



DIGITAL MIXING SYSTEM

**RIVAGE**  
PM SERIES

## Operation Manual

Part 1: Overview

Part 2: Operations

## About the Relevant Manuals

The manuals related to the RIVAGE PM series are organized as follows.

### Paper manuals

#### RIVAGE PM10 System Setup Guide RIVAGE PM7 System Setup Guide

This guide provides an overview of the RIVAGE PM series, and explains step by step how to set up the system from connecting devices to producing sound.

#### Manuals for each device

The manual for each device describes part names and functions of that device. Each manual is packaged with the corresponding device.

### Online manuals



#### RIVAGE PM series Operation Manual (this document)

This provides a detailed explanation of the screens and functions shown on the control surface.

Part 1: Overview is concerned mainly with providing an overview and explaining the concepts needed to understand the RIVAGE PM series. It contains knowledge and information that you will need for planning.

Part 2: Operations explains specific procedures and operations. It provides a Function Map that lets you quickly access the information you need, as if using a dictionary.



#### RIVAGE PM Editor Installation Guide

This guide explains how to install RIVAGE PM Editor.



#### RIVAGE PM StageMix User Guide

This guide describes an iPad application that enables you to control the RIVAGE PM series system wirelessly.

##### NOTE

All manuals can be downloaded from the Yamaha website. If necessary, you can review updated manual information, which is always posted on the Yamaha website.


<http://download.yamaha.com/>


### How to use this operation manual

Since the RIVAGE PM series Operation Manual (this document) is an electronic file (PDF file), it provides links that you can click to view an item of interest, and allows you to search for terms.

#### Using the icon buttons

Icon buttons are located in the upper right of the operation manual.

**CONTENTS**  ..... Press this button to view the table of contents.

**FUNCTION MAP**  ... Press this button to view a function tree diagram. Since an item is provided for each function screen, you can quickly access an explanation for the function of interest.

#### Searching for terms

To search for a term, use the search function provided by the software you're using to read this document.

If you're using Adobe Acrobat Reader DC, enter the term in the search bar and then press the <Enter> key of your computer keyboard to find that term.

##### NOTE

The most recent version of Adobe Acrobat Reader DC can be downloaded from the following URL.

<http://www.adobe.com/>

#### Showing the next/previous view

When using Adobe Acrobat Reader DC, you can show the previous or next page that you viewed. This is convenient when you have moved to a linked page and now want to return to the previous page.

##### NOTE

If the show next/previous view button is not shown in the toolbar, you can hold down the <Alt> key on your computer keyboard and use the <←> <→> keys to show the previous or next view.

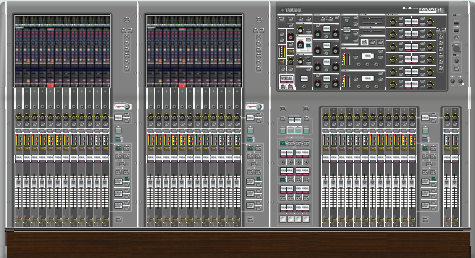
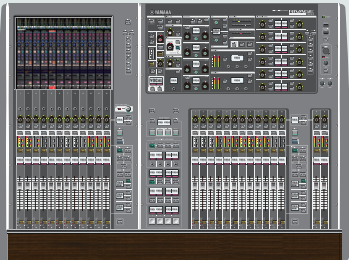
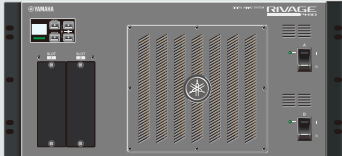
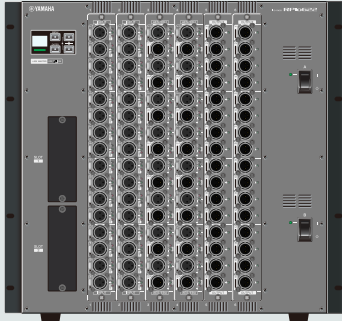
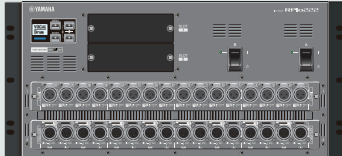



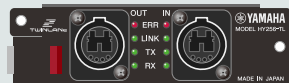
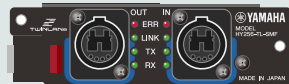




## Contents (Part 1: Overview)

<b>About the Relevant Manuals .....</b>	<b>2</b>	STEREO bus .....	32
<b>Component Structure .....</b>	<b>4</b>	I/O unit section .....	34
Control surface .....	5	<b>Delay Compensation .....</b>	<b>35</b>
Digital mixing console .....	7	<b>Monitor .....</b>	<b>36</b>
Differences between the RIVAGE PM10 system and the RIVAGE PM7 system .....	8	<b>Cue .....</b>	<b>37</b>
About RIVAGE PM Editor .....	9	<b>Oscillator .....</b>	<b>38</b>
DSP engine (DSP-R10) .....	10	<b>Talkback .....</b>	<b>39</b>
I/O rack (RPio622) .....	11	<b>DCA/Mute Groups .....</b>	<b>40</b>
I/O rack (RPio222) .....	12	<b>GEQ/PEQ/Automixer .....</b>	<b>40</b>
RY card .....	13	<b>Plug-ins .....</b>	<b>41</b>
HY card .....	13	Plug-in type list .....	41
<b>TWINLANe Network .....</b>	<b>14</b>	Unavailable Plug-in .....	43
TWINLANe network .....	14	<b>RTA (Realtime Analyzer).....</b>	<b>43</b>
Connecting a TWINLANe network card .....	14	<b>Recording.....</b>	<b>45</b>
<b>I/O and Routing Structure .....</b>	<b>16</b>	2-track USB recorder .....	45
System-wide signal flow .....	16	Multitrack recording and virtual sound check .....	45
Signal flow within the RPio .....	18	Signal flow during a virtual sound check (VSC) .....	47
<b>About Connections .....</b>	<b>19</b>	<b>MIDI/GPI/Time Code.....</b>	<b>48</b>
About Dual Console .....	20	<b>Customization.....</b>	<b>49</b>
About DSP mirroring .....	20	<b>Settings Files .....</b>	<b>50</b>
<b>Connecting a Computer .....</b>	<b>22</b>	Data handled by a settings file .....	50
<b>Word Clock.....</b>	<b>23</b>	<b>Conceptual Diagram of Memory.....</b>	<b>52</b>
Word clock in the RIVAGE PM series .....	23	<b>Scene Memory .....</b>	<b>55</b>
About the sampling rate converter (SRC) .....	23	<b>OVERLAY .....</b>	<b>56</b>
<b>RIVAGE PM series Function List .....</b>	<b>24</b>	<b>Other Convenient Functions .....</b>	<b>57</b>
<b>Input Channels.....</b>	<b>25</b>	<b>Maintenance Functions .....</b>	<b>57</b>
I/O unit section .....	25	Initialization .....	57
Mixing Engine section.....	26	System log .....	57
<b>Output Channels.....</b>	<b>29</b>	Calibration.....	57
Mixing Engine section.....	29		
MIX bus.....	29		
MATRIX bus.....	31		

## Component Structure

The RIVAGE PM series uses a modular architecture, allowing you to flexibly design a system of the appropriate size and structure. The following components are included in the RIVAGE PM series.

Control surface	DSP engine	I/O racks	RY cards	HY cards
<p><b>CS-R10</b></p>  <p><b>CS-R10-S</b></p>  <p>The control surface enables you to perform general operations on the RIVAGE PM series. (For details, refer to <a href="#">page 5</a>.)</p>	<p><b>DSP-R10 (5U size)</b></p>  <p>The DSP engine handles mixing and plug-in processing, and all other audio processing for the RIVAGE PM series. (For details, refer to <a href="#">page 10</a>.)</p>	<p><b>RPio622 (10U size)</b></p>  <p><b>RPio222 (5U size)</b></p>  <p>The I/O racks transfer analog and digital audio signals to and from the DSP engine. (For details, refer to <a href="#">pages 11</a> and <a href="#">12</a>.) R-series I/O racks can be used via a Dante audio network. (For details on Dante, refer to <a href="#">page 130</a>.)</p>	<p><b>RY16-ML-SILK</b></p>  <p>This is a 16-channel mic/line input card. It features SILK digital processing technology that has been co-developed by Rupert Neve Designs and Yamaha.</p> <p><b>RY16-DA</b></p>  <p>This card features 16-channel analog outputs.</p> <p><b>RY16-AE</b></p>  <p>This card features 16-channel digital I/Os that support the AES/EBU format. Sampling rate converters are provided on all inputs and outputs.</p> <p>(For details on RY cards, refer to <a href="#">page 13</a>.)</p>	<p><b>HY256-TL</b></p>  <p><b>HY256-TL-SMF</b></p>  <p>This digital I/O card supports TWINLANe (Yamaha's proprietary audio transfer network protocol). It can handle 256 channels and be installed in the HY card slot 1.</p> <p><b>HY144-D</b></p>  <p>This digital I/O card supports the Dante digital audio network. It can handle 144 channels and be installed in the HY card slot.</p> <p>(For details on HY cards, refer to <a href="#">page 13</a>.)</p>
<b>Digital mixing console</b>				
<p><b>CSD-R7</b></p>  <p>The mixing console handles audio processing and overall control for the RIVAGE PM series. (For details, refer to <a href="#">page 7</a>.)</p>				

## Control surface

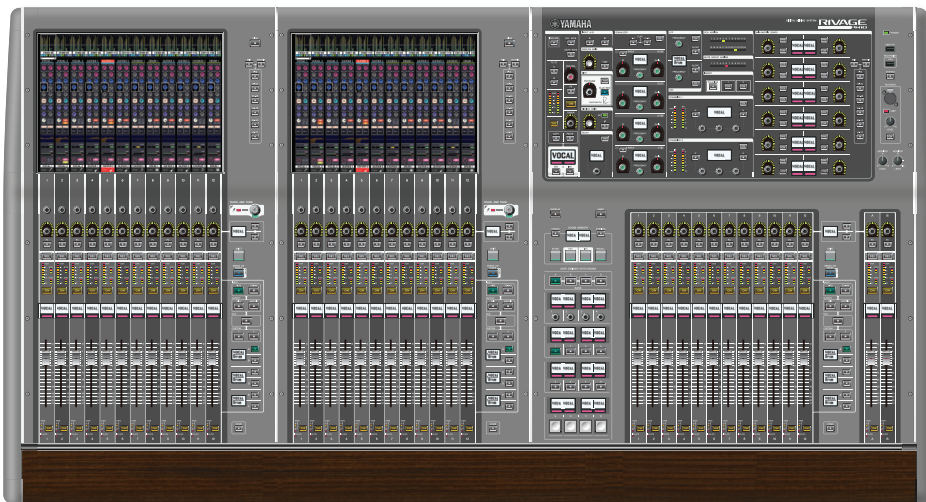
The CS-R10 control surface lets you control all functions of the DSP engine. All audio signal operations such as mixing and routing, memory functions, and system settings can be controlled.

The following functionality is provided.

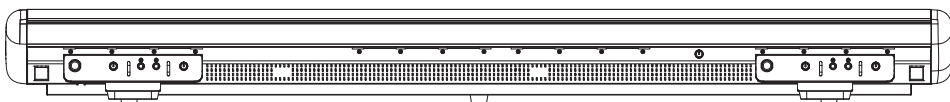
- 12 x 3 bays + 2 (total 38) faders (CS-R10)  
12 x 2 bays + 2 (total 26) faders (CS-R10-S)
- The full-function Selected Channel section acclaimed on Yamaha digital mixers
- A user interface that allows touch operation on large LCD panels
- Audio input/output connectors for connecting outboard gear or CD players (local I/O), and control input/output connectors (MIDI/GPI)
- Two-track USB recorder function allows live recording, or playback of background music or sound effects without requiring additional equipment
- Two internal power supply units provide redundant power

### ■ CS-R10

#### Top panel



#### Front panel



## Rear panel



### Jack list

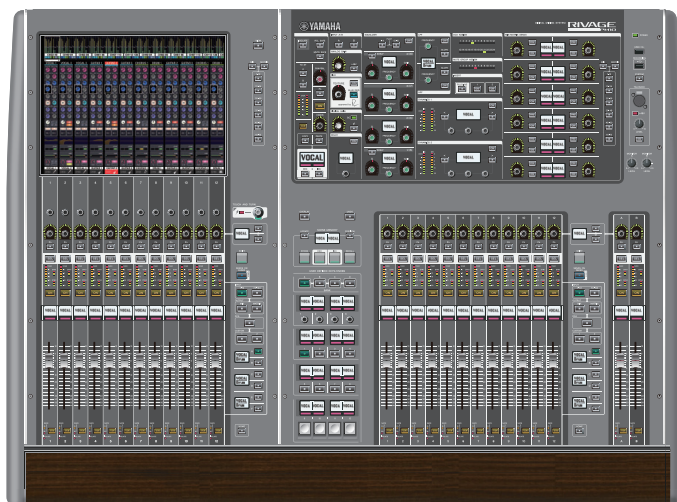
Jack	Connector	Number of jacks
OMNI IN (ANALOG)	XLR-3-31 Type	8
OMNI OUT (ANALOG)	XLR-3-32 Type	8
AES/EBU IN	XLR-3-31 Type	4
AES/EBU OUT	XLR-3-32 Type	4
TO ENGINE (Console Network)	etherCON CAT5e	2
WORD CLOCK OUT	BNC	1
MIDI IN	DIN 5P	1
MIDI OUT	DIN 5P	1
PHONES	TRS 1/4" (6.35 mm)	4 (front)
TALKBACK	XLR-3-31 Type	1
USB	TYPE A USB	1 (top) 3 (rear)
RECORDING	TYPE A USB	1
GPI	D-Sub 25P (Female)	1
VIDEO OUT	DVI-D	1
NETWORK (PC)	etherCON CAT5	1
LAMP	XLR-4-31 Type	4
AC INLET	V-Lock Type	2

### Slot list

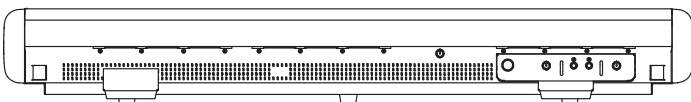
Slot	Number
MY CARD SLOT	2

## ■ CS-R10-S

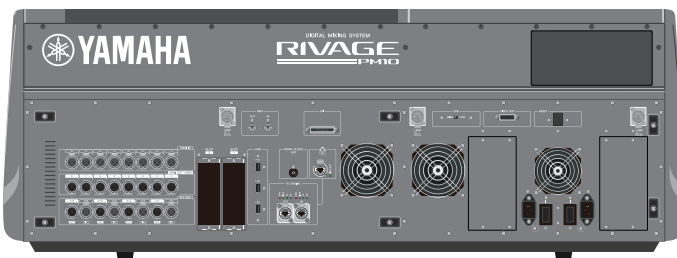
### Top panel



### Front panel



### Rear panel



### Jack list

Jack	Connector	Number of jacks
OMNI IN (ANALOG)	XLR-3-31 Type	8
OMNI OUT (ANALOG)	XLR-3-32 Type	8
AES/EBU IN	XLR-3-31 Type	4
AES/EBU OUT	XLR-3-32 Type	4
TO ENGINE (Console Network)	etherCON CAT5e	2
WORD CLOCK OUT	BNC	1
MIDI IN	DIN 5P	1
MIDI OUT	DIN 5P	1
PHONES	TRS 1/4" (6.35 mm)	2 (front)
TALKBACK	XLR-3-31 Type	1
USB	TYPE A USB	1 (top) 3 (rear)
RECORDING	TYPE A USB	1
GPI	D-Sub 25P (Female)	1
VIDEO OUT	DVI-D	1
NETWORK (PC)	etherCON CAT5	1
LAMP	XLR-4-31 Type	3
AC INLET	V-Lock Type	2

### Slot list

Slot	Number
MY CARD SLOT	2

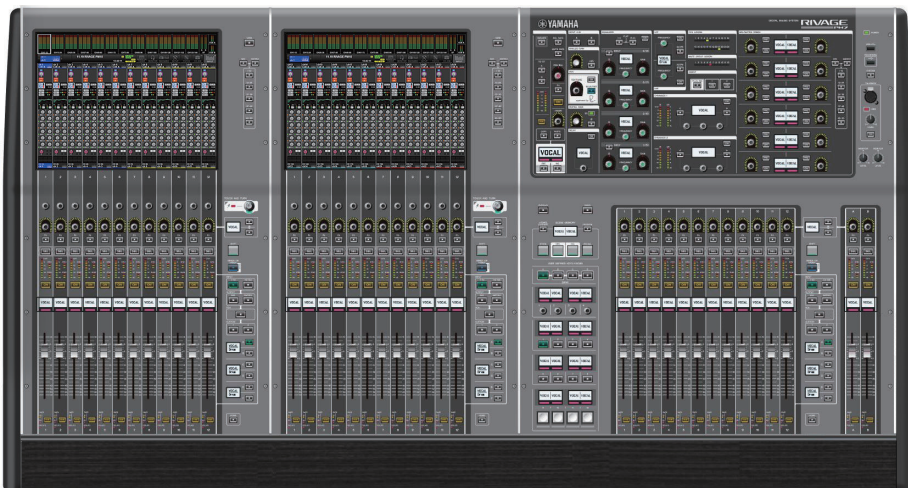
## Digital mixing console

All audio signal operations such as mixing and routing, memory functions, and system settings can be controlled. This unit also has a built-in DSP engine that handles 120 input, 60 mix, 24 matrix, and 2 stereo channels of audio processing.

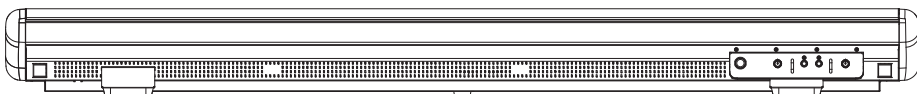
The functionality is essentially the same as that of the control surfaces (CS-R10, CS-R10-S), but there are some differences. (page 8)

### ■ CSD-R7

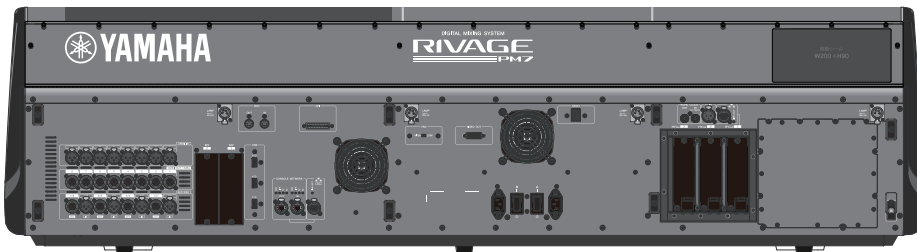
#### Top panel



#### Front panel



#### Rear panel



#### Jack list

Jack	Connector	Number of jacks
OMNI IN (ANALOG)	XLR-3-31 Type	8
OMNI OUT (ANALOG)	XLR-3-32 Type	8
AES/EBU IN	XLR-3-31 Type	4
AES/EBU OUT	XLR-3-32 Type	4
WORD CLOCK IN	BNC	1
WORD CLOCK OUT	BNC	1
MIDI IN	DIN 5P	1
MIDI OUT	DIN 5P	1
PHONES	TRS 1/4" (6.35 mm)	2 (front)
TALKBACK	XLR-3-31 Type	1
USB	TYPE A USB	1 (top) 3 (rear)
RECORDING	TYPE A USB	1
GPI	D-Sub 25P (Female)	1
VIDEO OUT	DVI-D	1
NETWORK (PC)	etherCON CAT5	1
NETWORK	etherCON CAT5	1
TC IN	XLR-3-31 Type	1
LAMP	XLR-4-31 Type	4
AC INLET	V-Lock Type	2

#### Slot list

Slot	Number
MY CARD SLOT	2
HY CARD SLOT	3

#### About the HY card slots

HY card slot 1 of the DSP engine is only for a TWINLANE network card. HY card slot 3 is used for multi-track recording exclusively. HY card slot 2 can be used as general-purpose I/O. Each HY card slot 1 – 3 is 256-in/out.



## Differences between the RIVAGE PM10 system and the RIVAGE PM7 system

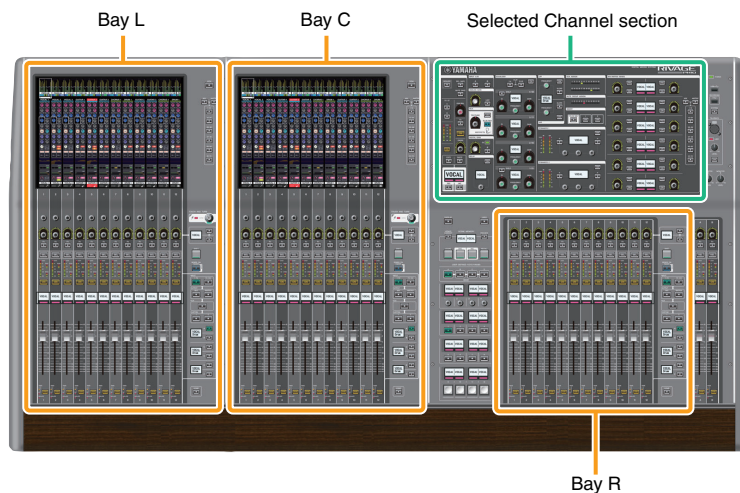
The main differences are listed below.

	<b>RIVAGE PM10 system</b>	<b>RIVAGE PM7 system</b>
Hardware	Separable: Control surface (CS-R10, CS-R10-S) and DSP engine (DSP-R10) configuration. Number of HY card slots: 4	Integrated: Digital mixing console (CSD-R7) with built-in DSP engine Number of HY card slots: 3
Number of channels and buses	Input channels 1–144 MIX buses 1–72 MATRIX buses 1–36	Input channels 1–120 MIX buses 1–60 MATRIX buses 1–24
Plug-ins	50 types	48 types
TWINLANe network	TWINLANe (MAIN) network and TWINLANe (SUB) network I/O racks that can be connected (M1–M8, S1–S8)	TWINLANe (MAIN) network only I/O racks that can be connected (M1–M8)

This operation manual is common to the RIVAGE PM10 system and the RIVAGE PM7 system. Explanatory images are taken from the RIVAGE PM10 system (CS-R10). The explanation and images will differ in some cases from those for the RIVAGE PM7 system (CSD-R7).

## Bays

A channel strip section of 12 faders together with their touch screen section is called a “bay.” The CS-R10 and CSD-R7 have three bays; the CS-R10-S has two bays. You can operate these bays independently.



## About RIVAGE PM Editor

This application software enables you to access the same functions that are available on the control surface. You can use your computer to perform off-line editing by preparing the RIVAGE PM series settings in advance, and to monitor and adjust those settings (on-line monitoring/operation). You can connect a computer with RIVAGE PM Editor installed (called PM Editor elsewhere in this book) to a DSP engine or a control surface. If you connect it to a DSP engine, you can control the entire system without a control surface. Therefore, in the event that the control surface encounters a problem, you can still use your computer as a backup.

Details about the software are available on the following Yamaha Pro Audio website:

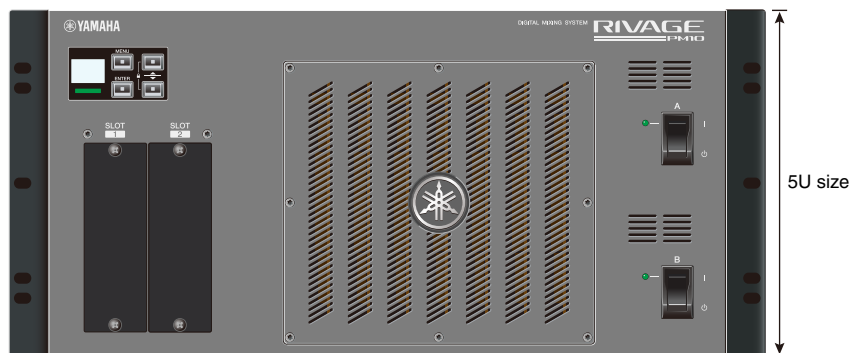
<http://www.yamaha.com/proaudio/>

For information regarding how to download or install Editor, as well as its various setting details, refer to the website listed above or to the Installation Guide attached to the downloaded software program.

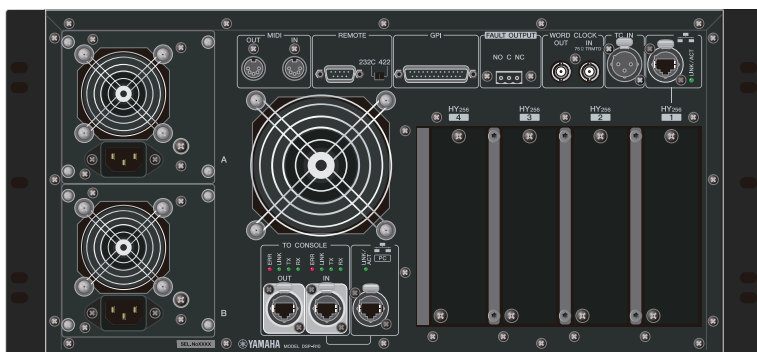
## DSP engine (DSP-R10)

This is a 144-input, 72-mix, 36-matrix, 2-stereo DSP engine that performs all of the RIVAGE PM series's audio processing such as mixing and plug-ins. It provides four HY card slots and two MY card slots as well as control input/output connectors for external equipment. Two power supply units are built-in, providing redundant power.

### Front panel



### Rear panel



### Jack list

Jack	Connector	Number of jacks
TO CONSOLE (Console Network)	etherCON CAT5e	2
WORD CLOCK IN	BNC	1
WORD CLOCK OUT	BNC	1
NETWORK (PC)	etherCON CAT5	1
NETWORK	etherCON CAT5	1
MIDI IN	DIN 5P	1
MIDI OUT	DIN 5P	1
TC IN	XLR-3-31 Type	1
GPI	D-Sub 25P (Female)	1
REMOTE	D-Sub 9P (Male)	1
FAULT OUTPUT	Euroblock 3P	1
AC INLET	V-Lock Type	2

### Slot list

Slot	Number
MY CARD SLOT	2
HY CARD SLOT	4

### About the HY card slots

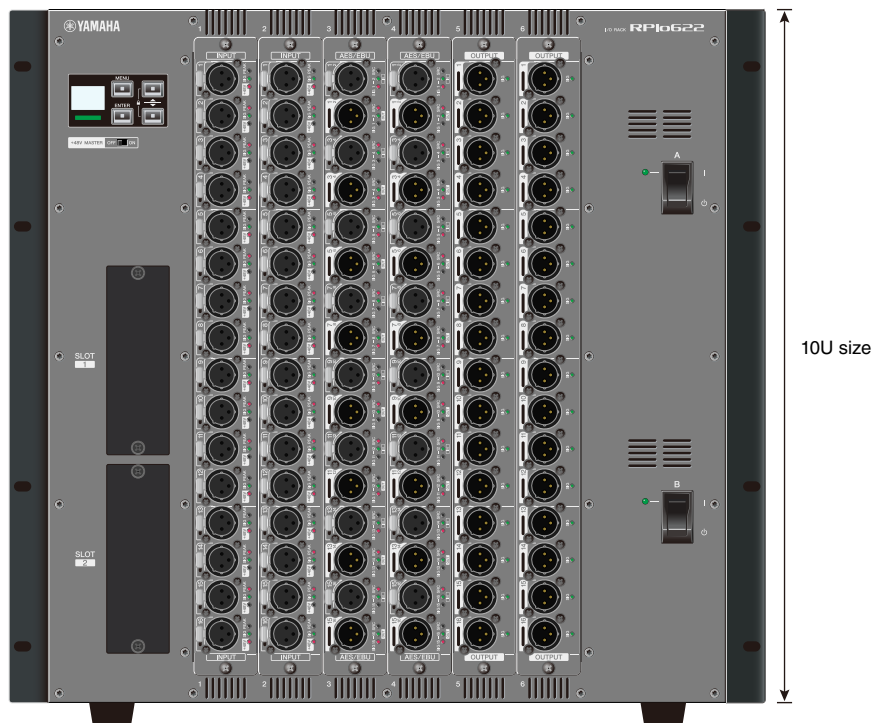
HY card slots 1 and 2 of the DSP engine are only for a TWINLANe network card. HY card slot 4 is used for multi-track recording exclusively. HY card slot 3 can be used as general-purpose I/O. Each HY card slot 1 – 4 is 256-in/out.



## I/O rack (R Pio622)

This is an I/O rack for input/output of analog audio signals and digital audio signals of various formats including AES/EBU to and from the DSP engine via a TWINLANe network card installed in HY card slot 1. Six RY card slots and two MY card slots allow the I/O structure to be configured flexibly. Two power supply units are built-in, providing redundant power.

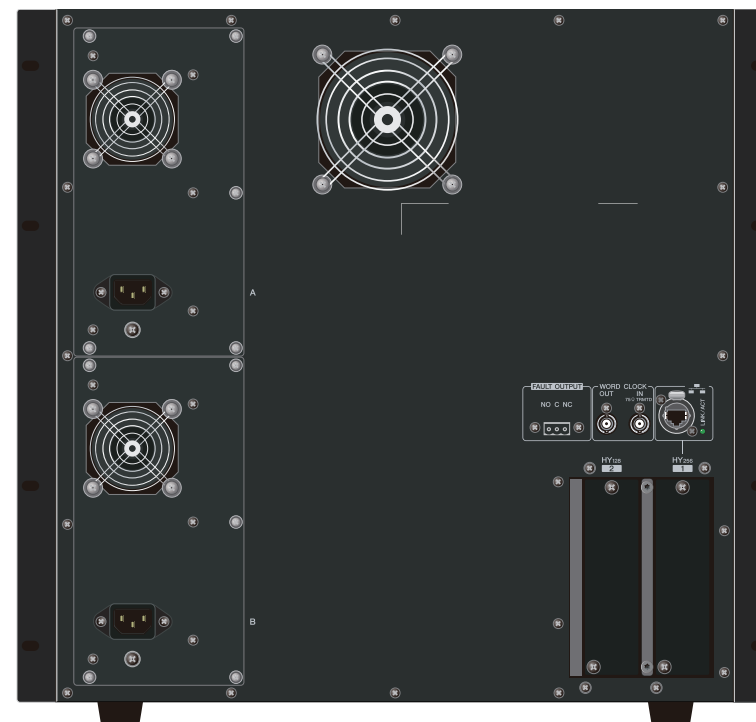
### Front panel



### About the HY card slots

HY card slot 1 of the I/O rack is only for a TWINLANe network card. HY card slot 2 can be used as general-purpose I/O. HY card slot 1 is 256-in/out, and HY card slot 2 is 128-in/out.

### Rear panel



### Jack list

Jack	Connector	Number of jacks
WORD CLOCK IN	BNC	1*
WORD CLOCK OUT	BNC	1
NETWORK	etherCON CAT5	1
FAULT OUTPUT	Euroblock 3P	1
AC INLET	V-Lock Type	2

\* Support is planned in a future update.

### Slot list

Slot	Number
RY CARD SLOT	6
MY CARD SLOT	2
HY CARD SLOT	2

## I/O rack (R Pio222)

This is an I/O rack for input/output of digital audio signals to and from DSP engine. It provides two RY card slots and two MY card slots, as well as two HY card slots. By limiting the number of RY card slots to two, this rack features a compact size of 5U (half the size of an R Pio622), offering great flexibility in installation. Two power supply units are built-in, providing redundant power.

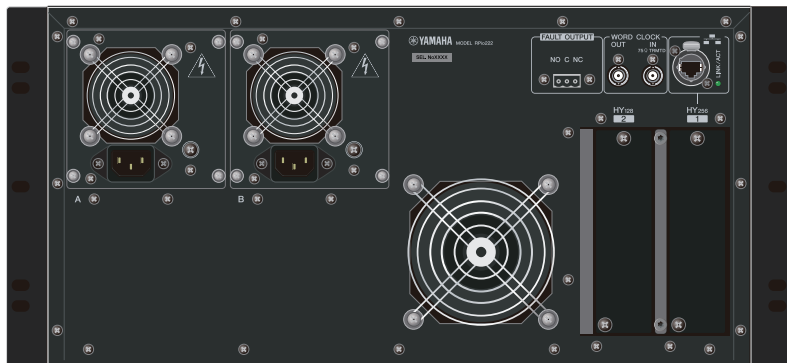
### Front panel



### About the HY card slots

HY card slot 1 on the I/O rack is for only a TWINLANe network card. HY card slot 2 can be used as a general-purpose I/O. HY card slot 1 features 256-in/outs, and HY card slot 2 features 128-in/outs.

### Rear panel



### Jack list

Jack	Connector	Number of jacks
WORD CLOCK IN	BNC	1*
WORD CLOCK OUT	BNC	1
NETWORK	etherCON CAT5	1
FAULT OUTPUT	Euroblock 3P	1
AC INLET	V-Lock Type	2

\* Support is planned in a future update.

### Slot list

Slot	Number
RY CARD SLOT	2
MY CARD SLOT	2
HY CARD SLOT	2

## RY card

RY cards are 16-channel input/output cards. They support 16-channel input/output regardless of the sampling frequency.

### ■ Mic/line analog input card (RY16-ML-SILK)

This is a 16-channel mic/line analog input card featuring a newly developed mic preamp and Rupert Neve Designs' "Silk" processing modeled in the digital domain. See [page 25](#) for more about Silk.



### ■ Analog output card (RY16-DA)

This is a 16-channel analog output card. Level setting switches allow the maximum output level of each channel to be switched between +15 dBu, +18 dBu, and +24 dBu. For details, refer to the owner's manual of the card.



### ■ AES/EBU input/output card (RY16-AE)

This is a 16-in/16-out AES/EBU format digital input/output card. Sampling rate converters are provided on all inputs and outputs. For details, refer to the owner's manual of the card.



## HY card

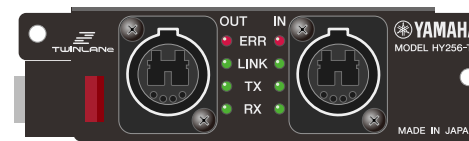
The HY cards allow multiple channels of digital audio signals and control signals to be transferred.

### ■ TWINLANE interface card

This is a 256-in/256-out interface card that supports Yamaha's proprietary TWINLANE audio transfer network protocol.

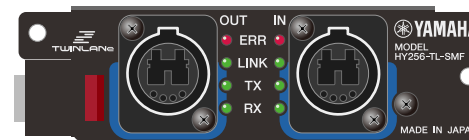
#### HY256-TL

It uses multi-mode optical fiber cables such as Neutrik's opticalCON DUO to allow transmission between devices up to 300 meters apart.



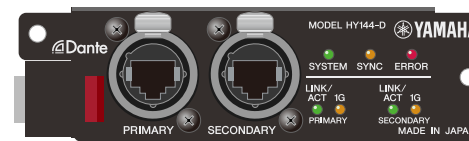
#### HY256-TL-SMF

It uses single-mode optical fiber cables such as Neutrik's opticalCON DUO to allow transmission between devices up to 2km apart.



### ■ Dante interface card (HY144-D)

This is an interface card that supports the Dante digital audio network protocol created by Audinate. It allows transfer of up to 144 channels of audio signals at a sampling frequency of 96 kHz. Transmission up to 100 meters is possible using CAT5e or better Ethernet cable.



#### NOTE

- Please refer to the owner's manual supplied with the host device for information on installing the I/O cards.
- For detailed information on I/O card settings, refer to the owner's manual for the I/O card.
- For the latest information on which I/O cards can be used with the system, visit the Yamaha Pro Audio website at:

<http://www.yamaha.com/proaudio/>

## TWINLANe Network

TWINLANe is a proprietary Yamaha network protocol for transferring multiple channels of digital audio and control signals simultaneously over a single cable.

TWINLANe allows low-latency transfer of up to 400 audio channels, and enables sharing between all devices on the network. Input signals can also be shared between multiple DSP engines.

Ring topology allows redundancy that will keep the network running even if a cable fails.

### TWINLANe network

<b>Transmitted data</b>	400 channels of audio, control signals
<b>Sampling frequency</b>	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
<b>Network latency*</b>	11 sample @ Fs = 44.1 kHz (0.25 msec) 11 sample @ Fs = 48 kHz (0.23 msec) 12 sample @ Fs = 88.2 kHz (0.14 msec) 12 sample @ Fs = 96 kHz (0.13 msec)
<b>Bit-length</b>	32-bit
<b>Topology</b>	Ring

\* If the number of connected devices is much larger, or if the total length of all cables is too long, the listed value may not apply.

#### NOTE

Use Neutrik opticalCON DUO multi-mode optical fiber cables. Optical fiber cable is easily damaged by bending and pulling. Using cable that has a locking mechanism and strong insulation can help to reduce trouble.

#### Cleaning

Correct communication might not be possible if debris and/or dust has adhered to the ends of optical fiber cables or the connectors.

Clean the equipment regularly by using commercially available optical fiber cleaning products.

## Connecting a TWINLANe network card

The TWINLANe network card can be used with the RIVAGE PM series.

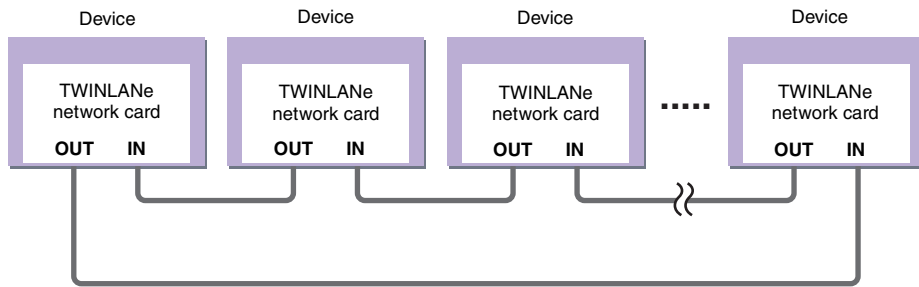
<b>TWINLANe network card</b>	HY256-TL	HY256-TL-SMF
<b>Connection cable</b>	Multi-mode optical fiber cable	Single-mode optical fiber cable
<b>Maximum cable length between devices</b>	300 meters maximum	2 km maximum
<b>Maximum number of channels</b>	256 in / 256 out	

To connect devices, first install a TWINLANe network card in an HY card slot of each device, then use fiber optic cables to connect the TWINLANe network cards in a ring network topology.

#### NOTE

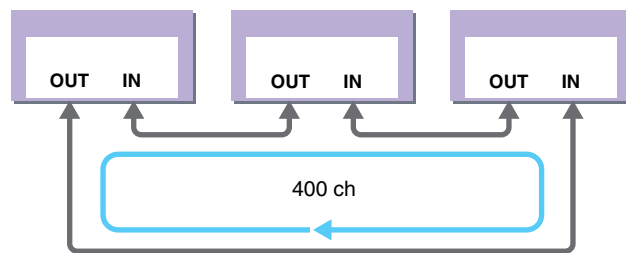
- Do not install both an HY256-TL-SMF and HY256-TL cards on a TWINLANe network.
- If you use an HY256-TL-SMF card, make sure that the total length of all cables is 6km or less.

### Ring connection

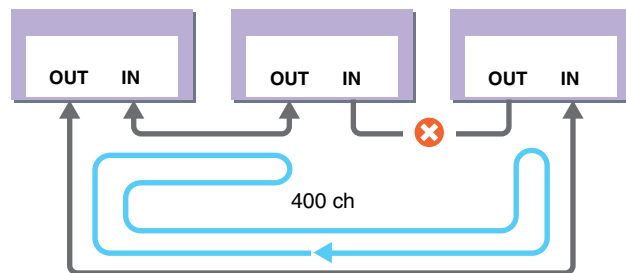


If a cable in the network breaks down for some reason, the signal will be automatically re-routed and audio will flow without interruption. Even if a device in the network malfunctions, other working devices will be able to continue communicating.

• **Normal situation**



• **When a cable is broken**



Even if a cable is severed at one point, the signal will be re-routed automatically and communication will continue without interruption.

In RIVAGE PM system version 2 and later, you can make settings for two TWINLANe networks (MAIN and SUB).

This is convenient if I/O racks are located in numerous places so that eight RPiO units are not sufficient, or if you want to divide the administration of a large system for simplicity. The following settings are required in order to provide the appropriate word clock to the system.

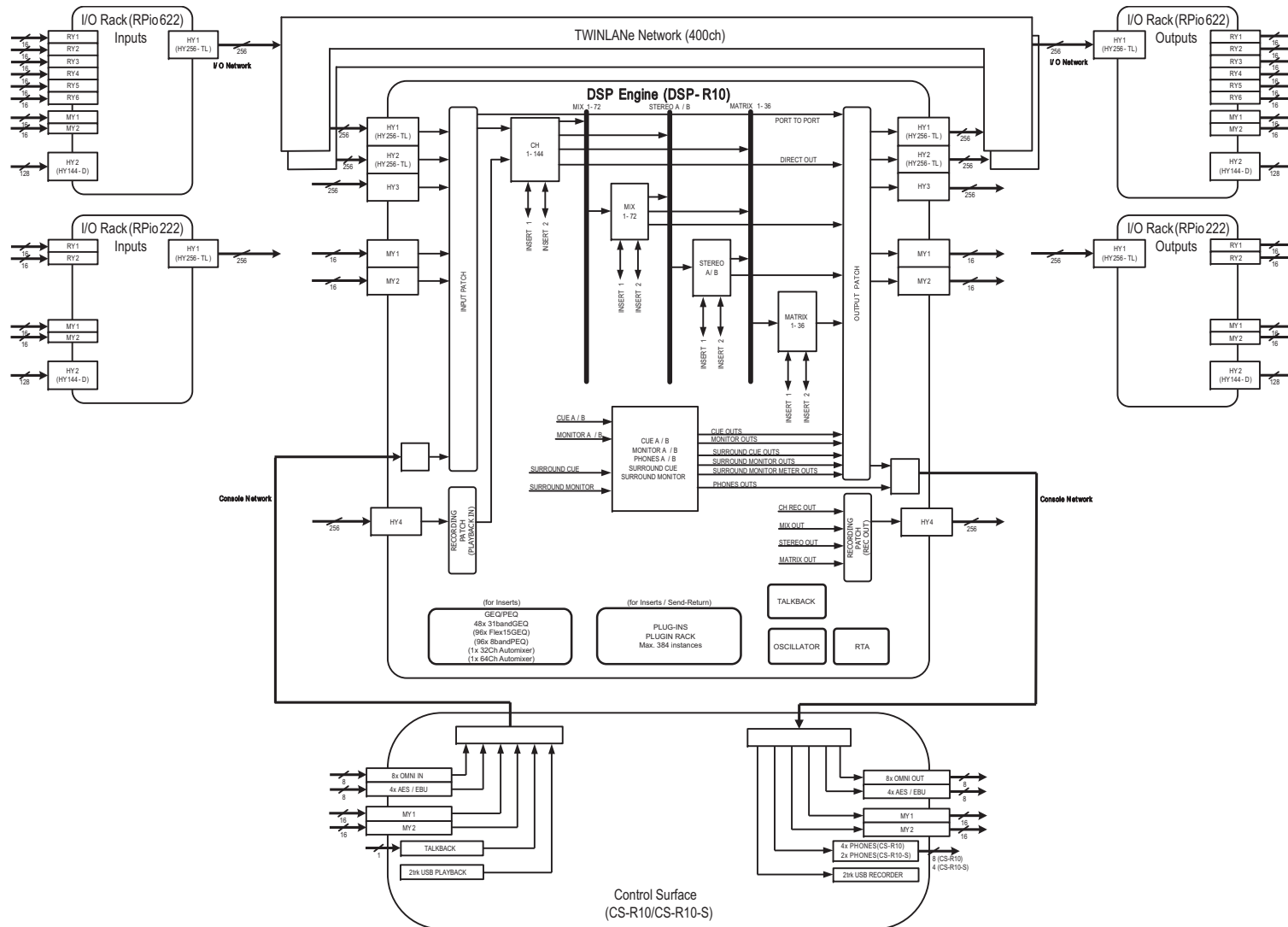
- Share TWINLANe (MAIN) network between all DSP engines.
- Connect the TWINLANe (MAIN) network only to HY card slot 1 of each DSP engine, and set the UNIT ID of the RPiO only to M1–M8.
- Connect the TWINLANe (SUB) network only to HY card slot 2 of each DSP engine, and set the UNIT ID of the RPiO only to S1–S8.
- Specify MASTER as the WORD CLOCK setting (page 128) of the DSP engine of the lowest UNIT ID in the network, and specify SLAVE for other DSP engines.

# I/O and Routing Structure

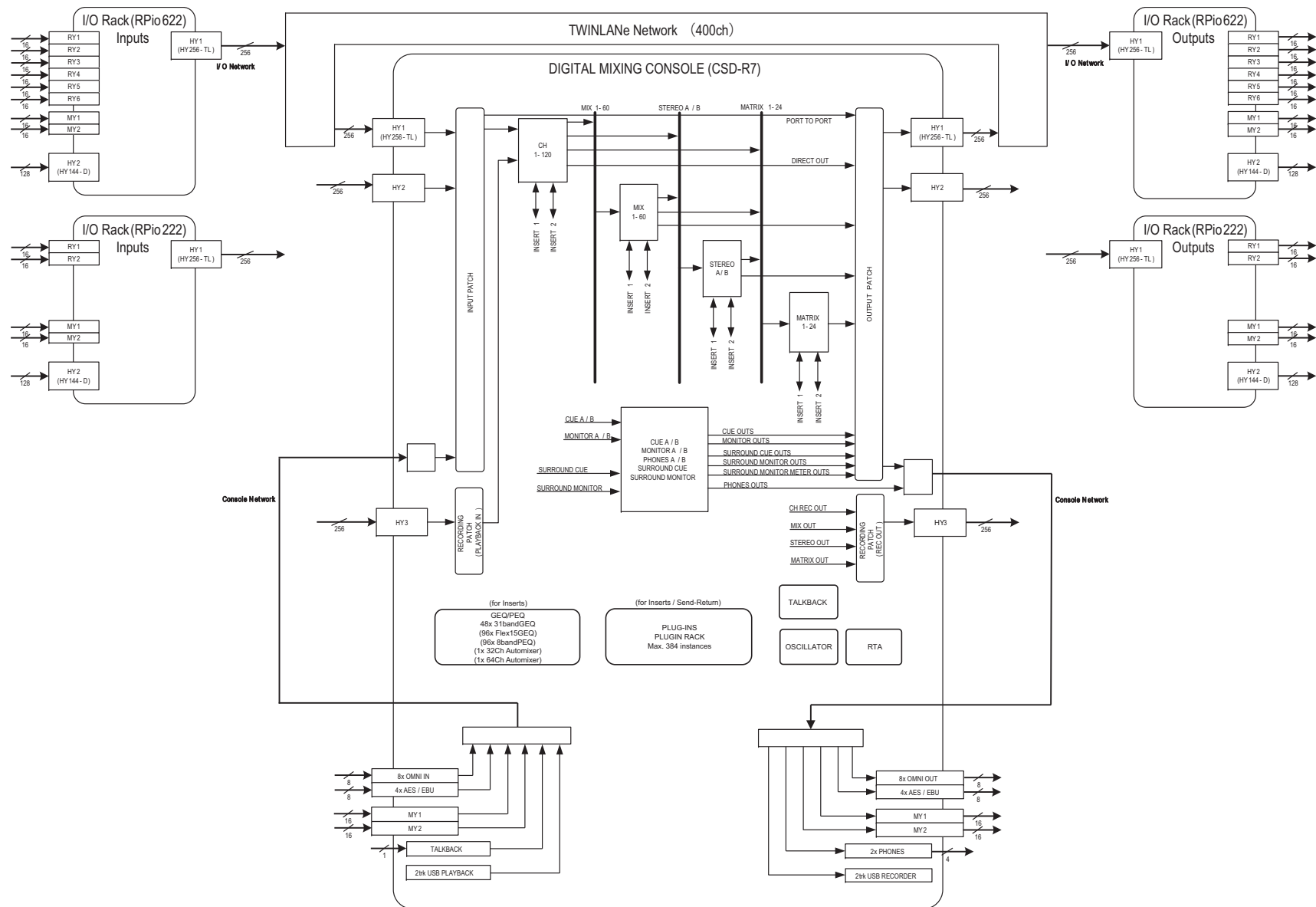
The following diagram shows the signal flow of the entire RIVAGE PM series.

## System-wide signal flow

### RIVAGE PM10 system



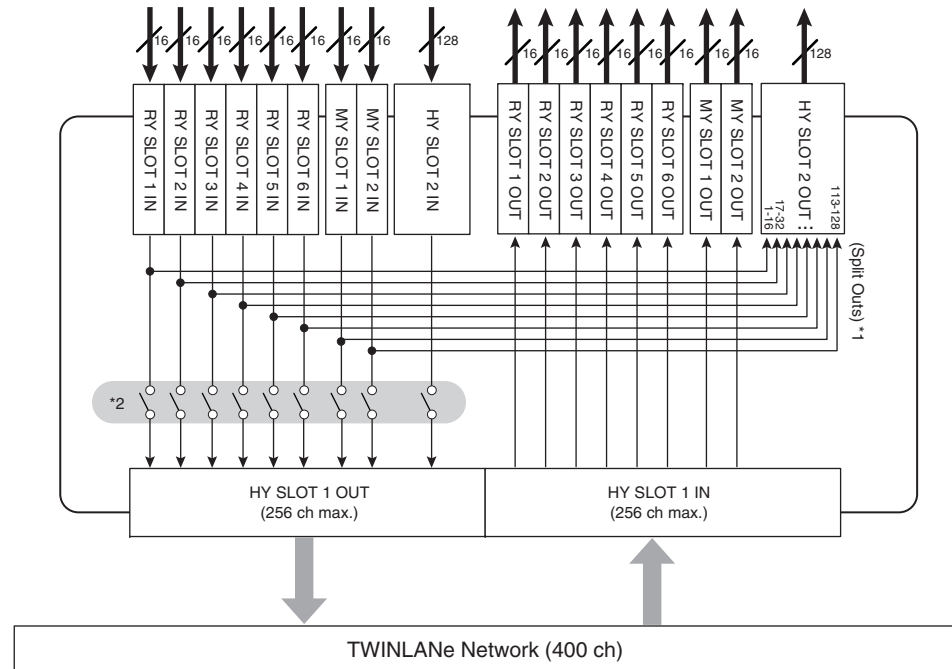
RIVAGE PM7 system



## Signal flow within the RPio

The following diagram shows the signal flow within the RPio.

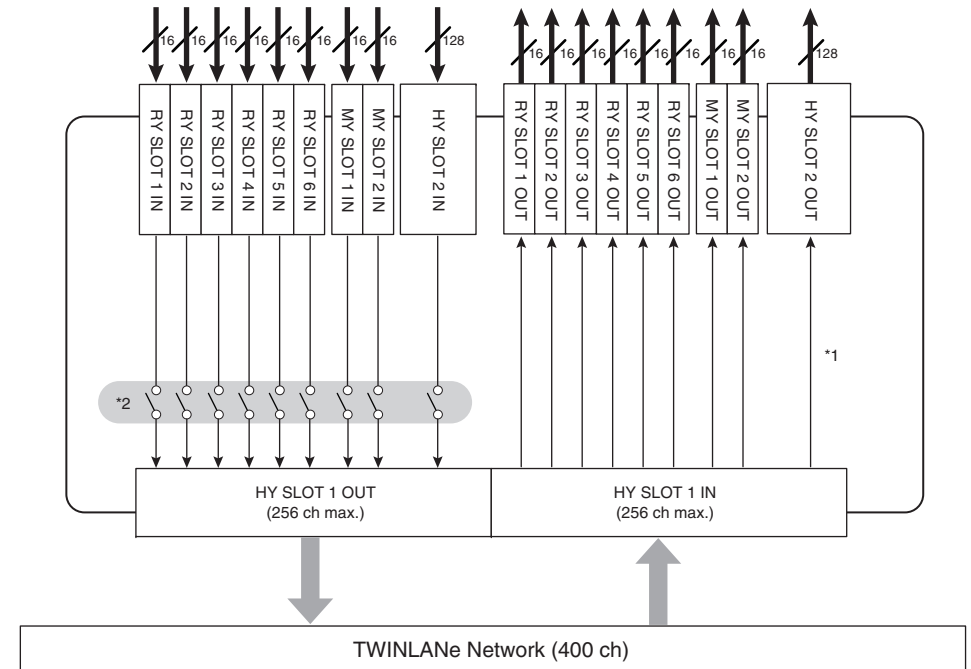
### ■ Mode 1



\*1) In mode 1, all input signals (total 128 channels) of the RY slots and MY slots are always split for output to the HY SLOT 2 output. The signal is output immediately after gain compensation.

\*2) Specifies the number of channels that are output to the TWINLANe network (turn on/off in 16-channel units for each slot).

### ■ Mode 2



\*1) In mode 2, you can patch signals from the DSP engine to the HY SLOT 2 output via the TWINLANe network.

\*2) Specifies the number of channels that are output to the TWINLANe network (turn on/off in 16-channel units for each slot).



## About Connections

The diagram below shows typical connections for the RIVAGE PM series. Equipment can be combined in various ways to construct small systems or large systems.

### • Connecting the control surface and DSP engine (Console Network)

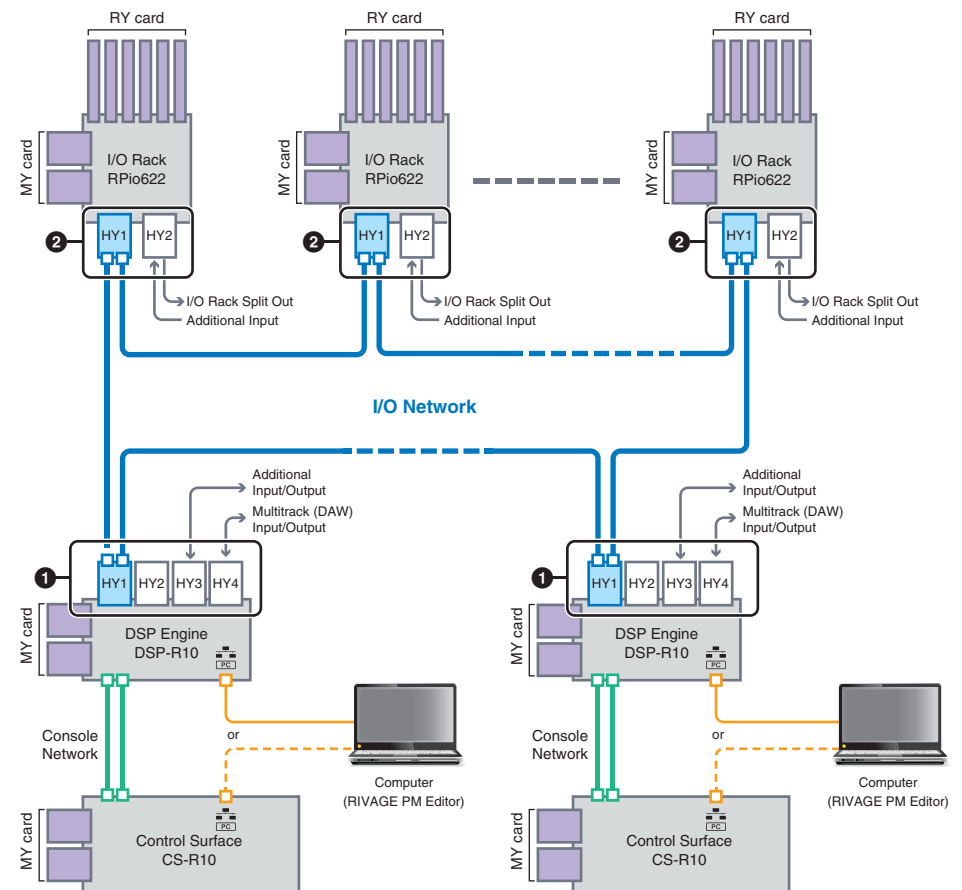
A DSP engine (DSP-R10) has a dedicated connector (TO CONSOLE) for connection to the control surface (CS-R10, CS-R10-S). You can connect control surface. A network created by the control surface and a DSP engine is called a “Console Network.” The Console Network is connected as a ring. This provides redundancy for both audio signals and control signals.

### • Connection between DSP engines and I/O racks (I/O Network)

A DSP engine and an I/O rack (RPio622, RPio222) are connected via a TWINLANE network, using HY card slot 1. A network created by a DSP engine and an I/O rack is called an “I/O Network.” The I/O Network is connected as a ring. For each ring, a maximum of four (in a DSP Mirroring configuration, a maximum of eight) DSP engines and a maximum of eight I/O racks can be connected.

### About the HY card slots

- ❶ HY card slot 1 and 2 of the DSP engine is only for a TWINLANE network card. HY card slot 4 (on the CSD-R7, HY card slot 3) is used exclusively for multitrack recording. HY card slot 3 can be used as general-purpose I/O. Each HY card slot 1 – 4 is 256-in/out.  
HY card slot 1 of the CSD-R7 is only for a TWINLANE network card. HY card slot 3 is only for multitrack recording. HY card slot 2 can be used for general-purpose I/O. HY card slots 1–3 are each 256-in/out.
- ❷ HY card slot 1 of the I/O rack is only for a TWINLANE network card. HY card slot 2 can be used as general-purpose I/O. HY card slot 1 is 256-in/out, and HY card slot 2 is 128-in/out.



#### — Ethernet connection

Ethernet cable (CAT5 or better) (maximum 100 meters)

#### — Console Network

Ethernet cable (CAT5e or better) (maximum 100 meters)

\* etherCON connectors made by Neutrik are recommended.

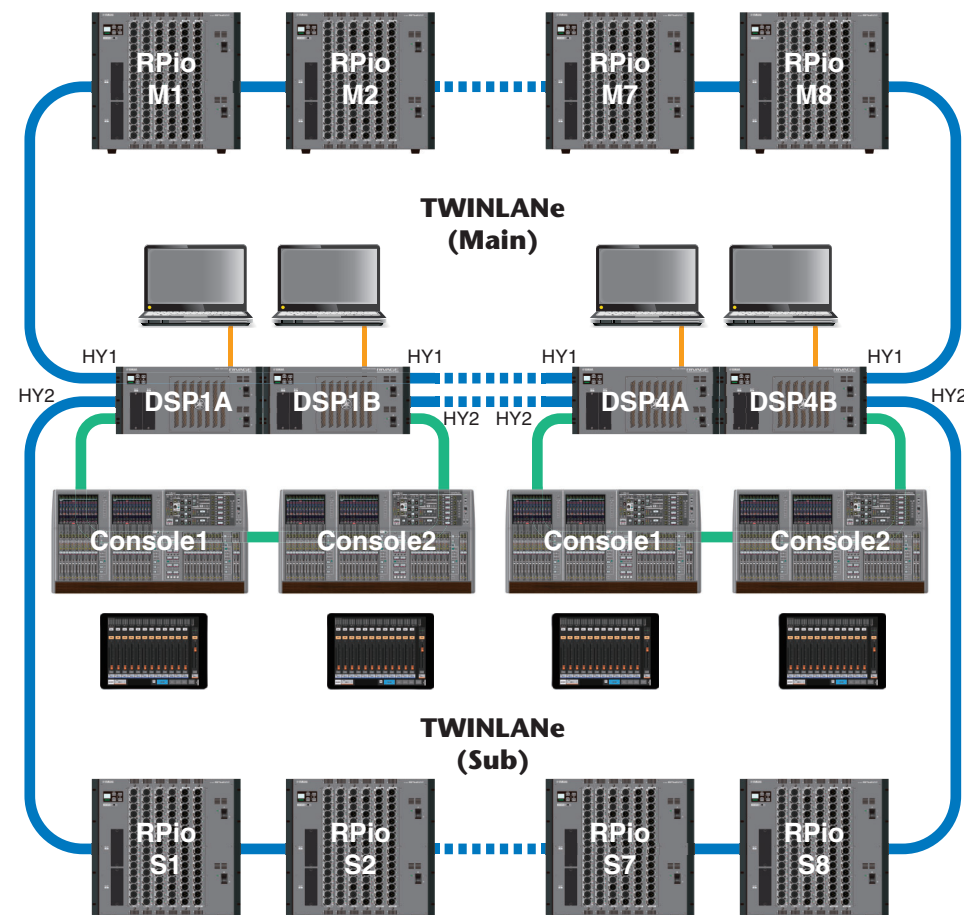
#### — I/O Network

Multi-mode optical fiber cable (maximum 300 meters between devices)

Single-mode optical fiber cable (maximum 2km between devices)

\* LC Duplex connectors compatible with Neutrik's opticalCON are recommended.

System configuration example



The ID settings of components are shown below.

CS-R10, CS-R10-S	DSP-R10	CSD-R7		RPio
Console ID	Unit ID	Unit ID	INTERNAL DSP ID	Unit ID
1, 2	1, 2, 3, 4 (In a DSP Mirroring configuration, 1A/1B–4A/4B)	1	1, 2, 3, 4	M1, M2...M8 S1, S2...S8

## About Dual Console

The system can be configured with two control surfaces connected to the DSP engine(s). The two control surfaces (the main CS-R10 and the sub CS-R10-S) can be placed side by side to expand the number of faders, or can be used by two operators in the FOH position of audience seating and in a sound booth. It is also possible to add a single CS-R10 or CS-R10-S unit to the CSD-R7. When connecting two control surfaces, you'll need to assign each to a different ID. (page 109)

## About DSP mirroring

The system can be configured with two DSP engines as a set, providing resilience against unexpected software failures or hardware malfunctions that would not be addressed by the redundant power supplies of the units or by TWINLANE cable redundancy.

### Requirements for mirroring

- The Unit IDs of the two DSP engines are set to A and B of the same number (example: 1A, 1B)
- The two DSP engine units have the same version
- The two DSP engine units have the same card configuration (Mini-YGDAI cards, HY cards)
- The TWINLANE networks of the two DSP engine units have the same ring connection settings (MAIN and SUB)

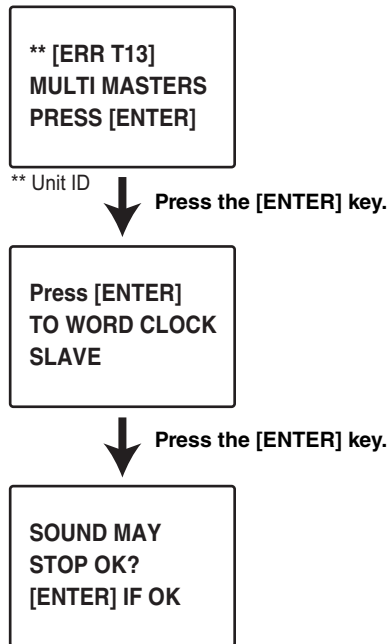
In a mirroring configuration, the DSP engine that is performing the system's audio processing is said to be in the "active" state, and the DSP engine that is waiting as a backup is said to be in the "standby" state. When starting up in a mirroring configuration, the default is that A starts in the active state and B starts in the standby state. The DSP engine that is running in the standby state synchronizes to the parameters of the DSP that is running in the active state.

When the active DSP engine stops operating and the standby DSP engine fails-over (automatically switches to the backup system when an accident occurs), synchronization processing is performed but the sound is not interrupted. Depending on the reason that the active DSP engine stopped operating, there might be cases in which failover will not occur. In such cases, you'll need to switch systems manually. Even in such cases, synchronization processing occurs automatically. Whether the audio is interrupted will depend on the state in which the active DSP engine's operation stopped. We cannot guarantee that the audio will be uninterrupted.

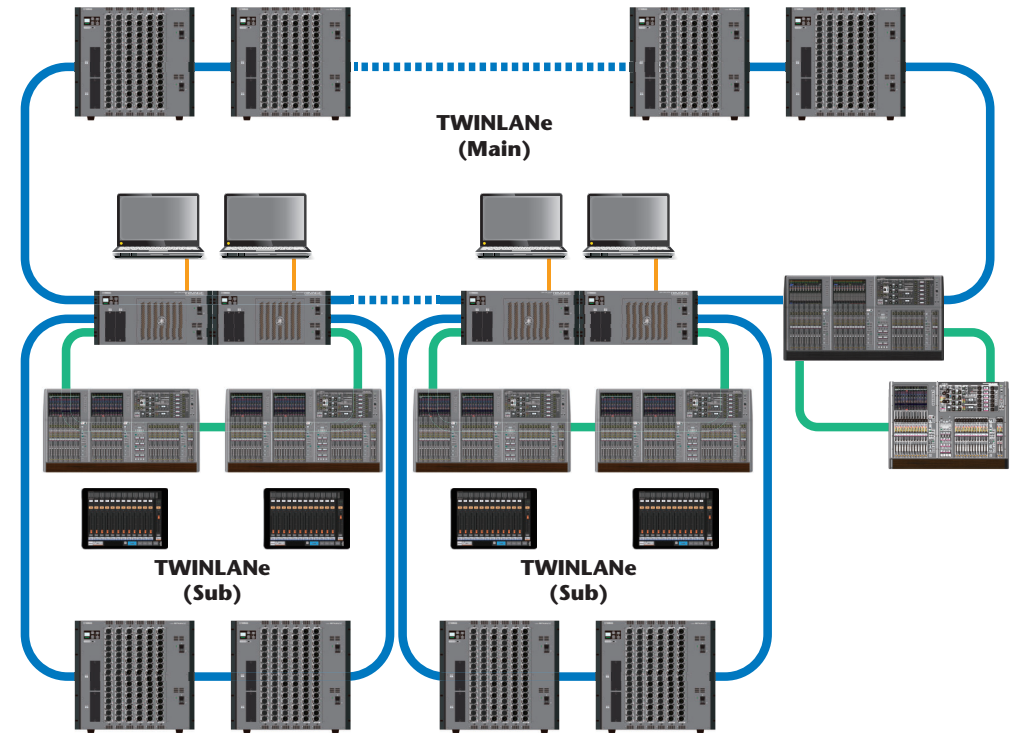
Even if failover occurs, the active DSP engine that is the word clock master will continue operating as long as the word clock continues to be supplied. For this reason, you should not turn off the power of the active DSP engine. If the power is turned off, the audio will be interrupted. If word clock supply from the active DSP engine that is the word clock master is interrupted, the standby DSP engine automatically becomes the substitute wordclock master. However, the audio is interrupted during this switch.

The indicator above the DSP popup button in the SYSTEM CONFIG screen (page 112) shows which DSP engine (A or B) is the word clock master.

After failover, if the replacement unit provided for A (the active DSP engine) and unit B (the standby DSP engine) that was operating after the failure are operating simultaneously, the parameters that had been edited on unit B will be lost. In the state where DSP engines A and B are each operating as the word clock master, and mirroring is occurring, both units are set as the word clock master. In this case, one unit must be removed from being a word clock master. Since this operation cannot be performed from the panel of the control surface, it must be performed from the front panel of the DSP engine.



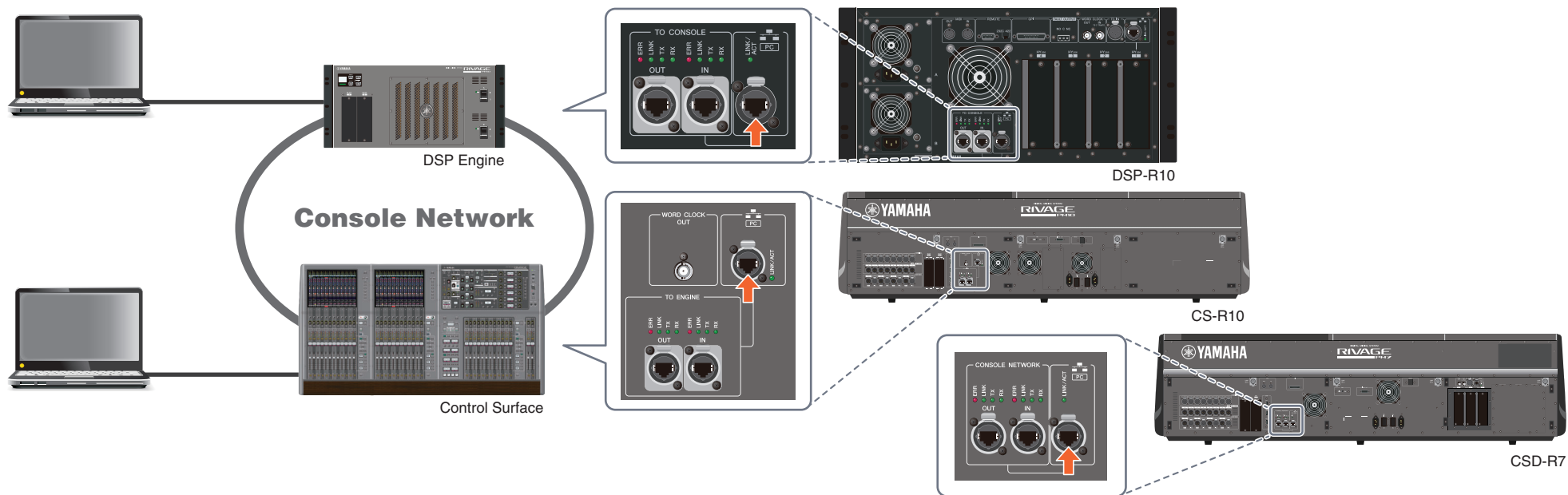
**System configuration example**



## Connecting a Computer

You can connect a computer with PM Editor installed to a DSP engine. To do so, connect the computer to the NETWORK connector [PC] located next to the TO CONSOLE connector. Do not connect it to the NETWORK connector located above the HY card slots.

Alternatively, you can use the NETWORK connector on the control surface. However, in this case, please note that the computer will be unable to communicate with the DSP engine if the power to the control surface is turned off.



If you want to connect two computers to a DSP engine or control surface, use a switching hub to make connections.



# Word Clock

## Word clock in the RIVAGE PM series

On a TWINLANE network, only one DSP engine is the master for one network. If two or more DSP engines exist on a single network, one is the master and the other units are slaves.

The master clock on a TWINLANE network can be one of the following two choices: the DSP engine's internal clock (44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz) or the external clock that is input to the WORD CLOCK IN connector on the rear panel of the master DSP engine. If using the Dante audio network, you can also select HY SLOT 3 (HY SLOT 2 on the CSD-R7) as the master clock.

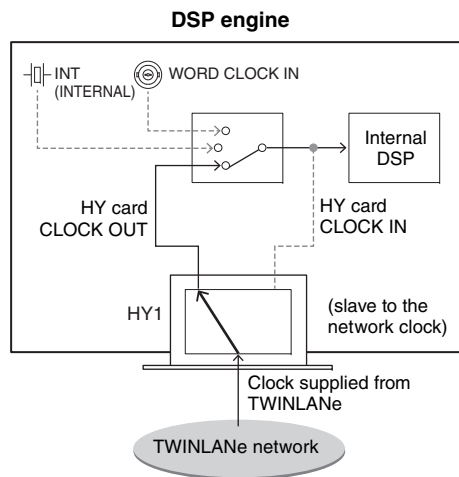
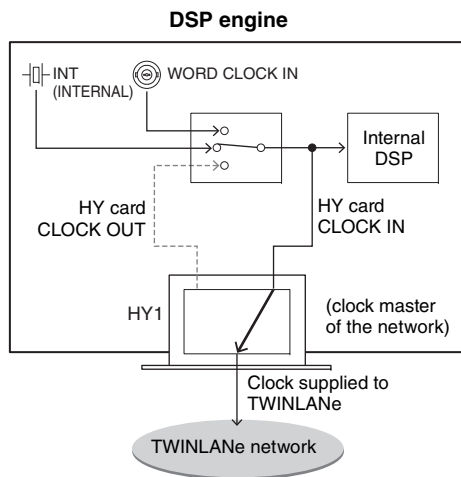
Since I/O racks always use the word clock that is being sent over the TWINLANE network, there is no need to specify their word clock source.

### If INT (INTERNAL) or WORD CLOCK IN is selected

The DSP engine will be the clock master for the TWINLANE network

### If HY SLOT 1 is selected

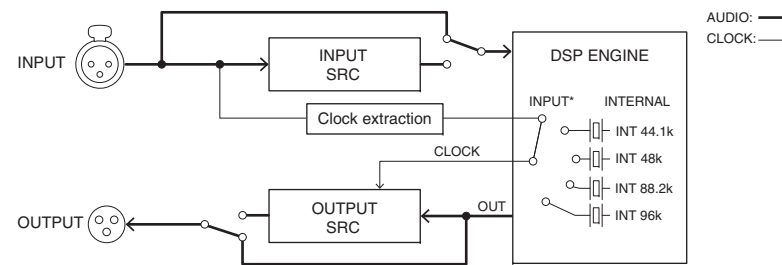
The DSP engine will be the clock slave of the TWINLANE network



## About the sampling rate converter (SRC)

SRC is built into all input and output channels (one SRC for every two channels) of the AES/EBU jacks on the rear panel of the control surface and of the RY16-AE. This allows digital signals that are not synchronized to the RIVAGE PM series to be input and output.

### SRC block diagram



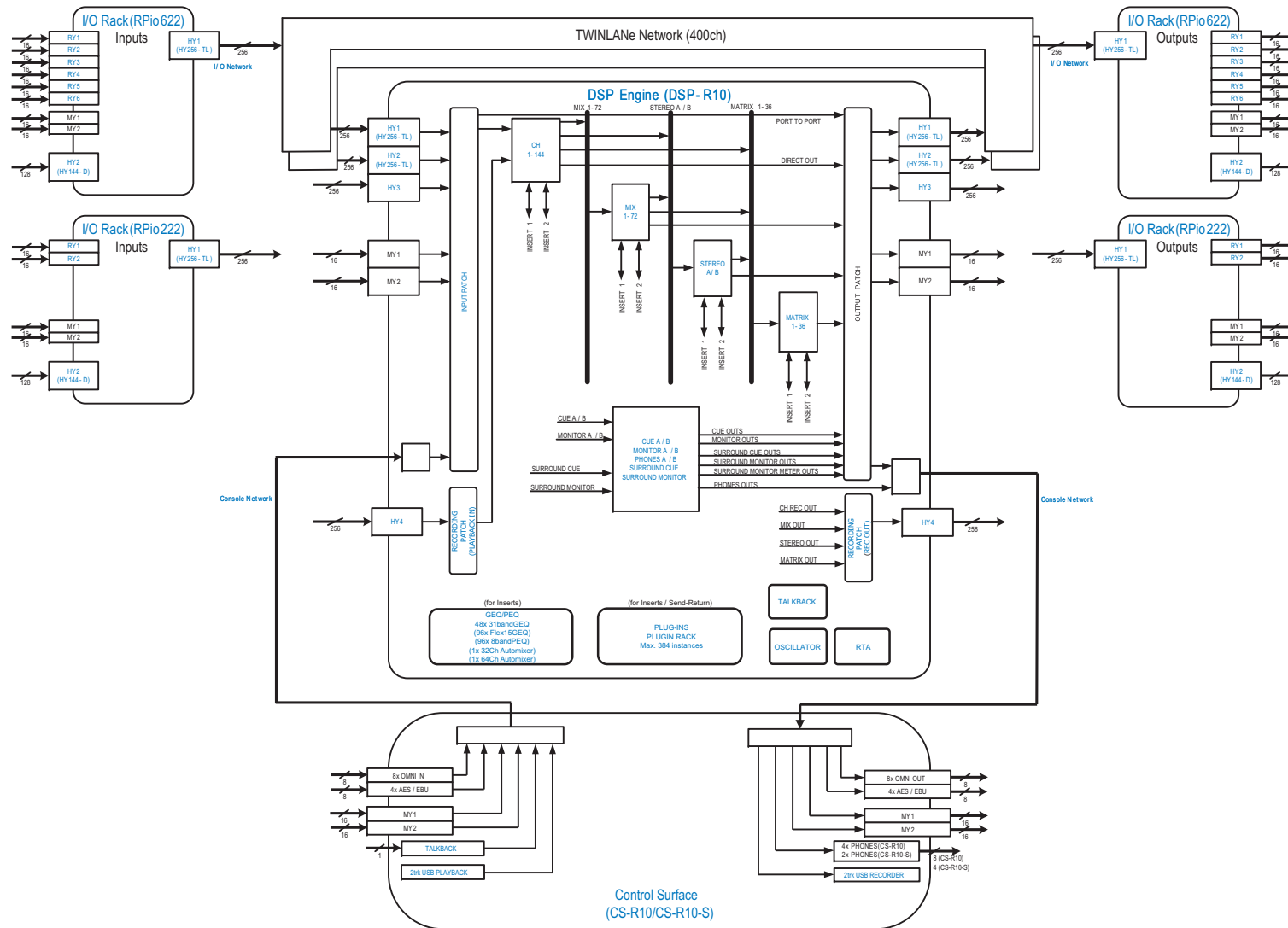
The input SRC converts the signal to the system clock of the RIVAGE PM series.

The output SRC converts the signal to the specified internal clock source or to the same clock as the input of the same channel.

\* Only the corresponding input channels can be selected (if OUT1/2, then IN1/2). For example, IN7/8 cannot be used for OUT1/2.

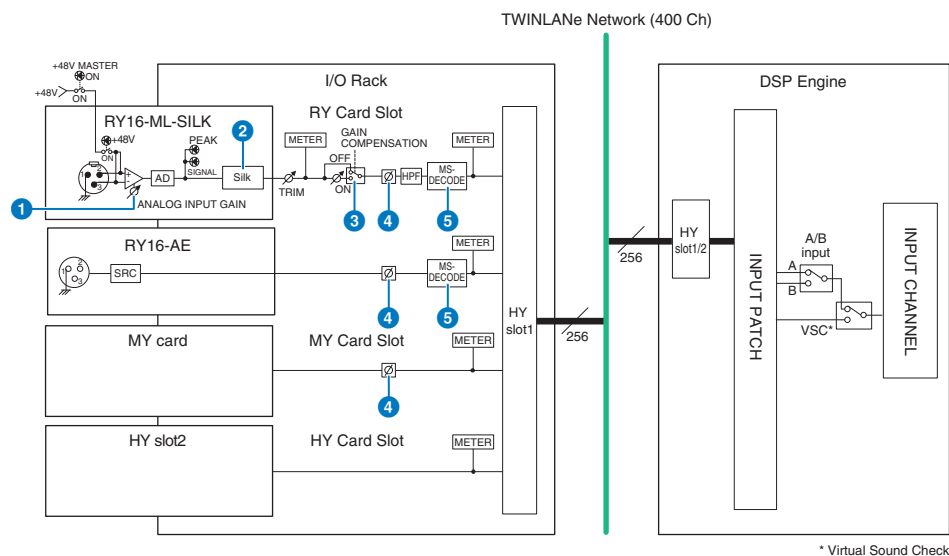
# RIVAGE PM series Function List

Click a function (blue text) to see a detailed explanation of that function.



# Input Channels

## I/O unit section



### 1 ANALOG INPUT GAIN

This is the analog gain of the head amp.

### 2 Silk

Allows you to add a natural sense of audio transformer compression and saturation. This enhances the sense of depth and space, freshening the sound. You can control the brilliance or power.

#### About “Silk”

Silk uses proprietary Yamaha “VCM technology” digital signal processing to faithfully replicate the “Silk” processing that is built into numerous high-end analog audio devices developed, manufactured, and sold by Rupert Neve Designs.

Based on the natural compression and saturation of audio transformers, a matter about which Rupert Neve is especially passionate, the user can choose one of two characters, “Blue” or “Red,” and use a continuously-variable “Texture” knob that allows effective control over the tone and the accompanying overtones.

Silk allows effects such as the following.

- In addition to adding power and brilliance, you can recover the sense of air that tends to be lost in the mix.

- The graceful and solid tone characteristic of an analog console can be obtained.
- Breathing and subtle pianissimos can be expressed in a lifelike way.
- Channel EQ and reverb become more effective.
- If this is used only on a small number of important channels, those parts will stand out from the mix.
- If this is used on all channels, the mix will be given depth and three-dimensional character.
  - Red: Bright and lively
  - Blue: Rich and powerful

### About the “Hybrid Mic Preamp” concept

This is a revolutionary mic preamp that uses digital signal processing to model and combine the ultra-high-quality analog mic preamp representing the pinnacle of Yamaha’s “natural sound” philosophy with Rupert Neve Designs’ “Silk” processing that allows you to freely control the sound’s “depth, space, and air.” In the RIVAGE PM series, this is provided as standard on the RY16-ML-SILK and on all the OMNI INPUT channels on the rear panel of the control surface.

### 3 GAIN COMPENSATION

Switches the gain compensation on or off for that channel.

If this is on, the signal level that is output from the I/O rack to the audio network remains constant even if the HA analog gain is adjusted.

#### About gain compensation

The HA analog gain of the I/O rack can be controlled by the gain knob of the control surface, but normally this will also change the input level to another DSP engine or recording device that shares the input.

However if gain compensation is used to fix the gain within the I/O rack, the signal level that is output to the audio network is kept constant. In other words, raising (or lowering) the analog gain causes the compensation gain within the I/O rack to decrease (or increase).

Because the mixing input level can be operated using the digital gain within the DSP engine, this allows the input level to be optimal for various routes used for different purposes.

Even if you turn gain compensation off again, the analog gain and compensation gain will return to the settings they had when gain compensation was turned on, so the signal level that is output to the audio network will not change.

In this way, you can adjust the analog gain for the optimal S/N ratio and use the digital gain to adjust the input level independently.

### 4 ∅

Reverses the phase of the input signal.

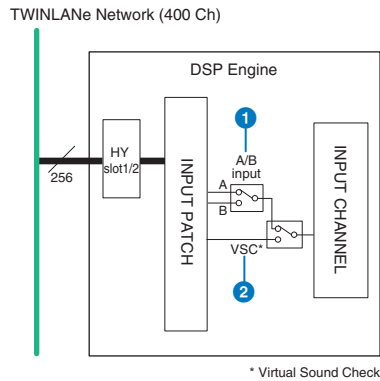
### 5 M/S DECODE

An M/S decoder is built in.

The M/S decoder is provided for adjacent odd- and even-numbered channels.



# Mixing Engine section



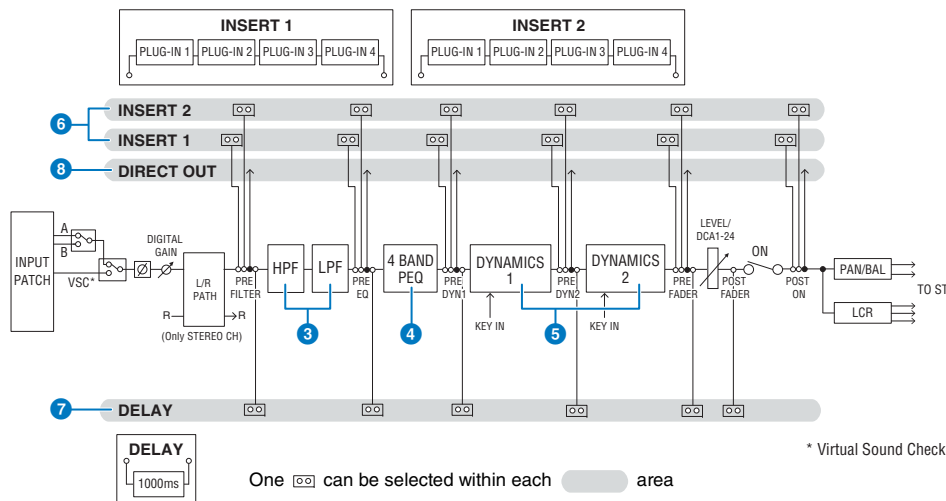
## 1 A/B input

Switches between two sources A and B that are patched to the input channel. You can use this in the following ways.

- Patch a backup circuit in advance for quick selection in an emergency.
- Quickly switch input sources depending on the performance or scene.

## 2 Virtual Sound Check

Switches all stage (I/O) inputs and DAW playback in a single operation.



## 3 Filter

### • HPF

The slope of the high-pass filter can be specified as -6 dB/oct, -12 dB/oct, -18 dB/oct, and -24 dB/oct.

### • LPF

The slope of the low-pass filter can be specified as -6 dB/oct or -12 dB/oct.

## 4 EQ

This is a four-band parametric EQ.

### • 4 BAND PEQ

The following EQ types can be selected: PRECISE, AGGRESSIVE, SMOOTH, or LEGACY. Two sets of EQ parameter settings (A and B) can be saved for convenient comparison. The FREQUENCY parameter of each band is normally set in 1/12 octave steps, but if you need more precise adjustment, you can set it in 1/24 octave steps. The two bands LOW and HIGH can be switched to L SHELF (Low Shelving) and H SHELF (High Shelving) respectively.

The available EQ types include:

### PRECISE

This EQ strives for ultimate precision and controllability. It enables you to adjust the target point precisely, and flexibly satisfies various requirements for sound making. Low/High Shelving filters feature a “Q” parameter, which enables you to adjust the knee characteristics.

### AGGRESSIVE

This EQ is musical and effective. It enables you to add a powerful, creative edge and serves as a powerful tool for artistic expression.

### SMOOTH

This EQ focuses on smooth sound qualities. It contributes to a natural sound without changing the atmosphere of the original.

### LEGACY

This is the standard EQ that has been provided on Yamaha digital mixers since the PM1D and PM5D.



**5 DYNAMICS**

Two dynamics processor modules are provided: Dynamics 1 and Dynamics 2. To each module you can assign one of six types of function such as GATE or COMP. Two types of compressor are provided: LEGACY COMP and COMP 260. Two sets of dynamics parameter settings (A and B) can be saved for convenient comparison.

The available dynamics types include:

<b>LEGACY COMP</b>	This is the standard compressor that has been provided on Yamaha digital mixers since the PM1D and PM5D.
<b>COMP 260</b>	This is an analog-flavored compressor built using Yamaha's proprietary VCM (Virtual Circuitry Modeling) technology. It emulates the characteristics of compressors and limiters of the mid-1970s, which are now a standard for live sound reinforcement. This compressor has faithfully modeled the VCA (Voltage Controlled Amplifier) circuit and the RMS (Root Mean Square) detection circuit. Compression curve (Knee) can be set to Hard, Medium, or Soft. Although the attack/release times can also be adjusted, the preset settings reproduce the fixed response of the original unit being modeled. Designed under the supervision of top SR engineers, the parameter effects have been optimized for live sound reinforcement.
<b>GATE</b>	This dynamics type reduces the output by a fixed value (RANGE) when a signal smaller than the THRESHOLD level is input.
<b>DE-ESSER</b>	This dynamics type detects only the sibilants and other high-frequency consonants of the vocal, and compresses its bandwidth.
<b>EXPANDER</b>	This dynamics type reduces the output by a fixed ratio (RATIO) when a signal smaller than the THRESHOLD level is input.
<b>DUCKING</b>	This dynamics type reduces the output by a fixed value (RANGE) when a signal greater than the THRESHOLD level is input. This is effective if you want to lower the volume level of background music using the KEY IN SOURCE signal.

**• KEY IN SOURCE**

Selects the source of the key-in signal. In addition to SELF, the key-in signal can also be selected directly from another channel or input patch.

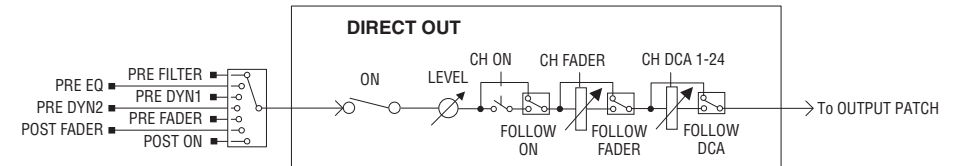
**6 INSERT**

Two inserts are provided: Insert 1 and Insert 2. In each insert, you can insert up to four plug-ins/GEQ/PEQ/external devices (via the I/O jacks). Each insert point can be selected independently for INSERT 1 and INSERT 2.

**7 DELAY**

Up to 1000 msec of delay is provided on each channel. You can freely select the delay insert point. You can select the delay time unit from the following: meter, feet, sample, msec, frame, depending on your application.

**8 DIRECT OUT**



**• DIRECT OUT POINT**

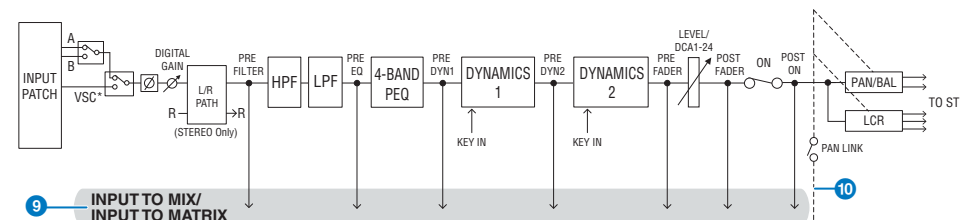
For each channel, a variety of points can be selected as the signal that is output to direct out.

**• DIRECT OUT LEVEL**

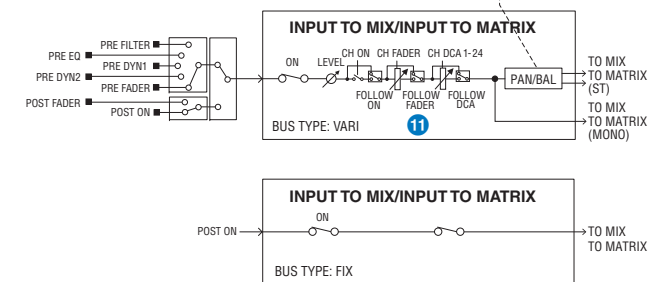
For each channel, sets the output level of direct out.

**• FOLLOW**

This function enables the direct out signal to “follow” channel parameter settings (FADER/ON/DCA) regardless of the direct out point. For example, if you want to route a signal from immediately after the HA to the direct out for recording, you can make the direct out signal follow the channel OFF setting to avoid possible noise caused by connecting or disconnecting cables or turning phantom power on or off.



\* Virtual Sound Check



## 9 INPUT TO MIX/INPUT TO MATRIX

A signal can be sent from the input channel to MIX buses 1 – 72. In addition to the conventional MIX sends, there are also direct sends to MATRIX buses 1 – 36, so by using these together you can use them as up to 108 mix buses.

### • Send Point

This allows you to flexibly select the send point for each channel.

You can set the send point selected here to PRE or POST using the PRE button. You can select each send point on the BUS SETUP screen.

PRE	POST
PRE FILTER	POST FADER
PRE EQ	POST ON
PRE DYN1	
PRE DYN2	
PRE FADER	

## 10 PAN LINK

With this setting, the signal sent from an input channel to the MIX/MATRIX bus can be made to follow the PAN of the STEREO bus send regardless of the send point.

## 11 FOLLOW

With this setting, the signal sent from an input channel to the MIX/MATRIX bus can be made to “follow” the channel FADER/ON/DCA settings regardless of the send point. For example, you can select whether or not a PRE FADER monitoring signal will follow the ON/OFF setting for the STEREO bus send.

## Pair setting

Adjacent channels can be paired and used as a stereo module. Either odd-numbered/even-numbered channels or even-numbered/odd-numbered channels can be specified as a combination. For a conventional input channel (monaural), the level response of its pan control will be nominal at center and +3 dB at far left or right.

If channels are paired, the level response of their balance will be nominal at center and +3 dB at far left or right.

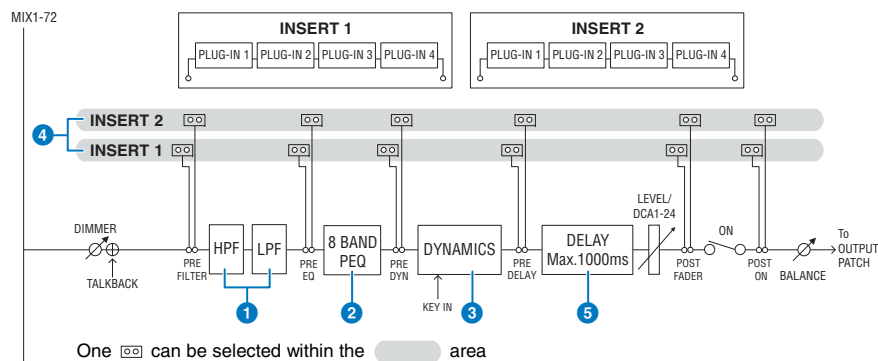
## Library

The “INPUT CHANNEL LIBRARY” lets you store and recall various input channel parameters.

# Output Channels

## Mixing Engine section

### MIX bus



#### 1 FILTER

- **HPF slope**

You can specify -6 dB/oct, -12 dB/oct, -18 dB/oct, or -24 dB/oct.

- **LPF slope**

You can specify -6 dB/oct or -12 dB/oct.

#### 2 EQ

- **8 BAND PEQ**

This is an eight-band parametric EQ. The following EQ types can be selected: PRECISE, AGGRESSIVE, SMOOTH, or LEGACY. Two sets of EQ parameter settings (A and B) can be saved for convenient comparison. The FREQUENCY parameter of each band is normally set in 1/12 octave steps, but if you need more precise adjustment, you can set it in 1/24 octave steps. Band 1 can be switched to L SHELF (Low Shelving) and band 8 can be switched to H SHELF (High Shelving).

The selectable EQ types are the same as for input channels ([page 26](#)).

#### 3 DYNAMICS

One dynamics processor module is provided. You can select a dynamics function from six types, including GATE and COMP. Two types of compressor are provided: LEGACY COMP and COMP 260. Two sets of dynamics parameter settings (A and B) can be saved for convenient comparison.

The selectable dynamics types are the same as for input channels ([page 27](#)).

- **KEY IN SOURCE**

Selects the source of the key-in signal.

In addition to SELF, the key-in signal can also be selected directly from another channel or input patch. You can use an HPF, BPF, or LPF as a KEY IN FILTER.

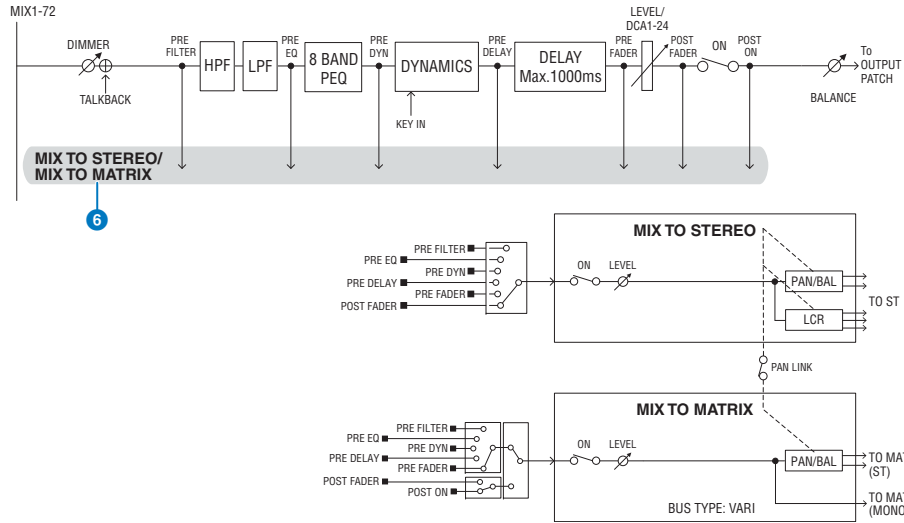
#### 4 INSERT

Two inserts are provided: Insert 1 and Insert 2. In each insert, you can insert up to four plug-ins/GEQ/PEQ/external devices (via the I/O jacks).

Each insert point can be freely specified independently.

#### 5 DELAY

Up to 1000 msec of delay is provided on each channel. The position at which the delay is inserted is fixed at pre-fader. You can select the delay time unit from the following: meter, feet, sample, msec, frame, depending on your application.



**6 MIX TO STEREO/MIX TO MATRIX**

Signals can be sent from MIX buses 1 – 72 to the STEREO bus or MATRIX buses 1 – 36.

**• Send Point (MIX TO STEREO)**

You can select the send source point for each channel from the following options.

- PRE FILTER
- PRE EQ
- PRE DYN
- PRE DELAY
- PRE FADER
- POST FADER

**• Send Point (MIX TO MATRIX)**

You can flexibly select the send source point for each channel.

You can set the send point selected here to PRE or POST using the PRE button. You can select each send point on the BUS SETUP screen.

PRE	POST
PRE FILTER	POST FADER
PRE EQ	POST ON
PRE DYN	
PRE DELAY	
PRE FADER	

**Pair setting**

You can pair adjacent odd/even MIX buses (in that order), and use them as a stereo module.

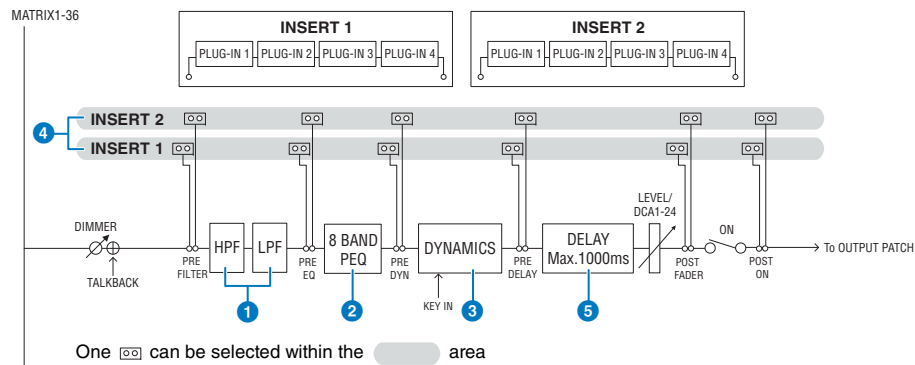
**BUS TYPE**

MIX buses can be either the FIXED type whose send level is fixed or the VARI type whose send level is variable; you can switch each odd/even-numbered pair to either type.

**Library**

The “OUTPUT CHANNEL LIBRARY” lets you store and recall various output channel parameters.

## MATRIX bus



### 1 FILTER

- **HPF slope**

You can specify -6 dB/oct, -12 dB/oct, -18 dB/oct, or -24 dB/oct.

- **LPF slope**

You can specify -6 dB/oct or -12 dB/oct.

### 2 EQ

- **8 BAND PEQ**

This is an eight-band parametric EQ. The following EQ types can be selected: PRECISE, AGGRESSIVE, SMOOTH, or LEGACY. Two sets of EQ parameter settings (A and B) can be saved for convenient comparison. The FREQUENCY parameter of each band is normally set in 1/12 octave steps, but if you need more precise adjustment, you can set it in 1/24 octave steps. The two bands LOW and HIGH can be switched to L SHELF (Low Shelving) and H SHELF (High Shelving) respectively.

The selectable EQ types are the same as for input channels ([page 26](#)).

### 3 DYNAMICS

One dynamics processor module is provided. You can select a dynamics function from six types, including GATE and COMP. Two types of compressor are provided: LEGACY COMP and COMP 260. Two sets of dynamics parameter settings (A and B) can be saved for convenient comparison.

The selectable dynamics types are the same as for input channels ([page 27](#)).

- **KEY IN SOURCE**

Selects the source of the key-in signal.

In addition to SELF, the key-in signal can also be selected directly from another channel or input patch. You can use an HPF, BPF, or LPF as a KEY IN FILTER.

### 4 INSERT

Two inserts are provided: Insert 1 and Insert 2. In each insert, you can insert up to four plug-ins/GEQ/PEQ/external devices (via the I/O jacks).

Each insert point can be freely specified independently.

### 5 DELAY

Up to 1000 msec of delay is provided on each channel. The position at which the delay is inserted is fixed at pre-fader. You can select the delay time unit from the following: meter, feet, sample, msec, frame, depending on your application.

## Pair setting

Adjacent channels can be paired and used as a stereo module.

Adjacent odd/even MATRIX buses (in that order) can be specified as a pair.

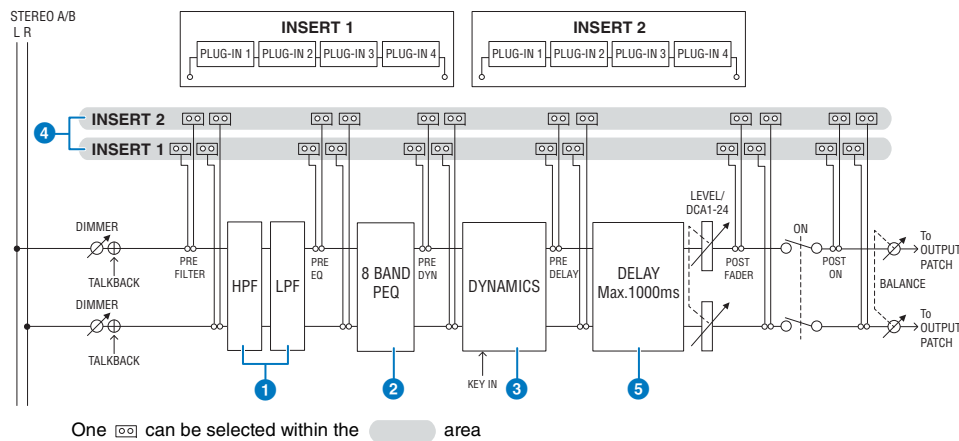
## Library

The “OUTPUT CHANNEL LIBRARY” lets you store and recall various output channel parameters.

## BUS TYPE

MATRIX buses are only VARI type.

## STEREO bus



### 1 FILTER

- **HPF slope**

You can specify -6 dB/oct, -12 dB/oct, -18 dB/oct, or -24 dB/oct.

- **LPF slope**

You can specify -6 dB/oct or -12 dB/oct.

### 2 EQ

- **8 BAND PEQ**

This is an eight-band parametric EQ. The following EQ types can be selected: PRECISE, AGGRESSIVE, SMOOTH, or LEGACY. Two sets of EQ parameter settings (A and B) can be saved for convenient comparison. The FREQUENCY parameter of each band is normally set in 1/12 octave steps, but if you need more precise adjustment, you can set it in 1/24 octave steps. The two bands LOW and HIGH can be switched to L SHELF (Low Shelving) and H SHELF (High Shelving) respectively.

The selectable EQ types are the same as for input channels ([page 26](#)).

### 3 DYNAMICS

One dynamics processor module is provided. You can select a dynamics function from six types, including GATE and COMP. Two types of compressor are provided: LEGACY COMP and COMP 260. Two sets of dynamics parameter settings (A and B) can be saved for convenient comparison.

The selectable dynamics types are the same as for input channels ([page 27](#)).

- **KEY IN SOURCE**

Selects the source of the key-in signal.

In addition to SELF, the key-in signal can also be selected directly from another channel or input patch. You can use an HPF, BPF, or LPF as a KEY IN FILTER.

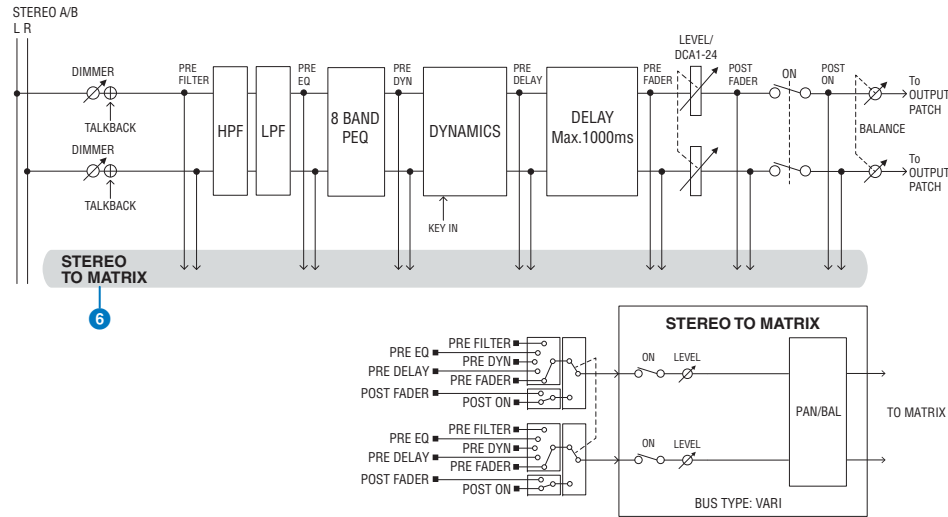
### 4 INSERT

Two inserts are provided: Insert 1 and Insert 2. In each insert, you can insert up to four plug-ins/GEQ/PEQ/external devices (via the I/O jacks).

Each insert point can be freely specified independently.

### 5 DELAY

Up to 1000 msec of delay is provided on each channel. The position at which the delay is inserted is fixed at pre-fader. You can select the delay time unit from the following: meter, feet, sample, msec, frame, depending on your application.



## 6 STEREO TO MATRIX

A signal can be sent from the STEREO channel to MATRIX buses 1 – 36.

### • Send Point

This allows you to flexibly select the send point for each channel.

You can set the send point selected here to PRE or POST using the PRE button. You can select each send point on the BUS SETUP screen.

PRE	POST
PRE FILTER	POST FADER
PRE EQ	POST ON
PRE DYN	
PRE DELAY	
PRE FADER	

## Library

The “OUTPUT CHANNEL LIBRARY” lets you store and recall various output channel parameters.

## MONO

STEREO B can be set to MONO. If it is set to MONO, the same signal is sent to L and R of STEREO B.

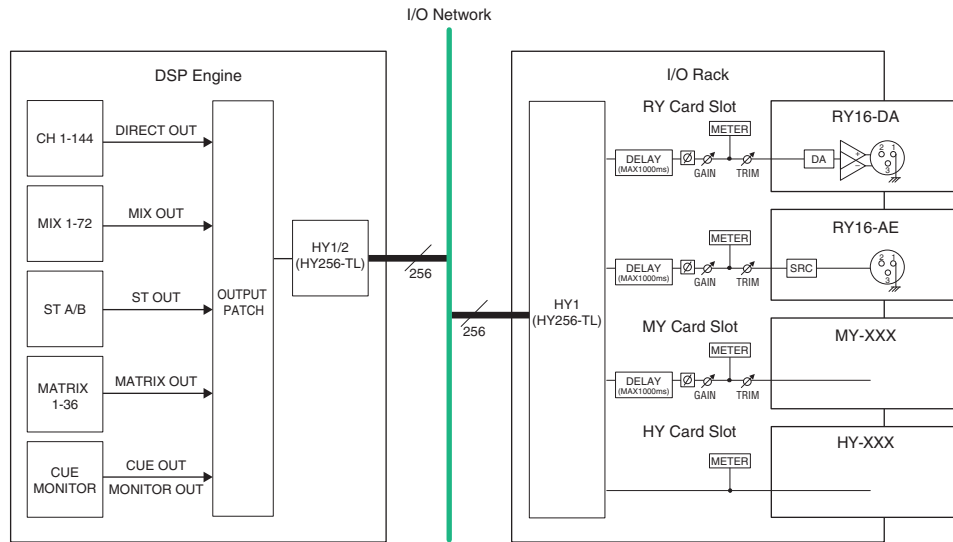
This is also used as the CENTER channel of LCR. If it is set to MONO, the same signal is sent to L and R of STEREO B.

## LCR

By using STEREO A as L/R and STEREO B (set to MONO) as CENTER, the two stereo buses can be used as an LCR bus.

# I/O unit section

DELAY, GAIN, and PORT TRIM can be specified for the output signal from the output channel.



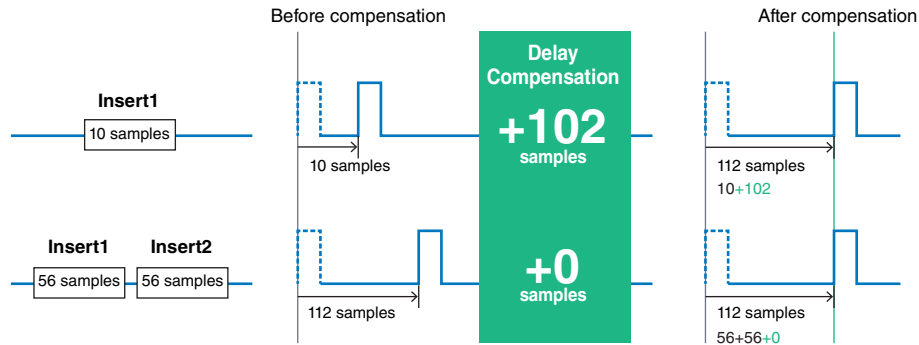


# Delay Compensation

Differences in delay between channels will be caused by DSP processing such as an inserted plug-in or GEQ, or by differences in routing. Delay Compensation is a function that automatically matches the timing of these delays.

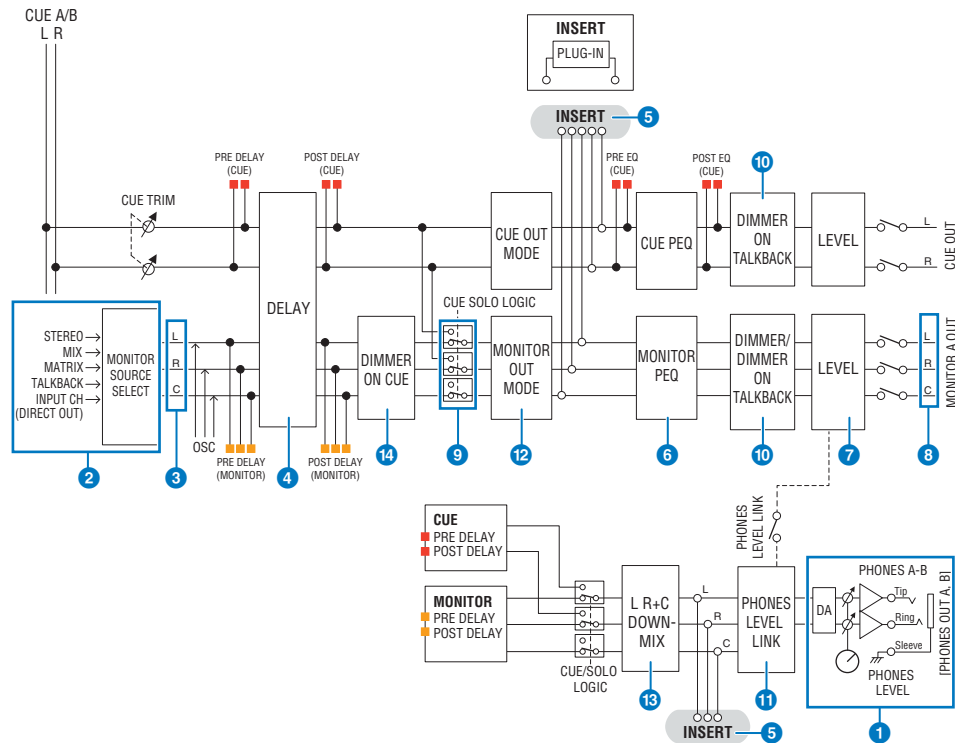
The maximum delay is estimated, and the appropriate amount of delay is added to each channel as compensation.

## Delay caused by inserts in input channels (example)



# Monitor

Two sets of monitor output are provided, MONITOR A and MONITOR B, and you can independently select the monitor source and adjust the output level for each.



## Number of systems

There are two sets of monitor output, MONITOR A and MONITOR B.

### 1 Headphone output

Two headphone outputs are provided, PHONES A and PHONES B.

### 2 Input selector

You can provide eight sources to be monitored, and switch between them. The signals of up to eight channels can be assigned to one monitor source. You can select not only channel or bus signals, but signals directly from input patches as monitor signals.

### 3 Monitor circuit structure

This consists of three channels: L-channel, R-channel, and CENTER channel.

### 4 DELAY

Allows the monitor signal to be delayed. You can specify up to 1000 msec. You can select the delay time unit from the following: meter, feet, sample, msec, frame, depending on your application.

### 5 INSERT

A plug-in, GEQ, or PEQ can be inserted. The insert point is fixed at PRE EQ (immediately before the EQ). An insert point is also provided for the PHONES OUT.

### 6 PEQ

The monitor section provides an 8-band parametric EQ specialized for monitoring.

### 7 MONITOR LEVEL

The MONITOR OUT L-channel, R-channel, and CENTER channel output levels can be adjusted. The monitor level can also be assigned to a fader.

### 8 Output structure

- L-channel, R-channel, and CENTER channel of MONITOR A
- L-channel, R-channel, and CENTER channel of MONITOR B

### 9 CUE SOLO LOGIC

Causes the CUE signal to interrupt the monitor output when CUE is active. The CENTER channel can be turned on/off independently.

### 10 DIMMER ON TALKBACK

Attenuates the monitor signal by a fixed amount.

### 11 PHONES LEVEL LINK

The level of the signal sent to the PHONES A/PHONES B jacks is linked with the MONITOR A/MONITOR B LEVEL.

### 12 MONITOR OUT MODE

Downmixes the L/R signals to monaural. This also downmixes the L/R/C signals to L/R.

### 13 L R+C DOWNMIX

Allows you to downmix the L/R/C signals to L/R.

### 14 DIMMER ON CUE

When the CUE signal has interrupted the monitor output, this attenuates the signal that is being input to the monitor.

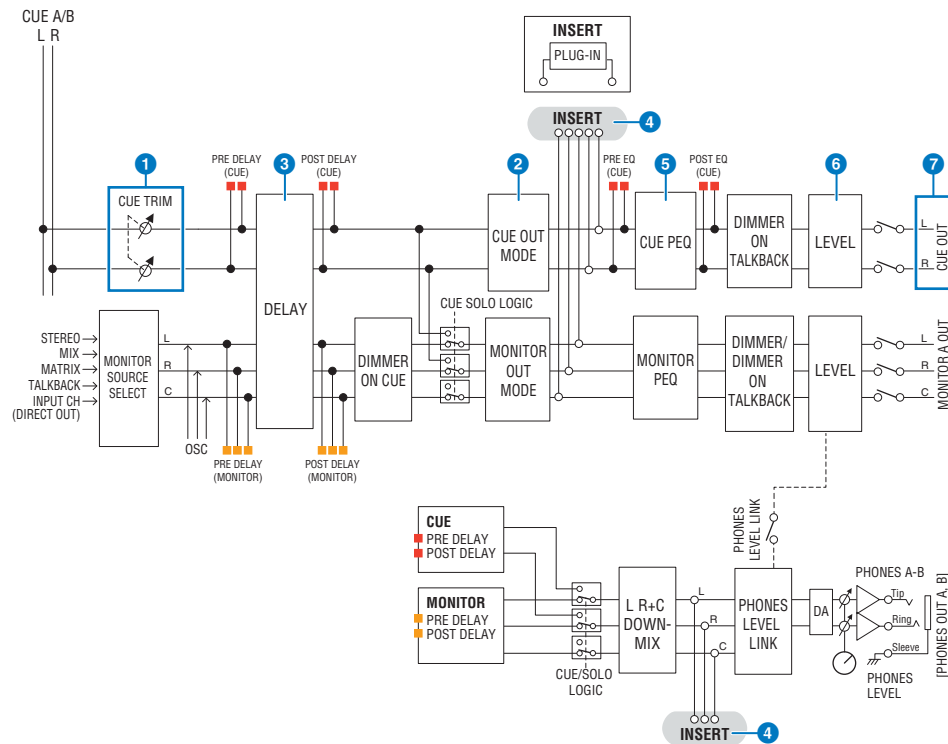
## NOTE

Monitor assignments and on/off switching can also be assigned to a USER DEFINED key.

## Cue

In order to check the sound of a selected individual channel or DCA, you can output it to MONITOR OUT, CUE OUT, or PHONES OUT for auditioning.

The RIVAGE PM series provides two cue outputs, CUE A and CUE B.



### Number of systems

The RIVAGE PM10 features two cue outputs: CUE A and CUE B.

### Structure of the cue circuit

The cue circuit is stereo, with an L-channel and R-channel.

#### 1 CUE TRIM

INPUT CUE/OUTPUT CUE specify the monitor level when PFL is selected.

DCA CUE specifies the monitor level when DCA is cued. DCA UNITY lets you monitor each DCA at unity gain (the same level as when the DCA fader is set to 0 dB).

#### 2 CUE OUT MODE

Downmixes the L/R signals to monaural.

#### 3 DELAY

Allows you to delay the cue signal. You can specify up to 1000 msec.

#### 4 INSERT

A plug-in, GEQ, or PEQ can be inserted. This is a single insert point which is fixed at PRE EQ (immediately before the EQ).

#### 5 PEQ

A dedicated 8-band parametric EQ for the cue is provided.

#### 6 CUE LEVEL

This adjusts the output level of the CUE channel. The CUE level can also be assigned to a fader.

#### 7 Output structure

- L-channel and R-channel of CUE A
- L-channel and R-channel of CUE B

### CUE MODE

You can select either MIX CUE or LAST CUE as the cue mode.

**MIX CUE:** All selected channels will be mixed and auditioned.

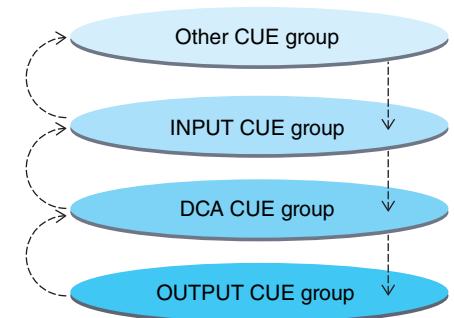
**LAST CUE:** Only most recently selected channel will be auditioned.

### CUE stack

Cue signals are divided into four groups: INPUT CUE group, DCA CUE group, OUTPUT CUE group, and other CUE group.

The illustration on the right shows the priority of the [CUE] keys.

After you have switched groups from lower to upper levels, if you then defeat cue for the upper group, the previous [CUE] key status of the group immediately below will be restored. For example, if you switch groups in the order of OUTPUT CUE group → DCA CUE group → INPUT CUE group → Other CUE group, you can then successively defeat the [CUE] keys (CUE/KEY IN CUE buttons) to successively restore the [CUE] key status of the previously-selected group.



### CUE/SEL LINK

The [SEL] keys can be linked to the [CUE] key that is pressed. For more information, refer to Part 2.

## SOLO

“Solo” is a function that outputs only the signal of a specific input channel or output channel. Only the signal of the channel whose [CUE] key is pressed is output, and the other channels are muted. The signal of a channel whose [CUE] key is pressed can also be monitored from the CUE OUT jacks, MONITOR OUT jacks, and PHONES jack.

- **SOLO SAFE**

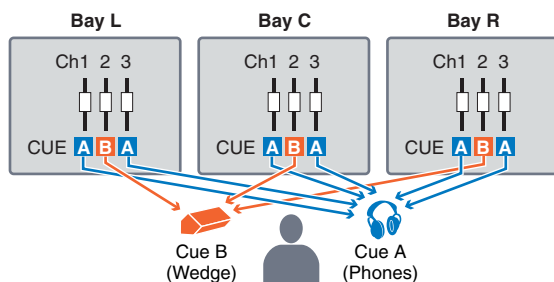
As necessary, you can select channels that will not be muted when Solo is performed.

## Channel Mode/Bay Mode

You can choose one of two modes: “Channel Mode” which lets you specify the CUE A/B destination of each channel, and “Bay Mode” which lets you specify the cue destination of each control surface bay being operated. The choice of Channel Mode or Bay Mode is made in the PREFERENCES page.

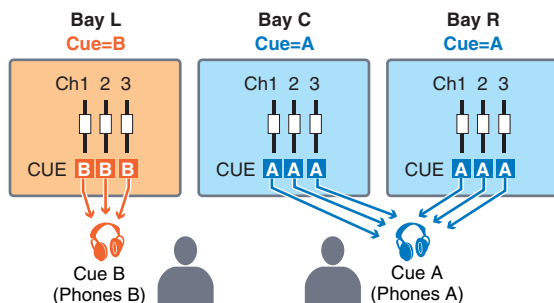
- **Channel Mode**

This mode assumes that one operator is using two cue buses separately. Each channel’s cue audio destination (Cue A, B, A+B) can be specified individually.



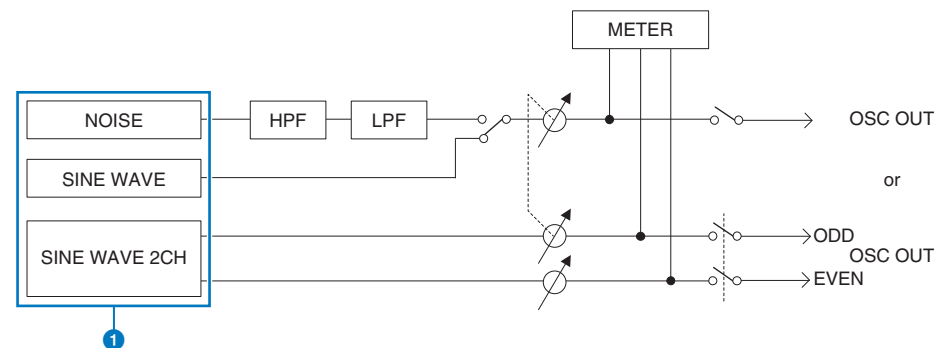
- **Bay Mode**

This mode assumes two operators will operate the system. You can specify the cue destination (CUE A and B) for each Bay.



# Oscillator

The RIVAGE PM10 features two oscillators that output individual sine waves with different frequencies to the desired channels. Also, LPF and HPF are provided for noise output.



**1 Oscillator operation mode**

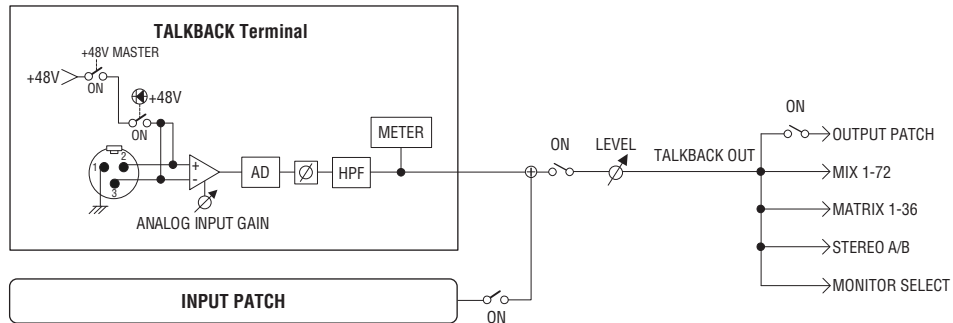
- SINE WAVE
- SINE WAVE 2CH
- NOISE (PINK NOISE/BURST NOISE)

**NOTE**

Oscillator assignments and on/off switching can also be assigned to a USER DEFINED key.

## Talkback

As a talkback input, you can select any input jack from input patches, as well as the TALKBACK jack on the top panel of the Control Surface.



### TALKBACK DIMMER

The dimmer function temporarily attenuates the monitor signal level when talkback is on. Two types of talkback dimmer are provided.

- Talkback dimmer for monitor out**  
 Temporarily attenuates the monitor out volume so that the sound from the monitor speakers will not interfere with the input of the talkback mic.
- Talkback dimmer for MIX, MATRIX, and STEREO**  
 Temporarily attenuates the volume of each MIX, MATRIX, and STEREO bus output signal so that excessive output from these buses will not make the talkback inaudible.

## DCA/Mute Groups

The RIVAGE PM series provides 24 DCAs and 12 mute groups. A group name can be assigned to each DCA and mute group.

### ■ DCA

DCA 1 – 24 can be used with both input channels and output channels. Both types of channel can exist in the same group.

#### NOTE

DCA settings can be saved and recalled using the dedicated library. The library contains channel information for the channels that belong to the DCA, and the name and color of the DCA.

- **DCA Cue**  
Allows you to cue the channels belonging to the DCA in a single operation.
- **DCA Unity**  
Allows you to monitor the corresponding DCA at unity gain (the same level as when the DCA fader is set to 0 dB).
- **DCA ROLL-OUT**  
The channels belonging to the DCA are temporarily assigned to the panel faders, allowing them to be operated individually.

### ■ Mute groups

Mute groups 1 – 12 can be used with both input channels and output channels. Both types of channel can exist in the same group.

- **Mute Safe**  
Specific channels that belong to a mute group can be temporarily excluded from mute group operations.
- **Mute Dimmer**  
A fixed amount of attenuation can be specified for each mute group.

#### NOTE

Mute settings can be saved and recalled using the dedicated library. The library contains channel information for the channels that belong to the mute group, and the name of the mute group.

## GEQ/PEQ/Automixer

The RIVAGE PM series provides 31-band GEQ, Flex15 GEQ, 8-band PEQ and Automixer. Each type can be used by inserting it in an insert point.

EQ Type	Number usable
31BandGEQ	48
Flex15GEQ	96
8 Band PEQ	96
Automixer	1

### ■ GEQ

#### • GEQ TYPE

You can use two types of GEQ: 31-band GEQ which enables you to freely adjust thirty-one bands (frequency regions), and Flex15 GEQ which enables you to adjust any fifteen of thirty-one bands. If you are using a stereo source, link two GEQ units.

#### • RTA

You can use a 1/12 octave (121 band) realtime analyzer (also known as a spectrum analyzer).

#### • Gain range

You can select  $\pm 15$  dB,  $\pm 12$  dB,  $\pm 6$  dB (boost or cut), or  $-24$  dB (cut only).

### ■ PEQ

#### • 8 Band PEQ

You can use an eight-band parametric EQ. Four notch filters are also provided.

#### • RTA

You can use a 1/12 octave (121 band) realtime analyzer (also known as a spectrum analyzer).

#### NOTE

Notch filters A – D are independent of the PEQ, and are not affected by the BYPASS buttons of the PEQ. You can also bypass the PEQ and use only the notch filters.

### ■ Automixer

The Automixer function provides 64- or 32-channel high-clarity sound mixing, and automatically adjusts the microphone input levels when multiple people are speaking.

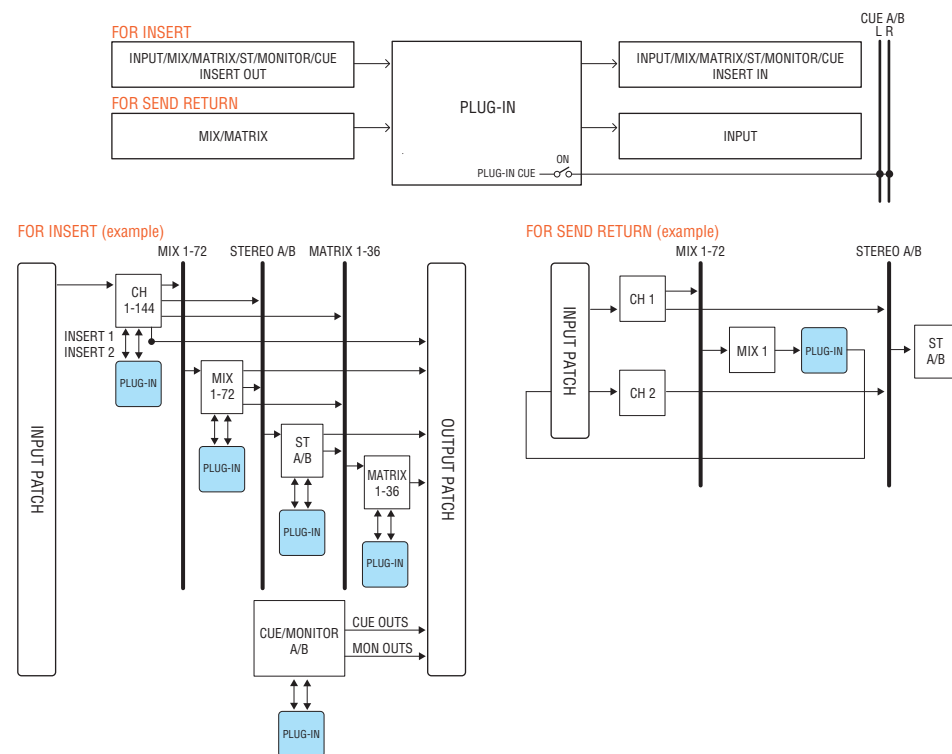
# Plug-ins

Plug-ins can be used by inserting them into a channel, or via send/return. The RIVAGE PM series provides 50 types of plug-in, including the Rupert EQ 773 and Rupert Comp 830 designed in a collaboration with Rupert Neve Designs, and the VSS4HD and NonLin 2 made by TC Electronic.

The maximum number of plug-ins that can be mounted depends on the type of plug-in. For example in the case of the Portico EQ or Portico Comp, up to 192 units can be used. For details on the amount of DSP resources that can be used for each plug-in, refer to the plug-in type list.

The following functionality is also provided.

- The plug-in mount status and parameters can be saved in scene memory.
- There is a “PLUG-IN LIBRARY” that lets you store and recall plug-in parameters.
- Tap tempo functionality can be used for plug-ins that support it. Tap tempo can be used via a USER DEFINED key or GPI.



# Plug-in type list

Plug-in type	Explanation	Amount of DSP resources	Tap tempo function
<b>REV-X</b>	A 2-in/2-out reverb algorithm that provides a high-density, richly reverberant sound quality, smooth decay, and spaciousness and depth that enhance the original sound. You can choose one of three programs to suit the acoustic environment and your purpose: REV-X Hall, REV-X Room, and REV-X Plate.	6	–
<b>VSS4HD</b>	Room simulation reverb by the TC Electronic. A variety of reflection settings provide a musical-sounding reverberation that gives you detailed control of room size and distance to the walls.	16	–
<b>NonLin 2</b>	Stereo reverb effect by the TC Electronic. As a gate reverb that uses an envelope filter and does not require a trigger, this can be used in a variety of creative applications.	16	–
<b>Reverb</b>	Yamaha’s legendary 1-in/2-out SPX reverb. You can choose one of four programs to suit the acoustic environment and your purpose: HALL, ROOM, STAGE, and PLATE.	5	–
<b>Stereo Reverb</b>	2-in/2-out stereo reverb.	6	–
<b>Early Ref.</b>	1-in/2-out early reflections.	7	–
<b>Gate Reverb</b>	1-in/2-out gate reverb. You can choose from two types: Gate Reverb and Reverse Gate.	7	–
<b>Mono Delay</b>	Basic 1-in/2-out repeat delay.	3	✓
<b>Stereo Delay</b>	Basic 2-in/2-out stereo delay.	3	✓
<b>Mod.Delay</b>	Simple 1-in/2-out repeat delay with modulation.	4	✓
<b>Delay LCR</b>	1-in/2-out 3-tap delay.	4	✓
<b>Echo</b>	2-in/2-out stereo delay with cross-feedback loop.	4	✓
<b>Analog Delay</b>	This delay effect is based on the Yamaha E1010 analog delay.	4	✓
<b>Chorus</b>	2-in/2-out chorus effect.	4	✓
<b>Flange</b>	2-in/2-out flange effect.	4	✓

Plug-in type	Explanation	Amount of DSP resources	Tap tempo function
<b>Symphonic</b>	Yamaha's proprietary 2-in/2-out symphonic effect, providing a modulation effect that is richer and more complex than chorus.	5	✓
<b>Dyna.Flange</b>	Flanger that changes the delay time according to the input level.	2	–
<b>Dyna.Phaser</b>	Stereo phaser that uses 16-stage phase shift.	2	–
<b>Phaser</b>	Phaser that changes the phase shift point according to the input level.	2	✓
<b>Max100</b>	Complete reproduction of a vintage effect that was manufactured only during the late 1970s.	1	✓
<b>Dual Phaser</b>	Complete reproduction of a vintage effect that was manufactured during the middle of the 1970s.	1	✓
<b>Vintage Phaser</b>	Phaser that provides a high degree of sound-shaping flexibility, and is not intended as a reproduction of any specific model.	2	✓
<b>HQ.Pitch</b>	Monaural pitch shifter that produces a stable effect.	4	✓
<b>Dual Pitch</b>	1-in/2-out high-quality pitch shifter.	4	✓
<b>H3000 Live</b>	This is a newly-developed harmonizer that offers the same performance as the Eventide H3000 Ultra-Harmonizer optimized for live-sound applications.	12	–
<b>Tremolo</b>	2-in/2-out tremolo effect.	2	✓
<b>Auto Pan</b>	2-in/2-out auto pan effect.	2	✓
<b>Rotary</b>	1-in/2-out rotary speaker simulation.	5	–
<b>Ring Mod.</b>	2-in/2-out ring modulator.	2	✓
<b>Mod.Filter</b>	2-in/2-out modulation filter.	2	✓
<b>Dyna.Filter</b>	2-in/2-out dynamic filter that changes the cutoff frequency according to the input level.	2	–
<b>Rupert EQ 773</b> <b>Dual Stereo</b>	Models a console EQ module that Rupert Neve designed in the 1970s.	3	–
<b>Rupert EQ 810</b> <b>Dual Stereo</b>	Models a console EQ module that Rupert Neve designed in the 1980s.	3	–

Plug-in type	Explanation	Amount of DSP resources	Tap tempo function
<b>Portico5033</b> <b>Dual Stereo</b>	Models an analog 5-band EQ made by the Rupert Neve Designs.	2	–
<b>EQ-1A</b> <b>Dual Stereo</b>	Models a classic vacuum tube passive-type vintage EQ.	3	–
<b>Equalizer601</b>	Equalizer that emulates the characteristics of an analog equalizer used in the 1970s. It can be used to obtain a sense of drive.	2	–
<b>DynamicEQ</b> <b>Dual Stereo</b>	EQ that dynamically changes the gain, allowing the cut/boost amount to be controlled in response to the input level.	2	–
<b>Dynamic EQ4</b> <b>Dual Stereo</b>	Dynamic EQ4 is a two-band dynamic equalizer that has been expanded to feature four bands.	3	–
<b>Rupert Comp 754</b> <b>Dual Stereo</b>	Models a console compressor/limiter module that Rupert Neve designed in the 1970s.	3	–
<b>Rupert Comp 830</b> <b>Dual Stereo</b>	Models a console compressor/limiter module that Rupert Neve designed in the 1980s.	3	–
<b>Portico 5043</b> <b>Dual Stereo</b>	Models an analog compressor/limiter made by the Rupert Neve Designs.	2	–
<b>Portico 5045</b> <b>Dual Stereo</b>	Models the Primary Source Enhancer made by Rupert Neve Designs.	2	–
<b>U76</b> <b>Dual Stereo</b>	Models a classic vintage compressor/limiter.	3	–
<b>Opt-2A</b> <b>Dual Stereo</b>	Models a classic vacuum tube (optical type) compressor.	4	–
<b>Comp276</b> <b>Comp276S</b>	This compressor emulates the characteristics of an FET compressor commonly used in recording studios.	2	–
<b>Buss Comp 369</b> <b>Dual Stereo</b>	This compressor emulates a standard bus compressor that has been used in recording studios and broadcasting stations.	3	–
<b>MBC4</b> <b>Dual Stereo</b>	This four-band compressor offers intuitive operability.	3	–
<b>Distortion</b>	1-in/2-out distortion effect.	2	–
<b>Amp Simulate</b>	1-in/2-out guitar amp simulator.	3	–



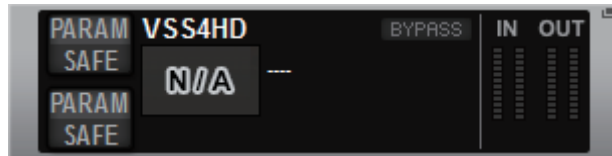
Plug-in type	Explanation	Amount of DSP resources	Tap tempo function
OpenDeck	This mastering plug-in emulates the tape compression created by two open reel tape recorders (a recording deck and a reproduction deck).	4	-

**NOTE**

Plug-ins are categorized into two types: Dual plug-ins that are used by two monaural channels; and Stereo plug-ins that are used by one stereo channel.

### Unavailable Plug-in

Some plug-ins (VSS4HD and NonLin2) cannot be used on the CSD-R7.

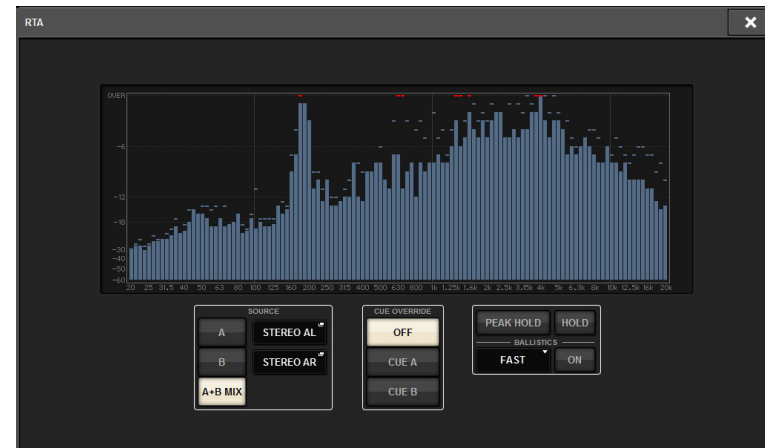


These are shown for the sake of file compatibility with the RIVAGE PM10 series, but will not perform audio processing. They can be changed to another plug-in or unmounted.

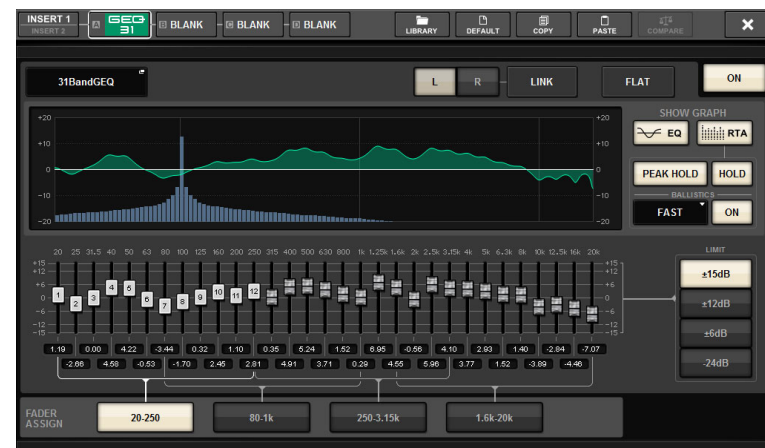
## RTA (Realtime Analyzer)

The RIVAGE PM series provides a 121-band realtime analyzer (also known as a spectrum analyzer). The RTA can be displayed in a dedicated RTA screen, or displayed in the GEQ/PEQ settings screen or EQ settings screen.

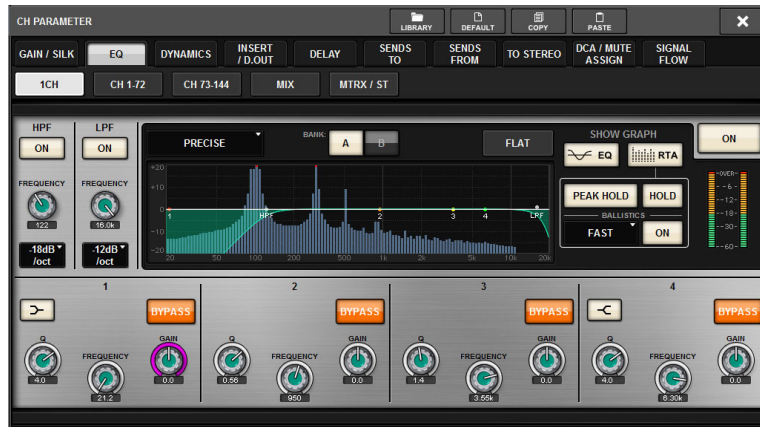
### ■ Dedicated RTA screen



### ■ RTA display screen in GEQ/PEQ settings



### ■ RTA display screen in EQ settings



## Recording

### 2-track USB recorder

The RIVAGE PM series features an easy-to-use 2-track USB recorder.

The 2-track USB recorder enables you to record output signals from the STEREO bus or a MIX bus to a connected USB flash drive. You can also use it to play background music or sound effects that are stored on a USB flash drive by assigning them to an input channel. Due to a built-in SRC (sampling rate converter), as well as the input and output from the 2-track USB recorder, you do not have to worry about differences in sampling rates between the system and the recording/playback files. If the system's sampling rate is the same as that of the recording/playback files, the SRC will automatically be bypassed.

The RIVAGE PM series supports WAV (uncompressed PCM) and MP3 (MPEG-1 Audio Layer-3) file formats for recording and playback.

#### ■ Supported recording format

##### WAV files

- Bit depth: 16-bit/24-bit
- Sampling rate: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz

##### MP3 files

- Bit rate: 192 kbps, 256 kbps, 320 kbps
- Sampling rate: 44.1 kHz, 48 kHz

#### ■ Supported playback format

##### WAV files

- Bit depth: 16-bit/24-bit
- Sampling rate: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz

##### MP3 files

- Bit rate: No restriction.
- Sampling rate: 44.1 kHz, 48 kHz

#### ■ Title list

You can change the order of the audio files shown in the title list, and play them repeatedly in a desired order.

## Multitrack recording and virtual sound check

The RIVAGE PM series supports multitrack recording via a Dante network.

To perform multitrack recording, you must install an HY144-D card (maximum 144-in/144-out) in HY card slot 4 of the DSP engine (in the case of the CSD-R7, in HY card slot 3), and then record using DAW software on your Dante network-connected computer.

If your computer already has a Dante Accelerator (AIC128-D) installed, you can perform up to 128-in/128-out (Fs=96 kHz), high-resolution recording.

If you use Dante Virtual Soundcard (DVS), you can perform up to 64-in/64-out\* (FS=48 kHz) recording.

Materials that were recorded by multitrack recording can be used for virtual sound check. For example, you can record a rehearsal session the day before the concert, and use that recording for sound check on the day of the concert. This “virtual sound check” will reduce the burden on both musicians and sound engineers, and will help them get ready efficiently.

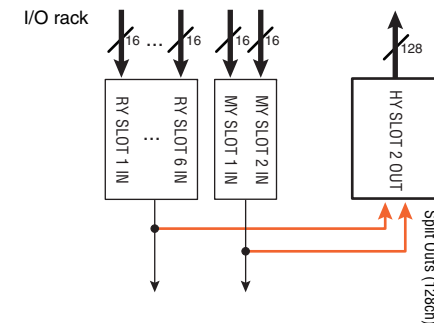
\* The number of channels available for recording and playback varies depending on the specifications of the computer that has the DAW installed.

#### • RECORDING PATCH

HY card slot 4 on the DSP engine (on the CSD-R7, HY card slot 3) is used for multitrack recording exclusively; HY card slot 4 features the Recording Patch function for recording and playback. If you select channels into which you want to perform multitrack recording, the Direct Out of the selected channels will be automatically assigned. Since these can be switched to playback patching in a single operation, the DAW playback can be used for a virtual sound check.

#### • Recording using Split Out

In addition, in mode 1, all input signals (total 128 channels) of the RY slots and MY slots are always split for output from the HY SLOT 2 output of the I/O rack. This allows the input from the I/O rack to be recorded directly to a DAW.

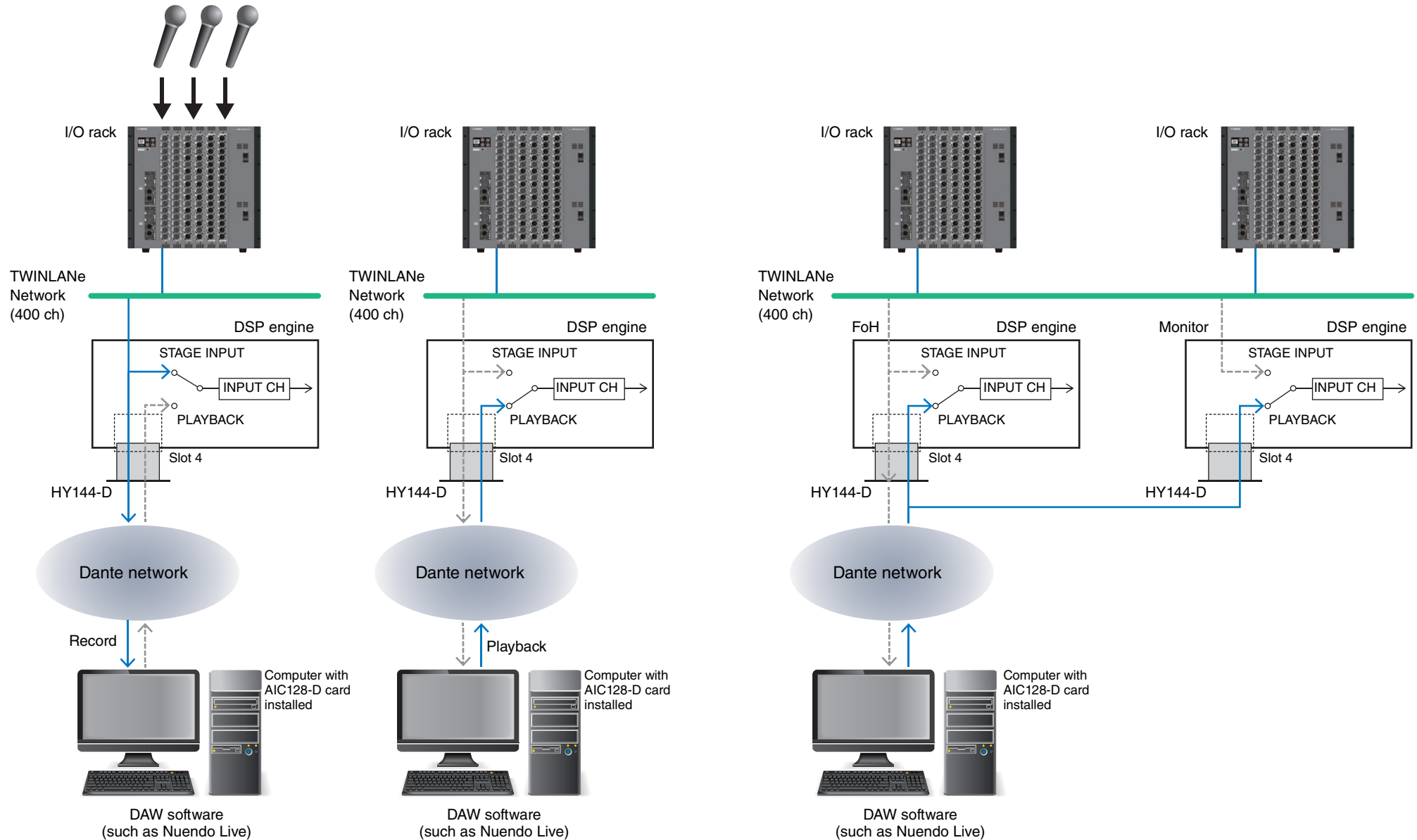


Conceptual diagram of recording system for a virtual sound check (an example)

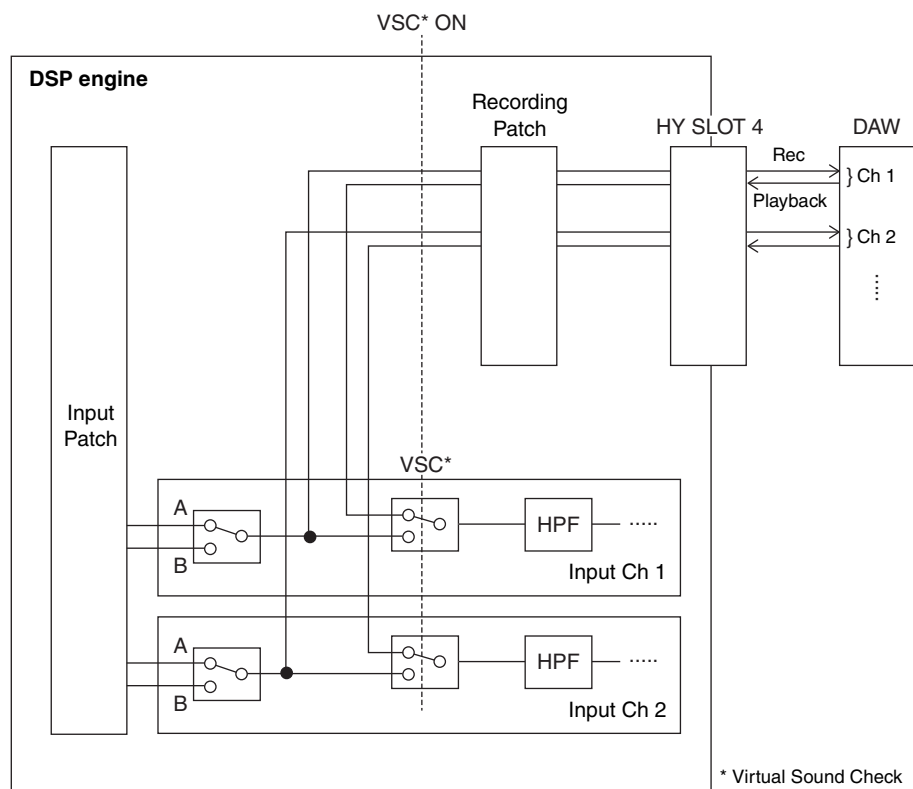
■ During recording

■ During playback

■ Sharing the playback from the DAW with FoH/Monitor



## Signal flow during a virtual sound check (VSC)



- Each channel can individually be set to ON/OFF when switching to virtual sound check. This allows a virtual sound check that mixes playback from the recorder with actual stage inputs.

## MIDI/GPI/Time Code

The MIDI connectors, GPI connectors, or TC IN connectors of the control surface or DSP engine can be used to control mixer parameters or scene recall from an external device. Parameter operations on the mixer can also be used to control an external device.

### ■ MIDI

The RIVAGE PM series can use MIDI to perform the following operations.

- **Program Change transmission and reception**

When you recall a specific scene on the RIVAGE PM series, a Program Change message of the corresponding number can be transmitted to an external device. Conversely, the corresponding scene can be recalled when the corresponding Program Change message is received from an external device.

- **Control Change transmission and reception**

When you execute a specific fader, knob, or key operation on the RIVAGE PM series, the corresponding Control Change message can be transmitted to an external device. Conversely, the corresponding fader, knob, or key operation can be executed when Control Change messages are received from an external device. This capability can be used to record fader and key operations on a MIDI sequencer or other external device, and play back the data later.

- **Receiving MMC**

MMC (MIDI Machine Control) can be received on the system. This can be used to control the 2-track USB recorder on a control surface that is set as the receiving port.

- **Receiving MIDI clock**

MIDI clock can be used to set the delay time for the plug-in.

### ■ GPI

The GPI connector on the rear panel of the control surface and the DSP engine can be used as a GPI (General Purpose Interface) input/output connector. This connector provides eight GPI IN ports and eight GPI OUT ports. For example you can use an external switch to control internal parameters of the RIVAGE PM series or to switch scenes. Conversely, operations or scene changes performed on the RIVAGE PM series can send control signals to an external device.

### ■ Time code

The TC IN connector located on the rear panel of the DSP engine or the CSD-R7 is an input connector for receiving time code signals from an external device. A scene or library item registered in the event list function can be recalled when time code received via the TC IN connector reaches a specified time.

## Customization

The RIVAGE PM series lets you customize the working environment to your preferences. The main customizations are as follows.

- **USER DEFINED KEYS**

You can assign functions to the top panel USER DEFINED keys, and use them to execute those functions.

For example, you could assign a USER DEFINED key to recall a scene of a specific number; when you press that USER DEFINED key, the specific scene number is directly recalled.

For details on the assignable functions and their parameters, refer to the data list.

- **USER DEFINED KNOBS**

You can assign functions to the top panel USER DEFINED knobs, and use them to execute those functions.

For example, you could assign a USER DEFINED knob as the MIX SEND of a specific channel, and then operate that USER DEFINED knob to directly change the reverb send of a vocal channel.

For details on the assignable functions and their parameters, refer to the data list.

- **CH STRIP ENCODERS**

You can assign a function to the channel strip encoder on the fader strip of each channel, and use them to control the function.

For example if DIGITAL GAIN is assigned to the channel strip encoder, you can use the Selected Channel section to adjust the analog gain while using the fader strip to directly access the digital gain as well.

For details on the assignable functions and their parameters, refer to Part 2.

- **PREFERENCES**

You can enable or disable the confirmation message that appears when you recall or store a scene, and make other preference settings such as linking CUE and SEL key on/off operations. For details on the preference settings, refer to Part 2.

- **Fn KEYS**

You can assign a function to the Fn keys on the fader strip of each channel, and control that function.

For example you could assign ISOLATE to the Fn keys, and use them to directly change the ISOLATE status of a channel controlled by the fader strip.

For details on the assignable functions and their parameters, refer to Part 2.

- **CUSTOM FADER BANK**

For each bay, there are 12 custom fader banks that allow you to combine channels regardless of their type.

- **BAY LINK**

You can also link layer selections from multiple bays, if necessary. For more information, refer to Part 2.

## Settings Files

Settings data of a system based on the RIVAGE PM series can be saved on a USB flash drive as a settings file. The settings file will have a file name extension of “.PM10ALL” (for the CSD-R7, it will be “.PM7ALL”).

The settings file contains all data such as scenes, libraries, and system setup.

### Data handled by a settings file

★ indicates data stored in scene memory

SYSTEM SETUP		
	<b>SYSTEM CONFIG</b>	System settings (TWINLANe bandwidth settings, settings for the units that are part of the system)
★	<b>BUS SETUP</b>	Bus settings
	<b>MIDI/GPI</b>	MIDI/GPI settings
ENVIRONMENTAL		
	<b>CUSTOM FADER</b>	Custom fader bank settings
	<b>USER DEFINED KEYS</b>	USER DEFINED KEYS function assignments
	<b>USER DEFINED KNOBS</b>	USER DEFINED KNOBS function assignments
	<b>PREFERENCES</b>	Settings for the operating environment
	<b>BRIGHTNESS/ CONTRAST</b>	Settings such as display brightness and contrast
PATCH		
★	<b>INPUT</b>	Input port patching settings
★	<b>OUTPUT</b>	Output port patching settings
★	<b>INSERT</b>	Insert patching settings
★	<b>DIRECT OUT</b>	Patching settings for output ports that perform direct output
	<b>PORT TO PORT</b>	Patching settings for Port to port
★	<b>RECORDING</b>	Patching settings for recording

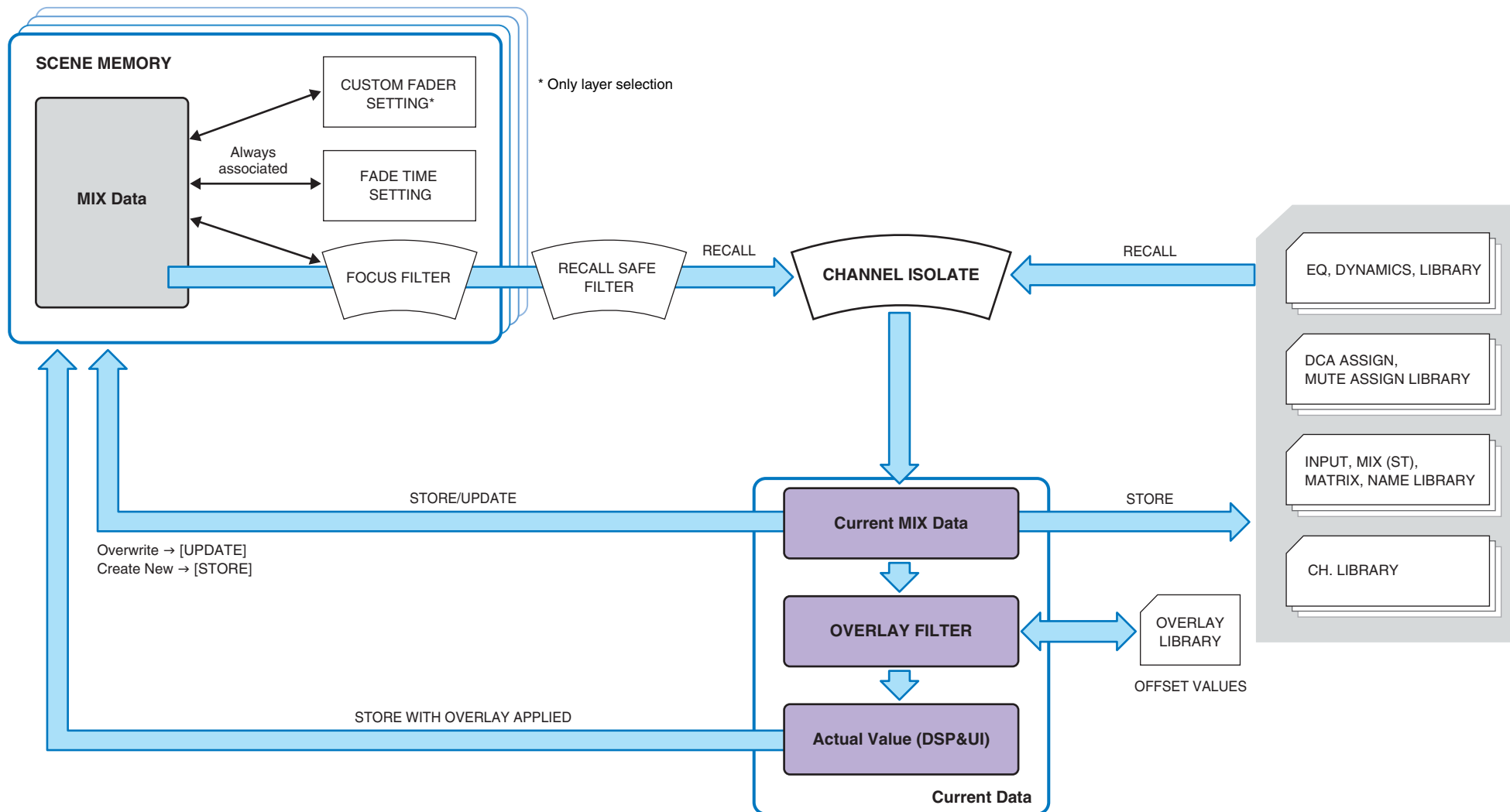
MIXING DATA		
★	<b>HA</b>	Head amp settings
★	<b>INPUT CH</b>	Input channel mixing data
★	<b>MIX</b>	MIX channel mixing data
★	<b>STEREO</b>	STEREO channel mixing data
★	<b>MATRIX</b>	MATRIX channel mixing data
★	<b>GEQ/PEQ</b>	GEQ/PEQ mount status and parameters
★	<b>PLUG-IN</b>	Plug-in mount status and parameters
★	<b>NAME</b>	Input channel/output channel names, colors, and icon settings
MONITOR/CUE/Other		
	<b>MONITOR</b>	Monitor settings
	<b>CUE</b>	Cue settings
	<b>OSCILLATOR</b>	Oscillator settings
	<b>TALKBACK</b>	Talkback settings
	<b>RTA</b>	Realtime analyzer settings
	<b>METERING POINT</b>	Meter display point settings
	<b>PEAK HOLD</b>	Peak hold on/off settings
SCENE		
★	<b>FOCUS</b>	Focus settings
	<b>RECALL SAFE</b>	Recall safe settings
★	<b>PLAY BACK LINK</b>	Playback link settings
★	<b>FADE TIME</b>	Fade function settings
OVERLAY		
	<b>OVERLAY</b>	Overlay settings
ISOLATE		
	<b>ISOLATE</b>	Isolate settings



<b>SURROUND</b>		
★	<b>SURROUND</b>	Settings for surround mode
<b>Library</b>		
	<b>CHANNEL</b>	Channel library settings
	<b>EQ</b>	EQ library settings
	<b>DYNAMICS</b>	Dynamics library settings
	<b>GEQ</b>	GEQ library settings
	<b>PLUG-IN</b>	Plug-in library settings
	<b>NAME</b>	Name library settings
	<b>DCA NAME/ASSIGN</b>	DCA Assign library settings
	<b>MUTE NAME/ASSIGN</b>	Mute Group Assign library settings
	<b>USER SETUP</b>	User Setup library settings
	<b>OVERLAY</b>	Overlay library settings

# Conceptual Diagram of Memory

The diagram below shows the relationship between current data, scene memory, and libraries.



**NOTE**  
For information regarding data that is not stored in scene memories, refer to [page 50](#).

The scene memories of the RIVAGE PM series hold mixing data such as channel fader levels and EQ, as well as all of the following:

- Patch settings
- Fader layer selection status of each bay
- Fade time settings
- Focus settings
- Playback link settings

When a scene is recalled, it is recalled to the current mix data through three filters: Focus, Recall Safe, and Channel Isolate (described below).

#### • Focus function

Focus is a function that lets you select which part of the data will be recalled when recalling scene data.

Focus settings are saved in the data of each scene.

Example: In a live concert where the engineer also changes for each band, it might be desirable to adjust the GEQ for each engineer. The Focus function can be set for each scene, so even if the GEQ is adjusted for the first song, scenes for the second and subsequent songs can be recalled with Focus settings that exclude the GEQ, so that the GEQ settings of the first song are preserved.

#### • Recall Safe function

Recall Safe is a function that protects the parameters of the current mix from being affected by a scene memory that is recalled.

Recall Safe settings are saved independently from the scene data.

Example: In a show that consists of numerous existing scenes, if a special mic (for a presenter or safety announcement) is added after the scenes were created, settings with this mic unused would be recalled each time a scene was recalled. In this case, that mic channel alone can be given the Recall Safe setting ALL so that it will be excluded from scene recall; that channel alone can be operated manually regardless of recalls. In the same way, if a rehearsal mic channel is to be turned off during the actual performance, that channel can be set to Recall Safe.

#### How Focus and Recall Safe are related

The Focus function and the Recall Safe function both apply filtering to the data that is recalled. However, they have an inverse relationship in that the Focus function determines “what portion of the scene data is recalled,” while the Recall Safe function determines “what parameters of the current mix data are not affected by the recall.”

Focus settings are saved in the data of each scene, and are used only when that specific scene is recalled. Recall Safe settings are common to all scenes.

Recall Safe and Focus can be used together; channels/parameters that either of the two functions excludes from recall (made safe / not in the focus) will not be recalled.

In other words, only channels/parameters that are in Focus and are not in Recall Safe will be recalled.

When scene data is recalled, it is not usually the case that you want to recall all of the data every time; in most cases, you want to selectively recall only the needed data from the scene data.

By using either or both of these functions appropriately for your specific situation, you can flexibly meet a variety of mixing requirements.

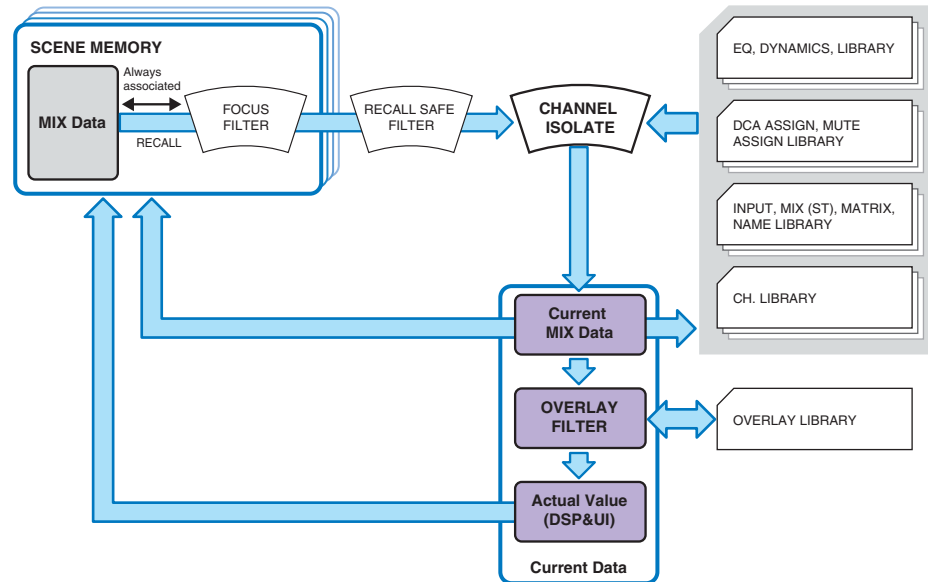
In addition to the above, the RIVAGE PM series provides the following functionality.

### • Isolate function

This function protects an entire channel module from any type of memory recall; not only scene memory but also libraries such as EQ or Dynamics. The Isolate function protects parameters of the isolated channel from scene recall and library recall.

#### NOTE

- If you load the setting file, the parameters of the isolated channel will not be protected by the Isolate function.
- The parameters of the isolated channel will not be protected from GEQ or plug-in library recall.



Example: Suppose that during the actual performance, you need to disconnect a certain input channel from the mixing. In this case, you could disconnect that channel by turning on all of its Recall Safe settings, but that channel is being used with partial Recall Safe for a different purpose. In this case, the desired operation will not be obtained unless you manually change the Recall Safe filter settings. However by using the Isolate function, you can instantly disconnect that channel regardless of Recall Safe.

The Isolate on/off parameter is provided on each of the channels Input Ch 1 – 144, Mix 1 – 72, Matrix 1 – 36 and Stereo A/B.

### • Overlay and storing a scene

Overlay is a function that enables you to specify a temporary offset value for the fader or send levels in the current mix.

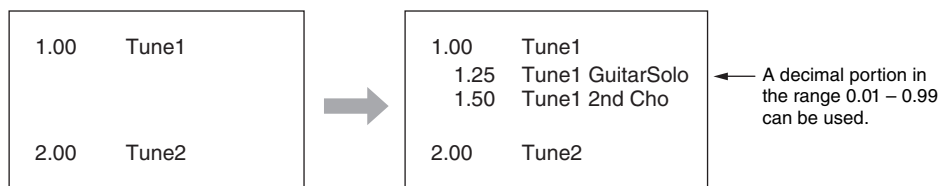
Normally, these Overlay offset values are ignored when the scene is stored. However, you can also store the resultant values to which the offset values have been added.

### • Library function

Separately from scenes, various library functions allow data such as EQ settings and channel names to be saved and recalled.

## Scene Memory

On the RIVAGE PM series, scene numbers consist of an integer portion and a decimal portion, and can be assigned as desired. One way of organizing scenes would be to create integer-numbered scenes (main scenes) for each song, and then use the decimal portion to manage detailed changes (sub-scenes) within the song. Up to 1,000 scenes can be stored.



### ■ STORE

Stores the current mix data to the selected scene memory.

### ■ UPDATE

Updates scene data by overwriting the current scene (that has been recalled most recently) with the current mix data.

### ■ RECALL

Recall a stored scene from scene memory.

When a scene is recalled, the data is applied according to the Focus settings included in that scene, the Recall Safe settings that are common to all scenes, and the Isolate setting for each channel.

### ■ COMMENT

For each scene, you can enter a comment as a reminder.

### ■ FOCUS

You can specify the parameters of a scene that will be selectively recalled (loaded) when that scene is recalled. This can be specified for each scene. For example, it is convenient to use this if you want to recall only the input channel settings of a certain scene.

### ■ FADE TIME

You can make the faders of specified channels/DCAs change smoothly to their new values over a specified duration when you recall a scene. The settings of the Fade function can be made independently for each scene.

### ■ Control via GPI/MIDI

You can use the GPI connector or MIDI connectors to execute scene recall from an external device, or to transmit signals to an external device in conjunction with scene recall.

### ■ Playback Link

You can specify an audio file that will play back from a USB flash drive when a specific scene is recalled. This can be convenient if you want a sound effect or background music to be played automatically for a specific scene. The Playback Link function can be turned on/off for each scene.

### ■ Global Paste

You can copy and paste channel or parameter settings from the current scene to scene data in memory (multiple scene selections are allowed).

### ■ Recall Safe

You can select specific channels/parameters that will be excluded from recall when scene recall occurs.

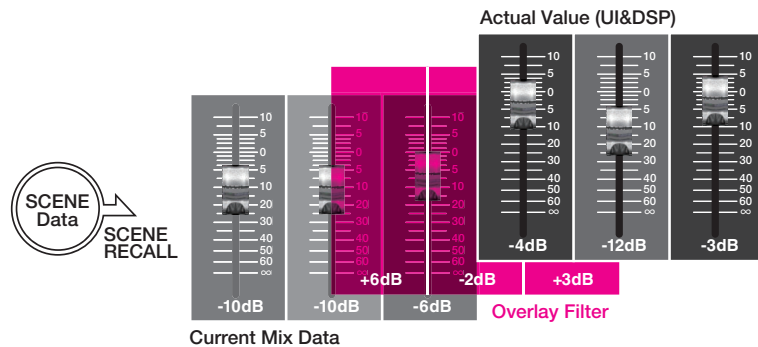
### ■ Protect

You can protect important scenes from being accidentally overwritten, erased, or moved.

## OVERLAY

Overlay is a function that enables you to add or “overlay” a temporary offset (+/-) value to fader levels or Mix/Matrix send levels in a current mix.

The “overlayed” value is something like a transparent filter applied to the level values. It enables you to temporarily adjust the relative levels without modifying existing scene data.



For example, assume that a regular musician for a show has been replaced by a new musician just before a take, and that the audio level on the channel for the new musician is lower than the original musician by 6dB. One way to correct this situation is to raise the head amp gain by 6dB. However, you should avoid this action. If you leave the gain raised after the take, there might be a risk of overloading the head amp when the original musician returns to the show.

Another way is to simply raise the channel fader level. But, if the scene is recalled later, the fader will return to the original level.

You might then think of enabling Recall Safe to this particular channel to avoid the level change caused by a scene recall. However, if you use Recall Safe, you will be unable to utilize the detailed fader level settings that have been painstakingly programmed for every scene.

This is where the Overlay function becomes very handy.

Set an offset value of +6dB for the channel in question. In this way, +6dB will be temporarily added to the existing current mix, and applied to the DSP process.

This Overlay filter (a set of offset values) is inserted between the current mix and the DSP process.

Therefore, as long as Overlay is enabled, a relative value of +6dB (in this example) will always be added — even after the current mix is changed (e.g., by scene recall, etc.).

To troubleshoot these types of level issues, the RIVAGE PM series now features the Overlay function, in addition to the conventional Global Paste function.

The Global Paste function enables you to paste and write a new value onto scene data, which is useful as a “permanent” editing function during programming. However, this function is not appropriate when you want to resolve an issue temporarily but you still want to return to the original value later. On the other hand, the Overlay function does not affect scene data directly. Once you disable the function, the value will revert to its original setting. Therefore, this function is useful in resolving real-time, temporary issues.

## Other Convenient Functions

The RIVAGE PM series provides various other convenient functions.

- **TOUCH AND TURN**

You can operate a parameter that you touch in the screen.

- **HOME**

The displayed screen, the selection within the screen, and the layer selection setting for each bay can be stored together in the HOME key, and recalled instantly.

- **CONSOLE LOCK**

You can temporarily prohibit control surface operation in order to prevent unwanted operation. This setting completely disables operations of the panel and touch screen, so that controls cannot be operated by an accidental touch or by an unauthorized third party while the operator is taking a break. You can also specify a password when locking the console.

## Maintenance Functions

### Initialization

You can return the entire system to its factory-set state, or initialize just a portion of the mixing data.

### System log

You can store the history of errors and alerts that occurred on the devices as a log file. The log can be export to an external storage device.

### Calibration

- **FADER CALIBRATION**

Depending on the environment in which you use the system, discrepancies may occur in the motion of the motorized faders. You can use the Calibration function to correct these discrepancies. The RIVAGE PM series provides two types of fader calibration function: “Motor Drive Calibration” which automatically optimizes the fader motor movement, and “Positioning Calibration” which aligns the fader positions.

- **TOUCH SCREEN CALIBRATION**

This function enables you to correctly align the positions of the LCD display and the touch screen panels.

# Contents (Part 2: Operations)

<b>Function Tree .....</b>	<b>62</b>
<b>Part Names &amp; Functions .....</b>	<b>63</b>
Top panel of the control surface .....	63
Selected Channel section.....	64
UTILITY section .....	67
SCENE MEMORY section.....	68
USER DEFINED KEYS/KNOBS section .....	68
Touch Screen section (bay L, bay C).....	69
Channel Strip section (bay L, bay R, bay C).....	70
Front panel of the control surface.....	72
Rear panel of the control surface.....	73
Precautions regarding using the NETWORK connector.....	76
<b>Bay.....</b>	<b>77</b>
Faders and fader layers.....	77
Selected channel concepts .....	78
Types of selected channels.....	78
Selecting a channel by using a hardware [SEL] key.....	78
Selecting channels on screen .....	79
On-screen selected channel displayed on an external monitor.....	79
Linking selected channels.....	80
Bay Link .....	81
About switching layers using the [HOME] keys .....	82
<b>Basic Operations .....</b>	<b>83</b>
Basic touch screen operations .....	83
Basic operations on the top panel.....	83
Shut down (power-off procedure).....	84
On-screen user interface .....	84
Meter area .....	87
Main area.....	87
Menu bar .....	88
Channel name area .....	89
Entering names.....	90

Using tool buttons.....	91
About the tool buttons .....	91
Copying and pasting parameters .....	91
Resetting parameters to default.....	92
Comparing two settings .....	92
Using libraries .....	93
Preset limits in the libraries.....	93
Recalling a preset from a library .....	94
Storing setting data in a library.....	95
Deleting setting data from a library .....	95
Pairing.....	96
Setting or defeating pairing on the SELECTED CHANNEL VIEW screen.....	97
<b>Screen Overview .....</b>	<b>99</b>
About the SELECTED CHANNEL VIEW screen .....	99
About the OVERVIEW screen .....	105
<b>System Setup .....</b>	<b>108</b>
About the SETUP screen .....	108
SYSTEM CONFIG.....	110
Online settings.....	110
Offline settings.....	123
DELAY COMPENSATION .....	127
WORD CLOCK.....	128
Dante audio network settings .....	130
Messages .....	132
Mounting an I/O rack .....	134
Patching an I/O rack.....	137
Remotely controlling an I/O rack .....	138
BUS SETUP .....	141
BUS SETUP (Basic settings for MIX buses and MATRIX buses) .....	141
SEND POINT (INPUT)	
(Specifying the send point for each input channel) .....	142
SEND POINT (OUTPUT)	
(Specifying the send point for each MIX channel/STEREO channel).....	144
Mix minus .....	145
SURROUND SETUP (specify in surround mode) .....	147



<b>Patching .....</b>	<b>156</b>
Patching the input ports.....	156
Patching the output ports.....	157
Changing the name .....	158
Port-to-port.....	160
<b>Monitor .....</b>	<b>162</b>
MONITOR.....	162
Using the Monitor function.....	162
Inserting a plug-in into monitor signals .....	168
CUE.....	170
About Cue mode and Solo mode.....	170
About cue/solo groups .....	170
About CUE OPERATION mode in Cue mode.....	171
Using the Cue function.....	171
Using the Solo function.....	175
OSCILLATOR.....	177
Using the oscillators .....	177
TALKBACK.....	180
Using talkback.....	180
PHONES.....	185
Using PHONES.....	185
RTA (Real Time Analyzer).....	187
Using the Real Time Analyzer .....	187
<b>Meters .....</b>	<b>190</b>
About the meter area .....	190
Using the METER screen .....	191
<b>CH Parameter.....</b>	<b>193</b>
GAIN/SILK.....	193
GAIN/SILK settings.....	193
EQ.....	196
Using EQ .....	197
DYNAMICS.....	201
Using dynamics.....	201
INSERT/D.OUT (Insert/Direct Out).....	206
About insert .....	206

Inserting an external device (OUTBOARD) into a channel .....	206
Inserting an external device into a channel.....	210
Directly outputting an input channel.....	211
Patching multiple Direct Outs simultaneously .....	213
DELAY.....	214
About delay .....	214
Using delay.....	214
SENDS TO/SENDS FROM.....	218
Using SENDS TO.....	218
Using SENDS FROM .....	220
Using the Selected Channel section to make send settings.....	221
Using the faders to adjust the sends (SENDS ON FADER mode) .....	222
Using the Quick data copy function .....	223
TO STEREO.....	226
Controlling via the TO STEREO section.....	226
Sending a signal to a STEREO bus .....	226
SIGNAL FLOW .....	228
Viewing the signal flow .....	228

<b>Channel Job .....</b>	<b>230</b>
About DCAs .....	230
Assigning channels to a DCA.....	230
Using DCAs .....	233
Viewing the list of DCA status on the OVERVIEW screen .....	233
Using DCAs .....	234
DCA Roll-out function .....	234
About mute groups .....	235
Assigning channels to mute groups.....	235
Channel link .....	238
Temporary link .....	240
Configuring a temporary channel link .....	241
Copying, moving, and initializing channels .....	241
Copying channel parameters .....	241
Moving channel parameters.....	242
Initializing channel parameters.....	244

<b>GEQ/PEQ/Automixer .....</b>	<b>246</b>
Graphic EQ, parametric EQ and Automixer .....	246
About using a graphic EQ (GEQ).....	246

About using a parametric EQ (PEQ) .....	246	Automatic suggestion of scene numbers and names .....	314
About Automixer .....	246	Updating a scene .....	314
DSP resource management for GEQ .....	246	Recalling a scene .....	315
Inserting a GEQ/PEQ into a channel .....	247	Using the SCENE LIST screen .....	316
Using the 31BandGEQ .....	251	Using USER DEFINED keys to recall a scene (Direct Recall function) ...	318
Using the Flex15GEQ .....	253	Editing scene memories .....	320
Using the 8BandPEQ .....	254	Sorting scene memories .....	320
Automixer .....	256	About editing scene memories .....	322
Theory of Automixer operation .....	256	Deleting a scene (DELETE) .....	322
Inserting Automixer into a channel .....	257	Duplicating a scene (DUPLICATE) .....	323
Controlling the Automixer parameters .....	259	Modifying the scene number and title (RENAME) .....	323
<b>Plug-ins .....</b>	<b>261</b>	Using the Focus function .....	324
About plug-ins .....	261	Using the Fade function .....	326
About plug-in resources .....	261	Outputting a control signal to an external device in tandem with scene recall (GPI OUT) .....	327
DSP resource management for plug-ins .....	261	Playing back an audio file in tandem with scene recall (PLAYBACK LINK) .....	328
Using plug-ins .....	263	Using the Global Paste function .....	330
Controlling the parameters of a plug-in .....	265	Using the Recall Safe function .....	333
Using the Tap Tempo function .....	296	Using the Event List function .....	334
Effects and tempo synchronization .....	297	Using Preview mode .....	338
		Using the keys in the SCENE MEMORY section .....	338
		Using the SCENE LIST screen .....	338
<b>Recording .....</b>	<b>298</b>	<b>OVERLAY .....</b>	<b>340</b>
2-track USB recorder .....	298	Using the Overlay function .....	340
About the USB memory recorder .....	298		
Assigning channels to the input/output of the recorder .....	299	<b>File .....</b>	<b>344</b>
Recording audio to a USB flash drive .....	301	SAVE/LOAD .....	344
Playing back audio files from a USB flash drive .....	303	Saving the RIVAGE PM series's settings on a USB flash drive .....	344
Editing the title list .....	305	Loading a file from a USB flash drive .....	347
Multitrack recording/virtual sound check .....	307	Editing the files saved on the USB flash drive .....	350
Multitrack recording .....	307	File editing .....	350
Virtual sound check .....	307	Sorting files and editing file names/comments .....	351
About Dante .....	307	Copying and pasting a file .....	351
Patching for multitrack recording and virtual sound check .....	308	Deleting a file .....	351
Recording or playing back using a DAW on the computer .....	309	Creating a directory .....	352
		Exporting a CSV file .....	352
<b>Scene Memory .....</b>	<b>312</b>		
About scene memories .....	312		
Storing, updating, and recalling scenes .....	312		
Using the keys in the SCENE MEMORY section .....	312		
Storing a scene .....	313		

**User Setup ..... 354**

- PREFERENCES ..... 354
- CUSTOM FADER ..... 357
  - Custom fader banks and master faders ..... 357
- USER DEFINED KNOBS ..... 359
  - Using the USER DEFINED KNOBS section ..... 359
  - Assigning a function to a USER DEFINED knob ..... 360
  - Using a channel strip encoder ..... 363
  - Assigning a function to a channel strip encoder ..... 364
- USER DEFINED KEYS ..... 365
  - Using the USER DEFINED KEYS section ..... 365
  - Assigning a function to a USER DEFINED key ..... 366

**MIDI/GPI ..... 373**

- About MIDI ..... 373
- Basic MIDI Settings ..... 373
- Using Program Changes to recall scenes ..... 375
- Using Control Changes to control parameters ..... 378
  - Using Control Changes ..... 378
- About GPI ..... 380
- Using GPI IN ..... 381
- Using GPI OUT ..... 383
- Using FADER START ..... 384

**Maintenance ..... 387**

- Firmware version ..... 387
- Firmware updates ..... 387
- Adjusting the faders ..... 387
- Adjusting the detection point of the touch screen panels ..... 390
- Initializing the unit to factory default settings ..... 391
- Adjusting the input/output gain ..... 392
- System log ..... 393
- System dump ..... 395

**Console Status ..... 396**

- Setting the date and time of the internal clock ..... 396

**Panel Settings ..... 398**

- Specifying the brightness of the touch screens, LEDs, channel name displays, and lamps ..... 398
- Console Lock ..... 399
  - Locking the console ..... 399
  - Unlocking the console ..... 400
  - Specifying the CONSOLE LOCK screen image ..... 400

**Setting up RIVAGE PM Editor and RIVAGE PM StageMix ..... 401**

- About the RIVAGE PM Editor ..... 401
- On-line monitoring/operation ..... 401
- Off-line editing/synchronization ..... 402
  - Off-line editing ..... 402
  - Synchronizing the edited mixing data ..... 403
- On-screen operation ..... 403
- Menu bar ..... 403
- About the screens ..... 404
  - CONTROLS ..... 405
- Operating the faders in the METER screen (Full Screen) ..... 406
- Saving and loading a file ..... 406
- PM Editor shortcut keys ..... 407
- Initializing PM Editor ..... 407
- About RIVAGE PM StageMix ..... 408
  - Network settings for the control surface ..... 408
  - Network settings on the iPad ..... 409
- Messages ..... 410

**Index ..... 415**

# Function Tree

MAIN	
SELECTED CHANNEL	99
OVERVIEW	105

CHANNEL PARAMETER	
GAIN/SILK	194
EQ	196
1CH	198
CH1-72, CH73-144, MIX, MTRX / ST	200
DYNAMICS	201
1CH	203
CH1-72, CH73-144, MIX, MTRX / ST	204
INSERT / D. OUT	206
1CH	208
12CH INSERT 1/2	209
12CH D.OUT	212
DELAY	214
12CH	215
CH1-72, CH73-144, MIX, MTRX / ST	216
DELAY SCALE	217
DELAY TIME	217
SENDS TO	218
SENDS FROM	220
TO STEREO	227
DCA / MUTE ASSIGN	230
1CH	232
ALL DCA	230
ALL MUTE	235
SIGNAL FLOW	228
SURROUND	147

LIBRARY	
CHANNEL LIBRARY	100
EQ LIBRARY	199
DYNAMICS LIBRARY	203
PLUG-IN LIBRARY	265
GEQ LIBRARY	252
NAME LIBRARY	158
DCA NAME/ASSIGN LIBRARY	231
MUTE NAME/ASSIGN LIBRARY	236
USER SETUP LIBRARY	58

SCENE	
SCENE LIST	316
COMMENT	316
FOCUS	324
FADE TIME	326
GPI	327
PLAYBACK LINK	328
RECALL SAFE	333
EVENT LIST	334
PREVIEW	338

OVERLAY	
OVERLAY	340

MONITOR	
MONITOR	162
MONITOR	163
CUE	172
PHONES	186
RTA	187
OSCILLATOR	178
TALKBACK	182

METER	
INPUT METER	190
OUTPUT METER	190
IN/OUT METER	190
FULL SCREEN	191

SETUP	
SYSTEM CONFIG	110
DANTE SETUP	131
DANTE INPUT PATCH	137
DANTE OUTPUT PATCH	138
NETWORK	131
DEVICE SYNC	111
WORD CLOCK	128
DELAY COMPENSATION	127
BUS SETUP	141
SURROUND SETUP	147
MIDI / GPI	373
PREFERENCES	354
SEL LINK	355
BAY LINK	81
CUSTOM FADER	357
USER DEFINED KNOBS	360
CH STRIP ENCODERS	364
USER DEFINED KEYS	366
SAVE/LOAD	344
MAINTENANCE	387
FIRMWARE VER	387
FADER CALIB	387
TOUCH CALIB	390
INITIALIZATION	391
PORT TRIM	392
SYSTEM LOG	394
DATE/TIME	396
NETWORK	408
PANEL SETTINGS	398
CONSOLE LOCK	399

GEQ / PEQ	
31BandGEQ	251
Flex15GEQ	253
8BandPEQ	254
Automixer	256

RACK & REC	
PLUG-IN	261
USB RECORDER	301
VIRTUAL SOUND CHECK	308

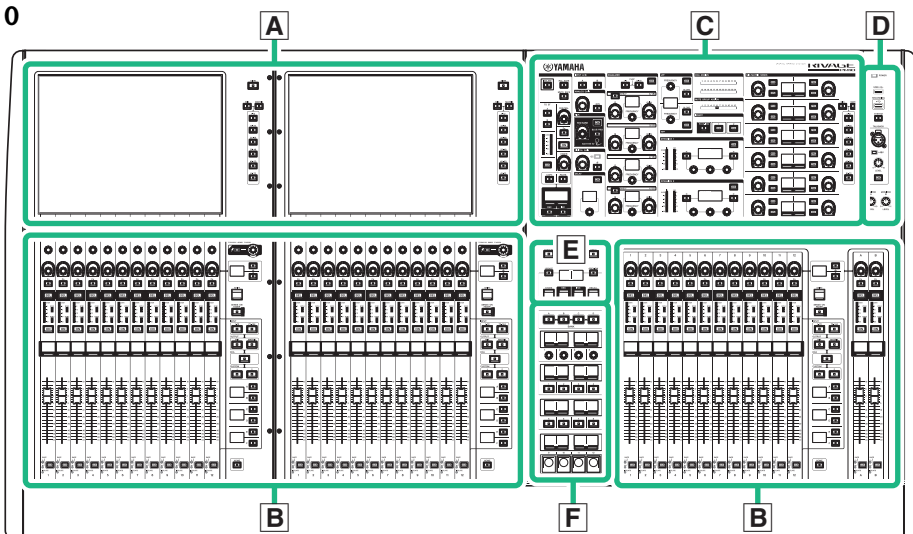
CH JOB	
DCA ASSIGN	230
MUTE GROUP ASSIGN	235
CH LINK	238
CH COPY	242
CH DEFAULT	241
CH MOVE	242

PATCH	
INPUT	156
OUTPUT	157
DIRECT OUT	213
RECORDING	308
NAME	158
PORT TO PORT	160

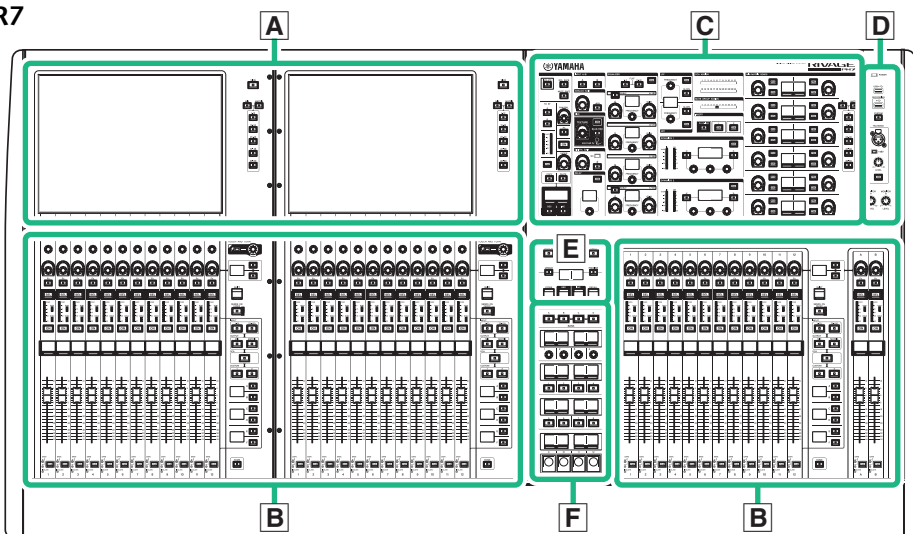
## Part Names & Functions

This chapter explains the names and functions of each part of the control surface. Details for each section of the top panel are explained in the paragraphs regarding operation. Please refer to the appropriate section for more information.

### ■ CS-R10



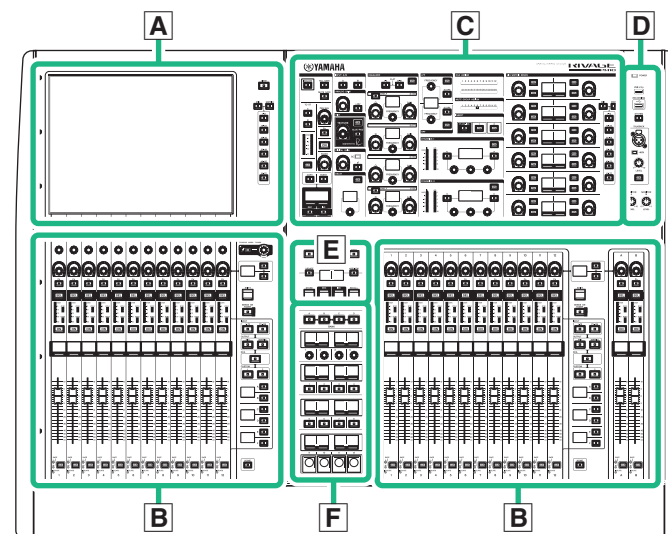
### ■ CSD-R7



## Top panel of the control surface

The top panel of the control surface is divided into the following sections.

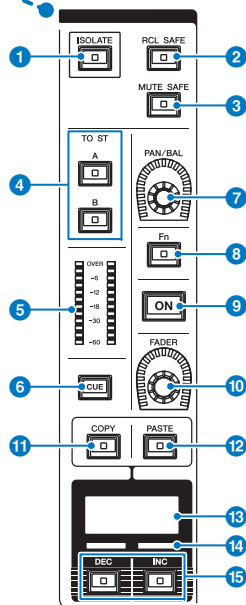
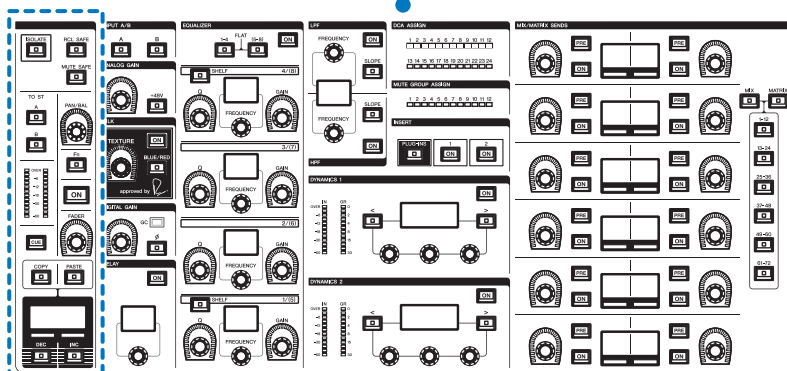
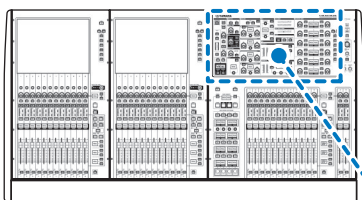
### ■ CS-R10-S



- A** Touch Screen section → [page 69](#)
- B** Channel Strip section → [page 70](#)
- C** Selected Channel section → [page 64](#)
- D** UTILITY section → [page 67](#)
- E** SCENE MEMORY section → [page 68](#)
- F** USER DEFINED KEYS/KNOBS section → [page 68](#)

## Selected Channel section

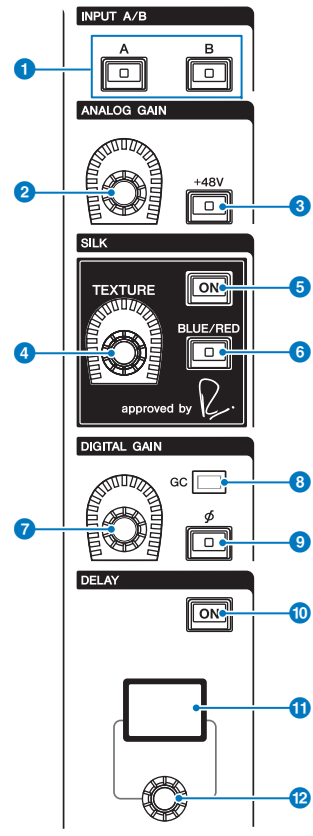
This section enables you to adjust parameters for the selected channel.



- 1 **[ISOLATE] key**  
Switches Isolate on or off. The Isolate function enables you to protect the channel from any recall operations for scenes or libraries. Also, if the “isolated” channel belongs to any DCA, Mute group, or other category, the channel will be unaffected by the controls of that group.
- 2 **[RCL SAFE] key**  
Switches Recall Safe on or off. The Recall Safe function protects certain parameters of a channel from scene recall operations.
- 3 **[MUTE SAFE] key**  
Switches Mute Safe on or off. The Mute Safe function protects a channel from mute operations.
- 4 **TO ST [A]/[B] keys**  
Switch on or off the signal sent from the channel to

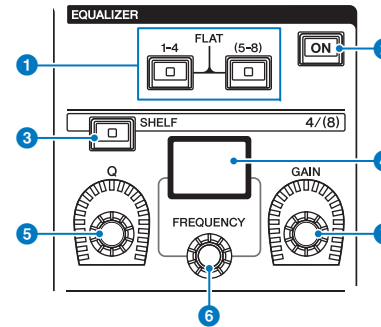
- 5 **LED meter**  
Displays the channel signal level.
- 6 **[CUE] key**  
Switches channel cue send on or off.
- 7 **[PAN/BAL] knob**  
Sets the panning/balance of the signal sent to the stereo buses.
- 8 **[Fn] (Function) key**  
Executes the pre-assigned function.
- 9 **[ON] key**  
Switches the channel on or off.
- 10 **[FADER] knob**  
Adjusts the channel fader level.
- 11 **[COPY] key**  
Copies a channel parameter.
- 12 **[PASTE] key**  
Pastes the copied channel parameter.
- 13 **Channel name display**  
Indicates the channel number and name, and the fader level.
- 14 **Channel color indicator**  
Indicates the channel color.
- 15 **[INC]/[DEC] keys**  
Switch channels to edit parameters.

## INPUT/A.GAIN/SILK/D.GAIN/DELAY



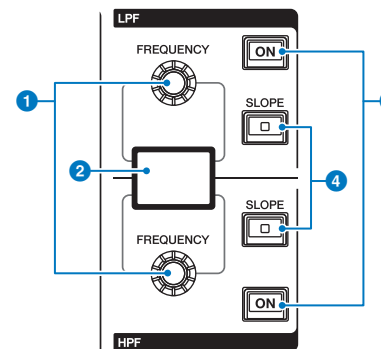
- 1 INPUT [A]/[B] keys**  
Switch the input source for the selected input channel.
- 2 [ANALOG GAIN] knob**  
Sets the analog gain for the head amp.
- 3 [+48V] key**  
Switches phantom power (+48V) on or off.
- 4 SILK [TEXTURE] knob**  
Adjusts the intensity of SILK processing.
- 5 SILK [ON] key**  
Switches SILK on or off.  
SILK processing can be applied only to specific channels to bring the corresponding parts to life within the mix, or to all channels to add depth and perspective to the mix overall.
- 6 SILK [BLUE/RED] key**  
Toggles between BLUE and RED: “BLUE” for solidity and power, and “RED” for sparkling energy.
- 7 [DIGITAL GAIN] knob**  
Sets the digital gain of the channel.
- 8 GC indicator**  
Lights up when GC (GAIN COMPENSATION) is enabled.
- 9 [∅] (Phase) key**  
Reverses the phase of the input signal.
- 10 DELAY [ON] key**  
Switches Delay on or off.
- 11 DELAY display**  
Indicates the delay value.
- 12 [DELAY] knob**  
Sets the delay value.

## EQUALIZER



- 1 EQUALIZER [1-4]/[(5-8)] keys**  
Switch the EQ bands for which you want to make settings.  
Pressing both [1-4] and [5-8] keys simultaneously will set the gain for all bands to 0 (FLAT).
- 2 EQUALIZER [ON] key**  
Switches EQ on or off.
- 3 EQUALIZER [SHELF] key**  
Switches peaking filter to shelving filter.
- 4 EQ display**  
Indicates parameters for each EQ band.
- 5 EQUALIZER [Q] knob**  
Specifies the Q value.
- 6 EQUALIZER [FREQUENCY] knob**  
Sets the frequency.
- 7 EQUALIZER [GAIN] knob**  
Sets the gain.

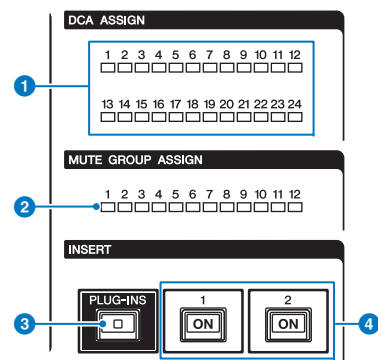
## LPF/HPF



- 1 LPF/HPF [FREQUENCY] knobs**  
Specify the cutoff frequency of LPF and HPF respectively.
- 2 LPF/HPF display**  
Indicates the LPF and HPF settings.
- 3 LPF/HPF [ON] keys**  
Switch the LPF and HPF on or off respectively.
- 4 LPF/HPF [SLOPE] keys**  
Switch the LPF and HPF slope settings respectively.

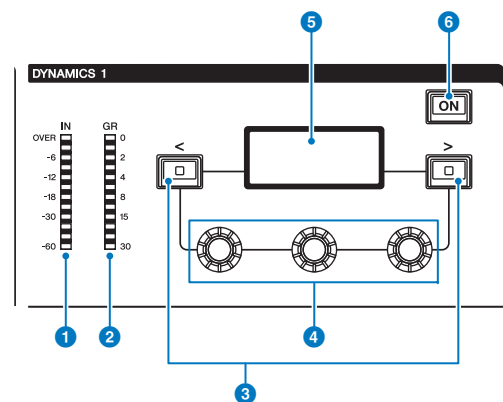


## DCA/MUTE/INSERT



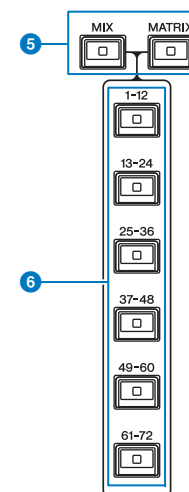
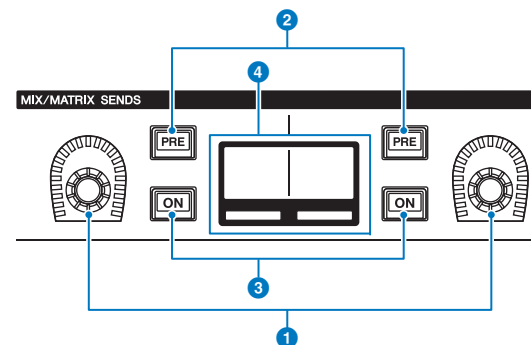
- 1 DCA ASSIGN LEDs**  
Indicate the assigned DCAs.
- 2 MUTE GROUP ASSIGN LEDs**  
Indicate the assigned Mute Groups.
- 3 INSERT [PLUG-INS] key**  
Enables you to recall a parameter setting screen for the inserted plug-ins.
- 4 INSERT 1/2 [ON] keys**  
Switch the INSERT1 and INSERT2 on or off respectively.

## DYNAMICS



- 1 DYNAMICS 1/2 IN LED**  
Indicates the Dynamics input level.
- 2 DYNAMICS 1/2 GR LED**  
Indicates the amount of Dynamics gain reduction.
- 3 DYNAMICS 1/2 [<|>] keys**  
Switch parameters that are indicated on the DYNAMICS display.
- 4 DYNAMICS 1/2 setting knobs**  
Set parameters that are indicated on the DYNAMICS display.
- 5 DYNAMICS 1/2 display**  
Indicates the Dynamics parameters.
- 6 DYNAMICS 1/2 [ON] key**  
Switches Dynamics on or off.

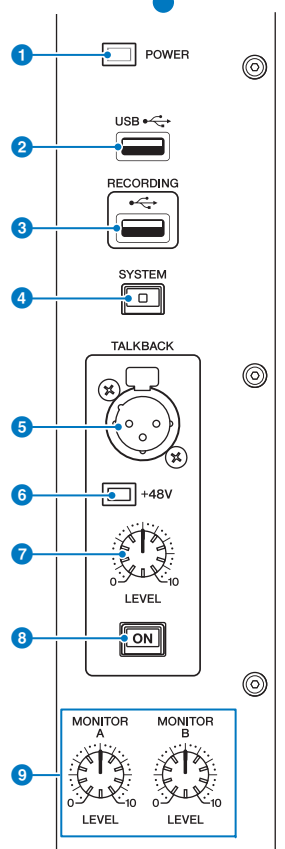
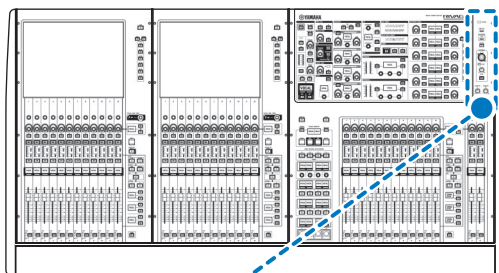
## MIX/MATRIX SENDS



- 1 MIX/MATRIX knobs**  
Adjust the send levels for the corresponding buses.
- 2 MIX/MATRIX SENDS [PRE] keys**  
Toggle the send point between PRE and POST. If a key lights up, the send point is set to PRE.
- 3 MIX/MATRIX SENDS [ON] keys**  
Switch the send signal to the corresponding bus on or off.
- 4 MIX/MATRIX SENDS display**  
Indicates the corresponding bus.
- 5 MIX/MATRIX SENDS [MIX]/[MATRIX] keys**  
Switch the type of the send destination bus.
- 6 MIX/MATRIX SENDS [1-12]/[13-24]/[25-36]/[37-48]/[49-60]/[61-72] keys**  
Selects a bank for the send destination bus.



## UTILITY section

**1 POWER Indicator**

Lights when AC power to the unit is ON. If both power switches A and B are turned on, this indicator will light green. If either power switch A or B is turned on, it will light red. If the RIVAGE PM series is not started, it will light orange.

**2 USB port**

Enables you to connect a USB device (such as a mouse, keyboard, or USB flash drive). Use a USB flash drive to store the system's internal data and to load the stored data into the system.

**■ Supported USB flash drive format**

The FAT16 and FAT32 formats are supported.

**■ Write Protection**

Some USB flash drives feature write protection that prevents data from being erased inadvertently. If your USB flash drive contains important data, we suggest that you use write protection to prevent accidental erasure. On the other hand, you will need to make sure that your USB flash drive's write-protect setting is turned off before you save data onto the USB flash drive.

For the latest information on USB flash drives that can be used with the system, visit the Yamaha Pro Audio website at: <http://www.yamaha.com/proaudio/>

**NOTICE**

Do not remove the USB flash drive from the USB connector or turn off the power to the unit while the unit is accessing data, e.g., saving, loading or deleting data. Doing so may damage your flash drive, or may damage the data in the unit or on your media device.

**3 RECORDING port**

Enables you to connect a USB flash drive to record and play back audio files. Supported file formats include WAV and MP3.

For the latest information on USB flash drives that can be used with the system, visit the Yamaha Pro Audio website at:

<http://www.yamaha.com/proaudio/>

**4 [SYSTEM] key**

Press this key to display information about the RIVAGE PM series on the touch screens.

Press and hold down the key for two seconds or longer to shut down the control section of the console ([page 84](#)). Be sure to shut down before turning off the power to the unit.

**5 TALKBACK jack**

This is a balanced XLR-3-31 jack to which a talkback mic can be connected.

**6 +48V indicator**

Lights up when +48V phantom power is supplied to the TALKBACK jack.

**7 TALKBACK [LEVEL] knob**

Adjusts the input level of the mic connected to the TALKBACK jack.

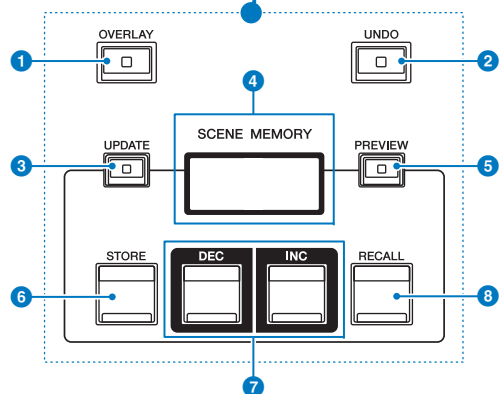
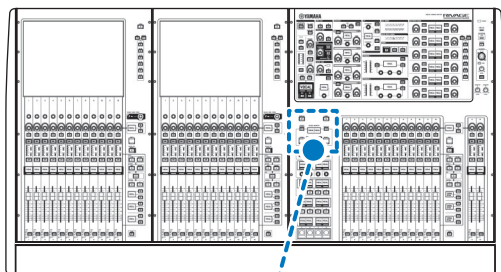
**8 TALKBACK [ON] key**

Switches the Talkback function on or off.

**9 MONITOR A/B [LEVEL] knobs**

Adjust the output level of the monitoring signals.

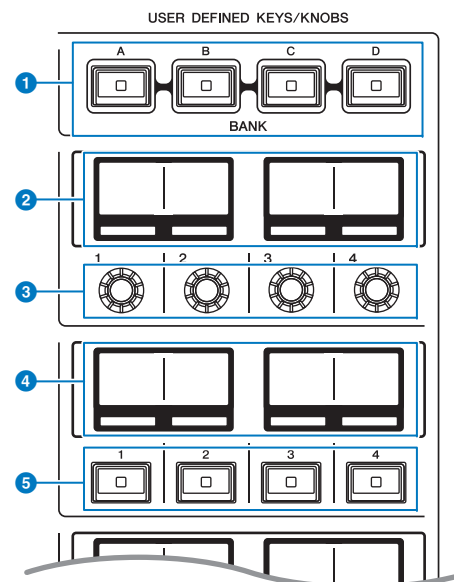
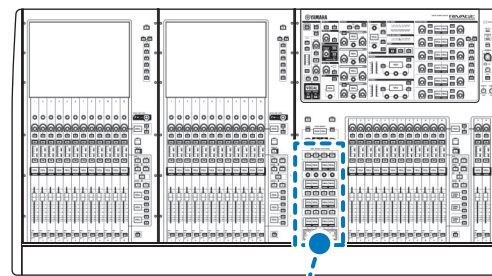
## SCENE MEMORY section



- [OVERLAY] key**  
Press this button to display the OVERLAY SETTING screen.  
While pressing and holding down the [SHIFT] key, press the [OVERLAY] key to switch Overlay on or off.  
While Overlay is turned on, press and hold down the [OVERLAY] key to enter Overlay edit mode.

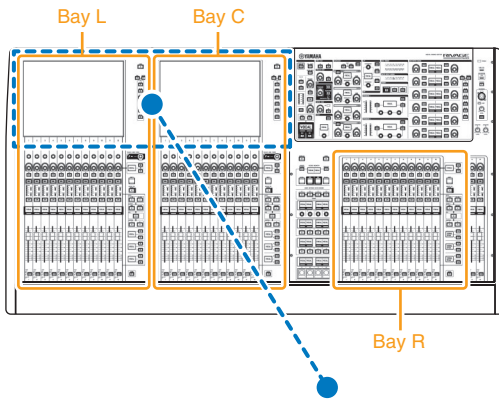
- [UNDO] key**  
Cancels the most recent scene operation of storing, recalling or updating a scene.  
After you cancel the operation by pressing the [UNDO] key, you can “redo” the canceled operation by pressing the [UNDO] key again.  
**NOTE**  
You cannot undo an operation to store a new scene.
- [UPDATE] key**  
Updates scene data by overwriting the current scene (that has been recalled or stored most recently) with the current mix data.
- SCENE MEMORY display**  
Indicates the selected scene memory.
- [PREVIEW] key**  
Switches Preview mode on or off.
- [STORE] key**  
Stores the current mix data to the selected scene memory.
- [INC]/[DEC] keys**  
Enable you to select the scene number of a scene that you want to store or recall.
- [RECALL] key**  
Enables you to recall a stored scene from scene memory.

## USER DEFINED KEYS/KNOBS section



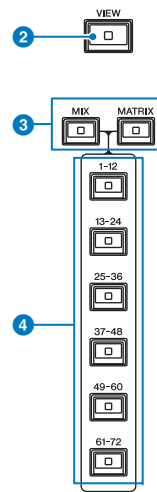
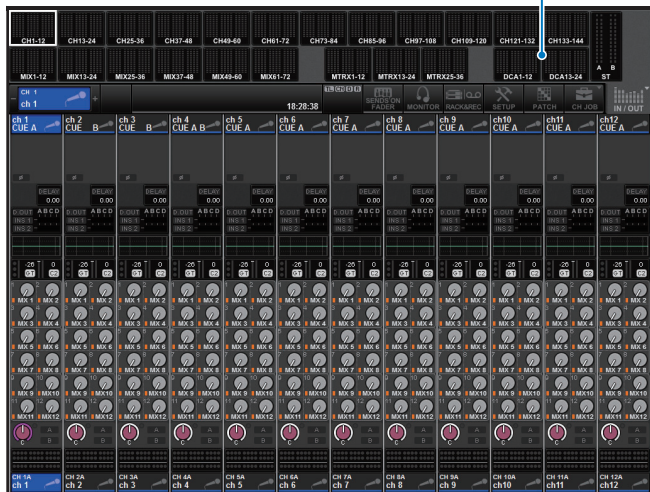
- USER DEFINED [A]/[B]/[C]/[D] BANK keys**  
Select the bank ([A], [B], [C], or [D]) for the USER DEFINED knobs or USER DEFINED keys.
- USER DEFINED KNOBS displays**  
Indicate the functions assigned to the USER DEFINED knobs.
- USER DEFINED KNOBS [1]/[2]/[3]/[4]**  
Control the functions as assigned by the user.
- USER DEFINED KEYS displays**  
Indicate the functions assigned to the USER DEFINED keys.
- USER DEFINED KEYS [1]–[12]**  
Control the functions as assigned by the user.

## Touch Screen section (bay L, bay C)



**Bay**  
A bay consists of a group of 12 faders located across the Touch Screen section and the Channel Strip section. The CS-R10 and CSD-R7 contain three bays; the CS-R10-S contains two bays. You can control these bays independently.

- 2 **[VIEW] key**  
Recalls and toggles between the OVERVIEW and SELECTED CHANNEL VIEW screens.
- 3 **[MIX]/[MATRIX] keys**  
Specify the type of the send destination buses displayed on the OVERVIEW screen.
- 4 **[1-12]/[13-24]/[25-36]/[37-48]/[49-60]/[61-72] keys**  
Enable you to select a bank for the send destination bus displayed on screen.



### 1 Touch screen

This is a touch screen that you can operate by touching it with your finger to select menus or set parameters. Please note that you cannot operate the unit by touching multiple points simultaneously.

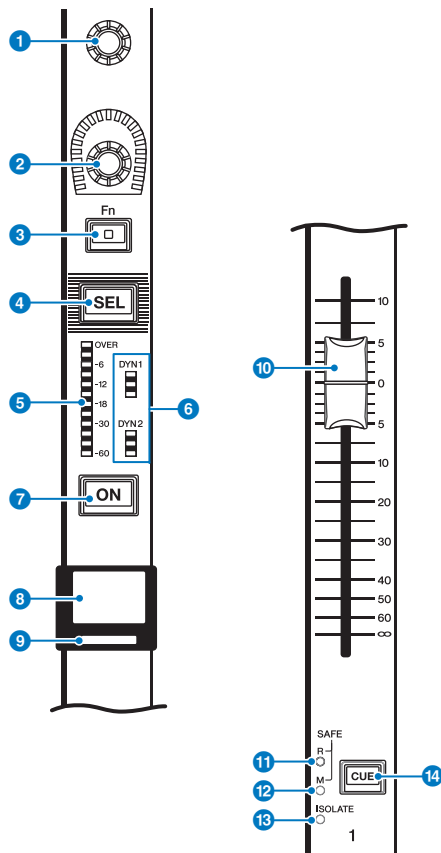
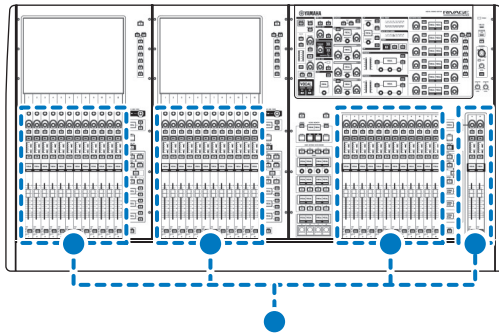
#### NOTE

- If the touch screens become dirty, wipe them with a soft dry cloth.
- Before use, be sure to remove the transparent film applied to the touch screens to protect them during transport.

#### NOTICE

Never use a sharp or pointed object such as your fingernail to operate the touch screens. Doing so may scratch the screens and render the touch screens inoperable.

## Channel Strip section (bay L, bay R, bay C)



### 1 Screen encoder (bay L and C only)

Controls the knob currently selected on the touch screen. The knob function varies depending on the screen currently displayed.

### 2 Channel strip encoder

Adjusts the gain, pan, and the other parameters of the channel. You can assign five parameter functions (selected from the following list) to this encoder, and use the [UP]/[DOWN] keys to select the function.

- PAN/BALANCE
- ANALOG GAIN
- DIGITAL GAIN
- SELECTED SEND
- MIX1 SEND - MIX72 SEND
- MATRIX1 SEND - MATRIX36 SEND
- HPF FREQUENCY
- LPF FREQUENCY
- DYNAMICS1 THRESHOLD
- DYNAMICS2 THRESHOLD
- DELAY
- SILK TEXTURE
- SURROUND L-R PAN
- SURROUND F-R PAN
- SURROUND DIV
- SURROUND LFE

### 3 [Fn] key

Executes the function as assigned by the user. You can assign one of the following functions:

- INPUT A/B
- ISOLATE
- ALTERNATE CUE
- ENCODER PARAMETER
- GC ON/OFF

- SURROUND CUE
- EQ A/B
- DYNAMICS1 A/B
- DYNAMICS2 A/B

### 4 [SEL] key

Enables you to select the channel that will be controlled in the Channel Strip section or on the display. When the channel is selected, the key LED will light.

### 5 Meter LEDs

Indicate the channel level.

### 6 Dynamics LEDs

Indicate the status of Dynamics 1 and 2.

### 7 [ON] key

Switches the channel on or off. If the channel is on, the key LED will light. In SENDS ON FADER mode, this key works as an on/off switch for signals sent from each channel to the currently-selected MIX/MATRIX bus.

### 8 Channel name display

Indicates the channel name, fader level, etc.

### 9 Channel color indicator

Indicates the channel color. You can select the channel color from eleven options including OFF.

### 10 Fader

This is a touch-sensitive 100mm motorized fader. In SENDS ON FADER mode, this fader adjusts the send level of the signal sent from each channel to the currently-selected MIX/MATRIX bus.

### 11 SAFE R indicator

Lights if the channel is set to Recall Safe.

### 12 SAFE M indicator

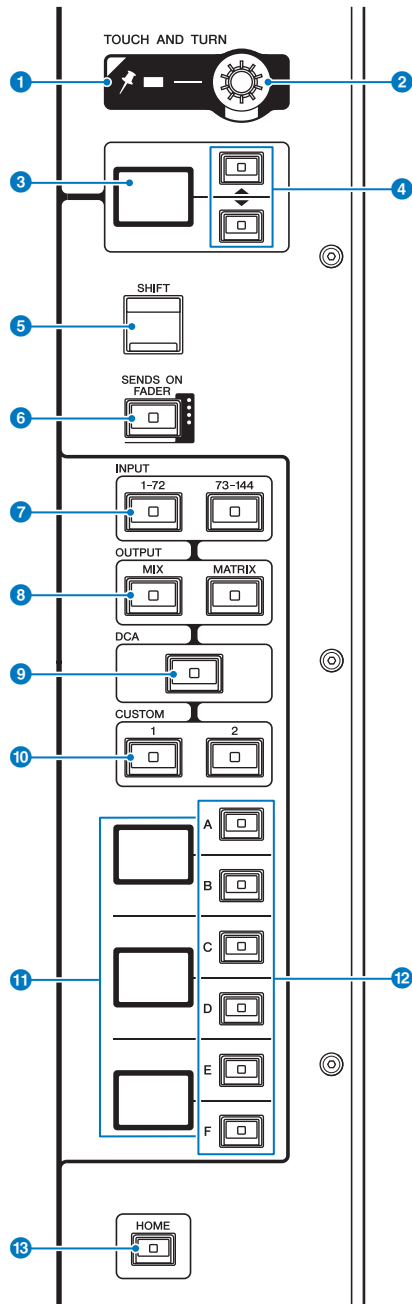
Lights if the channel is set to Mute Safe.

### 13 ISOLATE indicator

Lights if the channel is "Isolated."

### 14 [CUE] key

Selects the channel for cue.

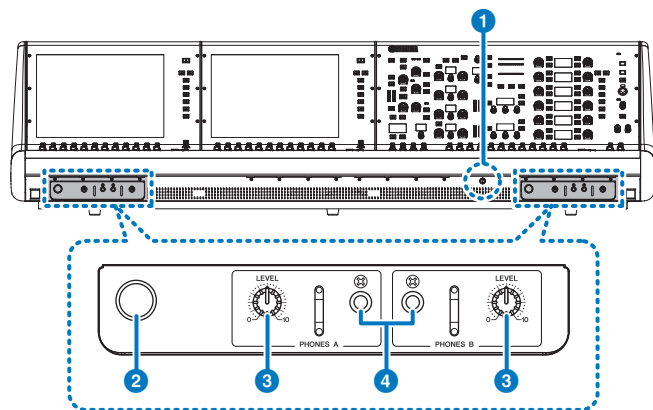


- 1 **PIN indicator**  
Lights when the Pinning function for the [TOUCH AND TURN] knob is ON. (This feature will be supported by a future update.)
  - 2 **[TOUCH AND TURN] knob**  
Controls the parameter of the knob you are touching on the touch screen.
  - 3 **Channel strip encoder display**  
Indicates the function that has been assigned to the channel strip encoder.
  - 4 **UP [▲]/DOWN [▼] keys**  
Enable you to select the function that you want to control using the channel strip encoder.
  - 5 **[SHIFT] key**  
Combine with another key to perform a certain function.  
The following table shows examples of using the [SHIFT] key combined with another key.
- | Procedure  | Function   |
|--|--|
| Press and hold down the [SHIFT] key and [CUE] key. | To switch cues as the channel's send destination.<br>(A → B → A&B → A) |
- 6 **[SENDS ON FADER] key**  
Turns SENDS ON FADER mode on and off.
  - 7 **INPUT [1-72]/[73-144] keys**  
Enable you to select an input layer.
  - 8 **OUTPUT [MIX]/[MATRIX] keys**  
Enable you to select an output layer.

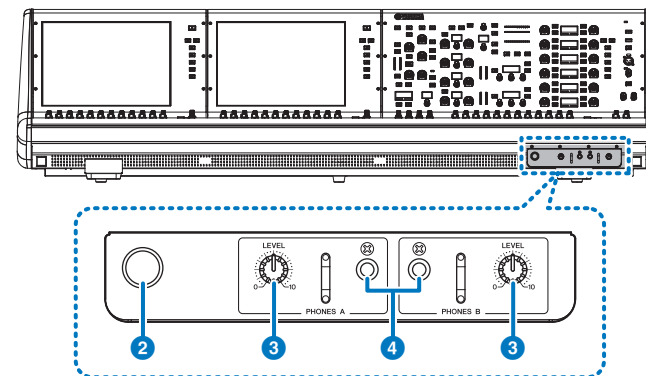
- 9 **[DCA] key**  
Enables you to select a DCA layer.
- 10 **CUSTOM [1]/[2] keys**  
Enable you to select a custom layer. You can assign custom faders of two banks (total of 12 layers) to each custom layer.
- 11 **Layer display**  
Indicates the selected layer.
- 12 **Layer Select [A]/[B]/[C]/[D]/[E]/[F] keys**  
Enable you to select a layer.
- 13 **[HOME] key**  
Recalls a group of settings. Press and hold down this key to store the following settings:
  - Current screen
  - Selected channel/parameter on the screen
  - Selected layer

## Front panel of the control surface

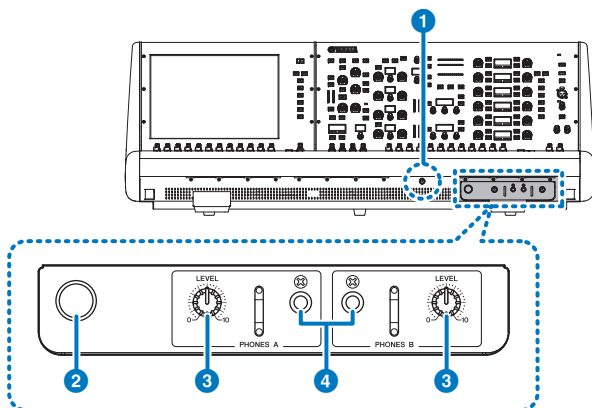
### ■ CS-R10



### ■ CSD-R7



### ■ CS-R10-S

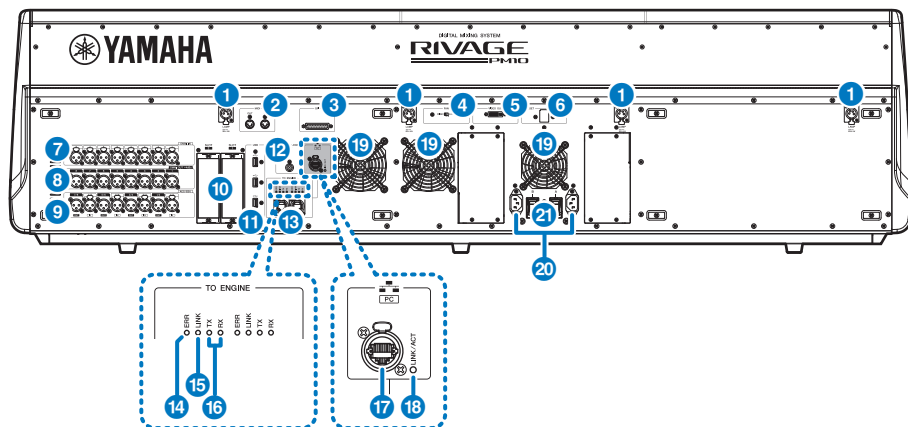


- 1 **Brightness control knob**  
Adjusts brightness of the light below the console.
- 2 **Headphone hanger**  
To use the hanger, pull out the knob, and then turn it counter-clockwise. (The hanger will be locked in place.)  
To put away the hanger, turn the knob clockwise to unlock it, and then push it in.
- 3 **PHONES A/B [LEVEL] knobs**  
Adjust the level of the signal output from the PHONES OUT jacks respectively.
- 4 **PHONES A/B output jacks**  
These are headphone jacks for monitoring the MONITOR or CUE signal.

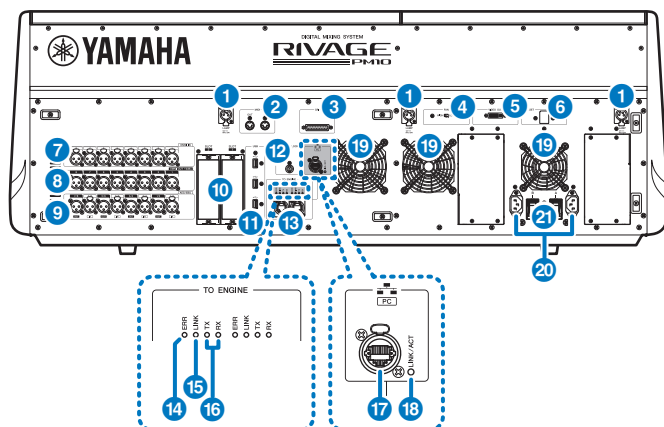


## Rear panel of the control surface

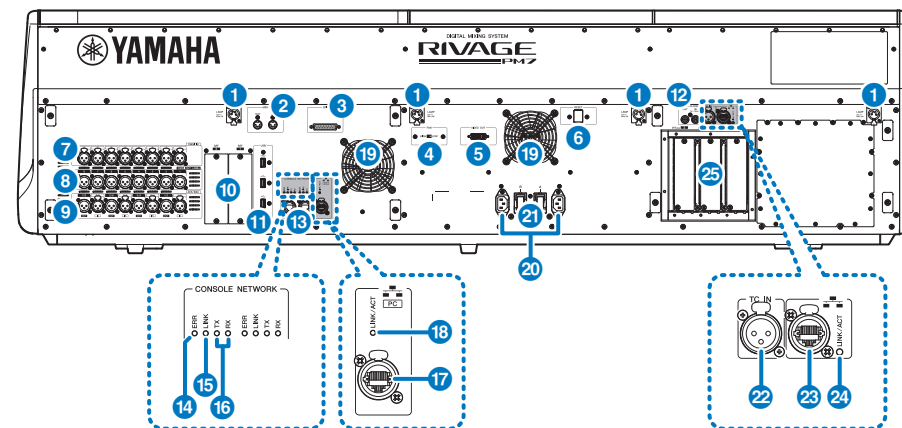
### ■ CS-R10



### ■ CS-R10-S



### ■ CSD-R7



#### 1 LAMP jacks

These four 4-pin female XLR output connectors are used to supply power to Yamaha LA1L gooseneck lamps supplied with the unit (CS-R10, CSD-R7: 4 jacks; CS-R10-S: 3 jacks).

#### 2 MIDI OUT/IN jacks

These connectors are used to transmit and receive MIDI messages to/from external MIDI devices.

#### 3 GPI connector

This is a D-sub 25-pin female connector that allows communication (8-in, 8-out) with a GPI-equipped external device.

#### 4 [FAN] switch

Sets the internal cooling fan to operate at either HIGH or LOW speed.

#### NOTE

This switch is set to LOW when the unit is initially shipped from the factory. As long as the unit is operated within the specified ambient temperature range either the LOW or HIGH setting can be used. The HIGH setting is recommended if the ambient temperature is high, if the unit is in direct sunlight even if the ambient temperature is within the specified operating range, and in any situation in which fan noise is not a problem.

#### 5 VIDEO OUT connector

Connect your external display monitor (XGA 1024x768 or higher) to this DVI-D (Dual-link) connector.

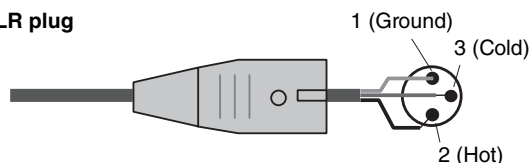
**6 [RESET] switch**

Resets the control surface.

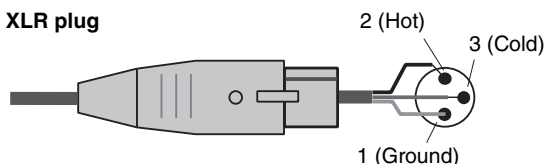
Only the controls (screens, indicators, and control keys and knobs) on the control surface will restart without interrupting audio. Use this switch in case the control surface becomes non-responsive to your operations.

**7 OMNI IN jacks**

These are balanced XLR-3-31 female input jacks for inputting analog audio signals from line level devices or microphones. They feature SILK digital processing.

**Male XLR plug****8 OMNI OUT jacks**

These are balanced XLR-3-32 male output jacks that transmit analog audio signals.

**Female XLR plug****9 AES/EBU jacks**

Both input and output jacks feature built-in sampling rate converters.

**IN**

These are balanced XLR-3-31 female input jacks that accept digital audio signals in AES/EBU format.

**OUT**

These are balanced XLR-3-32 male output jacks for outputting digital audio signals in the AES/EBU format.

**10 MY card slots**

Install optional Mini-YGDAI I/O cards here to expand I/O ports.

**11 USB ports**

Use these ports to connect a USB storage device such as a flash drive, USB mouse, or USB keyboard.

**12 WORD CLOCK OUT connector (CS-R10, CS-R10-S)**

This BNC connector is used to transmit word clock signal to an external device.

**WORD CLOCK OUT/IN connectors (CSD-R7)**

These are BNC connectors used to transmit/receive word clock signals to/from an external device. The WORD CLOCK IN connector is internally terminated by a 75-ohm resistor.

**13 TO ENGINE OUT/IN connectors (CS-R10, CS-R10-S) CONSOLE NETWORK connectors (CSD-R7)**

These RJ-45 connectors allow the unit to be connected to a console network in a ring topology via Ethernet cables (CAT5e or higher recommended).

**NOTE**

- Use an STP (Shielded Twisted Pair) cable to prevent electromagnetic interference. Make sure that the metal parts of the plugs are electrically connected to the STP cable's shield by conductive tape or comparable means.
- The use of Ethernet cables with Neutrik etherCON CAT5 compatible RJ-45 plugs is recommended. Standard RJ45 plugs can also be used.
- Cable length can span up to 100 meters between devices. Maximum practical distance may vary depending on the cable used.

**14 ERR indicator**

This indicator lights up or flashes red if an error occurs. In such an event, please contact your Yamaha dealer.

**15 LINK indicator**

This indicator flashes or lights up, depending on the network status.

<b>Green (flashing)</b>	The unit is preparing to connect to the console network. If it continues flashing, the system is not functioning properly. If the problem persists after you take the following actions, please contact your Yamaha dealer. <ul style="list-style-type: none"> <li>• Turn the power to the RIVAGE PM series off and then on.</li> <li>• Make sure that the cables are connected properly.</li> <li>• Make sure that the cables are securely inserted (locked in).</li> <li>• Change to a different cable.</li> </ul>
<b>Green (lit steadily)</b>	The unit is connected to the console network properly.

**16 TX/RX indicators**

The appropriate indicator flashes green when data is transmitted from (TX) or received at (RX) the TO ENGINE OUT/IN connectors.

**17 NETWORK PC connector**

This RJ-45 connector allows the unit to be connected to a computer or network device via an Ethernet cable (CAT5e or higher recommended).



**NOTE**

- Use an STP (Shielded Twisted Pair) cable to prevent electromagnetic interference. Make sure that the metal parts of the plugs are electrically connected to the STP cable's shield by conductive tape or comparable means.
- The use of Ethernet cables with Neutrik etherCON CAT5 compatible RJ-45 plugs is recommended. Standard RJ45 plugs can also be used.
- Cable length can span up to 100 meters between devices. Maximum practical distance may vary depending on the cable used.

**18 LINK/ACT indicator**

This indicator flashes or lights up green, depending on the connection status.

**19 Vent**

The control surface is equipped with cooling fans. These vents let warm air out from the unit. Please make sure that you do not block the vents with any object.

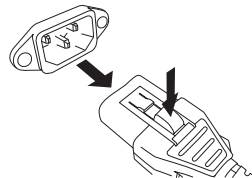
**20 AC IN connectors**

Use these sockets to connect the supplied power cords. First connect the AC power cords to this unit, and then insert the power cord plugs into AC outlets. Insert the cable plugs all the way until they lock in place securely. The supplied AC power cords feature a V-lock mechanism via a latch, which prevents the power cords from disconnecting accidentally.

**Caution**

Be sure to turn off the power to the unit before connecting or disconnecting the power cords.

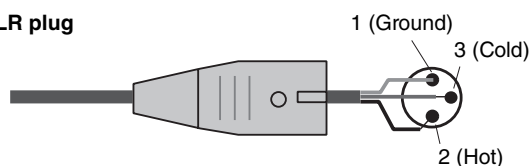
To disconnect each power cord, remove it while pressing the latch on the plug.

**21 I/O (Power switches)**

Toggle between power on (I) and off (⏻).

**22 TC IN connector**

This balanced XLR-3-31-type female connector accepts time code signals from a connected external device.

**Male XLR plug****23 NETWORK connector**

This RJ-45 connector enables you to connect an external device via an Ethernet cable (CAT5 or higher).

**NOTE**

- Use an STP (Shielded Twisted Pair) cable to prevent electromagnetic interference. Make sure that the metal parts of the plugs are electrically connected to the STP cable's shield by conductive tape or comparable means.
- The use of Ethernet cables with Neutrik etherCON CAT5 compatible RJ-45 plugs is recommended. Standard RJ-45 plugs can also be used.
- Cable length can span up to 100 meters between devices. Maximum practical distance may vary depending on the cable used.

**24 LINK/ACT indicator**

This indicator lights up or flashes green, depending on the connection status.

**25 HY card slots**

Enable you to install optional HY cards and connect to an I/O rack, such as RPio622, to expand I/O ports.

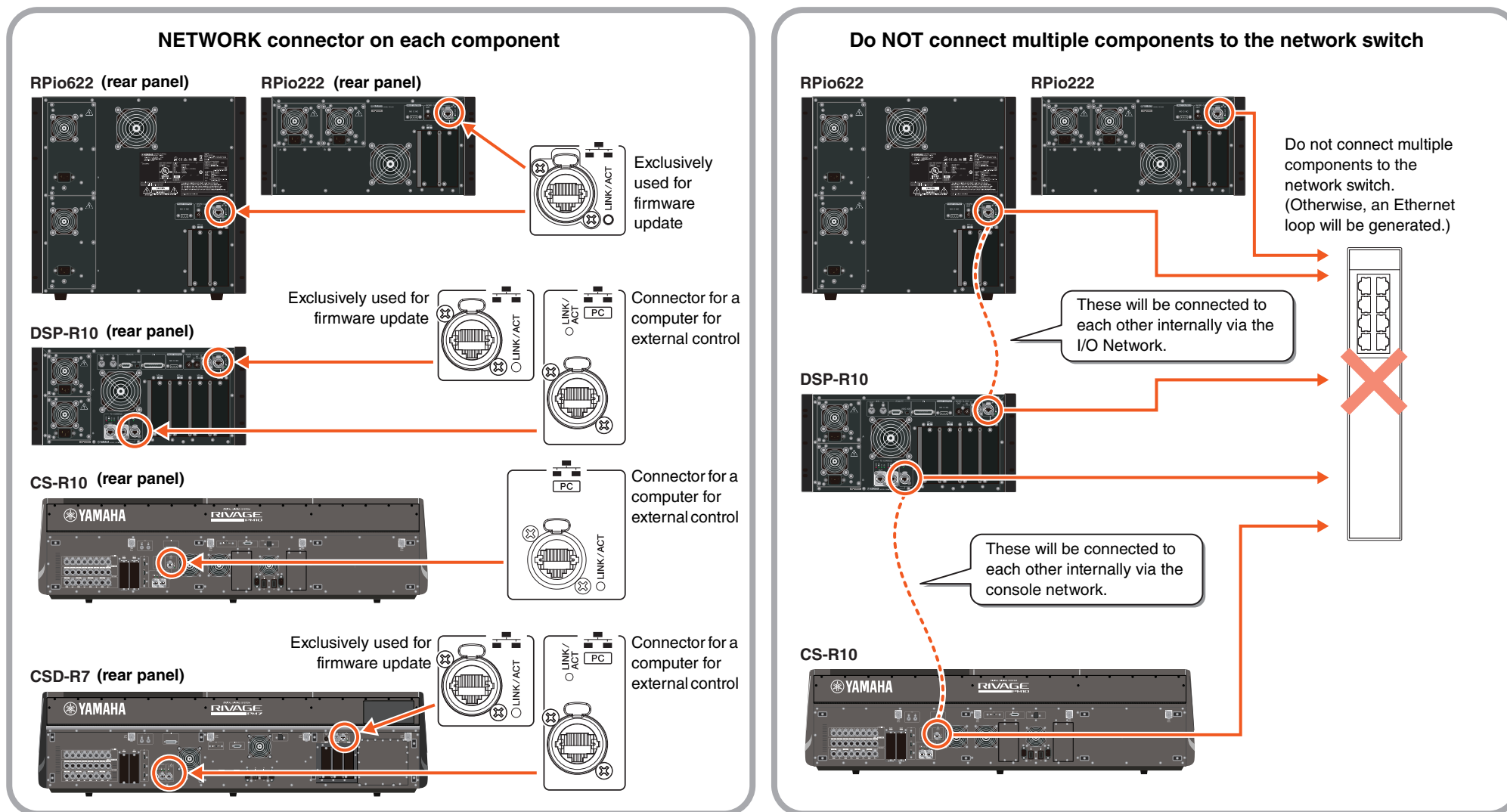
## Precautions regarding using the NETWORK connector

Each component in the RIVAGE PM series features a NETWORK connector on the rear panel. Do not connect these connectors to any unsupported devices (such as a computer you might use to update the firmware or for external control).

Otherwise, unexpected input of communications traffic may jeopardize system operation.

In particular, never connect the NETWORK connectors on multiple components to the same network switch.

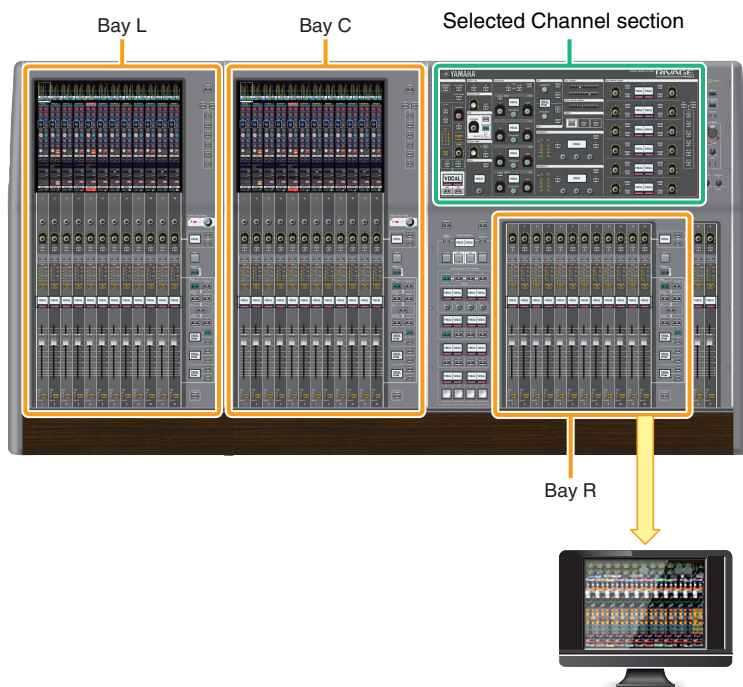
These connectors are usually connected to each other via the system network. Therefore, connecting them to the network switch will generate a loop that could prevent normal system communications.



# Bay

A bay consists of a group of 12 faders located across the Touch Screen section and the Channel Strip section.

The CS-R10 and CSD-R7 have three bays; the CS-R10-S has two bays. You can operate these bays independently. Therefore, you can perform mixing operations, such as recalling settings to the touch screen or switching between 12-fader layers on a bay, without affecting the settings on other bays. Please note that unlike bay L and bay C, bay R does not feature a touch screen or screen encoders beneath it. If you connect an external screen monitor, you will be able to use it exclusively for bay R. The external monitor will display content similarly to bay L and bay C, except that it will display a layer or channels that are selected on bay R.



## Faders and fader layers

### ■ Selecting a layer

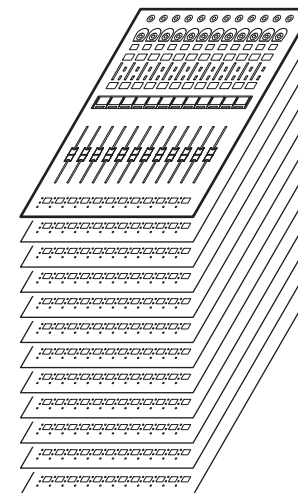
Twelve faders are arranged into layers, as illustrated below. You can use the Layer Select keys to the right of the faders to recall the channels to edit.

There are two layer types: base layer and custom layer.

### ■ Base layer

A base layer features mixer channels lined up in the fixed order of channels.

- Input [1-12], [13-24] ... [133-144]: total 12 layers
- Mix [1-12], [13-24] ... [61-72]: total 6 layers
- Matrix [1-12], [13-24] ... [35-36]: total 3 layers
- Stereo [A/B]: total one layer
- CUE [A/B], MONITOR [A/B]: total one layer
- DCA [1-12], [13-24]: total 2 layers



### ■ Custom layer

A custom layer contains 12 faders to which you can assign channels.

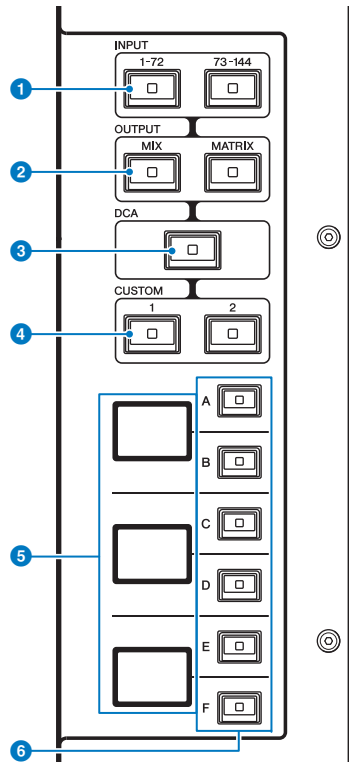
You can assign 12 layers (2 banks x 6 layers) of custom faders for each bay independently.

To edit a specific input channels/output channels/DCA/custom channel, use the LAYER key to select a layer.

The Layer Select key of the currently-selected layer will light up, and the layer display will show the short names of the corresponding channels.

For example, if you select LAYER [IN 1-12], you will be able to use the [SEL]1 key to control input channel 1. If you select LAYER [IN 25-36], you will be able to use the same [SEL]1 key to control input channel 25.

- 1 INPUT [1-72]/[73-144] keys**  
Enable you to select an input layer.
- 2 OUTPUT [MIX]/[MATRIX] keys**  
Enable you to select an output layer.
- 3 [DCA] key**  
Enables you to select a DCA layer.
- 4 CUSTOM [1]/[2] keys**  
Enable you to select a custom layer. You can assign custom faders of two banks (total of 12 layers) to each custom layer.
- 5 Layer display**  
Indicates the selected layer.
- 6 Layer Select [A]/[B]/[C]/[D]/[E]/[F] keys**  
Enable you to select a layer. Different layers are recalled to the faders depending on the combination of the keys, as shown in the table below:



Key	[INPUT 1-72]	[INPUT 73-144]	[OUTPUT MIX]	[OUTPUT MATRIX]	[DCA]
[A]	Input 1-12	Input 73-84	MIX 1-12	MATRIX 1-12	DCA 1-12
[B]	Input 13-24	Input 85-96	MIX 13-24	MATRIX 13-24	DCA 13-24
[C]	Input 25-36	Input 97-108	MIX 25-36	MATRIX 25-36	—
[D]	Input 37-48	Input 109-120	MIX 37-48	Stereo A, Stereo B	—
[E]	Input 49-60	Input 121-132	MIX 49-60	CUE A, CUE B, MON A, MON B	—
[F]	Input 61-72	Input 133-144	MIX 61-72	—	—

## Selected channel concepts

The RIVAGE PM series enables you to select a specific channel to control or for which to display mixing parameters.

### Types of selected channels

The CS-R10 control surface enables you to select specific “independent” channels. This feature enables you to control multiple channels on a single control surface.

#### Selecting a channel by using hardware

You can select a specific channel for the Selected Channel section (hardware). You can also use [SEL] keys on each bay.

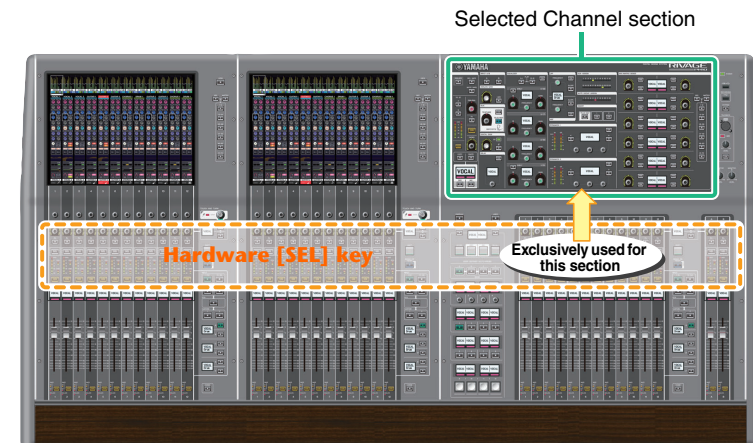
#### Selecting channels on screen (up to three individual channels)

SEL for bays L, C, or R (external display) (CS-R10, CSD-R7)

SEL for bays C or R (external display) (CS-R10-S)

You can also customize links between these on-screen selected channels and the ones selected via hardware keys, in accordance with your operational style.

#### Selecting a channel by using a hardware [SEL] key



A [SEL] key is used to select the corresponding channel for the Selected Channel section (hardware).



However, the [SEL] keys can also be linked to on-screen selected channels to assign channels to a DCA or mute group.

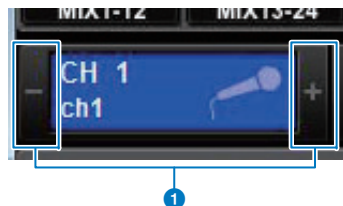
## Selecting channels on screen

In addition to the Selected Channel section (hardware), the touch screen in each bay is useful for controlling parameters for one specific channel. One specific channel selected on each touch screen is called an “on-screen selected channel.”

You can select a channel on screen in one of the following ways:

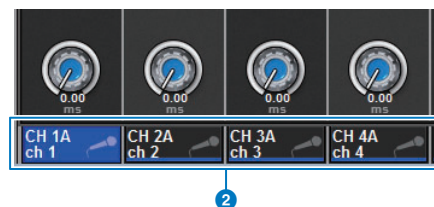
- 1 Press either side (+/- buttons) of the selected channel indication in the upper-left of the screen.

Press the left side (-) of the selected channel indication to select the preceding channel. Press the right side (+) of the area to select the next channel.



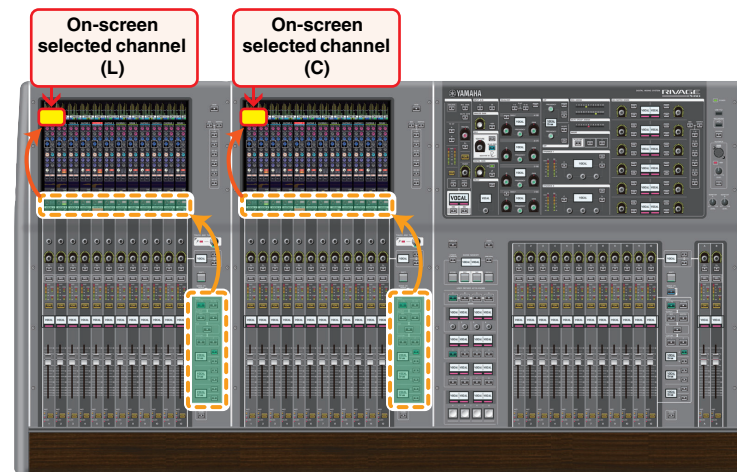
- 2 Press the channel name area located at the bottom of the screen.

Press the channel name repeatedly to switch the selected channel on screen. If you switch fader layers in the meter area, the channel name area will change the indication accordingly. In this way, you can access any channel on screen.



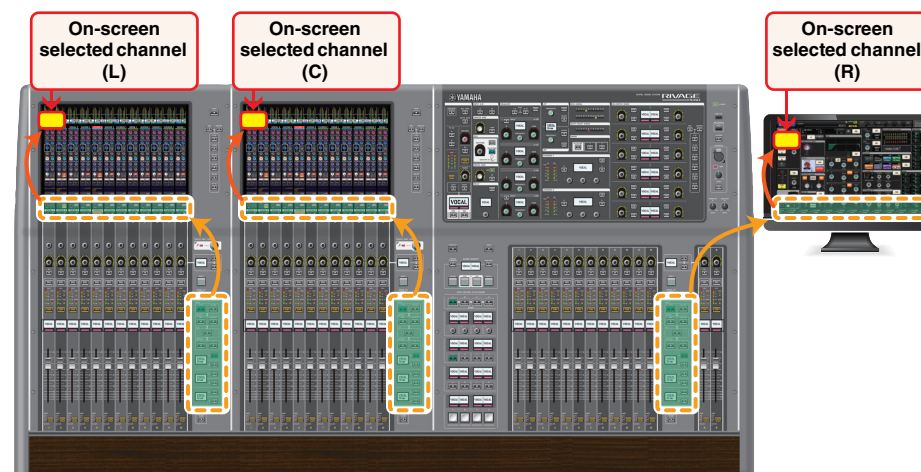
### NOTE

If you use the [FADER BANK]>[SEL] LINK function specified in the PREFERENCES window, you will be able to automatically switch to the selected channel in each bank (a channel selected most recently) while switching between fader banks (page 355).



## On-screen selected channel displayed on an external monitor

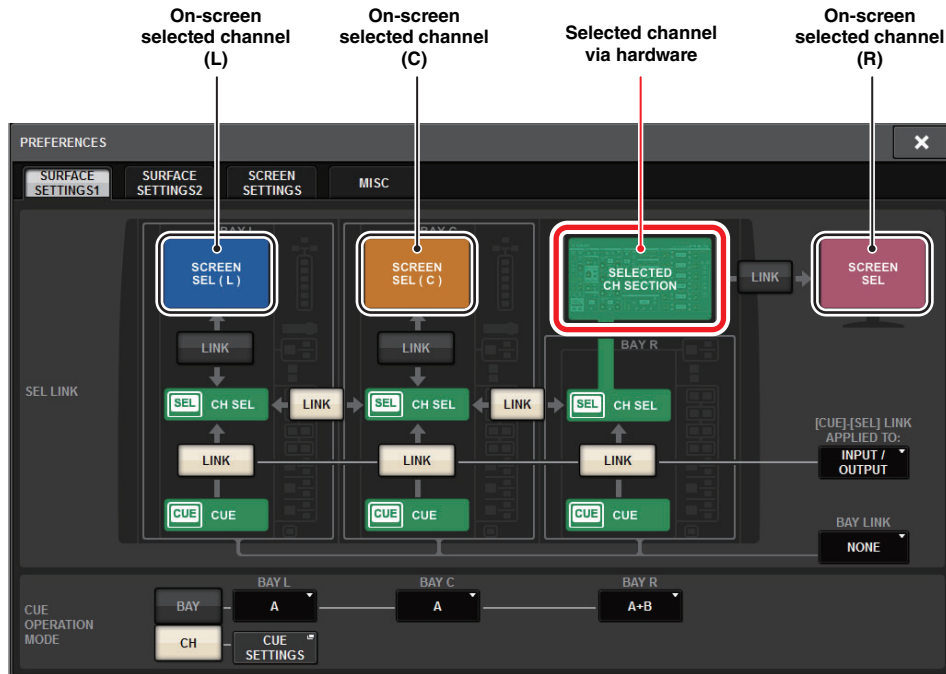
The on-screen selected channel on an external monitor screen also serves as the on-screen selected channel for bay R. In this way, if you use the external display and a USB mouse, you will be able to operate channel parameters on bay R in same way you do on bay L and bay C.



## Linking selected channels

The PREFERENCES window enables you to set up the link between the selected channels/ parameters on screen and the [SEL] keys (hardware), and to set up the link between [SEL] keys and the bays.

You can also specify whether the hardware [SEL] key selection will be linked with cue operations ([page 354](#)).

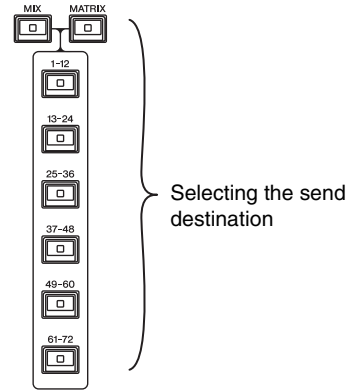


# Bay Link

A Bay Link function enables you to select and link layers from multiple bays on the control surface. Normally, each bay with 12 faders operates independently. However, using this function, you can link and use multiple bays as one bay that features up to 36 faders.

Linkable functions include:

- Fader layer selection
- SENDS ON FADER on/off
- Switching the selection of the channel strip encoders
- Selection of the send destination when the OVERVIEW screen is active

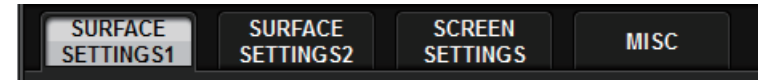


1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



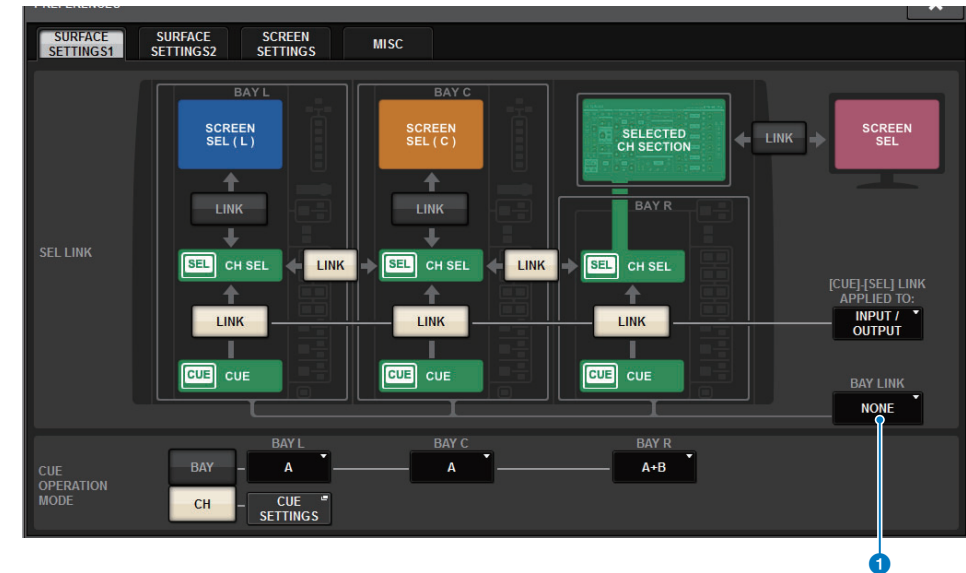
2. Press the **PREFERENCES** button to access the **PREFERENCES** popup window.

This window includes several pages, which you can switch between using the tabs located at the top of the window.



3. Press the **SURFACE SETTINGS1** tab to access the **SURFACE SETTINGS1** page.

## SURFACE SETTINGS1



### 1 BAY LINK

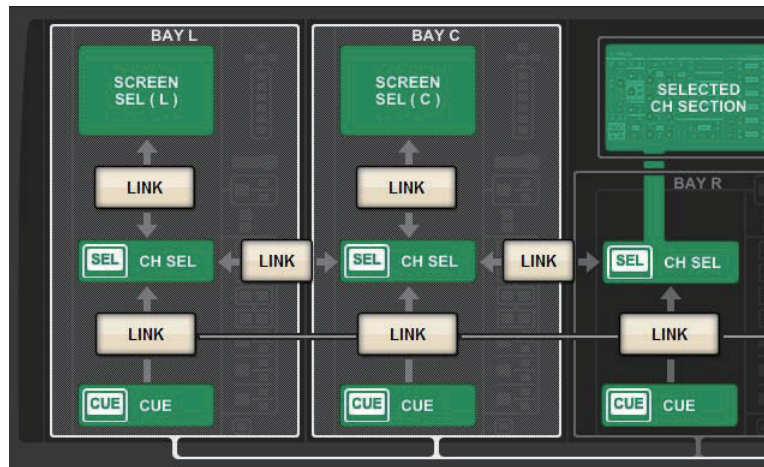
Specifies whether the layers selected from multiple bays will be linked. You can select L+R, L+C, C+R, or L+C+R.

4. Use the **BAY LINK** button to select bays you want to link.

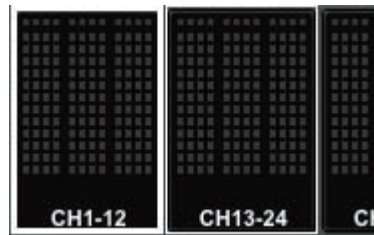
### NOTE

- You can select only bays that are linked via CH SEL.
- A link between SCREEN SEL and CH SEL, and the [CUE]-[SEL] LINK setting can be turned on or off on each bay independently, regardless of the Bay Link status.

Linked bays will be indicated by a white frame.



The selected layer will be indicated by a bold white frame in the meter area. Also, the layer of the linked bay will be indicated by a thin white frame.



**NOTE**

- Changing the Bay Link setting will clear the position of the selected channel stored in each layer. Once this position data is cleared, the selected channel (which was already selected at the time of layer switching) will move to the left-most channel in the fader bank. (Please note that this applies only when FADER BANK SEL LINK is turned on.)
- If Bay Link mode is changed while DCA channels are being rolled out, the DCA roll-out operation will be canceled.
- If the Bay Link setting is changed for a bay on which the SET BY SEL button is turned on, SET BY SEL will be turned off.

## About switching layers using the [HOME] keys

Each [HOME] key will recall a layer that was rolled out and bookmarked, regardless of the Bay Link status. If you cancel the Bay Link function after bookmarking rolled-out layers, only the layer on the bay stored via the corresponding [HOME] key will be recalled.



## Basic Operations

### Basic touch screen operations

This section explains the basic procedures you can perform on the unit's touch screens. In general, you will operate the system using an appropriate combination of the operations explained here.

#### ■ Pressing the touch screens

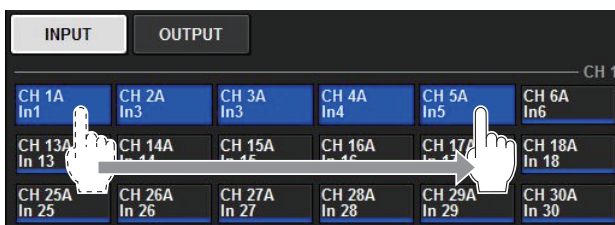
You will use this operation primarily to switch screens and pages, to select the parameter to be operated, and to turn a button on/off. Certain buttons let you specify a number based on the area of the button itself that you touch.

#### ■ Multiple selection (specifying a range)

While pressing your finger on the touch panel, move it in the left or right direction to specify a range within a character string. You will use this technique primarily when assigning a name to a scene or library.



For the channel select buttons, you can select multiple buttons by moving your finger across the touch screen while continuing to press down.



#### ■ Knob operations

Typically, knobs are rotated left or right to change the value of the corresponding parameter.

#### NOTE

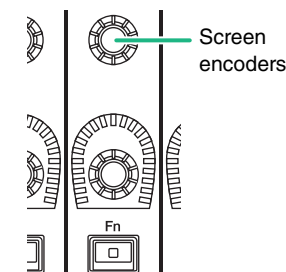
Pressing certain knobs a second time while a thick frame is displayed around them will open a window in which you can make additional detailed settings.

### Basic operations on the top panel

#### ■ Screen encoder operations

Screen encoders 1–12 are used to operate the knobs selected for operation in the touch screens.

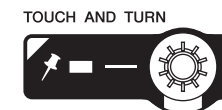
When you press to select a knob that can be controlled by the screen encoders, a thick frame appears around it. (Normally, a knob of this type corresponds to the screen encoder located immediately below that knob, allowing you to control up to twelve parameters simultaneously.)



#### ■ TOUCH AND TURN knob operations

The [TOUCH AND TURN] knob enables you to control the parameter of the knob you are touching on the touch screen.

At this time, a pink or yellow frame appears around certain knobs on the touch screen, indicating that you can operate those knobs.



#### ■ HOME key operations

This key enables you to store the status of each bay and recall the settings all together later.

Press and hold down this key to store the following settings:

- Current screen data
- Selected channel/parameter on the screen
- Selection of the fader layer



#### ■ [SYSTEM] key operations

Press this key to display information about the RIVAGE PM series on the center touch screens.

The SYSTEM CONFIG popup window (page 111) will open.

## Shut down (power-off procedure)

Before you shut down the control surface, Yamaha recommends that you store the current status to scene memory.

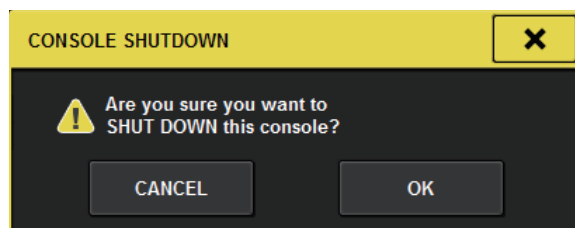
If you change the connection status of the components after the power is turned off, some settings, such as patching, may be altered when you turn the power on again. For instructions on storing scenes, see “[Storing a scene](#)” (page 313).

### NOTICE

If you turn off the power to the control surface without following the shutdown procedure, data inside the built-in storage (including the current memory) may be damaged. Be sure to perform the shutdown procedure to turn off the power to the control surface.

#### 1. Press the [SYSTEM] key for two seconds or longer.

A message will ask you to confirm the shutdown operation.



#### 2. To shut down the control surface, press the OK button. To cancel shutdown, press the CANCEL button.

#### 3. Wait until the LEDs on the panel turn off, the touch screens go dark, and the POWER indicator lights orange.

#### 4. Turn off both power switches A and B on the rear panel.



### Caution

If you plan to turn on the power to the control surface again, wait at least five seconds before switching the power on. Otherwise, the unit may malfunction.

Even when the power switches are turned off, a small amount of current still flows through the unit. If you plan not to use the unit for a long period of time, remove the power cords from the AC outlets.

### NOTE

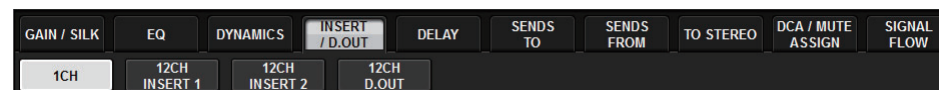
You can shut down the control surface by assigning the Console Shutdown function to a USER DEFINED key or GPI IN.

## On-screen user interface

This section explains various user interface components shown in the touch screens, and how to use them.

### Tabs


Tabs enable you to switch between multiple pages. Each tab indicates its page name.

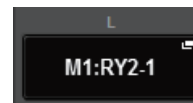



### Buttons

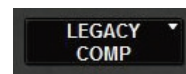
Buttons are used to execute specific functions, to switch parameters on or off, or to select one of multiple choices. Buttons that perform on/off operations appear in solid colors while they are turned on, and dark when turned off.



When you press a  button, a separate popup window will open, allowing you to make detailed settings.

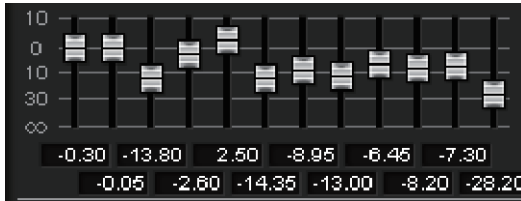


When you press a  button, a pull-down menu will appear.



## Faders/knobs

Faders in the screen are used mainly for visual confirmation of the levels of the corresponding channels, and will move in tandem when you operate the top panel faders. The current value is shown in numerical form immediately below the fader.



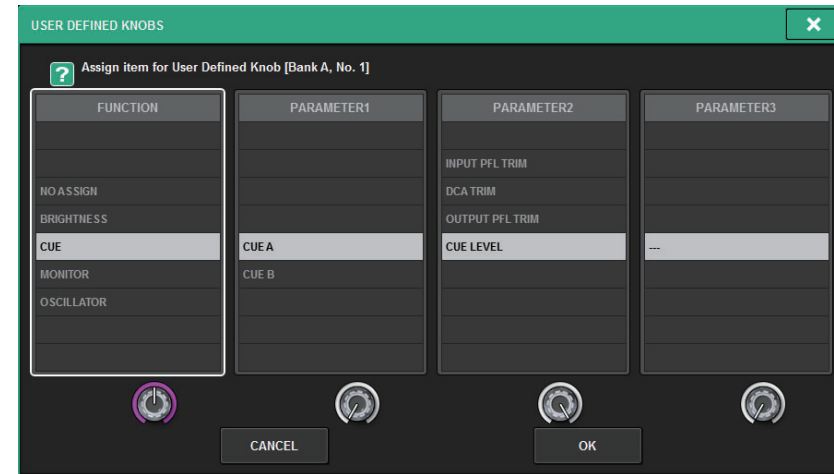
Knobs in the screen provide visual confirmation of the value of the corresponding parameter.

If you press a knob once in the window, a thick frame appears around the knob. This frame indicates that the knob is selected for operations that can be controlled by the [TOUCH AND TURN] knob or screen encoders.



## List windows

Windows similar to the following enable you to select items from a list, such as the USER DEFINED knob setting window.



The highlighted item in the middle of the list is the item that is selected for operation. Press the screen encoders located below the list to scroll the list upward or downward.

### NOTE

You can also scroll the list up or down by using the [TOUCH AND TURN] knob.

## Keyboard window

The following keyboard window will appear when you need to assign a name or comment to a scene or library, or when you need to assign a channel name. Press character buttons in the window to enter the desired characters.



## Popup windows

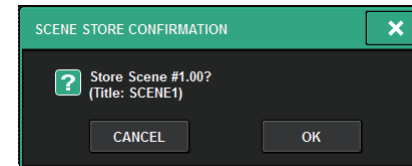
When you press a button or field for a specific parameter in a screen, a window showing details or a list for that parameter will appear. These windows are called “popup windows.”



You can switch between popup windows using tabs as needed. Some popup windows show several buttons called “tool buttons” at the top of the window. You can use these tool buttons to recall libraries or to perform copy and paste operations. Press the “X” symbol located in the upper right corner to close the popup window and return to the previous screen.

## Dialog boxes

Dialog boxes similar to the following enable you to confirm operations you just performed.



Press the OK button to execute the operation. The operation will be canceled if you press the CANCEL button.

## Viewing a touch screen

The touch screens display the following information:



## Meter area

The meter area displays various meters. Press any part of the meter area to recall the corresponding fader layer to the panel.

## Main area

The contents of the main area will vary depending on the currently-selected function. Mixing operations will involve mainly the following two types of screens. To access these screens, press the [VIEW] key.

### SELECTED CHANNEL VIEW screen

This screen shows all mix parameters of the currently-selected channel.

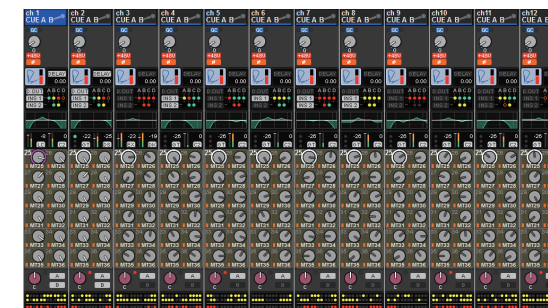
For details about this screen, see [page 99](#).



### OVERVIEW screen

This screen shows the main parameters of 12 channels selected as a layer.

For details about this screen, see [page 105](#).



## Menu bar



### 1 Selected channel

This area shows the number, name, icon, and channel color of the channel that is currently selected for operation. For details on assigning a name, refer to [page 90](#). For details on selecting an icon, refer to [page 158](#). Press the left side of the selected channel area to select the preceding channel. Press the right side of the area to select the next channel.

### 2 Connection

This indicates the ID of the control surface and the unit ID of the DSP engine that is connected.

Here you can also check whether the DSP engine is operating in active mode or in standby mode.

Not shown: DSP not found

Green: found as active

Gray: found as standby (switchable)

Gray slanting line: found as standby (not switchable)

Grayed out: DSP assumed to be in standby is not found

When DSP Mirroring is used, this also operates as a button to access the System Config screen.

### 3 Information

This area displays information such as the current time and a scene number. If you press this area, the SCENE LIST window will appear in the main area, allowing you to set scenes.

In Preview mode, this flashes red.

### 4 Status indicator

This area indicates the current status. The following table shows the displayed content and the corresponding status.



Indicator	Status
M	Status of the TWINLANE network (MAIN) Green: Online (Normal) Yellow: Online (Not in the ring connection) Red: Wiring problem Blue: Out of sync Gray: Offline

Indicator	Status
S	Status of the TWINLANE network (Sub) Green: Online (Normal) Yellow: Online (Not in the ring connection) Red: Wiring problem Blue: Out of sync Gray: Offline
C	Status of the Console network Green: Online (normal) Yellow: Online (Not in the ring connection) Red: Wiring problem Blue: Out of sync Gray: Offline
D	Status of the DSP engine Green: Normal Yellow: Only POWER A or B is enabled. Red: Error (inoperative fan, etc.)
R	Status of the I/O rack Green: Normal Yellow: Only POWER A or B is enabled. Red: Error (inoperative fan, etc.)
OSC (yellow)	Oscillator is enabled.
TB (yellow)	Talkback is enabled.
ALT (yellow)	Alternate function ON
REC (red)	Currently recording an audio file
PLAY (green)	Currently playing an audio file
OVL (yellow)	Overlay ON
VSC (yellow)	Virtual sound check ON
LINK (yellow)	Temporary link ON
CUE A, CUE B, CUE A+B, CUE S, CUE A+S, CUE B+S, CUE A+B+S (yellow)	Status of cue
SOLO (red)	Solo mode ON
ACCESS	Communicating with the USB flash drive



**NOTICE**

The ACCESS indicator will appear while data is being accessed (i.e., saved, loaded, or deleted). Do not disconnect the USB flash drive or power-off the unit while this indicator is shown. Doing so may damage the flash drive, or may damage the data in the unit or on your media device.

**5 SENDS ON FADER**

Press this button to switch to SENDS ON FADER mode, in which you can use the faders of the top panel to adjust the MIX/MATRIX send level (page 222). During this time, the main area will switch to a screen that enables you to select the send-destination MIX/MATRIX bus.

**6 MONITOR**

When you press this button, the MONITOR screen will appear in the main area, enabling you to edit the monitor or oscillator settings.

**7 RACK & REC (Recorder)**

When you press this button, the RACK & REC screen will appear, enabling you to configure plug-ins. You can also make settings for the recorder function (USB), which allows you to record and play back audio files.

**8 SETUP**

When you press this button, the SETUP screen will appear, enabling you to make basic and user-specific settings for the RIVAGE PM series.

**9 PATCH**

When you press this button, the PATCH screen will appear, enabling you to configure in/out, direct out, recording, and other patches.

**10 CH JOB (Channel Job)**

Press this button to access the CH JOB pull-down menu, in which you can copy or initialize the channel settings, etc.

**11 METER**

When you press this button, the a pull-down menu will appear, enabling you to select the type of channel block to display in the meter area from the following options (page 190):

- **INPUT (Input channel)**  
Input channels 1–144, STEREO A/B channels, CUE A/B channels
- **OUTPUT (Output channels)**  
MIX channels 1–72, MATRIX channels 1–36, STEREO A/B channels, CUE A/B channels, DCA
- **IN/OUT (Input/Output channels)**  
Input channels 1–144, MIX channels 1–72, MATRIX channels 1–36, STEREO A/B channels, CUE A/B channels, DCA
- **FULL SCREEN (Full-screen display)**  
The METER screen is displayed full-screen in the main area.

**Channel name area**

Press the channel name area to switch the selected channel/parameter on the screen.

If you switch fader layers, the indication in this area will reflect the change in layer selection. In this way, you can access any channel on screen.



Channel name

**NOTE**

Switching layers will not affect the selected channel/parameter on the screen. The 12-channel group displayed on the OVERVIEW screen will change. However, unless you press the channel name area, the selected channel/parameter on the screen will remain unchanged since your last press of the [SEL] key(s). If you want to switch the selected channel/parameter on screen at the same time you switch layers, you can configure this arrangement by selecting [FADER BANK] > [SEL] LINK in the PREFERENCES settings.

## Entering names

You can assign a name to each input channel, output channel, and DCA, and assign a title to each scene or library data item when you save it.

To assign a name, you will use the keyboard window that is shown in the main area.

### 1. Access the screen for assigning names.

The screen shot below shows how to assign a name to a channel.



The box shows the characters you have entered and a cursor that indicates the current position.

### 2. Use the keyboard window in the touch screen to enter the desired characters.

When you press a character button in the keyboard window, the corresponding character will be entered in the box, and the cursor will move to the right.

### 3. Enter the subsequent characters in the same way.

When entering characters, you can also use the following buttons in the keyboard window.

- **COPY button**  
Copies the string of characters that are selected (highlighted) in the text box.
- **CUT button**  
Deletes and copies the string of characters that are selected (highlighted) in the text box.
- **PASTE button**  
Inserts the string of characters copied by COPY or CUT at the cursor location (or overwrites the currently-selected range of characters).

- **CLEAR button**  
Erases all characters that have been input in the text input box.
- **DEL button**  
Deletes the character to the right of the cursor (or the string of characters selected in the text box).
- **BS button**  
Deletes the character to the left of the cursor (or the string of characters selected in the text box).
- **TAB button**  
Enables you to access the next selectable item. For example in the SCENE STORE window you can use this button to switch between four text entry boxes, and in the PATCH/NAME window you can use this to switch channels.
- **SHIFT LOCK button**  
Switches between uppercase and lowercase alphabetical characters. You can enter uppercase characters and symbols while this button is on, and lowercase characters and numerals while this button is off.
- **ENTER button**  
Finalizes the name you entered.

### 4. When you finish entering the name, press the [ENTER] button.

The name you entered will be applied.

#### NOTE

- Basic procedures are the same in windows that let you assign names to channels or other types of library data. When you enter a name for a channel, your input will be reflected immediately without pressing the ENTER button.
- By pressing inside the text entry box, you can move the input position to the location you pressed. If you select a region of characters you've entered in the box and then enter a new character, the newly entered character will overwrite the selected region.



## Using tool buttons

The title bar on top of certain popup windows features tool buttons that provide additional functions. These buttons enable you to recall related libraries, or copy channel parameters to another channel. This section explains how to use the tool buttons.

### About the tool buttons

EQ, Dynamics, Delay, GEQ/PEQ, and Plug-in popup windows feature the following tool buttons:



#### 1 LIBRARY button

Recalls a library related to the current popup window (such as EQ, Dynamics, GEQ/PEQ, or Plug-in library).

#### 2 DEFAULT button

Resets the EQ or Dynamics of the currently-selected channel, or GEQ/PEQ or Plug-in to their default settings.

#### 3 COPY button

Copies the EQ, Dynamics, or Delay parameter settings of the currently-selected channel, or the GEQ/PEQ or Plug-in settings. Copied settings will be stored in buffer memory (a temporary storage area).

#### 4 PASTE button

Pastes the settings stored in buffer memory to the EQ, Dynamics, or Delay of the currently-selected channel, or GEQ/PEQ or Plug-ins.

#### 5 COMPARE button

Switches between and compares the settings stored in buffer memory and the EQ or Dynamics of the currently-selected channel, or GEQ/PEQ or Plug-in settings.

## Copying and pasting parameters

You can copy the EQ, Dynamics, or Delay parameter settings of the currently-selected channel, or GEQ/PEQ or Plug-in settings to buffer memory, and then paste them to corresponding parameters for other channels, or a similar type of GEQ/PEQ or Plug-in.

### NOTE

- The EQ and Dynamics parameter settings will be copied and pasted per bank (A/B). You can copy and paste the parameters between Bank A and B of the same channel. For example, you can copy the parameter settings for Dynamics 1 on CH1 in Bank A to Dynamics 2 on CH144 in Bank B.
- If 15 bands or less are used for 31BandGEQ, those parameter settings can also be copied to Flex15GEQ.

#### 1. Open a popup window that features tool buttons.

#### 2. Select a channel EQ, Dynamics, or Delay, or GEQ/PEQ or Plug-in as the copy source.

#### 3. Press the COPY button.

The current setting will be stored in buffer memory.

### NOTE

- After copying a setting, be sure to paste it to the destination BEFORE you copy another setting. Otherwise, the copied setting (in buffer memory) will be overwritten.
- You can copy parameters from only one channel, GEQ/PEQ or Plug-in as the copy source.

#### 4. Select the paste destination.

### NOTE

You can select multiple channels as the paste destination for EQ, Dynamics or Delay using the corresponding popup windows (CH 1-72, CH 73-144, MIX, or MTRX/ST). In this case, the identical setting will be pasted to all selected channels.

#### 5. Press the PASTE button.

The channel EQ, Dynamics or Delay setting, or GEQ/PEQ or Plug-in setting (selected in Step 2) will be pasted.

### NOTE

- Please note that pasting the copied settings will overwrite the settings that are currently residing in the paste destination.
- If no data is stored in buffer memory, or if the data in buffer memory is not compatible with the data in the paste destination, the PASTE button will be disabled.

## Resetting parameters to default

This section explains how to reset the EQ or Dynamics settings of the currently-selected channel, or GEQ/PEQ or Plug-in settings, to their default values.

### NOTE

Pressing the FLAT button for GEQ/PEQ will reset the GAIN parameter for all bands to 0 dB.

1. Open a popup window that features tool buttons.
2. Select a channel EQ, Dynamics, or Delay, or GEQ/PEQ or Plug-in, for which you want to reset the parameters.

### NOTE

You can select multiple channels to reset those channels' EQ or Dynamics settings using the corresponding popup windows (CH 1-72, CH 73-144, MIX, or MTRX/ST).

3. Press the DEFAULT button.  
A dialog will request that you confirm the initialization operation.
4. To execute the initialization, press the OK button.  
The channel EQ or Dynamics, or GEQ/PEQ or Plug-in settings (selected in Step 2) will be initialized. If you decide to cancel the initialization operation, press the CANCEL button instead of the OK button.

## Comparing two settings

Using the COMPARE button enables you to switch between and compare the settings stored in buffer memory with the EQ or Dynamics settings of the currently-selected channel, or GEQ/PEQ or Plug-in.

This function is useful if you want to compare and listen to the edited data using the settings temporarily stored during the editing process.

1. Open a popup window that features tool buttons.
2. Select a channel EQ, Dynamics, or Delay, or GEQ/PEQ or Plug-in that you want to compare.

3. Press the COPY button to store the current setting in buffer memory.

This is the first of two settings to compare.

### NOTE

Do not try to copy another setting before you compare settings. Otherwise, the setting (in buffer memory) that you originally meant to compare will be overwritten by the newly-copied setting.

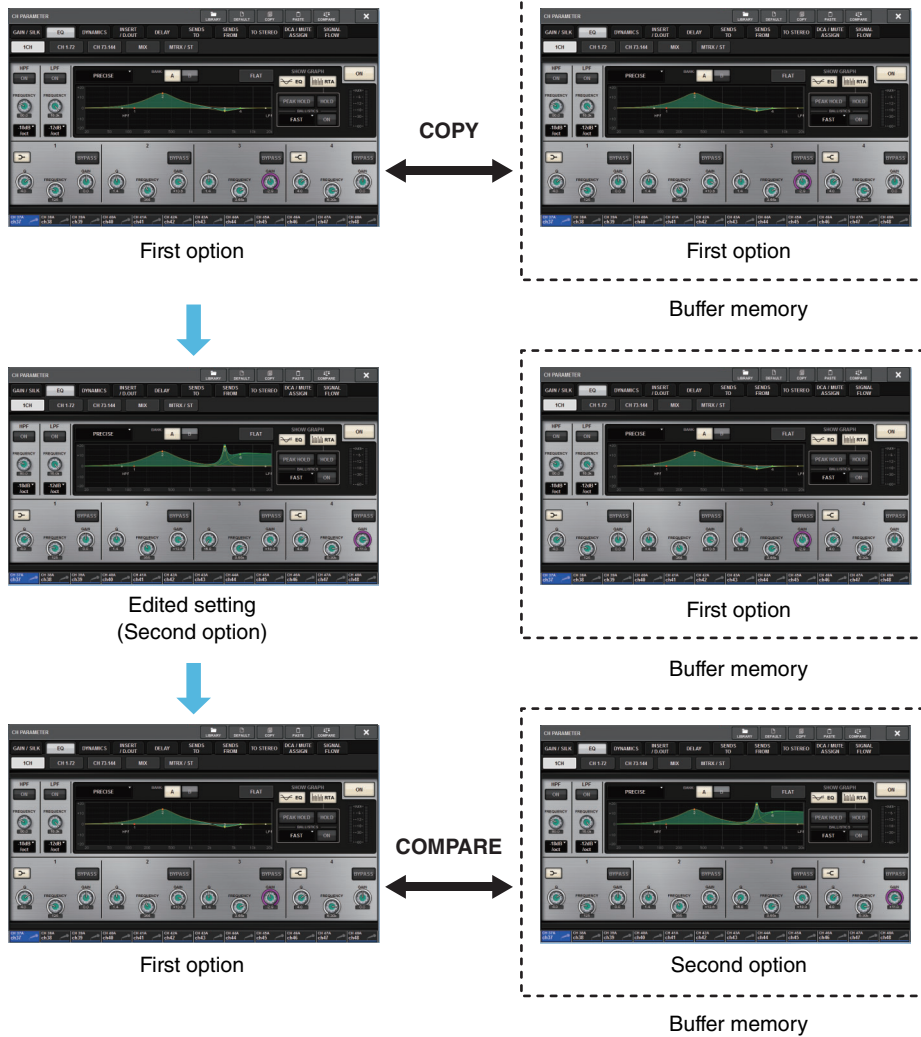
4. Edit the EQ or Dynamics setting of the currently-selected channel, or the GEQ/PEQ or Plug-in setting, as you desire.  
This is the second of two settings to compare.

### NOTE

Once the first option is stored in buffer memory, you can initialize the current setting to create a second option from scratch.

5. Press the COMPARE button to compare the first option and the current (second) option.

The first option will be applied to the system. At this time, the second option will be stored in buffer memory.



6. Press the **COMPARE** button repeatedly to listen to options 1 and 2 alternately. Pressing the **COMPARE** button repeatedly will alternate between the two options. Unlike the paste operation, you can revert to the previous setting at any time unless buffer memory has been overwritten.

**NOTE**

You can also paste the option stored in buffer memory to another appropriate paste destination.

## Using libraries

This section explains how to use libraries. Using libraries enables you to store and recall the EQ or Dynamics settings of the currently-selected channel, or GEQ/PEQ or Plug-in settings.

Libraries are categorized as follows:

- INPUT CH library
- OUTPUT CH library
- INPUT EQ library
- OUTPUT EQ library
- DYNAMICS library
- GEQ library
- PLUG-IN library
- NAME library
- DCA NAME/ASSIGN library
- MUTE NAME/ASSIGN library
- USER SETUP library
- OVERLAY LIBRARY

Basic operation is nearly identical for all of these libraries.

**NOTE**

- PLUG-IN library is sub-categorized into libraries based on type.
- NAME library is sub-categorized into libraries based on type.

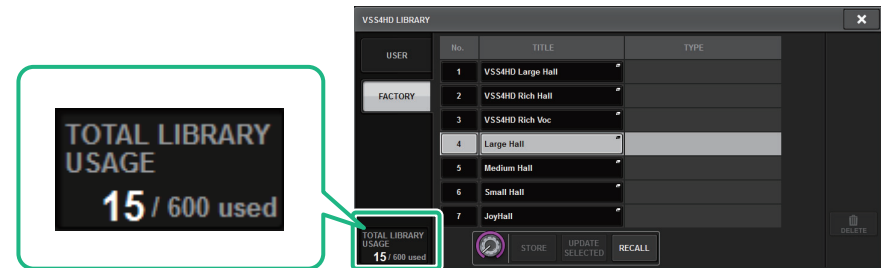
## Preset limits in the libraries

Up to 600 user presets can be stored in all libraries collectively.

You can view the total number of presets in the **TOTAL LIBRARY USAGE** field.

**NOTE**

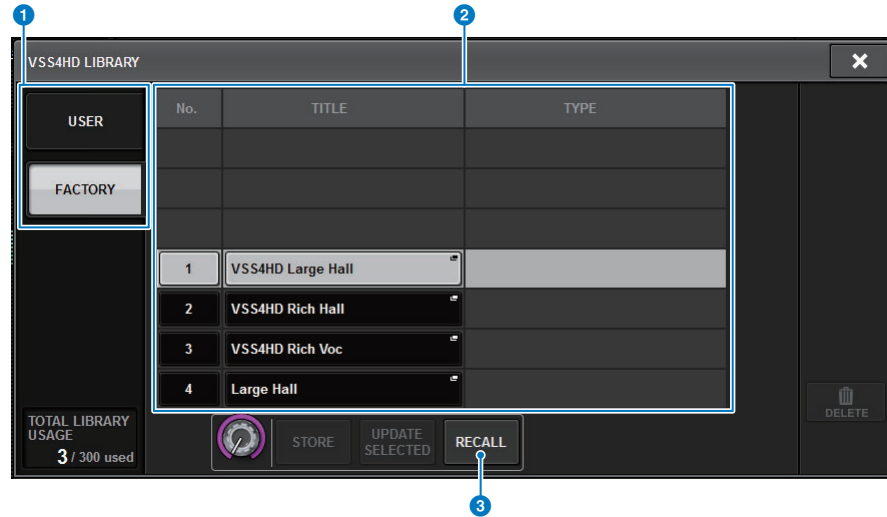
If you try to store more presets than the maximum allowed, the **STORE** button will be disabled.



## Recalling a preset from a library

1. Press the **LIBRARY** tool button in the target screen to access the corresponding library screen.

Each library screen contains the following items.



1. **USER preset/FACTORY preset switching buttons**

Switch between the user preset and factory preset display.

### NOTE

The **FACTORY** preset switching button appears only on library screens for plug-ins that feature factory presets.

2. **List**

Displays the setting data (presets) stored in the library.

The highlighted row in the list indicates that the item is selected for use.

### NOTE

The right column in the list shows information related to the corresponding setting data (such as the type of output channels, Dynamics or effect type used).

3. **RECALL button**

Recalls a preset for the currently-selected item.

2. Rotate the corresponding screen encoder to select the preset number you want to recall.

3. Press the **RECALL** button.

The selected preset data will be loaded and displayed.

### NOTE

Some presets selected as the recall source may not be recalled into the currently-selected item.

The following restrictions apply for each library:

#### • Channel libraries

In the **OUTPUT CH** library, if the type of channel selected in the list does not match the type of channel selected as the recall destination, the “CONFLICT” indicator will appear on the right side of the **TYPE** column. You can still recall the preset while the “CONFLICT” indicator appears. However, please note that parameters that are not included in the recalled preset will be set to default values.

#### • OUTPUT EQ library

This library is sub-categorized into three types: output channel EQ, 8BandPEQ (to be mounted to **INSERT**), and **MONITOR/CUE** EQ. If you select a different type of preset than the destination, the “CONFLICT” indicator will appear. You can still recall the preset while the “CONFLICT” indicator appears. However, please note that parameters that are not included in the recalled preset will be set to default values or will remain unchanged.

#### • GEQ library

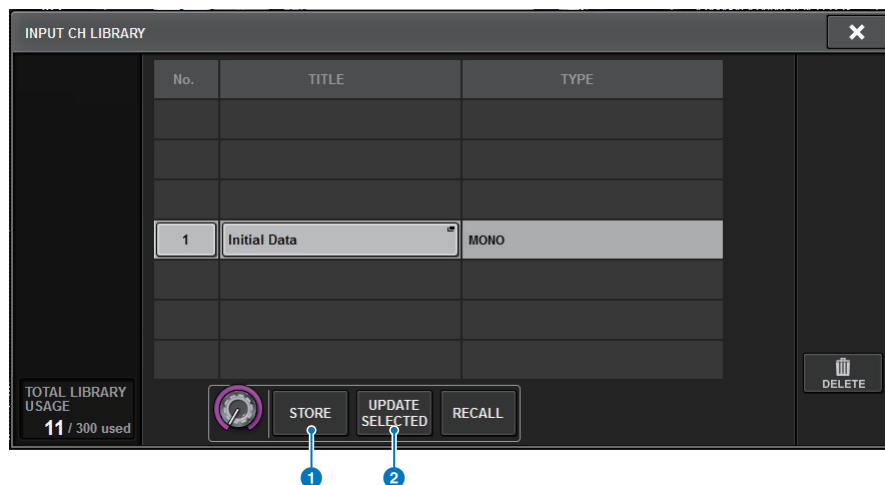
The presets stored in the **GEQ** library are sub-categorized into two types: 31BandGEQ and Flex15GEQ. If a 31BandGEQ library preset includes gain settings for more than 15 bands, you will be unable to recall it into Flex15GEQ.

#### • USER SETUP library

Setup data created in **PM Editor** can be recalled only by using **PM Editor**. Setup data created on the control surface can be recalled only by using the control surface.

## Storing setting data in a library

1. Press the LIBRARY tool button in the target screen to access the corresponding library screen.



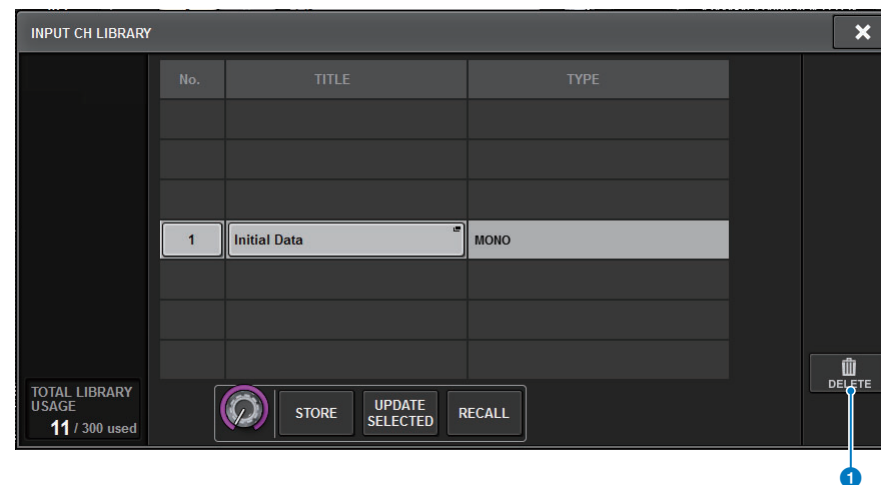
1. **STORE button**  
Stores the current-channel EQ or Dynamics setting, or the GEQ/PEQ or Plug-in setting.
2. **UPDATE SELECTED button**  
Stores the current setting by overwriting the selected preset.
2. Rotate the corresponding screen encoder to select the preset number to which you want to store the setting.
3. After you select the store destination, press the STORE button.  
A dialog will request that you confirm the store operation.
4. To execute the store operation, press the OK button.  
The setting data will be stored to the preset number you selected in step 2. If you decide to cancel the store operation, press the CANCEL button instead of the OK button.

### NOTE

You can change the title of the setting data after storing it by pressing on the setting data title in the list to open the TITLE EDIT popup window.

## Deleting setting data from a library

1. Press the LIBRARY tool button in the target screen to access the corresponding library screen.



1. **DELETE button**  
Deletes the preset selected in the list.
2. Rotate the corresponding screen encoder to select the preset number you want to delete.
3. Press the DELETE button.  
A dialog will request that you confirm the delete operation.
4. To execute the delete operation, press the OK button.  
The preset you selected in step 3 will be deleted. If you decide to cancel the delete operation, press the CANCEL button instead of the OK button.

# Pairing

You can pair adjacent channels for stereo operation.

## Input channels

You can pair either odd/even-numbered channels or even/odd-numbered channels. For single input channels (monaural), the pan level is nominal at the center, and +3 dB at hard left or hard right. For paired input channels, the balance level is nominal at the center, and +3 dB at hard left or hard right.

## MIX buses and MATRIX buses

You can pair adjacent odd/even-numbered MIX buses or MATRIX buses.

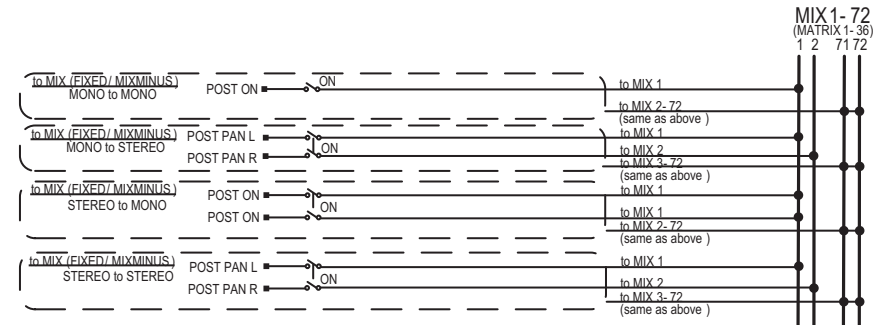
### NOTE

For information on the parameters that can be linked using the pair setting, refer to the data list.

When MIX buses are paired, the signal flow will change as described below:

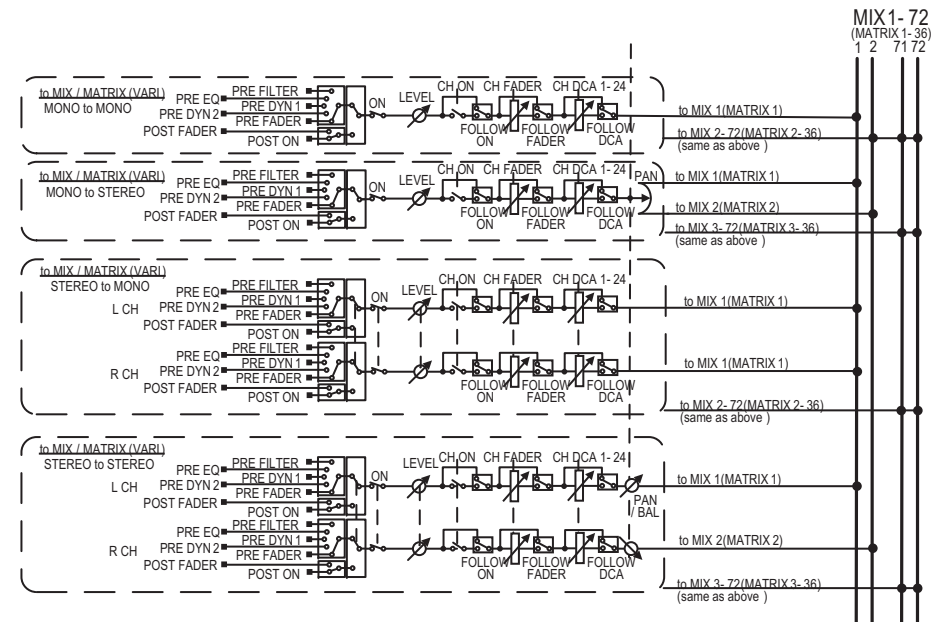
## CH to MIX

### FIX

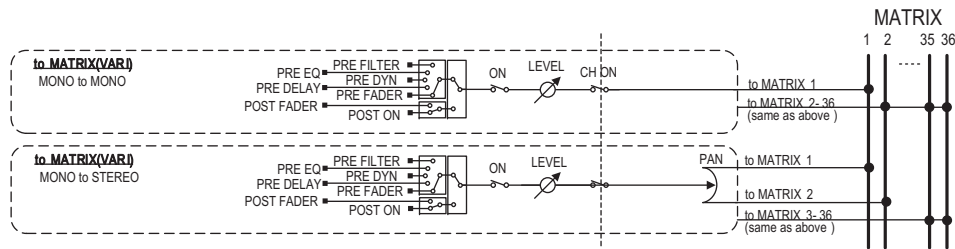


## CH to MIX

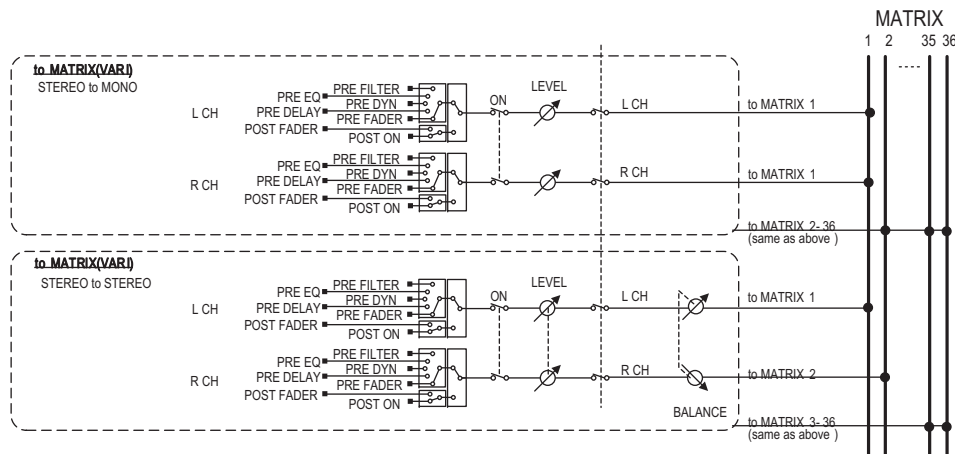
### VARI



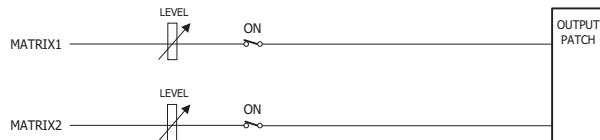
### MIX to MATRIX



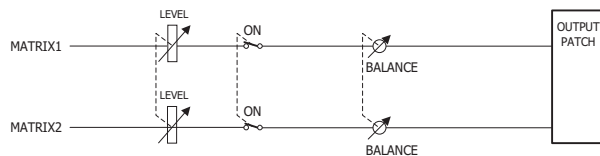
### MIX/STEREO to MATRIX



### MATRIX (MONO) to OUTPUT PATCH



### MATRIX (STEREO) to OUTPUT PATCH




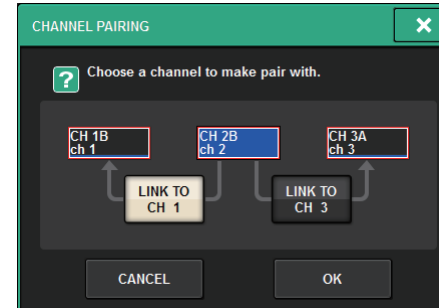
## Setting or defeating pairing on the SELECTED CHANNEL VIEW screen

1. Press the [VIEW] key to access the SELECTED CHANNEL VIEW screen.




SELECTED CHANNEL VIEW screen

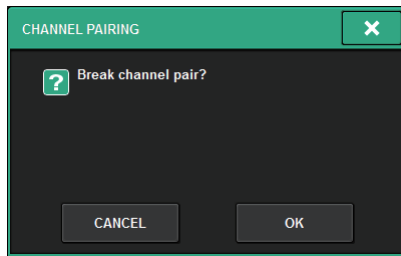
2. Press the pair  button to access the CHANNEL PAIRING popup window.



3. Select the channel pairing direction, and then press the OK button.

4. To defeat pairing, press the pair  button once again.

A window will be displayed, asking you to confirm that you want to defeat pairing.



**5. Press the OK button.**

The pairing setting will be defeated.



# Screen Overview

## About the SELECTED CHANNEL VIEW screen

This screen shows all mix parameters of the currently-selected channel.



### ■ ISOLATE

- 1 **ON button**  
Turns the Isolate function on and off.



### ■ RECALL SAFE

This field enables you to make Recall Safe settings.

- 1 **ON button**  
Switches the Recall Safe status on or off.
- 2 **Popup button**  
Press this button to access the RECALL SAFE popup window. This button will indicate “PARTIAL” if recall safe applies only to some of the parameters, not to all channel settings. It will indicate “All” if recall safe applies to all parameters. If no parameters are specified, it will indicate “OFF.”



### ■ SOLO SAFE

- 1 **ON button**  
Turns the Solo Safe function on and off.



### ■ MUTE SAFE

- 1 **ON button**  
Turns the Mute Safe function on and off.

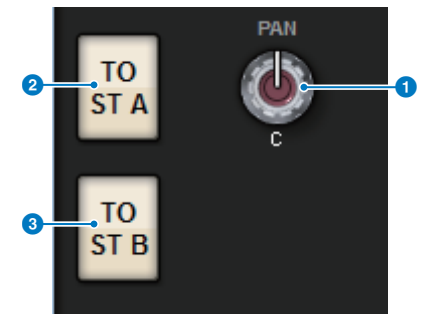


### ■ TO STEREO field

You can control the stereo balance of the signals sent from the selected channel to the STEREO bus, or the signals output from the MIX/MATRIX/STEREO buses. The indication varies depending on the selected channel, as follows.

#### If the selected channel is an input channel or MIX channel:

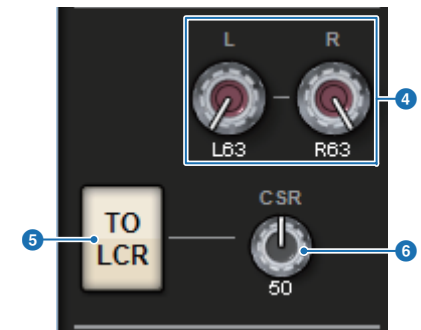
Use the PAN knob on the right (1) to adjust the panning of the signal. Use the TO ST A button (2) to switch on or off the signal sent to the STEREO A bus. Use the TO ST B button (3) to switch on or off the signal sent to the STEREO B bus.



#### NOTE

- If channels are paired for stereo, the PAN knob will be replaced with the BALANCE knob.

In the TO STEREO popup window, if the PAN/BALANCE select button is set to PAN, the L and R PAN knobs (4) are shown, enabling you to specify the panning of the signal. If you use the ST/LCR mode select button to select LCR, the LCR button (5) and CSR knob (6) appear. The LCR button turns on/off the signal that is sent from the channel to the STEREO bus, and the CSR knob specifies the level ratio between the signal that is sent to the STEREO A (L/R) bus and to the STEREO B (C) bus.



### ■ Fader strip field

- 1 **LEVEL meter**  
Indicates the POST ON level of a channel.
- 2 **CUE ON button**  
Switches Cue Out on or off. The button also indicates the selected cue bus(es).
- 3 **ON button**  
Switches the channel on or off.
- 4 **FADER knob**  
Adjusts the channel fader level.



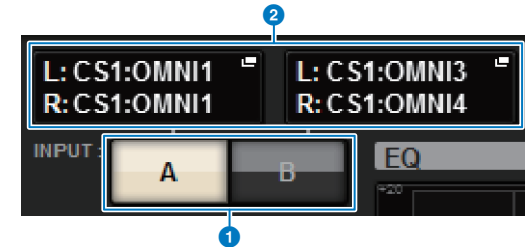
### ■ CH MODE field

- 1 **L/R PATH pull-down menu**  
Appears if the input channels are paired. You can select MONO, STEREO, L/L, or R/R as the audio combination input to the input channels.
- 2 **NAME popup buttons**  
Press this button to access the NAME/ICON EDIT popup window (page 159).
- 3 **Pair setting popup button**  
Press this button to access the CHANNEL PAIRING popup window (page 97).
- 4 **LIBRARY popup button**  
Press this button to access the library popup window, in which you can store or recall input/output channel parameters (including the HA setting).



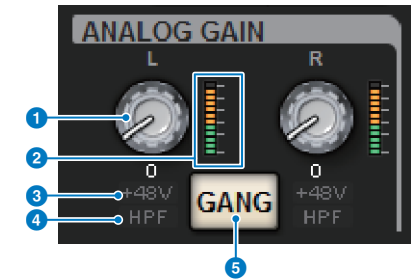
### ■ PATCH field

- 1 **INPUT A/B switch buttons**  
Switch between INPUT A and INPUT B.
- 2 **PATCH popup button**  
Press this button to access the patching popup window. The button will indicate the patch setting.  
If the selected channel is a STEREO channel, or is a MIX/MATRIX channel that is assigned as a pair, an OUTPUT BALANCE knob is shown, enabling you to adjust the output balance.



### ■ ANALOG GAIN field

- 1 **ANALOG GAIN knob**  
Sets the analog gain of the head amp. If the Gain Compensation function is turned on, a blue indicator appears, showing the analog gain position at the time the function was turned on.
- 2 **HA meter**  
Indicates the level immediately after the analog head amp.
- 3 **+48V indicator**  
Indicates the phantom power (+48V) on or off status for the head amp.
- 4 **HPF indicator**  
Indicates the on/off status of the HPF immediately after the external head amp.
- 5 **GANG button**  
Appears if channels are paired.  
If this button is on, the differences in HA analog gain will be maintained, and the digital gain GANG button will also be turned on.



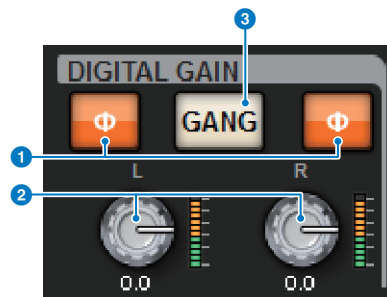
## ■ SILK field

- 1 **SILK [TEXTURE] knob**  
Adjusts the Silk TEXTURE parameter.
- 2 **SILK [ON] key**  
Switches SILK on or off.
- 3 **SILK [BLUE/RED] key**  
Toggles between BLUE and RED: “BLUE” for solidity and power, and “RED” for sparkling energy.



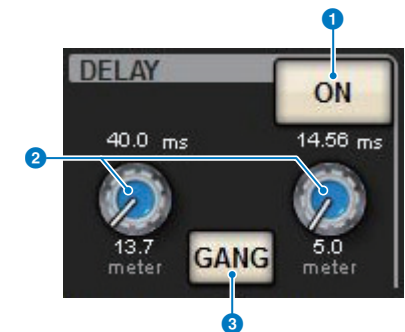
## ■ DIGITAL GAIN field

- 1 **Φ (Phase) button**  
Switches the phase of the head amp input signal between normal phase (gray) and reverse phase (orange).
- 2 **DIGITAL GAIN knob**  
Indicates the digital gain value. Use the screen encoder to adjust the digital gain. If the Gain Compensation function is turned on, this knob will adjust the level of the signal input to the selected channel.
- 3 **GANG button**  
Appears if channels are paired. If this button is on, the differences in digital gain will be maintained, and the digital gain GANG button will also be turned on.



## ■ DELAY field

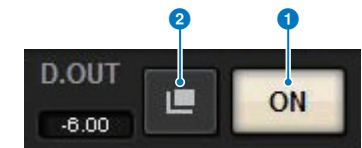
- 1 **DELAY ON buttons**  
Switches delay on or off for the selected channel.
- 2 **Delay time**  
Each number indicates the delay time. Use the corresponding screen encoder to adjust the delay time. In addition, you can press one of these values to display the DELAY TIME popup window, in which you can set the delay time.
- 3 **GANG button**  
Appears if channels are paired. If this button is on, then differences in delay time will be maintained.



## ■ DIRECT OUT field (input channels only)

This field enables you to turn Direct Out on/off for the selected input channel.

- 1 **ON button**  
Turns the Direct Out on or off.
- 2 **Direct Out patch popup button**  
Press this button to access the INSERT/D.OUT (1CH) popup window (page 208). The Direct Out level value will appear to the left of the button.



## ■ EQUALIZER field



### 1 EQ graph

This field indicates the approximate response of the EQ. Press this field to open the HPF/EQ (1CH) popup window (page 198), in which you can set the HPF, LPF, and EQ.

### 2 Tabs (Output channels only)

Use these tabs to select a band that you want to view on the screen.

### 3 EQ IN/OUT level meters

Indicate the peak level of signals before and after the EQ. For a stereo channel, these meters indicate the level of both the L and R channels.

### 4 EQ ON/OFF button

Switches the EQ on or off.

### 5 HIGH SHELVING ON/OFF button

Turn on this button to switch the HIGH band to a shelving type filter.

### 6 LOW SHELVING ON/OFF button

Turn on this button to switch the LOW band to a shelving type filter.

### 7 BYP (BYPASS) button

Temporarily bypasses the EQ for each band.

### 8 EQ parameter setting knobs

Indicate the Q, FREQUENCY, and GAIN parameters for each band. Press these knobs, and you will be able to use the screen encoders to adjust the values.

## ■ LPF field

This field enables you to set the LPF.

### 1 LPF knob

Specifies the cutoff frequency of the low pass filter.

### 2 ON button

Switches the LPF on or off.

### 3 LPF type select button

Enables you to set the LPF attenuation per octave to  $-6$  dB/oct or  $-12$  dB/oct.



## ■ HPF field

This field enables you to set the HPF.

### 1 HPF knob

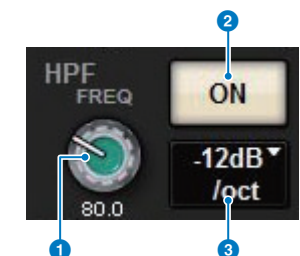
Specifies the cutoff frequency of the high pass filter.

### 2 ON button

Switches the HPF on or off.

### 3 HPF type select button

Enables you to set the HPF attenuation per octave to  $-6$  dB/oct,  $-12$  dB/oct,  $-18$  dB/oct, or  $-24$  dB/oct.

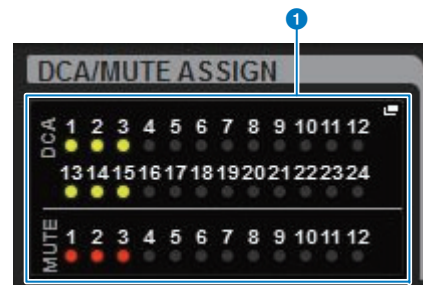


### ■ DCA/MUTE field

This field displays the DCA or mute group to which the channel is assigned.

#### 1 DCA/mute group popup button

Indicates the DCA and mute group to which the channel is assigned. Press this button to access the DCA/MUTE ASSIGN (1CH) popup window.



### ■ INSERT field

This field enables you to make insert settings.



#### 1 ON button

Switches Insert on or off.

#### 2 Plug-in buttons

If nothing is inserted, each button will indicate “BLANK.” If you press a BLANK button, a window will appear, in which you can insert a plug-in. If a plug-in is already inserted, a window will appear, in which you can set the plug-in parameters. Also, the level indicator will appear in the upper right.

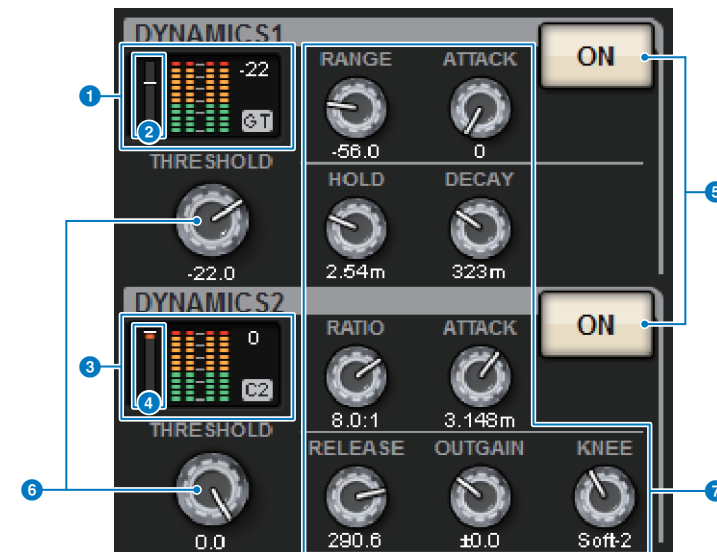
#### NOTE

If an inserted plug-in is bypassed, the plug-in button icon will become dark.



### ■ DYNAMICS 1/DYNAMICS 2 field

This field enables you to view and set the Dynamics 1/2 parameters. Press the meter or knob to open the DYNAMICS 1/2 popup window, in which you can make detailed parameter settings (page 203).



#### 1 DYNAMICS 1 graph

Indicates the abbreviated name of the dynamics processor type and the threshold value that are selected for Dynamics 1. You can view an input and output level indicator on the right, and a real-time GR (Gain Reduction) meter (2) on the left.

#### 3 DYNAMICS 2 graph (input channels only)

Indicates the abbreviated name of the dynamics processor type and the threshold value that are selected for Dynamics 2. You can view an input and output level indicator on the right, and a real-time GR (Gain Reduction) meter (4) on the left.

#### NOTE

For details on the abbreviation of the dynamics processor types, refer to page 204.

#### 5 ON button

Switches the dynamics processor on or off.

#### 6 Threshold

Specifies the threshold.

#### 7 Parameters

Indicate the values of parameters that vary depending on the currently-selected dynamics type.



■ MIX/MATRIX SENDS field

1 MIX popup buttons  
(input/MATRIX channels only)

Each button indicates the level of the signal sent from the selected channel to the MIX bus. If an input channel is selected, press the relevant button to open the SENDS FROM popup window. If a MATRIX channel is selected, press the button to open the SENDS FROM popup window.

On with PRE



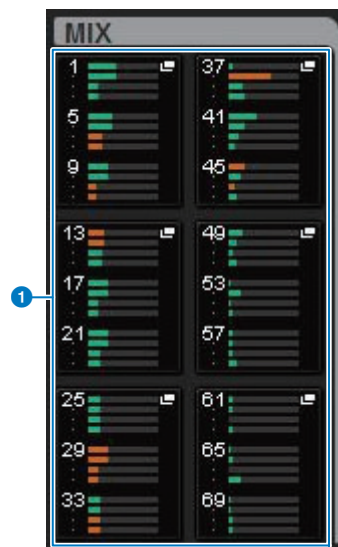
On with POST



Off with PRE



Off with POST



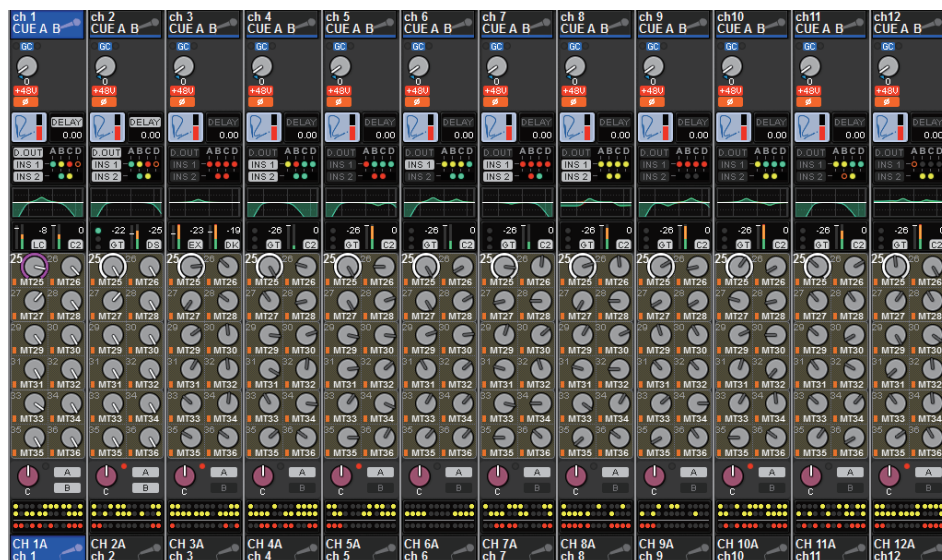
2 MATRIX popup buttons  
(input/MIX/STEREO channels only)

Each button indicates the level of the send signal sent from the selected channel to the MATRIX bus. Press this button to access the SENDS FROM popup window.



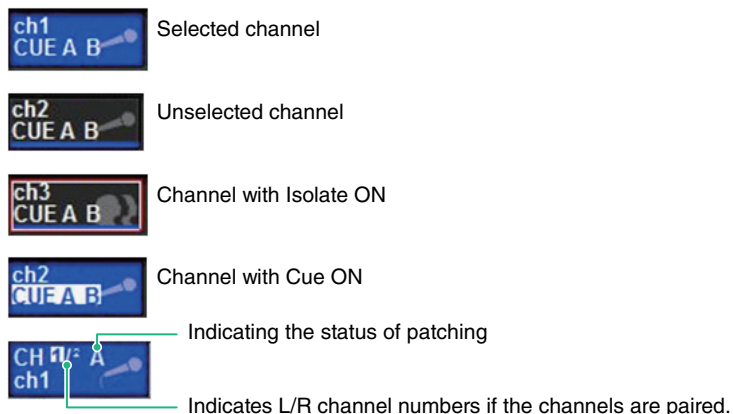
## About the OVERVIEW screen

This screen shows the main parameters of 12 channels selected as a layer.



### Channel name area

The upper part of the channel name area displays the channel name, channel icon, and the status of the assigned Cue for the currently-selected twelve channels. The lower part of the channel name area displays the number, name, channel icon, and the pairing/patching status of the selected channels. The channel name of the currently-selected channel is highlighted.



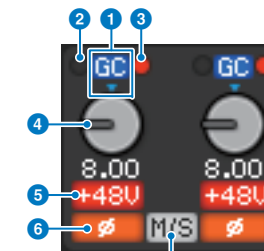
### HA GAIN field

You can set the analog gain or digital gain of the HA (head amp) in this field. This field also displays the operating status of the head amp.

The indication in the field varies depending on the status of patches and the system configuration.

### Analog gain parameters

- 1 **GC indicator**  
If the Gain Compensation function is turned on, this indicator will appear, showing the fixed gain value of the signal output to the TWINLANE network.
- 2 **PRE GC OVER indicator**  
Lights to indicate that a signal is clipping before gain compensation.
- 3 **POST GC OVER indicator**  
Lights to indicate that a signal is clipping after gain compensation.
- 4 **ANALOG GAIN knob**  
Indicates the analog gain value of the head amp. Use the screen encoder to adjust the gain. If the Gain Compensation function is turned on, an indicator appears, showing the analog gain position at the time the function was turned on.
- 5 **+48V indicator**  
Indicates the phantom power (+48V) on or off status for the head amp. This indicator is not displayed unless the head amp is patched to the channel.
- 6 **Indicator (input channels only)**  
Indicates the phase setting for the head amp input.
- 7 **M/S indicator**  
Appears when the M/S Decode Indicator function is enabled.



## Digital gain parameters

### 1 DIGITAL GAIN knob

Indicates the digital gain value. Use the screen encoder to adjust the digital gain. If the Gain Compensation function is turned on, this knob will adjust the level of the signal input to the input channel.

### 2 OVER indicator

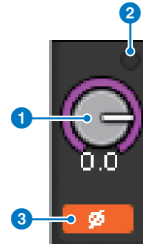
Lights when a signal at the input port or from the rack output is clipping. This indicator is available only if an input channel is selected.

### 3 indicator

Indicates the phase setting for each channel.

#### NOTE

You can display either analog gain or digital gain in the OVERVIEW screen by using the GAIN SHOWN ON OVERVIEW SCREEN setting on the PREFERENCES screen.



## ■ SILK field

This field indicates the Isolate setting status.

A bar graph on the right displays the TEXTURE of the SILK processing.

SILK BLUE On



SILK BLUE Off



SILK RED On



SILK RED Off



## ■ DELAY field

This field displays the delay status of the corresponding input channel or output channels. Press this field to open the DELAY popup (12CH) popup window.

### 1 DELAY ON/OFF indicator

Indicates the on/off status of the delay.



## ■ INSERT/DIRECT OUT field

This field enables you to make insert and Direct Out settings. Press this field to open the INSERT/D.OUT 1CH popup window.

### 1 DIRECT OUT ON/OFF indicator (input channels only)




Indicates the Direct Out on/off status.



### 2 INSERT ON/OFF indicator

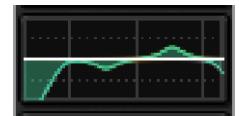
Indicates the Insert on/off status.

The following indicators indicate the status of the corresponding insert point:

	A plug-in, GEQ/PEQ, or outboard unit is inserted at the insert point.
	Bypassed.
	Level indicator Gray: $-\infty$ Green: $< -18$ dB Yellow: $-18$ dB ≤, $\geq 0$ dB Red: 0 dB <

## ■ EQ field

This field indicates the approximate response of the EQ. Press this field to open the HPF/EQ (1CH) popup window, in which you can set the HPF, LPF and EQ. This field will be grayed out on channels for which the EQ is disabled.



## ■ DYNAMICS 1/2 field

This field displays the threshold value, meter, and abbreviated dynamics processor type for Dynamics 1/2. Press this field to open the DYNAMICS 1/2 (1CH) popup window. If GATE is selected as the dynamics type, an indicator appears, indicating the gate status. If the dynamics processor is any type other than GATE, the abbreviated type name will appear in this field, and the threshold setting will be indicated as a horizontal line on the meter. For information on the abbreviated name and GATE indicators that are displayed, see (page 205).





### ■ SEND field

This field displays the send level, output bus name, and send on/off status for 12 buses.

To select the 12 destination buses, use the MIX/MATRIX SENDS [1-12]/[13-24]/[25-36]/[37-48]/[49-60]/[61-72] keys on the panel.

Use the screen encoders or the [TOUCH AND TURN] knob to adjust the send level for each bus. Press the knob of the bus you want to operate to assign the knob to one of the screen encoders. If it is assigned to the [TOUCH AND TURN] knob, press the knob once again to open the SENDS TO popup window. If the channels that are rolled out to a bay are MATRIX channels, press the knob to open the SENDS FROM popup window.

This field varies depending on the type of destination bus.



#### If the destination bus is VARI (mono):

The knob color and pointer color indicate the send on/off and pre/post status. If the send is off, the knob color will turn gray. With the post setting, the knob pointer color will turn black.



#### If the destination bus is VARI (stereo):

If a pair of buses (odd-numbered and even-numbered) are in stereo, the left-hand knob will function as the PAN knob, and the right-hand knob will function as the SEND knob.



#### If the destination bus is set to FIXED:

The SEND ON/OFF button for each bus is shown instead of the knob.



### ■ TO STEREO field

This field displays the on/off status and pan/balance setting of the signal sent to the STEREO bus. Press this knob and you will be able to use the screen encoder and the [TOUCH AND TURN] knob to adjust the value. If you press the knob once again, the TO STEREO popup window (page 227) will appear.

This field varies depending on the type of the selected channel.

#### When an input channel or MIX channel is selected:

##### 1 TO STEREO PAN knob

Sets the pan/balance of a signal routed to the STEREO bus. Press the knob to open the TO STEREO popup window.

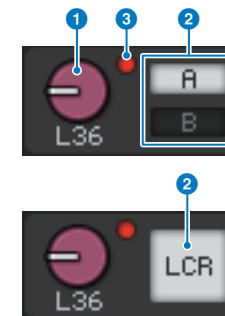
##### 2 TO ST A/TO ST B indicators

Indicate the status of a signal sent to the STEREO A bus and STEREO B bus respectively.

If an input or MIX channel is set to LCR mode, the LCR indicator will appear.

##### 3 Σ clipping indicator

Lights to indicate that a signal is clipping at some point in the channel.



#### When MATRIX or STEREO channels are selected:

If STEREO channels are selected, the stereo balance will be displayed. Also, if MATRIX channels are paired, the balance will be displayed.

The Σ clip indicator will appear if the signal is clipping at some point in the channel.



### ■ DCA field

A DCA (1-24) to which the channel is assigned is displayed on the first and/or second row in this field.

Press this field to open the DCA/MUTE ASSIGN (1CH) popup window (page 232).



### ■ Mute group field

A mute group (1-12) to which the channel is assigned is displayed on the third row in this field. If the channel has been temporarily removed (SAFE) from the mute group, the corresponding indicator will be highlighted.

Press this field to open the DCA/MUTE ASSIGN (1CH) popup window (page 237).

# System Setup

## About the SETUP screen

The SETUP screen enables you to set various parameters that apply to the entire RIVAGE PM series. Press the SETUP button on the menu bar to access the SETUP screen. The screen contains the following items:



### ■ SYSTEM SETUP field

This field enables you to make various settings that globally apply to the control surface.

#### 1 SYSTEM CONFIG popup button

Press this button to access the SYSTEM CONFIG popup window, in which you can configure the TWINLANe network and set up the components that comprise the RIVAGE PM series (page 111).

#### 2 DEVICE SYNC popup button

Press this button to access the DEVICE SYNC popup window, in which you can set the direction of data synchronization (page 111).

#### 3 WORD CLOCK popup button

Press this button to access the WORD CLOCK popup window, in which you can set the word clock (page 129).

#### 4 DELAY COMPENSATION popup button

Press this button to access the DELAY COMPENSATION popup window, in which you can make settings to compensate for signal delay (page 128).

#### 5 BUS SETUP popup button

Press this button to access the BUS SETUP popup window, in which you can switch bus operation, mono/stereo, or send point, and specify mix minus and surround settings (page 141).

#### 6 +48V MASTER button

Switches the console's master +48V master phantom power on or off. If this button is off, phantom power will not be supplied even if the +48V button of an OMNI jack input channel or TALKBACK IN is on.

#### 7 <PM10> MIDI/GPI [CS] popup button MIDI/GPI [DSP] popup button <PM7> MIDI/GPI popup button

Press this button to access the MIDI/GPI popup window, in which you can make MIDI and GPI settings. (page 373).

### ■ USER SETUP field

This field enables you to make various user-related settings.

#### 8 USER SETUP LIBRARY popup button

Press this button to access the USER SETUP LIBRARY popup window, in which you can store various settings for PREFERENCES, or for the USER DEFINED keys and knobs.

#### NOTE

Please note that custom fader settings will not be stored in this window.

#### 9 PREFERENCES popup button

Press this button to access the PREFERENCES popup window, in which you can make various settings (page 354).

#### 10 CUSTOM FADER popup button

Press this button to access the CUSTOM FADER popup window. This window enables you to make settings for custom faders for which you can combine various channels at will (page 358).

**11 USER DEFINED KNOBS popup button**

Press this button to access the USER DEFINED KNOBS popup window, in which you can set the parameters related to the USER DEFINED knobs, and assign functions to the channel strip encoders (page 360).

**12 USER DEFINED KEYS popup button**

Press this button to access the USER DEFINED KEYS popup window, in which you can make settings for the USER DEFINED keys (page 366).

**FILE field**

This field enables you to save and load various data.

**13 CSV EXPORT/IMPORT popup button**

Press this button to access the CSV FILE EXPORT/IMPORT popup window, enabling you to export or import data of the RIVAGE PM series as a CSV file that can be edited offline in a spreadsheet application.

**14 SAVE/LOAD popup button**

Press this button to access the SAVE/LOAD popup window, in which you can save or load various system data sets configured on the RIVAGE PM series.

**MAINTENANCE field**

This field enables you to perform maintenance operations for the entire control surface.

**15 MAINTENANCE popup button**

Press this button to access the MAINTENANCE popup window, in which you can initialize or calibrate the RIVAGE PM series (page 388).

**CONSOLE STATUS field**

This field displays various information about the control surface.

**16 CONSOLE MODE button**

Selects the CONSOLE MODE and CONSOLE ID.

When you edit the setting, a confirmation dialog box appears. When you press the OK button, the control surface restarts.

**CS-R10 MODE ID:1****CS-R10 MODE ID:2**

Specify separate IDs when using the system in dual console mode.

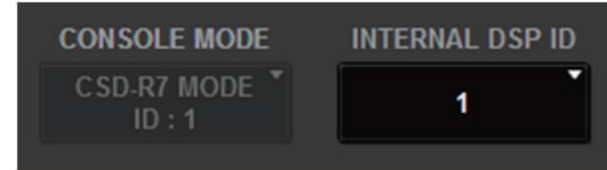
The following functions are available only for the master console (ID1), but other functions are common to both.

- Pressing a meter indication in the meter area to recall the fader layer to the panel.
- Editing an event list and recalling events.

**CSD-R7 MODE ID:2**

If you want to connect an additional control surface to the CSD-R7, set the Console ID to 2 for the CS-R10 or CS-R10-S that you connect.

In the case of the CSD-R7, the CSD-R7 MODE's ID is fixed at 1. If connecting multiple CSD-R7 units or DSP engines to the I/O network, set the INTERNAL DSP ID to 1–4.

**17 DATE/TIME popup button**

Press this button to access the DATE/TIME popup window, in which you can set the date and time (page 396).

**18 NETWORK popup button**

Press this button to access the NETWORK popup window, in which you can make IP address settings etc. for StageMix.

**PANEL SETTINGS field**

This field enables you to set the LED brightness and contrast (page 398).

**19 BANK A–D buttons**

Select the bank to which you want to save the brightness and contrast settings. You can save four different settings in banks A–D, and switch them if desired.

**20 CONTRAST NAME knob**

Adjusts the contrast of the channel name display.

**21 BRIGHTNESS NAME knob**

Adjusts the brightness of the channel name display.

**BRIGHTNESS CH COLOR knob**

Adjusts the brightness balance of the channel color.

**BRIGHTNESS PANEL knob**

Adjusts the brightness of the panel LEDs.

**BRIGHTNESS SCREEN knob**

Adjusts the brightness of the display.

**BRIGHTNESS LAMP knob**

Adjusts the brightness of the lamp connected to the LAMP connector.

## ■ CONSOLE LOCK button

Executes the Console Lock function. If the console password has been set, pressing this button will open the PASSWORD popup window. Enter the correct password to execute Console Lock ([page 399](#)).

If the console password has not been set, pressing this button will execute the Console Lock immediately.

## SYSTEM CONFIG

In SYSTEM CONFIG you can specify the type and number of components that comprise the RIVAGE PM series, and the audio channels that are assigned to the TWINLANe network. As necessary, you can also set the internal parameters of each component. You can also view and set the overall operating state of the entire system. SYSTEM CONFIG allows you to make settings offline if you are setting up in a location where the actual devices are not yet connected. The components will be recognized automatically once they are connected, and you will be able to control the parameters for those actual devices.

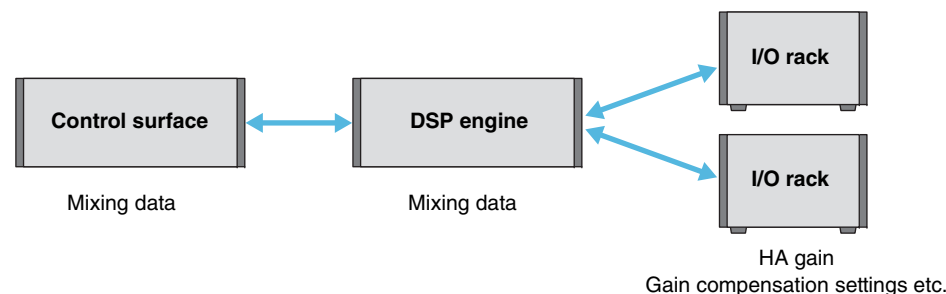
### Online settings

The procedure for making online settings is described below.

1. Synchronizing the settings data between components
2. Assigning channels to the TWINLANe network ([page 111](#))
3. Editing the internal parameters of each component ([page 117](#))
4. Make Dante network settings as needed ([page 130](#))

### ■ Synchronizing the settings data between components

#### About the need for synchronization



The control surface and DSP engine each maintain mixing data, and synchronize this data via the network.

This means that when connecting a network, it is necessary to specify whether synchronization is performed on the basis of the control surface's data or the DSP engine's data.

The I/O (CS I/O) of the I/O rack or control surface saves parameters such as the HA gain and gain compensation, and you must likewise specify the unit whose data will be the basis of synchronization.

(Since CSD-R7 unifies the console and the DSP, the synchronization occurs with the I/O rack and CS I/O.)

- When you finish connecting the system, turn on the power of each device other than the output devices (such as amps) as described in the RIVAGE PM series Setup Guide.

When the control surface detects that a new device (Control surface, DSP engine, I/O rack, CS I/O) is connected, it determines whether data synchronization is needed; if data synchronization is needed, the DEVICE SYNC popup window will appear.



- When a popup window appears, specify the direction of data synchronization.
- Press the SYNC button.  
Data synchronization is completed, and the line indicating synchronization is displayed in green.

#### NOTE

- If there has been no change in the internal data of each component since the previous synchronization, synchronization occurs automatically, so the DEVICE SYNC popup window does not appear.
- Before you synchronize, you must specify the CONSOLE MODE and CONSOLE ID.

## Assigning channels to the TWINLANE network

The following procedure explains how to assign the channels used by the I/O racks and DSP engines to the TWINLANE network.

### For an I/O rack

#### NOTE

Bandwidth for an I/O rack can be assigned to the TWINLANE network only for the DSP engine that is the word clock master of the system.

- Press the SETUP button on the menu bar to access the SETUP screen.
- Press the SYSTEM CONFIG button to access the SYSTEM CONFIG popup window.



#### 1 I/O rack select popup buttons (M1–M8, S1–S8)

These buttons represent the I/O racks that are connected to the system. When you press one of these buttons, a popup window appears, allowing you to select an I/O rack (on the CSD-R7, only M1–M8).

The row at the top of the button shows the icon of the device and the power supply status of POWER A and B (green: power on, red: power off). The device icon indicates the status of +48V MASTER (red: on; grey: off), and also the status of the device (green: normal; yellow: abnormal; red: critical error).

The number of output channels for the TWINLANE network is shown below the button.



**2 TWINLANE network**

Indicates the status of the TWINLANE network (MAIN/SUB) (for the CSD-R7, only MAIN).

- Blue:** Connected, but settings data is not synchronized
- Green:** Connected, and settings data is synchronized
- Yellow:** The TWINLANE network is not in a ring-connected state (a cable is disconnected somewhere in the ring connection).  
When there is a device on the TWINLANE network whose input/output level is diminished.
- Red:** When a misconnection of a TWINLANE cable is detected:
  - If connected IN-IN
  - If connected OUT-OUT
  - If the DSP engine's own IN-OUT are connected directly

**3 CS1 popup button****4 CS2 popup button**

Press this button to access the SYSTEM CONFIG [CS1] or SYSTEM CONFIG [CS2] popup window, in which you can make input/output and MY slot settings for the control surface (page 116).

**5 DSP popup button**

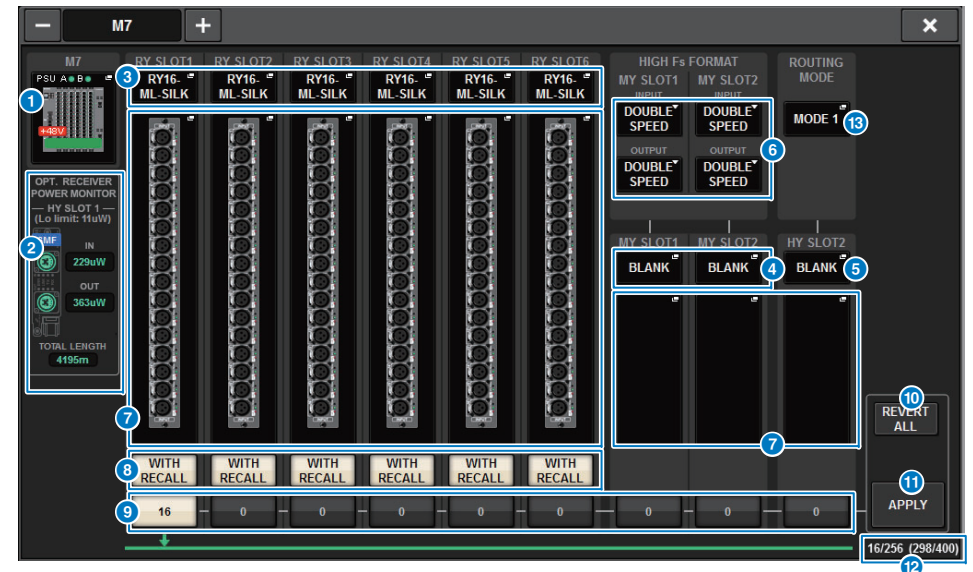
Press this button to access the SYSTEM CONFIG [DSP] popup window, in which you can assign the DSP engine's MIX channels, MATRIX channels, and direct outputs to the TWINLANE network, and make settings for the HY slots and MY slots (page 114).  
In the case of a DSP engine that is the word clock master for any TWINLANE network (Main, Sub, or Console), an indicator is shown above this button.



In the case of a DSP Mirroring configuration, a button for switching the DSP engine between active/standby and DSP popup buttons for two units are shown. In this case, the SYSTEM CONFIG [DSP] popup window that is opened by the DSP popup button will be valid only for the DSP engine that is selected as the active unit by the active/standby button.

**6 TWINLANE channel indication**

Indicates the total number of channels currently used by the TWINLANE network. A maximum of 400 channels can be assigned on the TWINLANE network. You cannot assign more than 400 channels.

**3. Press an I/O rack select popup button to access the I/O rack settings popup window.****I/O rack settings popup window****1 I/O rack select popup buttons**

These buttons represent the I/O racks that are connected to the system. Press one of these buttons to access a popup window, in which you can select an I/O rack.  
The row at the top of the button shows the power supply status of POWER A and B (green: power on, red: power off). The device icon indicates the status of +48V MASTER (red: on; grey: off), and also the status of the device (green: normal; yellow: abnormal; red: critical error).

**2 Optical reception power status display**

This section indicates the power status and readings of the optical receiver for communication on the TWINLANE network.

- Green:** Normal
- Yellow:** Low optical reception power
- Red "LOW":** No reception

It also indicates the type of HY cards (MMF:HY256-TL; SMF:HY256-TL-SMF) and the total length of the cables.

**3 RY SLOT (1–6) popup buttons**

Press a button to open the RY CARD SELECT popup window, in which you can select an RY card.

**4 MY SLOT (1–2) popup buttons**

Press a button to open the MY CARD SELECT popup window, in which you can select a Mini-YGDAI card.

**5 HY SLOT (2) popup button**

Press the button to open the HY CARD SELECT popup window, in which you can select an HY card.

**6 HIGH Fs FORMAT select buttons**

When a Mini-YGDAI card is using high sampling (88.2 kHz, 96 kHz), these buttons enable you to select the operating mode as DOUBLE SPEED, DOUBLE CHANNEL, or SINGLE for IN and OUT respectively.

**NOTE**

This function is not applicable if an MY card that does not support high sampling is specified.

**7 Parameter settings popup buttons**

Press a button to open a popup window, in which you can set the parameters of each card.

**8 WITH RECALL buttons**

If this button is on, the scene data is applied to the HA devices and to the output patching when a scene is recalled. Turn this off if you do not want HA gain settings to be recalled (for example, if all HA settings are controlled from the monitor console, turn this button for the FoH).

**9 TWINLANE assign buttons**

When you press a button, the number of channels used by the selected slot will be assigned to TWINLANE (or the assignment will be canceled).

For an HY slot, a window in which you can make settings in 16-channel units will appear.

**NOTE**

- Bandwidth for an I/O rack can be assigned to the TWINLANE network only for a DSP engine that is the word clock master of the system.  
If the assignment is unavailable, the button will be disabled.
- You must assign the number of channels required for input signals (that is, signals output to the TWINLANE network). You do not need to assign bandwidth to an RY slot that has an RY16-DA card installed, nor to a slot that has an output-only MY card installed.

**10 REVERT ALL button**

If you press this button, all changes in channel assignments that you made up to that point will be canceled, reverting to the state prior to the changes.

**11 APPLY button**

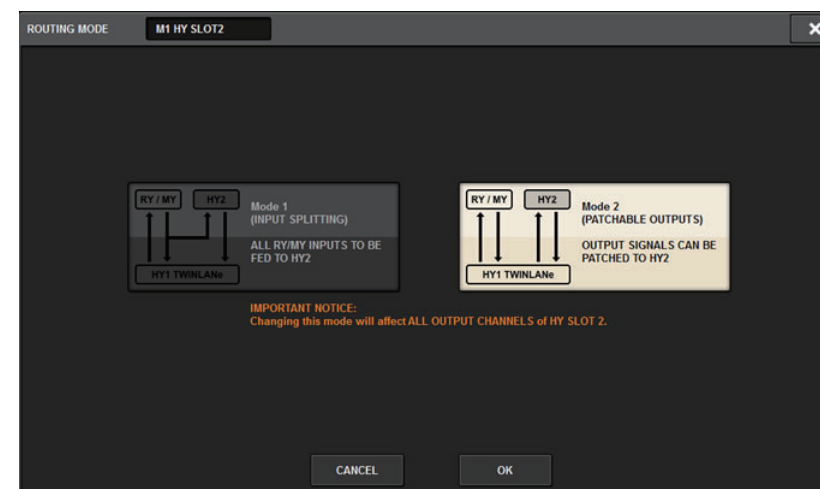
If you press this button, the channel assignment changes you made will be applied to the TWINLANE network.

**12 TWINLANE channel count indication**

Indicates the total number of channels currently used by the TWINLANE network.

**13 ROUTING MODE switch button**

Press this button to open a popup window, in which you can switch the routing mode for HY slot 2.

**ROUTING MODE switch popup window**


This window enables you to switch the routing mode for HY slot 2.


**MODE 1:** All input signals of the RY slots and MY slots are split for output to the HY SLOT 2 output.

**MODE 2:** You can patch mixing output signals to the HY SLOT 2 output via the TWINLANE network, in the same way as the RY slots and MY slots.

**4. Press the TWINLANE assignment button of the slot for which you want to make settings, and assign the channels to the TWINLANE network.**

The number of selected channels assigned is shown on the button. For an HY slot, a window in which you can make settings in 16-channel units will appear.

If you press a TWINLANE assignment button that is already assigned, an “x” mark (  ) appears, indicating that the assignment is canceled.

If you press a TWINLANE assignment button that is not assigned, a checkmark (  ) appears, indicating the assignment.

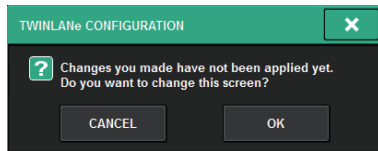
**5. Press the APPLY button to apply the channel settings to the TWINLANE network.**

## 6. When you finish making assignments, press the × button to close the I/O rack settings popup window.

If channels are assigned, and you press the × button without pressing the APPLY button, the following confirmation screen will appear.

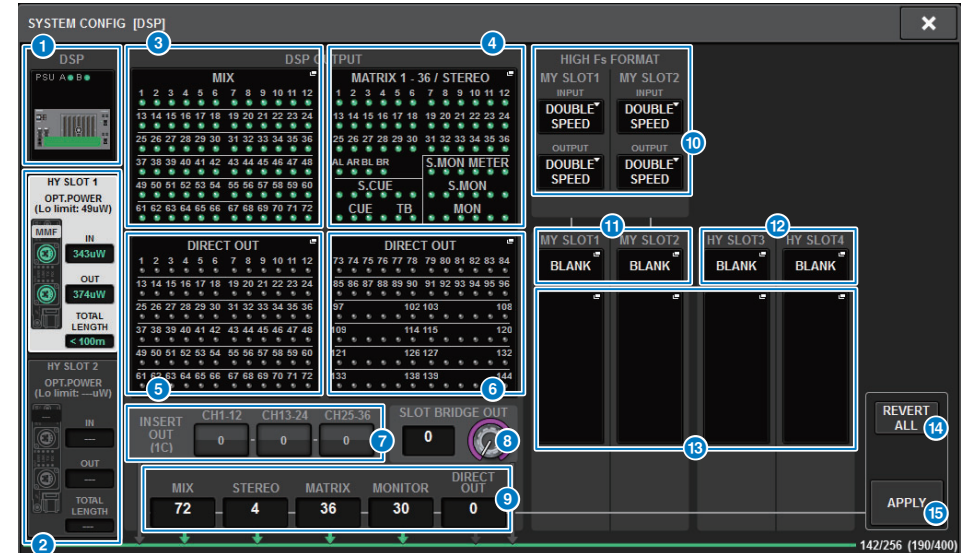
If you press OK, you will return to the SYSTEM CONFIG popup window without applying the assignments.

If you press CANCEL, you will return to the I/O rack settings popup window.



## For a DSP engine

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.
2. Press the **SYSTEM CONFIG** button to access the **SYSTEM CONFIG** popup window.
3. Press the **DSP** button to access the **SYSTEM CONFIG [DSP]** popup window.



### 1 DSP popup button

This button represents the DSP engine that is connected to the system. The row at the top of the button shows the power supply status of POWER A and B (green: power on, red: power off). The device icon indicates the device status (green: normal; yellow: abnormal, red: critical error).

### 2 HY SLOT select buttons

These buttons allow you to select the HY SLOT (TWINLANe network) for which you will assign channels. (HY SLOT 2 is only on the RIVAGE PM10 system.) The optical reception power status and value on the TWINLANe network are also shown here.

**Green:** Normal

**Yellow:** Low optical reception power

**Red "LOW":** No reception

It also indicates the type of HY cards (MMF:HY256-TL; SMF:HY256-TL-SMF) and the total length of the cables.



**3 Channel assign popup buttons (MIX 1–72)**

When you press a button, a TWINLANe CONFIGURATION popup window appears, in which you can assign the MIX channel to the TWINLANe network (page 115).

**4 Channel assign popup buttons (STEREO/MATRIX/MONITOR/CUE/TB)**

When you press a button, an TWINLANe CONFIGURATION popup window appears, in which you can assign the STEREO channel, MATRIX channel, MONITOR, CUE, or TALKBACK to the TWINLANe network (page 115).

**5 Channel assign popup buttons (DIRECT OUT 1-72)**

**6 Channel assign popup buttons (DIRECT OUT 73-144)**

When you press a button, an TWINLANe CONFIGURATION popup window appears, in which you can assign the direct out to the TWINLANe network.

**7 Channel insert assignment buttons**

These buttons are used to assign channels to the TWINLANe network so that the external hardware can be inserted to those channels via the connectors on the I/O rack (page 210).

**8 SLOT BRIDGE OUT setting knob**

This knob specifies the number of channels that are assigned to the TWINLANe network for the PORT TO PORT function.

**9 Channel assignment indication**

This area shows the number of channels assigned in the TWINLANe CONFIGURATION popup window.

**10 HIGH Fs FORMAT select buttons**

When a Mini-YGDAI card is using high sampling (88.2 kHz, 96 kHz), these buttons enable you to select the operating mode as DOUBLE SPEED, DOUBLE CHANNEL, or SINGLE for IN and OUT respectively.

**NOTE**

This setting will be ignored if you try to specify the operating mode for an MY card that does not support high sampling.

**11 MY SLOT (1–2) popup buttons**

Press a button to open the MY CARD SELECT window, in which you can select a Mini-YGDAI card.

**12 HY SLOT (3–4) popup buttons**

Press a button to open the HY CARD SELECT window, in which you can select an HY card.

**13 Parameter settings popup buttons**

Press a button to access a popup window, in which you can set the parameters of each card.

**14 REVERT ALL button**

When you press this button, all changes in channel assignments that you made up to that point will be canceled, reverting to the state prior to the changes.

**15 APPLY button**

When you press this button, the channel assignment number changes you made are applied to the TWINLANe network.

**4. Press each channel assign popup button to access the TWINLANe CONFIGURATION popup window.**

Each settings window contains the following items.

**TWINLANe CONFIGURATION popup window**





**1 Tabs**


Switch between MIX OUT, ST/MT/MON/CUE/TB, DIRECT OUT 1-72, and DIRECT OUT 73-144.

**2 Channel select buttons**

Select the channel to edit. The select button will change as follows.

 ..... Currently not assigned to the TWINLANe network

 ..... Currently assigned to the TWINLANe network

 ..... Currently assigned to the TWINLANe network, and selected for cancellation.



.....Currently not assigned to the TWINLANe network, and selected for assignment.

### 3 ALL OFF button

When you press this button, all channels assigned to TWINLANe are selected for cancellation in a single operation.

### 4 ALL ON button

If you press this button, all channels not assigned to TWINLANe are selected for assignment in a single operation.

### 5 REVERT button

If you press this button, all selections for cancellation or for assignment will revert to their original state.

## 5. Select the channels that you want to use on the TWINLANe network.

When you finish making selections, press the CLOSE button to close the window.

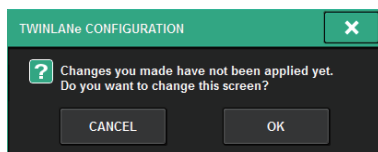
## 6. Press the APPLY button to apply the channel settings to the TWINLANe network.

## 7. When you finish making assignments, press the × button to close the SYSTEM CONFIG [DSP] popup window.

If channels are assigned, and you press the × button without pressing the APPLY button, the following confirmation screen appears.

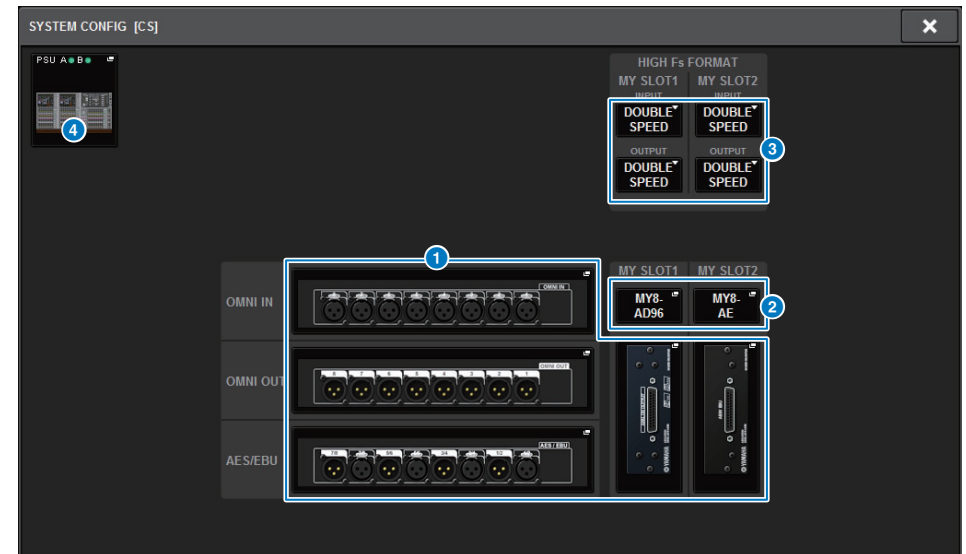
If you press OK, all selections for cancellation or for assignment will revert to their original state, and you will return to the SYSTEM CONFIG popup window.

If you press CANCEL, you will return to the SYSTEM CONFIG [DSP] popup window.



## Procedure for the control surface

1. Press the SETUP button on the menu bar to access the SETUP screen.
2. Press the SYSTEM CONFIG button to access the SYSTEM CONFIG popup window.
3. Press the CS1 popup button to access the CONFIG [CS1] popup window.



### 1 Parameter settings popup buttons

Press a button to open a popup window, in which you can set the parameters of each card.

### 2 MY SLOT (1–2) popup buttons

Press a button to open the MY CARD SELECT popup window, in which you can select a Mini-YGDAI card.

### 3 HIGH Fs FORMAT selection button

When a Mini-YGDAI card is using high sampling (88.2 kHz, 96 kHz), these buttons select the operating mode as DOUBLE SPEED, DOUBLE CHANNEL, or SINGLE for IN and OUT respectively.

#### NOTE

This function is not applicable if an MY card that does not support high sampling is specified.

The I/Os for the control surface are assigned as part of the DSP engine on the RIVAGE PM series. Therefore, you do not need to assign channels to the TWINLANe network.

&lt;PM10 only&gt;

**4 Control surface select popup button**

This shows the control surfaces that are connected to the system. Press this button to display a popup window, in which you can select a control surface.

**4. Set the operating mode for the Mini-YGDAl card's high sampling setting, if necessary.****5. When you finish making settings, press the x button to close the SYSTEM CONFIG [CS] popup window.****■ Editing the internal parameters of each component****1. Press a parameter settings popup button to access the parameter settings popup window of each component.****2. Edit the parameters as needed.**

The parameter editing screens that appear are as follows

**RY16-ML-SILK****1 Patch indication**

Indicates the channels that are patched.

**2 +48V button**

Switches phantom power (+48V) on or off.

**3 A.GAIN knob**

Indicates the HA analog gain setting. You can use the screen encoders to make adjustments. If gain compensation is on, an indicator shows the analog gain position at the time that gain compensation was turned on.

**4 Meter (Pre GC)**

This meter indicates the level of signals after passing through analog gain (before GC).

**5 Meter (channel input)**

This meter indicates the level of signals after passing through GC (before D.GAIN).

**6 GC (GAIN COMPENSATION) button**

Switches the gain compensation on or off for that channel.

**7 PHASE button**

Switches the phase of the input signal.

**NOTE**

This is a parameter within the I/O rack. It is different than the  $\Phi$  parameter within the channel module of the control surface.

**8 SILK ON button**

Switches Silk on or off.

**9 RED/BLUE selection button**

Switches the character of Silk processing between the powerful BLUE and the sparkling RED.

**10 SILK [TEXTURE] knob**

Adjusts the TEXTURE parameter of Silk.

**11 HPF button**

Toggles the high pass filter on or off for each port.

**NOTE**

This is a parameter within the I/O rack. It is different than the HPF within the channel module of the control surface.

**12 FREQUENCY knob**

Sets the HPF cutoff frequency.

**13 M/S button**

Switches the M/S decoder on or off for each pair of channels.

**14 S-GAIN knob**

Adjusts the side gain of M/S.

**15 Tabs**

Switch the display in units of eight channels.

**RY16-DA****OMNI OUT of the control surface****1 Patch indication**

Indicates the channel that is patched.

**2 DELAY button**

Switches the output delay on or off.

**3 Delay time knob**

Sets the delay time of the output port. If you press this knob when it is selected, the DELAY TIME popup window will appear. The delay time value is shown above the knob in millisecond units, and below the knob in the units that are selected in the DELAY SCALE popup window.

**NOTE**

If the scale is set to ms, the delay time value above the knob will not be shown.

**4 PHASE button**

Switches the phase of the output signal.

**5 GAIN knob**

Adjusts the output gain of the output port. You can use the screen encoders to make adjustments. Adjust the setting in 1.0 dB units by turning the knob, or adjust the setting in 0.1 dB units by turning the knob while pressing it. The current value is shown immediately below the knob.

**6 Level meter**

Indicates the output level of the signal after level adjustment.

**7 Tabs**

Switch the display in units of eight channels.

**RY16-AE INPUT1-8/INPUT9-16****AES/EBU INPUT 1-8 of the control surface's rear panel****1 Patch indication**

Indicates the channel that is patched.

**2 Level meter**

Shows the input level.

**3 SRC button**

Switches the sampling rate converter on/off for each pair of channels.

**4 Clock status indicator**

Indicates the status of the input signal.

**5 PHASE button**

Switches the phase of the input signal.

**NOTE**

This is a parameter within the I/O rack. It is different than the  $\Phi$  parameter within the channel module of the control surface.

**6 M/S button**

Switches the M/S decoder on or off for each pair of channels.

**7 S-GAIN knob**

Adjusts the side gain of M/S.

**8 Tabs**

Switch the input and output display in units of eight channels.

## RY16-AE OUTPUT1-8/OUTPUT9-16

## AES/EBU OUTPUT1-8 of the control surface's rear panel



## 6 Sampling rate select menu

Selects the output sampling rate when an SRC is turned on. Choose from SAME AS INPUT (same as the word clock that is input), 44.1 kHz, 48 kHz, 88.2 kHz, or 96 kHz.

## 7 GAIN knob

Adjusts the output gain of the output port. You can use the screen encoders to make adjustments. Adjust the setting in 1.0 dB units by turning the knob, or adjust the setting in 0.1 dB units by turning the knob while pressing it. The current value is shown immediately below the knob.

## 8 Level meter

Indicates the output level of the signal after level adjustment.

## 9 Tabs

Switch the input and output display in units of eight channels.

## 1 Patch indication

Indicates the channel that is patched.

## 2 DELAY button

Switches the output delay on or off.

## 3 Delay time knob

Sets the delay time of the output port. If you press this when it is selected, the DELAY TIME popup window will appear. The delay time value is shown above the knob in millisecond units, and below the knob in the units that are selected in the DELAY SCALE popup window.

**NOTE**

If the scale is set to ms, the delay time value above the knob is not shown.

## 4 PHASE button

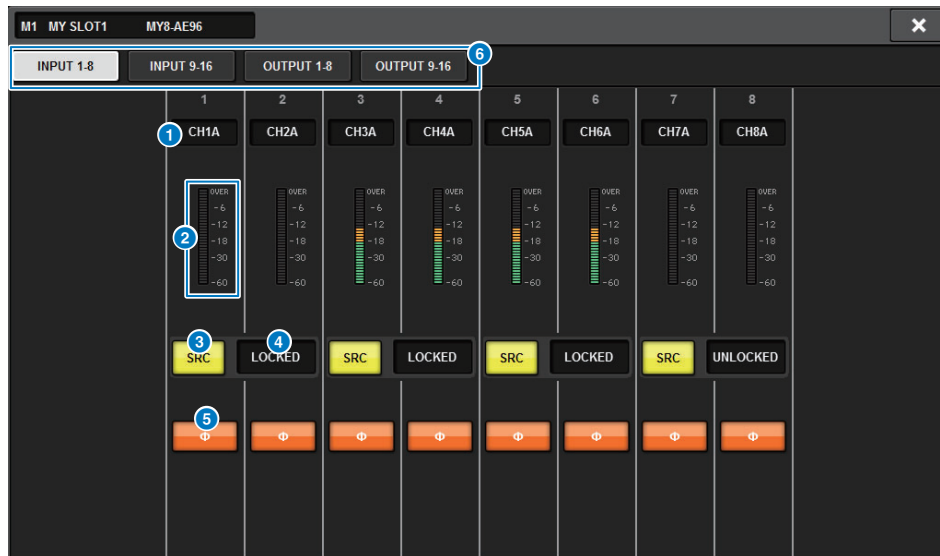
Switches the phase of the output signal.

## 5 SRC button

Switches the sampling rate converter on/off for each pair of channels.



## MY CARD INPUT

**1 Patch indication**

Indicates the channel that is patched.

**2 Level meter**

Shows the input level.

**3 SRC button**

Switches the sampling rate converter on/off for each pair of channels.

**NOTE**

This setting will be ignored if you try to specify it for an MY card that does not support SRC.

**4 Clock status display**

Indicates the status of the input signal.

**5 PHASE button**

Switches the phase of the input signal.

**NOTE**

This is an internal SLOT parameter. It is different than the  $\Phi$  parameter within the channel module of the control surface.

**6 Tabs**

Switch the input and output display in units of eight channels.

## MY CARD OUTPUT

**1 Patch indication**

Indicates the channel that is patched.

**2 DELAY button**

Switches the output delay on or off.

**3 Delay time knob**

Sets the delay time of the output port. If you press this knob when it is selected, the DELAY TIME popup window will appear. The delay time value is shown above the knob in millisecond units, and below the knob in the units that are selected in the DELAY SCALE popup window.

**NOTE**

If the scale is set to ms, the delay time value above the knob will not be shown.

**4 PHASE**

Switches the phase of the signal that is output.

**5 GAIN knob**

Adjusts the output gain of the output port. You can use the screen encoders to make adjustments. Adjust the setting in 1.0 dB units by turning the knob, or adjust the setting in 0.1 dB units by turning the knob while pressing it. The current value is shown immediately below the knob.

**6 Level meters**

Indicates the output level of the signal after level adjustment.

**7 Tabs**

Switch the input and output display in units of eight channels.

**OMNI IN of the control surface****1 Patch indication**

Indicates the channel that is patched.

**2 +48V button**

Switches phantom power (+48V) on or off.

**3 A.GAIN knob**

Indicates the HA analog gain setting. You can use the screen encoders to make adjustments.

**4 Meter**

This meter indicates the level of signals after passing through analog gain.

**5 SILK ON button**

Switches SILK on or off.

**6 RED/BLUE selection button**

Switches the character of Silk processing between the powerful BLUE and the sparkling RED.

**7 SILK [TEXTURE] knob**

Adjusts the TEXTURE parameter of Silk.



**8 HPF button**

Toggles the high pass filter on or off for each port.

**NOTE**

This is a parameter within the I/O rack. It is different than the HPF within the channel module of the control surface.

**9 FREQUENCY knob**

Sets the HPF cutoff frequency.

**10 M/S button**

Switches the M/S decoder on or off for each pair of channels.

**11 S-GAIN knob**

Adjusts the side gain of M/S.

## Offline settings

You can make system settings using the control surface by itself, without connecting a DSP engine or I/O rack.

The procedure for offline settings is described below.

1. Mounting the I/O rack
2. Specifying the type and number of cards ([page 125](#))
3. Assigning channels to the TWINLANE network ([page 111](#))
4. Editing the internal parameters of each component ([page 117](#))
5. Make Dante network settings as needed ([page 130](#))

**NOTE**

If the settings made while offline differ from the settings of the actual device when the actual device is connected, the settings of the actual device will take priority over the offline settings, and will be applied to the system.

### ■ Mounting the I/O rack

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **SYSTEM CONFIG** button to access the **SYSTEM CONFIG** popup window.

## SYSTEM CONFIG popup window



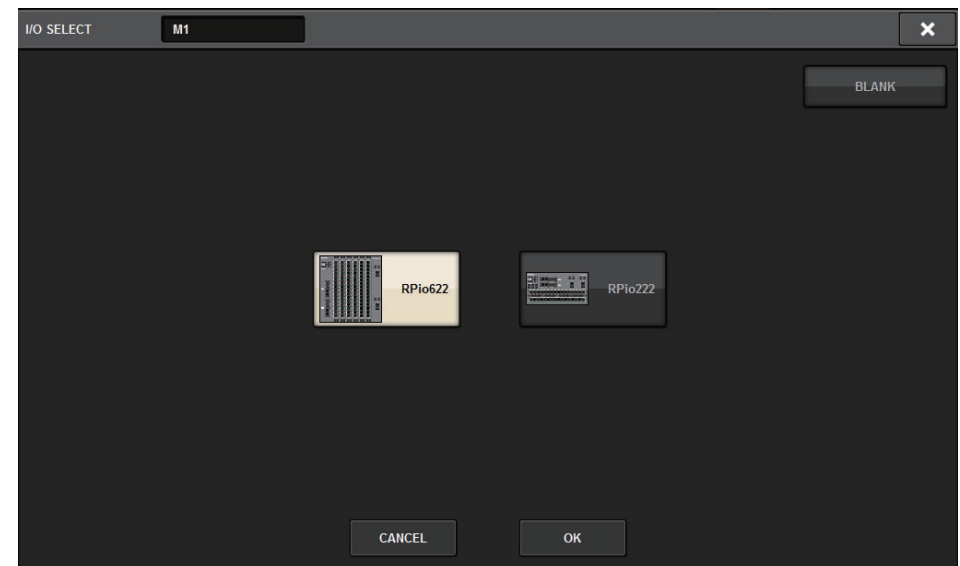
**1 I/O rack select popup buttons (M1–M8, S1–S8)**

If you press one of these buttons when an I/O rack is not mounted, the I/O SELECT popup window will appear, allowing you to select the I/O rack that you want to use. If you press this button when an I/O rack is already mounted, the I/O rack settings window will appear (page 125).

Devices being edited offline are indicated as “VIRTUAL” in yellow.

**3. Press the I/O rack select popup button to access the I/O SELECT popup window.**

## I/O SELECT popup window



**4. Select the I/O rack (RPio622 or RPio222) that you want to use, and press the OK button.**

You will return to the SYSTEM CONFIG popup window. To cancel, press the CANCEL button.

If you want to add another I/O rack, repeat steps 3–4.

## ■ Specifying the type and number of cards

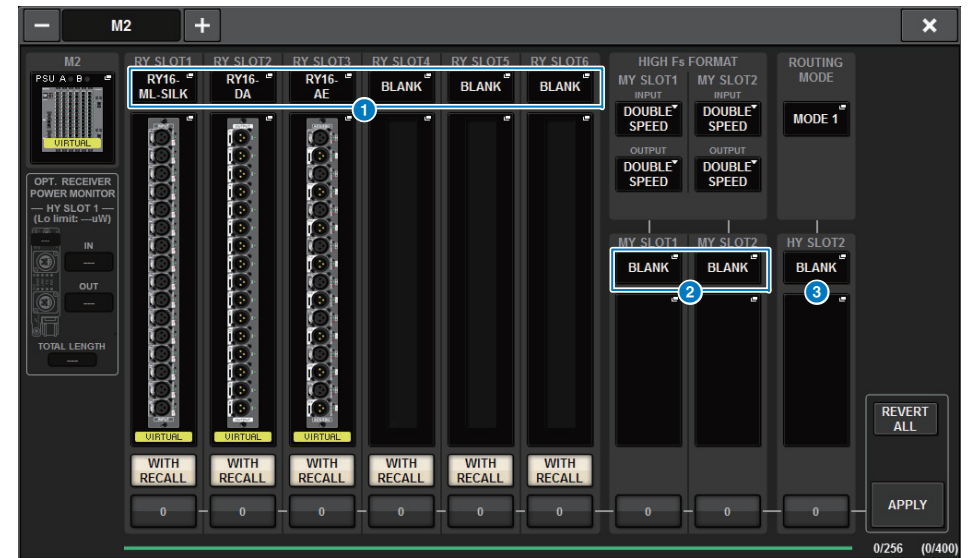
The following example explains how to add an RY card for use in the I/O rack. Use the same procedure for adding a different card to a different component.

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.
2. Press the **SYSTEM CONFIG** button to access the **SYSTEM CONFIG** popup window.



3. Press the mounted I/O rack select popup button to access the I/O rack settings popup window.

## I/O rack settings popup window



### 1 RY SLOT (1–6) popup buttons

When you press a button, the RY CARD SELECT popup window appears, in which you can select an RY card.

### 2 MY SLOT (1–2) popup buttons

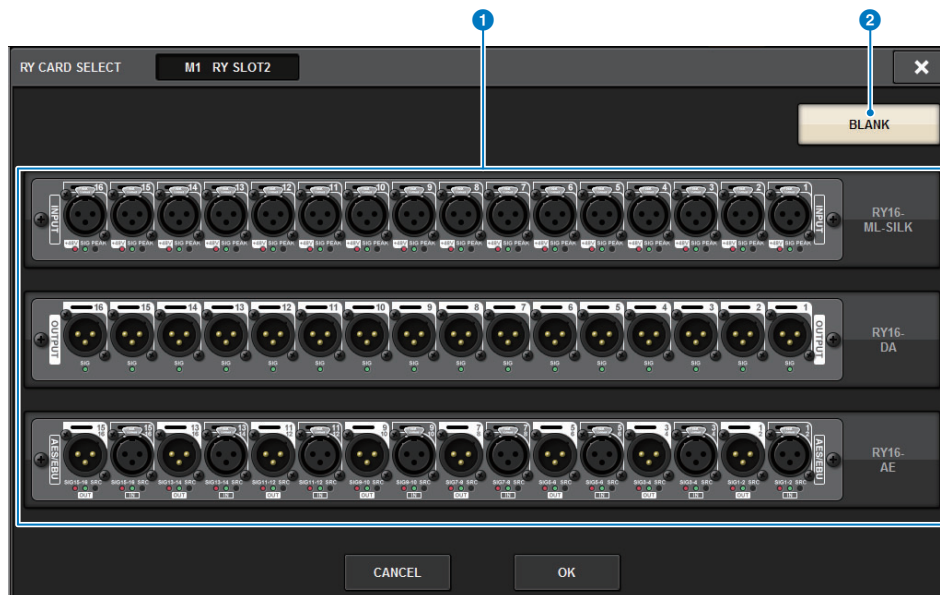
When you press a button, the MY CARD SELECT popup window appears, in which you can select a Mini-YGDAI card ([page 126](#)).

### 3 HY SLOT (2) popup button

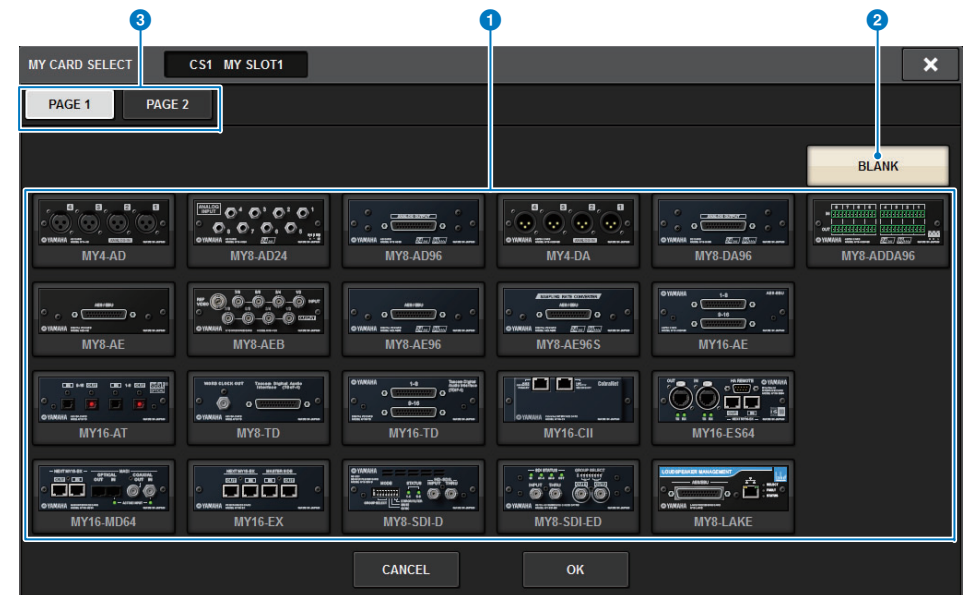
When you press the button, the HY CARD SELECT popup window appears, in which you can select an HY card ([page 127](#)).

4. Press the RY SLOT popup button to access the RY CARD SELECT popup window.

## RY CARD SELECT popup window



## MY CARD SELECT popup window

**1 RY card select buttons**

Select the RY card that you want to use.

**2 BLANK button**

Use this button if you do not want to mount anything.

**5. Select the RY card that you want to use, and press the OK button.**

You will return to the I/O rack settings popup window. To cancel, press the CANCEL button. If you want to add another RY card, repeat steps 4–5.

**6. When you finish adding cards, press the × button to close the I/O rack settings window.****1 Mini-YGDAI card select buttons**

Select the Mini-YGDAI card that you want to use.

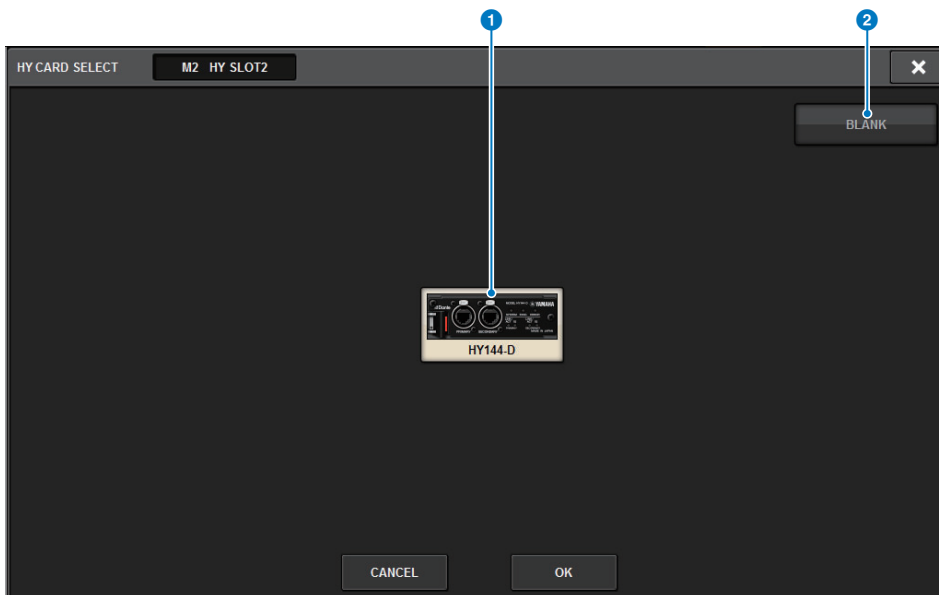
**2 BLANK button**

Use this if you do not want to mount anything.

**3 Tabs**

Switch between pages in the list of Mini-YGDAI cards.

## HY CARD SELECT popup window

**1 HY card select buttons**

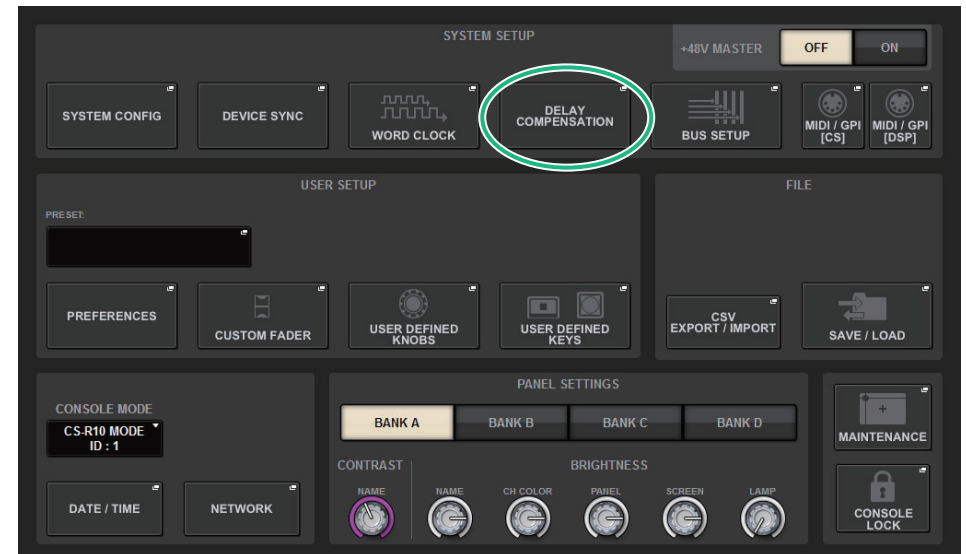
Select the HY card that you want to use.

**2 BLANK button**

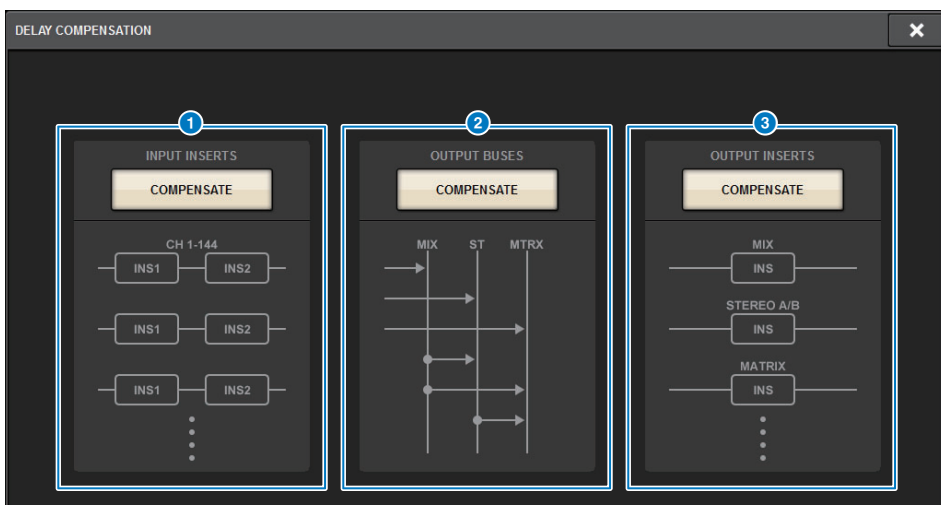
Use this button if you do not want to mount anything.

## DELAY COMPENSATION

Each channel signal may be delayed by a different amount of time due to digital signal processing through plug-ins, GEQ inserts, or certain routings. The Delay Compensation function automatically fixes this delayed timing. The maximum delay is estimated, and the appropriate amount of delay is added to each channel as compensation.

**1. Press the SETUP button on the menu bar to access the SETUP screen.****2. Press the DELAY COMPENSATION button to open the DELAY COMPENSATION popup window.**

## DELAY COMPENSATION popup window



### 1 INPUT INSERTS COMPENSATE button

Press this button to automatically compensate for the timing among channels by inserting a delay into each input channel. Due to this compensation, all input channel signals will be delayed by 112 samples.

### 2 OUTPUT BUSES COMPENSATE button

Press this button to automatically compensate for the delayed timing on each MIX/ST/MATRIX bus. Due to this compensation, output signals from the MIX buses will be delayed by 14 samples, and output signals from the STEREO buses will be delayed by 7 samples. If you use the compensation via this button along with the OUTPUT INSERTS COMPENSATE button, output signals from the MIX buses will be delayed by 336+14 samples; from the STEREO buses by 336+7 samples; and from the MATRIX buses by 336 samples.

### 3 OUTPUT INSERTS COMPENSATE button

Press this button to automatically compensate the timing among channels by inserting a delay into each output channel. Due to this compensation, output signals from the MIX buses will be delayed by 112 samples; from the STEREO buses by 224 samples; and from the MATRIX buses by 336 samples.

#### Conversion table for the number of samples and delay time

sample	fs							
	44.1kHz		48kHz		88.2kHz		96kHz	
7	0.16	msec	0.15	msec	0.08	msec	0.07	msec
14	0.32	msec	0.29	msec	0.16	msec	0.15	msec
112	2.50	msec	2.30	msec	1.30	msec	1.20	msec
224	5.10	msec	4.70	msec	2.50	msec	2.30	msec
336	7.60	msec	7.00	msec	3.80	msec	3.50	msec
336+7	7.80	msec	7.10	msec	3.90	msec	3.60	msec
336+14	7.90	msec	7.30	msec	4.00	msec	3.60	msec

## WORD CLOCK

A TWINLANE network that features the RIVAGE PM series transfers not only audio and control signals, but also word clock.

On a TWINLANE network, only one DSP engine can become the clock master. If two DSP engines are on the same network, one becomes the master and the other becomes a slave.

For the master clock on a TWINLANE network, you can select either the DSP engine's internal clock (44.1 kHz, 48 kHz, 88.2 kHz, or 96 kHz), or the external word clock that is input at the WORD CLOCK IN connector on the rear panel of the master DSP engine.

On the other hand, since the slave DSP engine will use word clock flowing through the TWINLANE network as the clock source, you must select HY SLOT 1 for the slave DSP engine. Meanwhile, since the I/O racks automatically use word clock flowing through the TWINLANE network as the clock source, you do not have to specify word clock for the I/O rack.

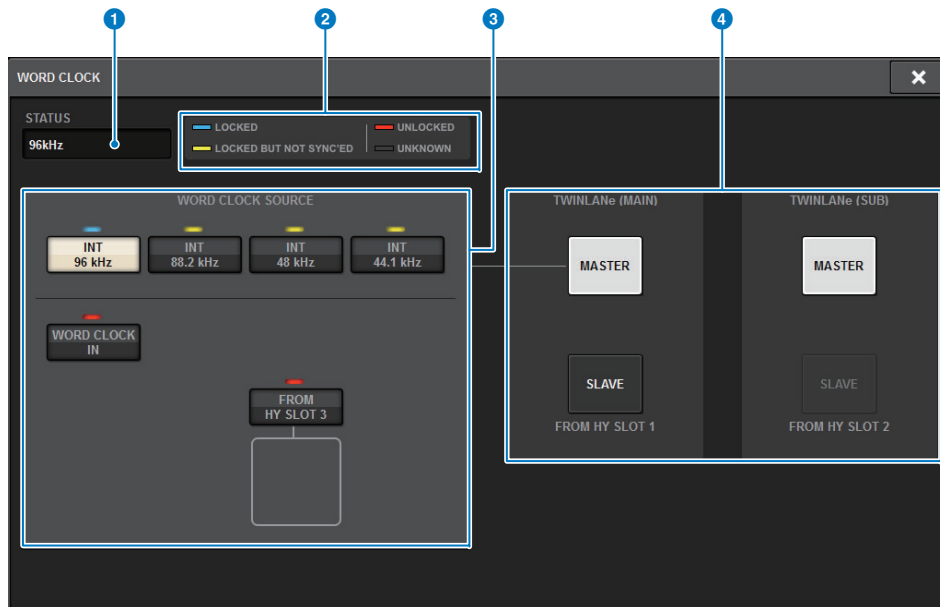
Follow the steps below to select the clock source.

### 1. Press the SETUP button on the menu bar to access the SETUP screen.



### 2. Press the WORD CLOCK button to open the WORD CLOCK popup window.

## WORD CLOCK popup window (Master mode)



## ■ MASTER CLOCK SELECT field

### 1 Master clock frequency display

Indicates the frequency (44.1 kHz, 48 kHz, 88.2 kHz, or 96 kHz) of the currently-selected master clock. If the unit is not syncing to the master clock, “UNLOCK” will appear.

### 2 Clock status display

Indicates the status of synchronization with the master clock for each clock source. Each indicator is explained below.

- **LOCK (light blue)**

Indicates that a clock synchronized with the selected clock source is being input. If an external device is connected to the corresponding connector or slot, it indicates that a clock is being input or output properly between that device and the RIVAGE PM series. If the sampling frequency is close, this status may be displayed even if not synchronized.

- **LOCK, BUT NOT SYNC'ED (yellow)**

A valid clock is being input, but is not synchronized with the selected clock source. If an external device is connected to the corresponding connector, it indicates that a clock is not being input or output properly between that device and the RIVAGE PM series.

- **UNLOCK (red)**

A valid clock is not being input. If an external device is connected to the corresponding connector, a clock will not be input or output properly between that device and the RIVAGE PM series.

- **UNKNOWN (black)**

This indicates that the clock status cannot be detected because no external device is connected or because there is no valid clock input. You will be able to select this connector/slot, but successful synchronization cannot occur until a valid connection is established.

### NOTE

- If the indicator for the port selected as the clock source has turned light blue, and the clock frequency appears in the upper left of the MASTER CLOCK SELECT field, this indicates that the RIVAGE PM series is operating correctly with the new clock.
- If the indicator for the selected clock does not turn light blue, make sure that the external device is correctly connected, and that the external device is set to transmit clock data.
- Noise may occur at the output jacks when the word clock setting is changed. To protect your speaker system, be sure to turn down the power amp volume before changing the word clock setting.

### 3 Master clock select buttons

Use the buttons to select the clock source that you want to use as the word clock master from the following options:

- INT 44.1 kHz
- INT 48 kHz
- INT 88.2 kHz
- INT 96 kHz

The internal clock of the DSP engine (sampling rate: 96 kHz, 88.2 kHz, 48 kHz or 44.1 kHz) will be the clock source.

- **WORD CLOCK IN**

The word clock supplied from the WORD CLOCK IN jack on the rear panel of the master DSP engine will be used as the clock source.

- **FROM HY SLOT3 (for the CSD-R7, FROM HY SLOT2)**

The word clock supplied from HY card slot 3 (for the CSD-R7, HY card slot 2) located on the rear panel of the DSP engine is used as the clock source.

### NOTE

If the unit is initialized to the factory default status, the word clock default value will be set to 96 kHz.

### 4 TWINLANe network settings button

Use this button to specify operation (master/slave) within the TWINLANe network.

## 3. In the MASTER CLOCK SELECT field, select a clock source.

A confirmation dialog box will appear if you attempt to change the clock source setting.

## 4. To close the WORD CLOCK popup window, press the “x” symbol located in the upper right.

The system will return to the SETUP screen.



# Dante audio network settings

Here's how to make Dante audio network settings for the RIVAGE PM series and the connected I/O racks. By mounting an I/O rack you can use routing and HA remote operations.

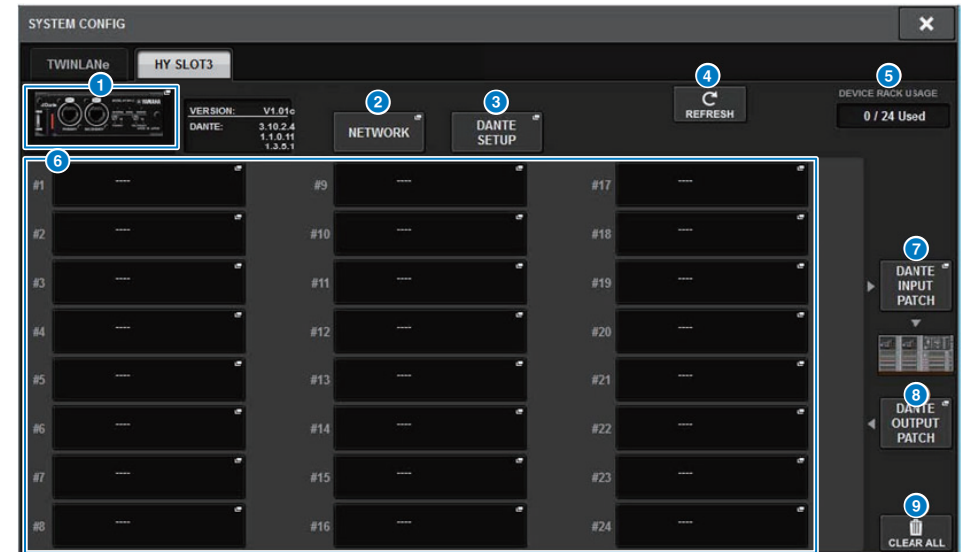
1. Press the **SETUP** button to access the **SETUP** screen.



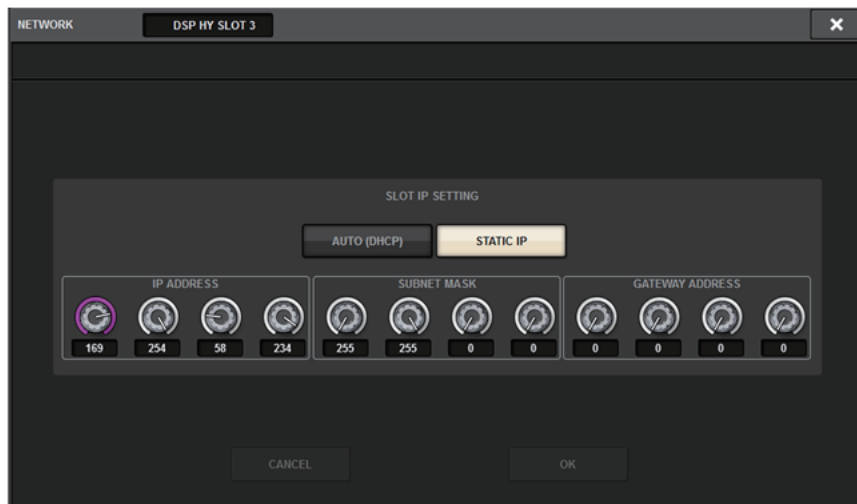
2. Press the **SYSTEM CONFIG** button to access the **SYSTEM CONFIG** popup window.
3. Press the **HY SLOT3** tab to access the **HY SLOT3** window.

### NOTE

On the CSD-R7, press the HY SLOT2 tab to access the HY SLOT2 screen.



- 1 **HY SLOT 3 popup button (for the CSD-R7, HY SLOT2 popup button)**  
Press a button to open the HY CARD SELECT popup window, in which you can select a Dante-enabled HY card.
- 2 **NETWORK popup button**  
Press this button to access the NETWORK popup window, in which you can make IP address settings.  
Normally, the IP address is obtained automatically, so it is not necessary to change the setting. Specify this manually as necessary.



**AUTO (DHCP)**..... The IP address is obtained automatically.

**STATIC IP** ..... The IP address is specified manually.

**3 DANTE SETUP popup button**

Press this button to access the DANTE SETUP popup window, in which you can make settings for Dante-enabled HY cards.

**4 REFRESH button**

Press this button to update the I/O rack information in the Dante audio network to its latest state.

**5 DEVICE RACK USAGE indication**

This shows the state of IO rack resource usage.

**6 I/O rack select button**

This indicates the I/O rack's ID number, model name, and the number of inputs/outputs. When you press this, the DEVICE SELECT screen or DANTE I/O DEVICE screen appears, allowing you to mount an I/O rack.

**7 DANTE INPUT PATCH button**

When you press this, the DANTE PATCH popup window's INPUT tab appears, allowing you to select the channels that will be input from the I/O rack to the Dante-enabled HY card.

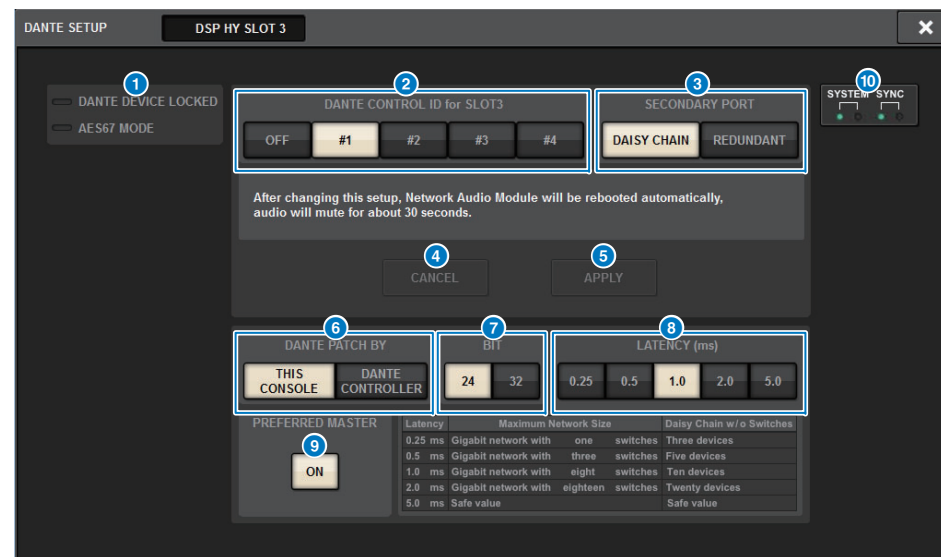
**8 DANTE OUTPUT PATCH button**

When you press this button, the DANTE PATCH popup window's OUTPUT tab appears, allowing you to select the channels that will be output from the Dante-enabled HY card to the I/O rack.

**9 CLEAR ALL button**

When you press this button, the mounted state of all displayed I/O racks is cleared.

**4. Press the DANTE SETUP popup button to access the DANTE SETUP popup window.**



**1 STATUS indicator**

**DANTE DEVICE LOCKED** ..... The indicator is lit red if the Dante Device Lock function is enabled, preventing the audio network settings of the Dante device from being changed.

**AES67 MODE**..... The indicator is lit green if AES67 (audio network compatibility connection standard) mode is enabled.

**2 DANTE CONTROLLER ID for SLOT 3 select buttons (for the CSD-R7, DANTE CONTROLLER ID for SLOT 2 select buttons)**

These buttons specify the ID used to distinguish compatible HY cards on the Dante audio network.

If the ID is turned OFF, the DANTE PATCH BY select button is fixed at DANTE CONTROLLER, and Dante patching cannot be edited. Additionally, the remote functionality of the mounted I/O racks is disabled.

If you specify ID #1, the shared settings (BIT/LATENCY/WORD CLOCK) are also applied to the mounted I/O racks.

**NOTE**

Assign different IDs to the control surfaces and digital mixing consoles on the Dante audio network.

**3 SECONDARY PORT select buttons**

These buttons select how the Dante-enabled HY cards are connected: either the daisy chain connection used for simple systems with a small number of connected units, or the redundant connection used when connecting multiple units.

**4 CANCEL button**

This button cancels the temporarily edited content during the process of editing DANTE CONTROLLER I/O for SLOT or SECONDARY PORT.

**5 APPLY button**

If you have edited the DANTE CONTROLLER ID for SLOT setting or the SECONDARY PORT setting, the settings are applied when you press this button. A dialog box will ask you to confirm the change.

**6 DANTE PATCH BY select buttons**

If the THIS CONSOLE button is selected, Dante patching can be modified from the RIVAGE PM series. If the DANTE CONTROLLER button is selected, Dante patching cannot be controlled.

**7 BIT select buttons**

These buttons select either 24 bits or 32 bits as the bit depth of the Dante audio network.

**8 LATENCY select buttons**

These buttons select either 0.25 ms, 0.5 ms, 1.0 ms, 2.0 ms, or 5.0 ms as the latency of the Dante audio network.

**9 PREFERRED MASTER button**

Turning this ON raises the unit's order of priority for being the master within the Dante audio network.

**10 SYSTEM/SYNC indicators**

These indicators show the state of Dante operation. When you press an indicator, a message is shown.

For patterns that indicate a message, an error icon and information icon are shown beside the indicators.

For details on what the indicators show, refer to “Messages” which follows.

**5. When you finish making settings, press the x button to close the DANTE SETUP popup window.**

## Messages

Errors, warnings, and certain other types of information are displayed via the Rio front panel indicators. Messages are also displayed in the Dante Controller Error Status field.

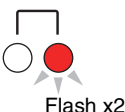
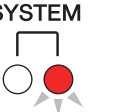
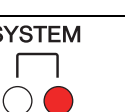
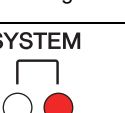
Each indicator lights or flashes as described below:

No call-out	The indicator is off.
Light	The indicator remains lit steadily.
Flash	The indicator continues to flash.
Flash x2	The indicator flashes twice cyclically.
Flash x3	The indicator flashes three times cyclically.

### ■ Error Messages

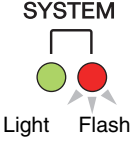
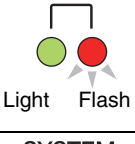
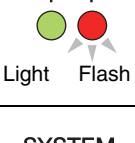
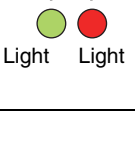
If one of the following errors has occurred, the device will not operate. Until the error is resolved, the green SYSTEM indicator will be turned off, and all indicators for all I/O channels will continue to flash.

In addition, certain errors will cause the red SYSTEM indicator to light or flash.

SYSTEM Indicators	Description	Possible Solution
	An internal error has occurred.	The device has failed. Contact your Yamaha dealer for repair.
	Communication cannot occur because the MAC address setting has been corrupted.	
	UNIT ID is not unique.	Set a unique UNIT ID number within the Dante network.
	The device's DIP switches are not set correctly.	Check the DIP switch settings, and set them correctly.

The following errors affect the settings or the hardware. However, the device will still be usable. The green SYSTEM indicator will light, and all indicators for all I/O channels will work normally.

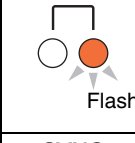
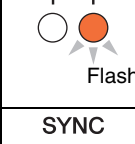
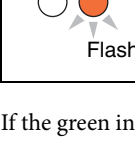
In addition, certain errors will cause the red SYSTEM indicator to light or flash.

SYSTEM Indicators	Description	Possible Solution
 <p>Light Flash</p>	The number of Dante transmit flows exceeded the limit.	Reduce the number of flows by, for example, using Dante Controller to change some of the transmit flows to multicast.
 <p>Light Flash x2</p>	The cooling fan has stopped.	Check that nothing is caught in the fan. If the problem persists, consult your Yamaha dealer.
 <p>Light Flash x3</p>	The internal memory has been corrupted.	When using the unit in [NORMAL] mode, if the problem persists even after turning the power off and on again, consult your Yamaha dealer.
 <p>Light Light</p>	You changed the positions of the device setting DIP switches or rotary switch, or changed the Dante settings from Dante Controller. Therefore, the positions of the device setting DIP switches do not match the actual Dante settings.	If the Device Lock setting was enabled from Dante Controller, disable the setting, or check the device setting DIP switch positions, and set them to accommodate the current situation.

## Warning Messages

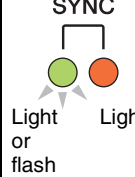
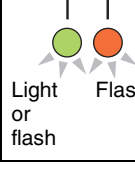
The indicators will light and/or flash as shown until the cause is resolved.


If the green [SYNC] indicator is unlit, the unit's clock is unconfirmed.

SYNC Indicators	Description	Possible Solution
 <p>Flash</p>	The word clock is not set correctly.	Set the clock master and sampling frequency correctly on the Rionative device or in Dante Controller.
 <p>Flash x2</p>	Dante Network circuit is broken.	Make sure that the Ethernet cables are not removed or short-circuited.
 <p>Flash x3</p>	Other Dante-compatible devices cannot be found due to an incorrectly-wired Dante Network.	Make sure that the Ethernet cables are connected correctly.

If the green indicator is flashing, the unit is the clock master.

If the green indicator is lit, the unit is the clock slave and the clock is synchronized.

SYNC Indicators	Description	Possible Solution
 <p>Light or flash Light</p>	A non-GbE-compatible device is connected.	When transferring audio via Dante, use device that supports GbE.
 <p>Light or flash Flash</p>	The [SECONDARY] connector has taken over communications during redundant network operation.	Check the circuit connected to the [PRIMARY] connector.

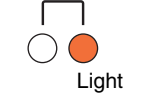
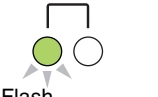

<p><b>SYNC</b></p>  <p>Light or flash      Flash x2</p>	<p>An abnormality has occurred on the circuit connected to the [SECONDARY] connector during redundant network operation.</p>	<p>Check the circuit connected to the [SECONDARY] connector.</p>
--	--	--

■ Information Messages

The indicators will remain lit and/or flashing cyclically to report the status.

If the orange [SYNC] indicator is unlit, the unit is operating normally.

If the green [SYNC] indicator is unlit, the unit's clock is unconfirmed.

SYNC Indicators	Description	Explanation
<p><b>SYNC</b></p>  <p>Light</p>	<p>Synchronizing on a Dante network</p>	<p>Please wait until started has completed or until the unit has finished synchronization. It may take up to 45 seconds for completion.</p>
<p><b>SYNC</b></p>  <p>Flash</p>	<p>The unit is functioning correctly as the word clock master.</p>	<p>The unit is operating as the word clock master.</p>
<p><b>SYNC</b></p>  <p>Light</p>	<p>The unit is functioning correctly as the word clock slave.</p>	<p>The unit is operating as the clock slave and the clock is synchronized.</p>

## Mounting an I/O rack

Here's how to select a device from the multiple I/O racks on the Dante audio network, and mount that device.

1. Press the **SETUP** button to access the **SYSTEM CONFIG** screen.

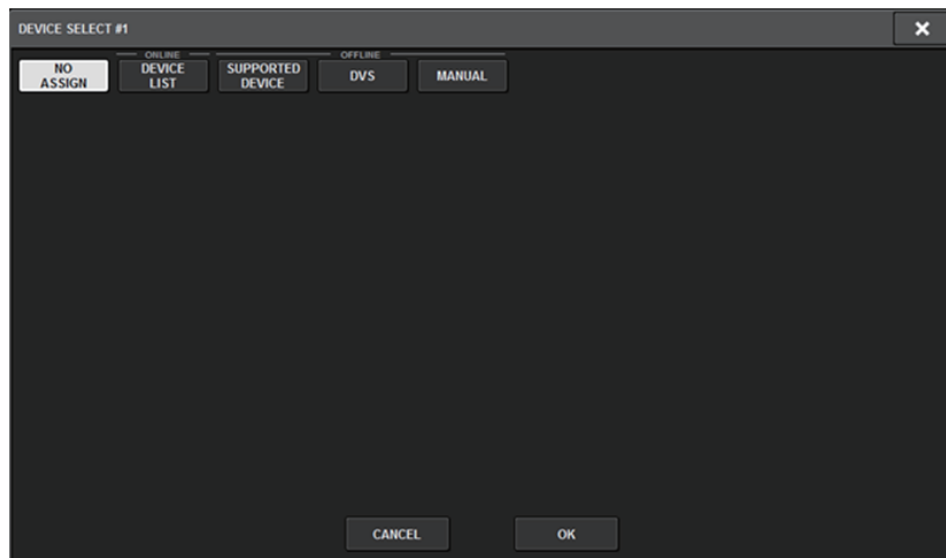


2. Press the **SYSTEM CONFIG** button to access the **SYSTEM CONFIG** popup window.
3. Press the **HY SLOT3** tab to access the **HY SLOT3** window.

**NOTE**

On the CSD-R7, press the **HY SLOT2** tab to access the **HY SLOT2** screen.

#### 4. Press a vacant I/O rack select button to access the DEVICE SELECT popup window.

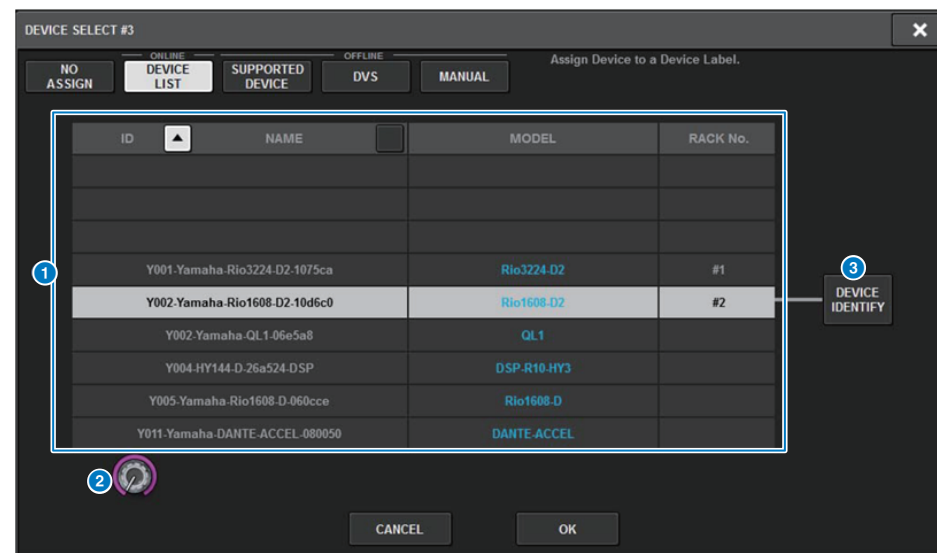


This window includes several pages, which you can switch between using the buttons located at the top of the window.

- **NO ASSIGN** .....Unmount
- **DEVICE LIST** .....Select an online I/O rack, and mount
- **SUPPORTED DEVICE** .....Select from a list of supported devices, and mount
- **DVS** .....Enter a device label, and mount (only for Dante Virtual Soundcard)
- **MANUAL** .....Enter a device label, and mount

#### ■ DEVICE LIST

Here's how to select a device from a list of I/O racks on the Dante audio network, and mount that device.



##### 1 DEVICE LIST

This shows a list of the I/O racks on the Dante audio network. From the list, select the I/O rack that you want to mount.

##### NOTE

After the MODEL information appears in blue text, press the OK button to mount the device. If you press the OK button before this indication appears, the device is not recognized as a supported device.

If an identical I/O rack of the identical UNIT ID is already mounted, the OK button is disabled, and the unit cannot be mounted.

##### 2 DEVICE LIST select knob

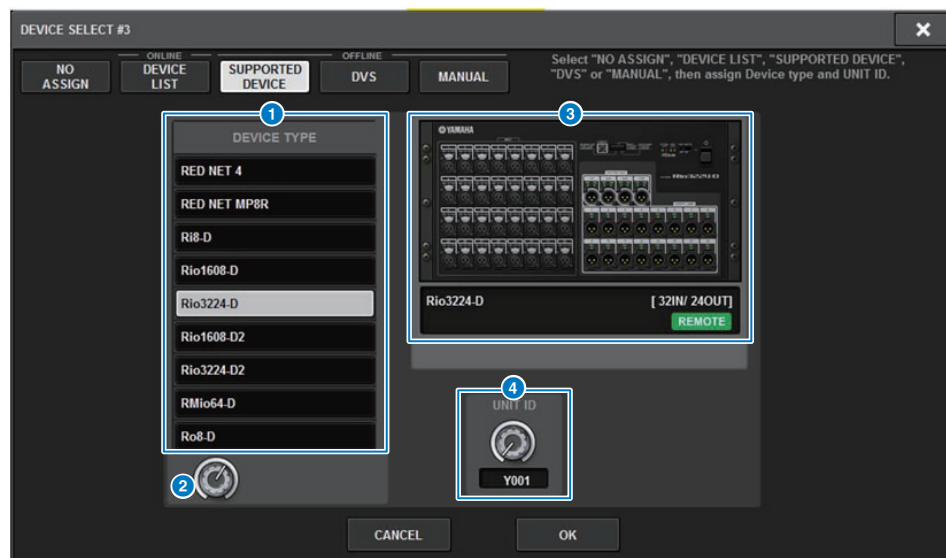
Use the [TOUCH AND TURN] knob to operate this, to select the I/O rack that you want to mount.

##### 3 DEVICE IDENTIFY button

This button is available in the case of an I/O rack that is equipped with a DEVICE IDENTIFY function; you can press the button to identify that device.

## ■ SUPPORTED DEVICE

Here you can select from the supported I/O racks, and mount a device offline.



### 1 DEVICE TYPE

This shows a list of the supported I/O rack types.  
From the list, select the type of I/O rack that you want to mount.

#### NOTE

If an identical I/O rack of the identical UNIT ID is already mounted, the OK button is disabled, and the unit cannot be mounted.

### 2 DEVICE TYPE select knob

Use the [TOUCH AND TURN] knob to operate this, to select the type of I/O rack that you want to mount.

### 3 I/O rack indication

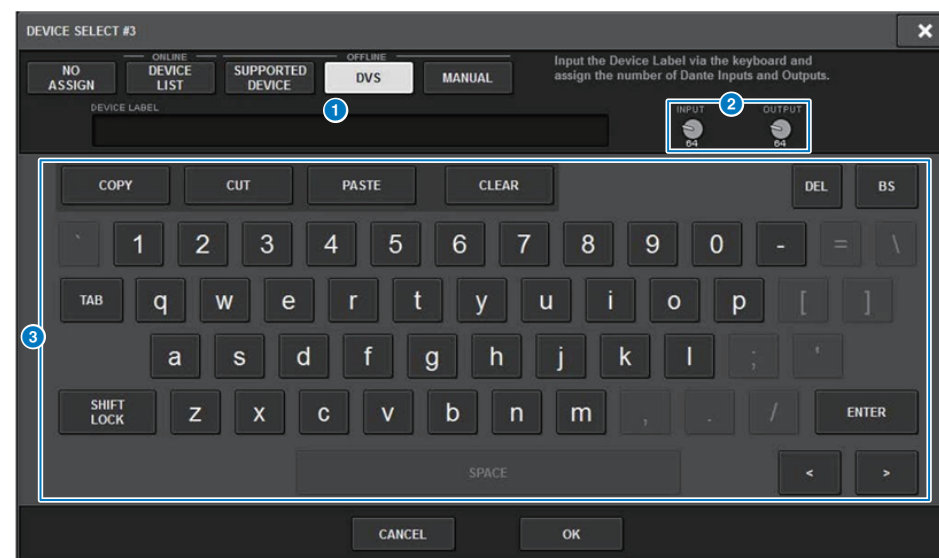
The selected I/O rack is shown here.  
This shows the model name, the number of inputs and outputs, and the remote control icon (only for supported devices).

### 4 UNIT ID knob

Use the [TOUCH AND TURN] knob to operate this, and set the UNIT ID.

## ■ DVS or MANUAL

Here you can enter a device label for an I/O rack, and mount it offline.



### 1 DEVICE LABEL

This shows the device label of the I/O rack that you entered using the keyboard.

### 2 INPUT/OUTPUT knob

Use the [TOUCH AND TURN] knob to operate this, to specify the number of inputs and outputs of the Dante audio network.

### 3 Keyboard for device label input

Use this keyboard to enter a device label for the I/O rack.

## 5. Select the mounting method, and mount the I/O rack.

## 6. When you finish making settings, press the x button to close the DEVICE SELECT popup window.



## Patching an I/O rack

Here you can patch between an I/O rack connected to a Dante connector and the Dante audio network.

1. Press the **SETUP** button to access the **SETUP** screen.

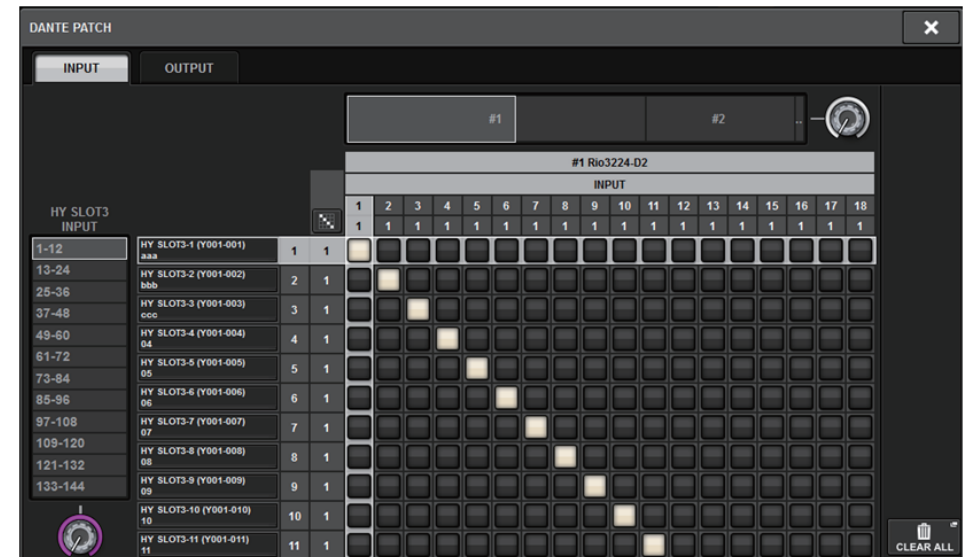


2. Press the **SYSTEM CONFIG** button to access the **SYSTEM CONFIG** popup window.
3. Press the **HY SLOT3** tab to access the **HY SLOT3** window.

### NOTE

On the CSD-R7, press the **HY SLOT2** tab to access the **HY SLOT2** screen.

4. Press the **DANTE INPUT PATCH** button to access the **INPUT** tab of the **DANTE PATCH** popup window.

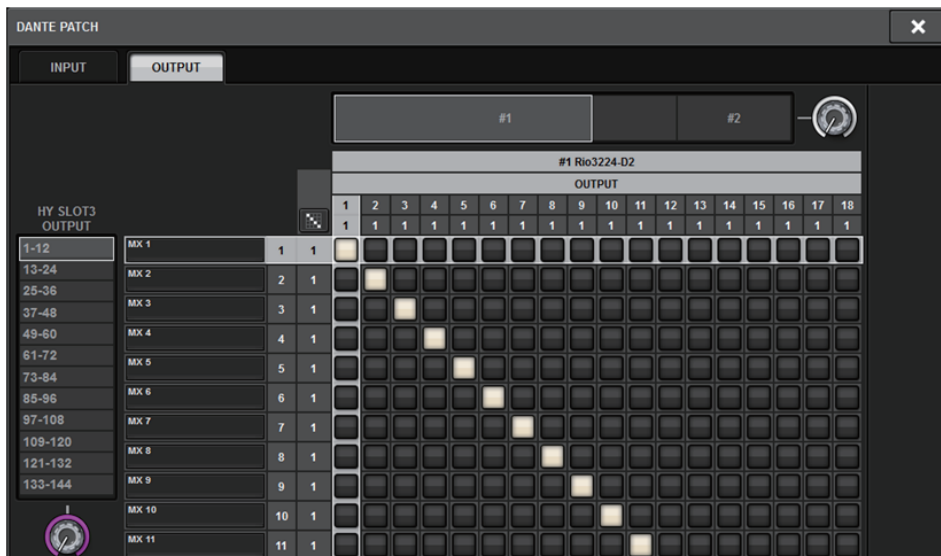


Specify the patching that will be input from the I/O rack to the Dante-enabled HY card.

### NOTE

Unrecognized devices are indicated as ETC.

- Press the **OUTPUT** tab to access the **OUTPUT** tab of the DANTE PATCH popup window.



Specify the patching that will be output from the Dante-enabled HY card to the I/O rack.

#### NOTE

- Unrecognized devices are indicated as ETC.
- If a CL1/CL3/CL5/QL1/QL5/DSP-R10-HY3/CSD-R7-HY2 is mounted, the grid is grayed-out, and cannot be edited.

- When you finish making settings, press the **x** button to close the DANTE PATCH popup window.

#### NOTE

In order to input and output signals from the I/O rack, the Dante-enabled HY card must be patched with input channels and output channels.

## Remotely controlling an I/O rack

You can control an I/O rack that supports remote control and is connected to the Dante connector. Supported models are indicated by a remote control icon. Up to 24 units can be controlled, and a maximum number of 128 channels per device can be controlled.

- Press the **SYSTEM CONFIG** button to access the **SYSTEM CONFIG** popup window.

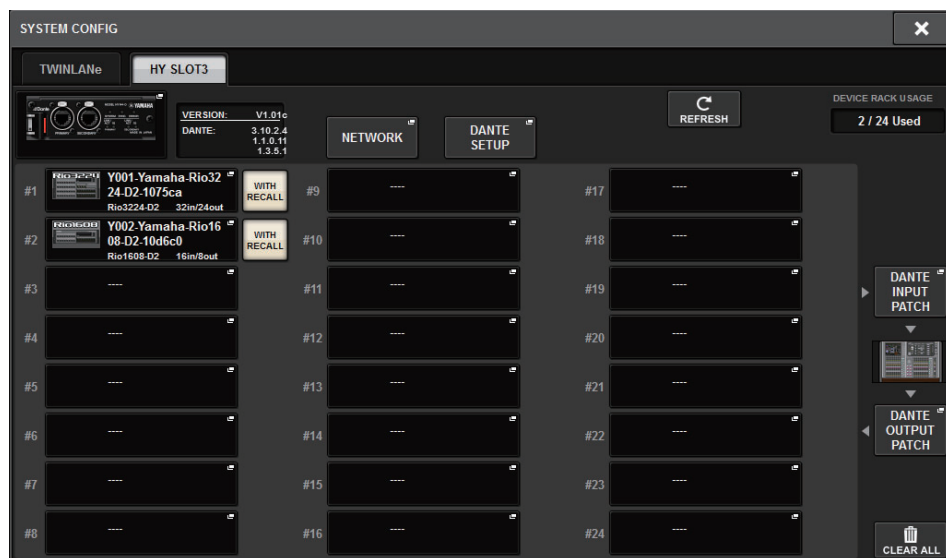


- Press the **SYSTEM CONFIG** button to access the **SYSTEM CONFIG** popup window.

### 3. Press the HY SLOT3 tab to access the HY SLOT3 window.

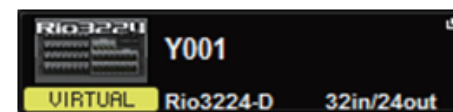
#### NOTE

On the CSD-R7, press the HY SLOT2 tab to access the HY SLOT2 screen.



### Control status icon

This indicates the control status of the device.



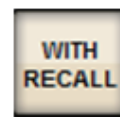
<b>VIRTUAL</b>	Previously specified, and currently not existing on the Dante audio network <sup>*1</sup>
<b>CONFLICT</b>	Devices of a different DEVICE TYPE and the identical ID are connected <sup>*2</sup>
<b>DUPLICATE</b>	Multiple instances of the same ID exist <sup>*1</sup>
<b>AES67 MODE</b>	Operating in AES67 mode
<b>LOCKED</b>	Dante Device Lock is on <sup>*3</sup>
<b>NOT CTRL</b>	The DANTE CONTROLLER ID for SLOT3 select button (for the CSD-R7, HY SLOT2 popup button) is off, and the device is controlling as a Dante Controller
<b>MISMATCH</b>	There is a mismatch between the version of the Dante-enabled HY card and the version of the device <sup>*1</sup>

\*1 Remote control is not possible.

\*2 Remote control is possible, but some functionality is limited. (For example, such as if a Rio1608-D is mounted, and is then replaced by a Rio3216-D of the identical ID.)

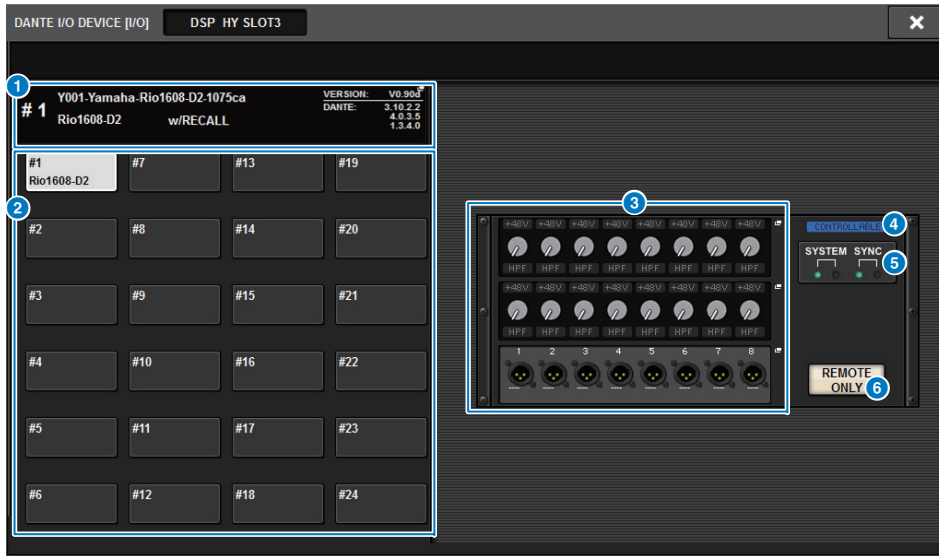
\*3 It is not possible to edit Dante audio network settings such as the parameters of the DANTE SETUP popup window on other than the specified PC.

### WITH RECALL button



If this button is on, the information saved in the RIVAGE PM series unit is applied to the HA device when scene recall is performed while connected to the applicable I/O rack.

- Press the I/O rack select button for an HA-equipped I/O rack that is mounted; the DEVICE [I/O] screen appears.



**1 I/O rack button**

This indicates the I/O rack's ID number and model name. Press this button to display the RACK MOUNT popup window, in which you can select an I/O rack to mount.

**2 Display select buttons**

Press a button to display the corresponding I/O rack.

**3 I/O rack indication**

When you press the HA display area, the I/O DEVICE popup window appears; when you press the output connector area, the OUTPUT tab of the DANTE PATCH popup window appears.

**4 Control status icon**

This indicates the control status of the device.

<b>DISCOVERING</b>	Searching for the device to be controlled
<b>DECLINED</b>	The device to be controlled was discovered, but connection was declined
<b>CONNECTING</b>	Attempting to connect to the device
<b>SYNCHRONIZING</b>	Synchronizing with the device
<b>CONTROLLABLE</b>	The device can be controlled

**5 SYSTEM/SYNC indicators**

These indicate messages such as errors, warnings, and information. For details on the messages, refer to "Messages" (page 132).

**6 REMOTE ONLY button (Rio3224-D2 and Rio1608-D2 only)**

If this is on, it will no longer be possible to perform HA operations from the panel of the I/O rack. Only devices for which With Recall is enabled can be turned on/off.

**5. Remotely control the HA of the I/O rack.**

Control the HA of the I/O rack from the Selected Channel section, the OVERVIEW screen, or the SELECTED CHANNEL VIEW screen. When you press the panel's [SEL] key, the signal indicator of the I/O rack port to which the corresponding channel is patched will flash.

Operations can also be performed from the I/O DEVICE popup window that appears when you press the HA display area of the I/O rack.



- When you finish making settings, press the x button to close the DANTE I/O DEVICE [I/O] screen.

- Press the OUTPUT connector of the I/O rack to access the DANTE PATCH popup window.

- As necessary, make output port settings.

- When you finish making settings, press the x button to close the DANTE PATCH popup window.

# BUS SETUP

## BUS SETUP (Basic settings for MIX buses and MATRIX buses)

This section explains how to edit the basic settings for MIX buses and MATRIX buses, such as switching between stereo and monaural, or changing the bus type.

The settings you make in the following procedure are saved as part of the scene.

1. Press the **SETUP** button to access the **SETUP** screen.



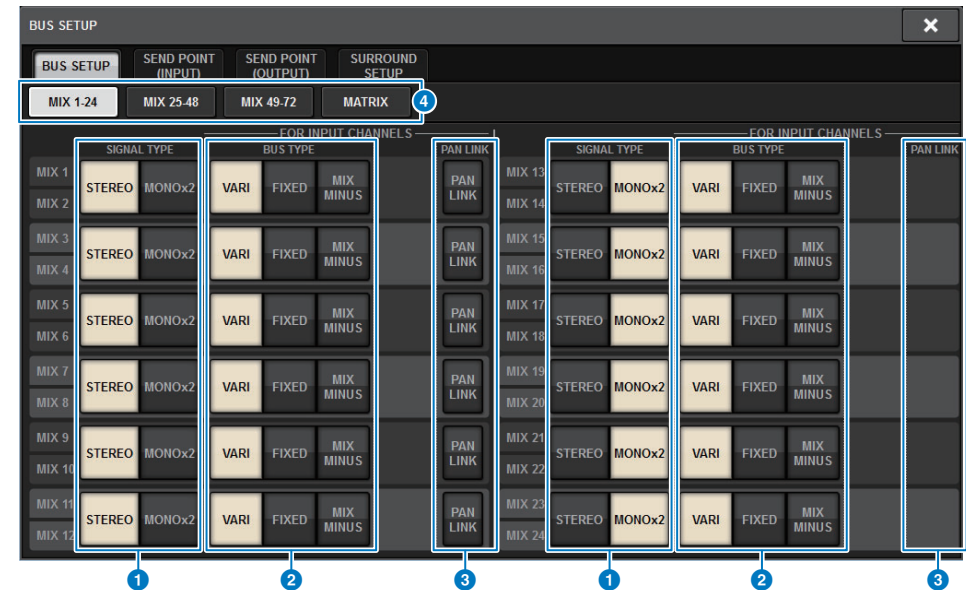
2. Press the **BUS SETUP** button to open the **BUS SETUP** popup window.

This window includes several pages, which you can switch between using the tabs located at the top of the window.



3. Press the **BUS SETUP** tab.

The screen contains the following items.



1. **SIGNAL TYPE** switch buttons

Enable you to select how signals are processed for every adjacent pair of buses. You can select either STEREO (stereo signal) or MONOx2 (monaural signal x 2).

2. **BUS TYPE** select buttons

Enable you to select the bus type for every adjacent pair of buses. You can select VARI (adjustable send level), FIXED (fixed send level), or mix minus ([page 145](#)).

3. **PAN LINK** button

This button will be displayed only if SIGNAL TYPE is STEREO and set to VARI. If the button is on, the signals routed to the corresponding channels will link with the TO STEREO pan setting.

4. **Tags**

Enable you to select MIX1-24, MIX25-48, MIX49-72, or MATRIX bus.

4. Use the tabs to display the buses for which you want to edit the settings.
5. Use the SIGNAL TYPE switch buttons to specify whether each bus will function as STEREO (main parameters will be linked for two adjacent odd-numbered/even-numbered buses) or MONOx2 (use as two monaural channels).
6. Use the BUS TYPE select buttons to select the bus type.

## SEND POINT (INPUT) (Specifying the send point for each input channel)

You can select the send destination points for each channel. The send point can be specified for both when the send source channel is set to PRE and set to POST individually.

1. Press the SETUP button to access the SETUP screen.

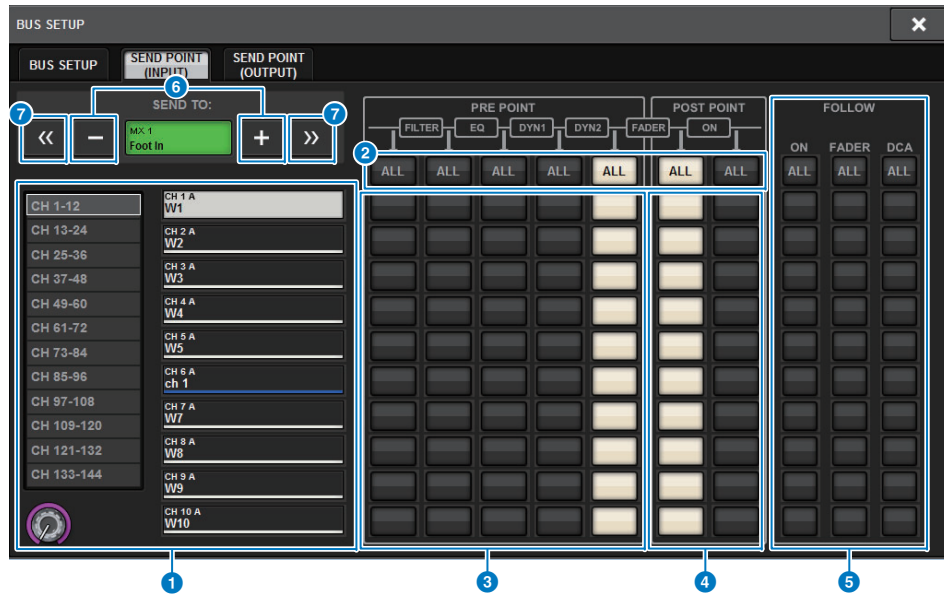


2. Press the BUS SETUP button to open the BUS SETUP popup window.  
This window includes several pages, which you can switch between using the tabs located at the top of the window.



3. Press the SEND POINT (INPUT) tab.  
The screen contains the following items.





**1 Channel select list**  
Enables you to select a channel.

**2 ALL button**  
Press this button to apply the selected send point to all channels simultaneously. If the send point is not selected for some channels in the column, “...” will appear.

**3 PRE send point select buttons**  
Enable you to select the send point for each channel for which PRE is turned on. These buttons correspond to the following parameters.

Button	Send Point
PRE FILTER	Immediately before the filter
PRE EQ	Immediately before the EQ
PRE DYN1	Immediately before DYNAMICS1
PRE DYN2	Immediately before DYNAMICS2
PRE FADER	Immediately before the fader

**4 POST send point select buttons**  
Enable you to select the send point for each channel for which PRE is turned off (POST). These buttons correspond to the following parameters.

Button	Send Point
POST FADER	Immediately after the fader
POST ON	Immediately after the [ON] key

**5 FOLLOW setting buttons**  
Enable you to select for each channel whether the signal sent to the MIX/MATRIX bus will follow the ON/FADER/DCA settings regardless of the send point. These buttons correspond to the following parameters.

Button	Setting
ON	FOLLOW ON
FADER	FOLLOW FADER
DCA	FOLLOW DCA

**6 SEND TO [+]/[-] buttons**  
Enable you to select the MIX/MATRIX bus channel as the signal destination for a single channel at a time.

**7 SEND TO [<<]/[>>] buttons**  
Enable you to select the MIX/MATRIX bus channel as the signal destination for 12 channels at a time.

**4. Use the send point select buttons to specify the send point.**



## SEND POINT (OUTPUT) (Specifying the send point for each MIX channel/STEREO channel)

You can specify the MATRIX bus send point for each bus. The send point can be specified for both when the send source bus is set to PRE and set to POST individually.

1. Press the **SETUP** button to access the **SETUP** screen.



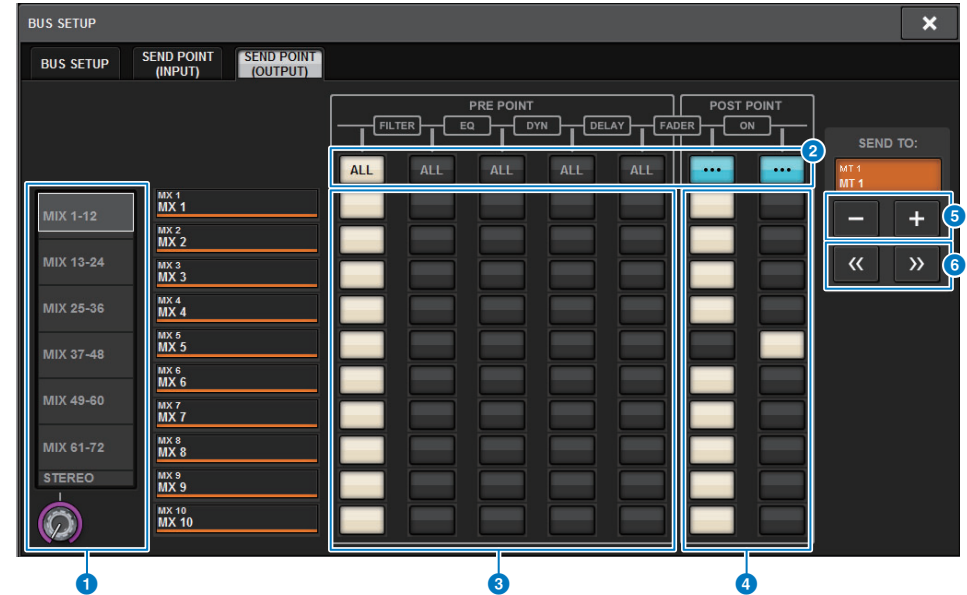
2. Press the **BUS SETUP** button to open the **BUS SETUP** popup window.

This window includes several pages, which you can switch between using the tabs located at the top of the window.



3. Press the **SEND POINT (OUTPUT)** tab.

The screen contains the following items.



- 1 **Category select list**  
Enables you to select the bus category.
- 2 **ALL button**  
Press this button to apply the selected send point to all MIX/STEREO buses simultaneously. If the send point is not selected for some channels in the column, “...” will appear.
- 3 **PRE send point select buttons**  
You can select the send point for each channel. These buttons correspond to the following parameters.

Button	Send Point
PRE FILTER	Immediately before the filter
PRE EQ	Immediately before the EQ
PRE DYN	Immediately before DYNAMICS
PRE DELAY	Immediately before DELAY
PRE FADER	Immediately before the fader

**4 POST send point select buttons**

You can select the send point for each channel. These buttons correspond to the following parameters.

Button	Send Point
POST FADER	Immediately after the fader
POST ON	Immediately after the [ON] key

**5 SEND TO [+] / [-] buttons**

Enable you to select the MATRIX bus channel as the signal destination for a single channel at a time.

**6 SEND TO [<<] / [>>] buttons**

Enable you to select the MATRIX bus channel as the signal destination for 12 channels at a time.

**4. Use the send point select buttons to specify the send point.**

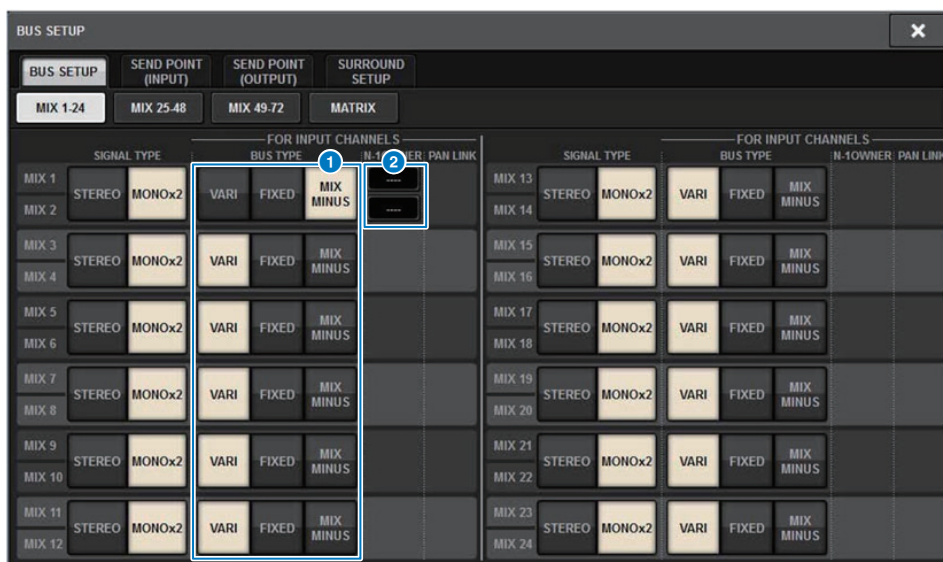
## Mix minus

This function removes only the signal of a specified channel from the signal that is sent to the MIX/MATRIX bus. By using this, you can quickly send to a performer or announcer a monitor signal that omits only the voice of that person.

You can make mix minus settings ahead of time, and then specify the OWNER channel to associate an announcer's mic (input channel) at their location with their monitor (mix minus bus).

**1. Press the SETUP button to access the SETUP screen.****2. Press the BUS SETUP button to open the BUS SETUP popup window.**

### 3. Press the BUS SETUP tab.



#### 1 BUS TYPE select buttons

This enables you to select the bus type for every adjacent pair of buses. You can select VARI (variable send level), FIXED (fixed send level), or MIX MINUS.

#### 2 N-1 OWNER button

Press this to access the MIX MINUS OWNER popup window, where you can select the OWNER channel for the mix minus setting.

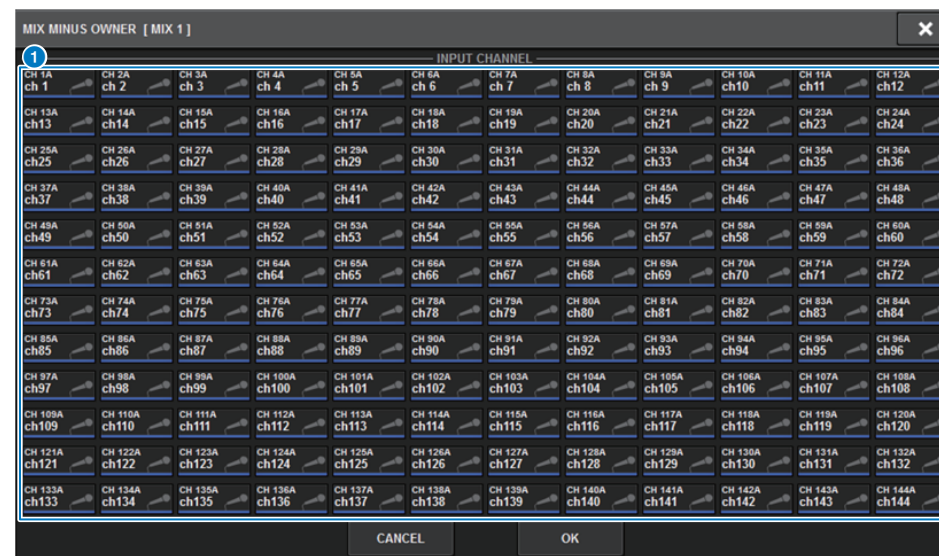
### 4. Press the MIX MINUS button.

#### NOTE

- The send level of the signal sent from the selected OWNER channel is lowered to  $-\infty$  dB.
- The send levels of all signals sent from input channels other than the selected channel are set to nominal level (0.0 dB).
- Also, send to the send-destination bus is turned on, and the send point is switched to POST.
- For a stereo input channel, the send levels of both signals sent from the two channels are lowered to  $-\infty$  dB.

### 5. Press the MIX MINUS OWNER button.

The MIX MINUS OWNER popup window appears.



#### 1 Channel select buttons

These buttons select the OWNER channel (the input channel that uses mix minus).

### 6. Select the OWNER channel.






#### NOTE

- Even in the OWNER screen, you can hold down the [SHIFT] key and use the N-1 OWNER button to make a selection.

### 7. Press the OK button.

The send that is sent from the selected OWNER channel is turned off.

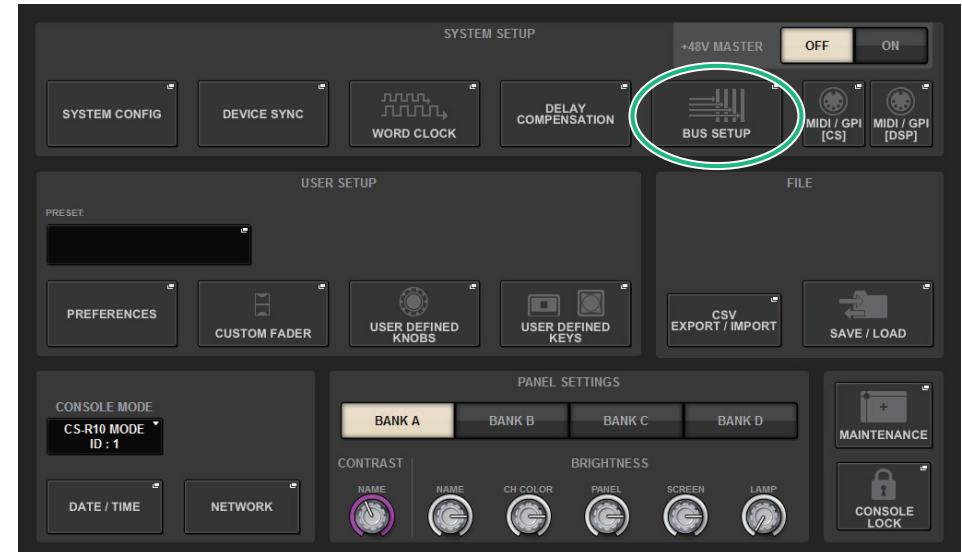
SEND indications for a mix minus bus

OVERVIEW screen	SELECTED CHANNEL VIEW screen
<p><b>SEND field</b></p> <p>After specifying the mix minus bus</p>  <p>By pressing the [SHIFT] key you can specify the OWNER channel.</p>  <p>After the setting is made, it is shown in red.</p>  <p>For channels other than the OWNER channel, this will be the SEND ON/OFF button.</p> 	<p><b>MIX/MATRIX SENDS field</b></p> <p>Send to a mix minus bus is blue However, send from the OWNER channel is red</p> 

## SURROUND SETUP (specify in surround mode)

If you specify surround mode in BUS SETUP, you'll be able to use 5.1 surround panning and monitoring. By using two surround buses, IS surround production also becomes easy. This allows a highly flexible monitoring environment that includes downmixing and external monitor sources. MIX buses 1–12 and MATRIX buses 1–4 are used for the two surround buses and the downmix bus.

1. Press the **SETUP** button to access the **SETUP** screen.



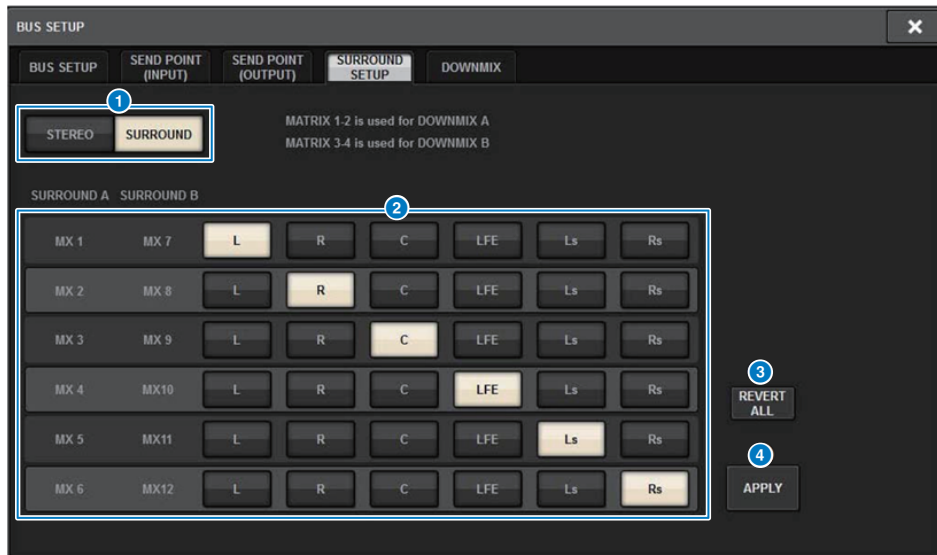
2. Press the **BUS SETUP** button to open the **BUS SETUP** popup window.



This window includes several pages, which you can switch between using the tabs located at the top of the window.

**3. Press the SURROUND SETUP tab.**

The screen contains the following items. Surround A/B use MIX buses 1–12 (fixed).

**1 Mode switching buttons**

These buttons switch the bus setting from stereo mode to surround mode, or from surround mode back to stereo mode. Mode settings can be recalled as a scene.

**2 Surround output assign buttons**

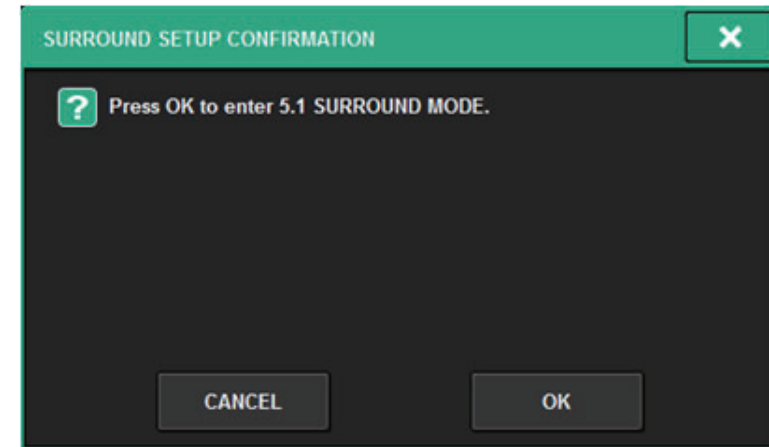
In surround mode, these buttons assign MIX buses (MIX 1–6/MIX7–12) to surround buses.

**3 REVERT ALL button**

This button reverts the un-applied changes of the surround output assign buttons to their previous state.

**4 APPLY button**

This button applies the settings of the mode switching buttons and the surround output assign buttons.

**4. Press the SURROUND mode switching button.****5. Using the surround output assign buttons, select the surround output channel to which each MIX channel is assigned.****6. Press the APPLY button.**

A window will be displayed, asking you to confirm the change.

**7. Press the OK button.**



## SELECTED CHANNEL VIEW screen

When the bus setting in BUS SETUP is set to surround mode, the SELECTED CHANNEL VIEW screen will appear as follows.



### 1 Surround graph

The surround positioning is shown for the MIX popup buttons of MIX bus sends 1–12. When you press this, the SURROUND PAN 1CH screen will appear.

## OVERVIEW screen

When the bus setting in BUS SETUP is set to surround mode, the OVERVIEW screen will appear as follows.



### 1 Surround graph

This shows the surround positioning. When you press this, the SURROUND PAN 1CH screen will appear.

### 2 L/R?F/R select button

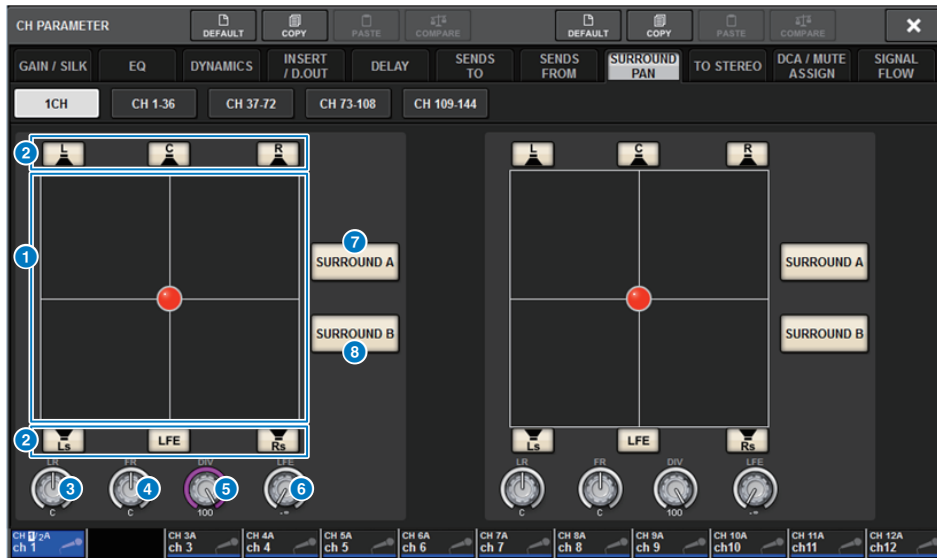
This is a toggle button that switches the object to be operated. (The [SHIFT] key does the same thing.) Use the screen encoder or the [TOUCH AND TURN] knob to operate this.

### 3 LFE knob

This knob adjusts the level of the LFE (low frequency effects) channel. Use the screen encoder or the [TOUCH AND TURN] knob to operate this.

## SURROUND PAN 1CH screen

When the bus setting in BUS SETUP is set to surround mode, the SURROUND PAN 1CH screen will appear as follows. (The example shows PAIR)



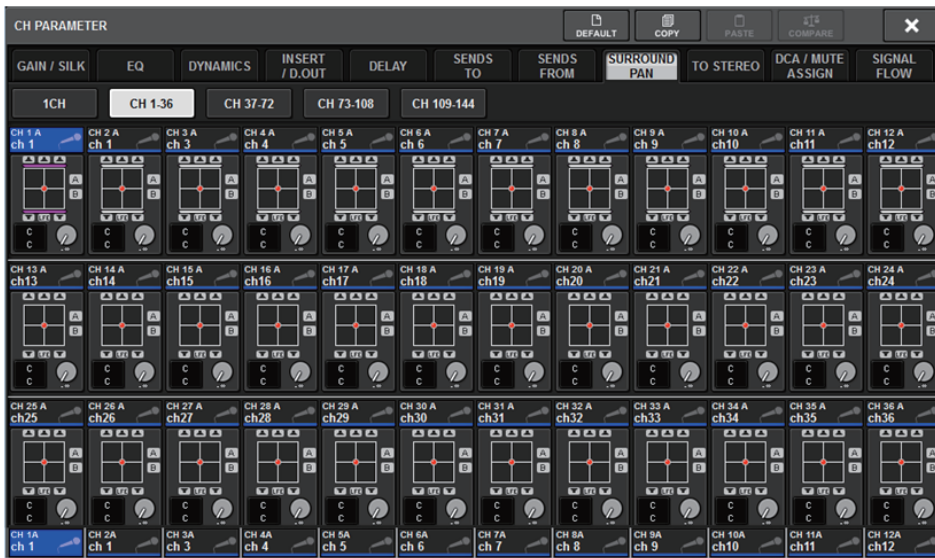
- 6 **LFE knob**  
This knob adjusts the level of the LFE (low frequency effects) channel. Use the screen encoder or the [TOUCH AND TURN] knob to operate this.
- 7 **SURROUND A button**  
Specifies whether the signal is sent to surround bus A.
- 8 **SURROUND B button**  
Specifies whether the signal is sent to surround bus B.

- 1 **Surround graph**  
This shows the surround positioning.
- 2 **Assignment buttons for each bus**  
By default, all buttons are on. Turn off buses that do not output an audio signal.
- 3 **L/R knob**  
Specifies the left/right surround positioning. Use the screen encoder or the [TOUCH AND TURN] knob to operate this.
- 4 **F/R knob**  
Specifies the front/rear surround positioning. Use the screen encoder or the [TOUCH AND TURN] knob to operate this.
- 5 **DIV knob**  
Specifies the proportion of the front center signal that is sent to the left, right, and center channels. With a setting of 0, the front center signal is sent only to the left and right channels. With a setting of 50, the signal is sent equally to the left, right, and center channels. With a setting of 100, the signal is sent only to the center channel. Use the screen encoder or the [TOUCH AND TURN] knob to operate this.



## SURROUND PAN CH1-36/ CH37-72/ CH73-108/ CH109-144 screen

When the bus setting in BUS SETUP is set to surround mode, the screen will appear as follows.



## DOWNMIX screen

If surround mode is specified in BUS SETUP, the DOWNMIX page allows you to individually specify the downmix coefficients for surround buses A/B and for the surround monitor. MATRIX buses 1-4 are used for downmix (fixed).



- 1 **L/R buttons**  
Specify the output destination.
- 2 **Coefficient setting knobs**  
Specify the downmix coefficients.  $\Sigma$  clip is provided.
- 3 **APPLY TO MONITOR buttons**  
Copy the settings to the surround monitor downmix settings.

## SURROUND MONITOR screen

If surround mode is specified in BUS SETUP, you can make SURROUND MONITOR and SURROUND CUE settings in the SURROUND MONITOR tab that appears in the MONITOR screen.



### 4 MONITOR SOURCE SELECT buttons

Select the surround monitor source. You can select not only surround buses A/B but also downmix A/B and external input (5.1 and stereo).

### 5 DOWNMIX buttons

To downmix the surround monitor, select either stereo or monaural.

### 6 Assignment buttons for each bus

You can mute specific buses of the surround monitor.

### 7 MONITOR FADER LEVEL knob

Adjusts the surround monitor fader level.

### 8 MONITOR OUTPUT button

Turns the surround monitor output on or off.

### 9 Meter field

Shows the output level for each channel of the surround monitor. Press this field to open the SURROUND MONITOR SETTINGS popup window.

### 10 SURROUND CUE popup button

Accesses the SURROUND CUE SETTINGS popup window, in which you can make detailed settings for surround cue.

### 11 CUE MODE buttons

Enable you to specify the operation mode when multiple [CUE] keys are on.

- **MIX CUE mode**.....All selected channels will be cue-monitored.
- **LAST CUE mode**.....Only the most recently selected channel will be cue-monitored.

### 12 Meter field

Shows the output level for each channel of the surround cue. Press this field to open the SURROUND CUE SETTINGS popup window.

### 13 CLEAR CUE button

Cancels all surround cue selections simultaneously. If the CUE MODE setting is MIX CUE, all of the selected channels will be cleared.

### 1 SURROUND MONITOR popup button

Accesses the SURROUND MONITOR SETTINGS popup window, in which you can make detailed settings for surround monitoring.

### 2 DIMMER field

Enables you to make settings for the Dimmer function, which temporarily attenuates the surround monitor signals.

#### - DIMMER LEVEL knob

Adjusts the amount by which the surround monitor signals will be attenuated when the dimmer is on.

#### - DIMMER ON button

Turn on this button to enable the dimmer function and attenuate the surround monitor signal.

### 3 PHONES LEVEL LINK button

If this is on, the MONITOR FADER LEVEL knob will adjust the level of signals sent to the PHONES B output jack.

## SURROUND MONITOR SETTINGS popup window

**1 MONITOR SOURCE SELECT buttons**

Select the source that will be output to the MONITOR bus.

**2 CUE INTERRUPT button**

Press this button to interrupt the surround monitor signal by the surround cue signal. If this button is on and surround cue is enabled, the surround cue signal will be sent to the surround monitor output.

**3 DOWNMIX buttons**

To downmix the surround monitor, select either stereo or monaural.

**4 Meter field**

Shows the output level for each channel of the surround monitor.

**5 MONITOR OUTPUT button**

Turns the surround monitor output on or off.

**6 MONITOR DELAY knob**

Indicates the currently-specified delay time. The millisecond value is indicated above the knob, and the delay time value in currently-selected units and the currently-selected scale type are indicated below the knob. However if the scale is set to ms, the delay time value is not shown above the knob.

**7 DIMMER ON CUE knob**

Adjusts the amount by which the surround monitor signal will be attenuated when surround cue is on.

**- DIMMER ON CUE indicators**

When surround cue is active, CUE A and/or CUE B will light.

**8 DIMMER ON TALKBACK LEVEL knob**

Adjusts the amount by which the monitor signal will be attenuated when talkback is on.

**- DIMMER ON TALKBACK indicator**

Indicates the on/off status of the talkback dimmer function.

**9 DIMMER LEVEL knob**

Adjusts the amount by which the surround monitor signals will be attenuated when the dimmer is on.

**10 SPEAKER MUTE buttons**

These buttons individually mute the surround monitor speakers.

The SOLO button turns on the solo function for the monitor speakers. This mutes the speakers other than the speaker for which this is on.

**11 MONITOR FADER LEVEL knob**

Adjusts the surround monitor fader level.

**12 INSERT ON button**

Switches the plug-in insert on or off.

**13 INSERT button**

Press this button to display a window allowing you to insert plug-ins into the surround monitor signal. One plug-in can be inserted into each bus.

**14 OUTPUT PATCH popup buttons**

These indicate the slot or port that is the surround monitor output destination of each channel. Press these buttons to access the OUTPUT PATCH [SURROUND MONITOR] popup window.

**15 SURROUND METER OUTPUT PATCH popup button**

Press this button to access the OUTPUT PATCH [SURROUND MONITOR] popup window.

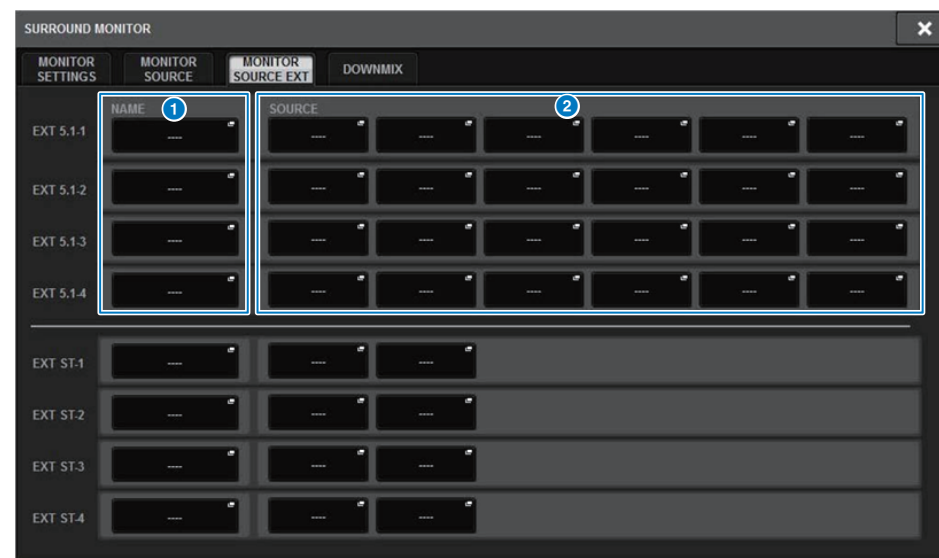
## MONITOR SOURCE popup window



### 1 MONITOR SOURCE DEFINE buttons

Each button displays the name of the assigned surround monitor source. Press these buttons to access the MONITOR SOURCE SELECT popup window, in which you can assign surround monitor sources to individual DEFINE buttons.

## MONITOR SOURCE EXT popup window



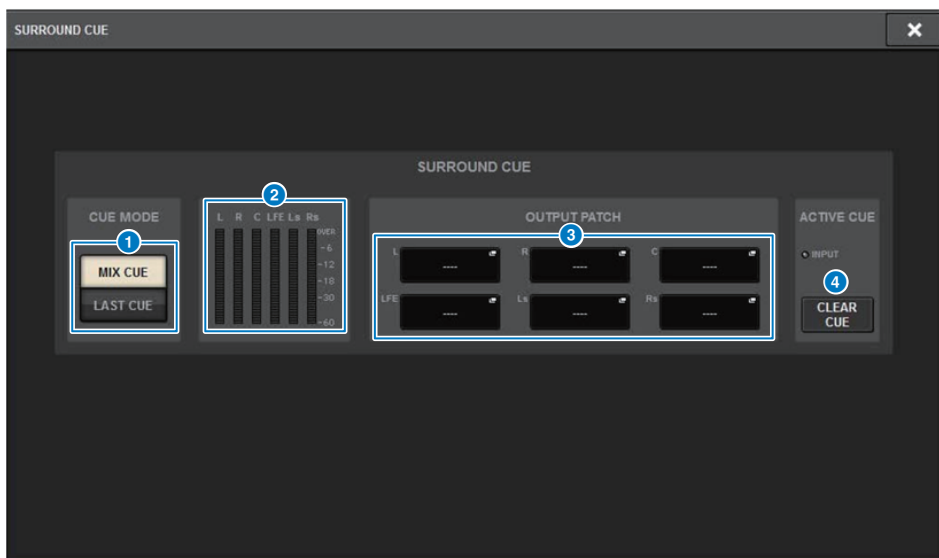
### 1 NAME buttons

You can enter the name of the external source that is assigned to each button. When you press a button, a keyboard screen appears, allowing you to edit the name.

### 2 SOURCE popup buttons

These buttons select the surround monitor source. When you press one of these buttons, the INPUT PATCH popup window will appear, in which you can select input jacks, slots and channels.

## SURROUND CUE SETTING popup window



Since surround cue is assigned to the [Fn] key, you can use the [CUE] key to switch PFL and use the [Fn] key to switch AFL

### 1 CUE MODE buttons

Enable you to specify the operation mode when multiple [CUE] keys are on.

- **MIX CUE mode**.....Surround-cue all selected channels
- **LAST CUE mode**.....Surround-cue only the last-selected channel

### 2 Meter field

Shows the output level for each channel of the surround cue.

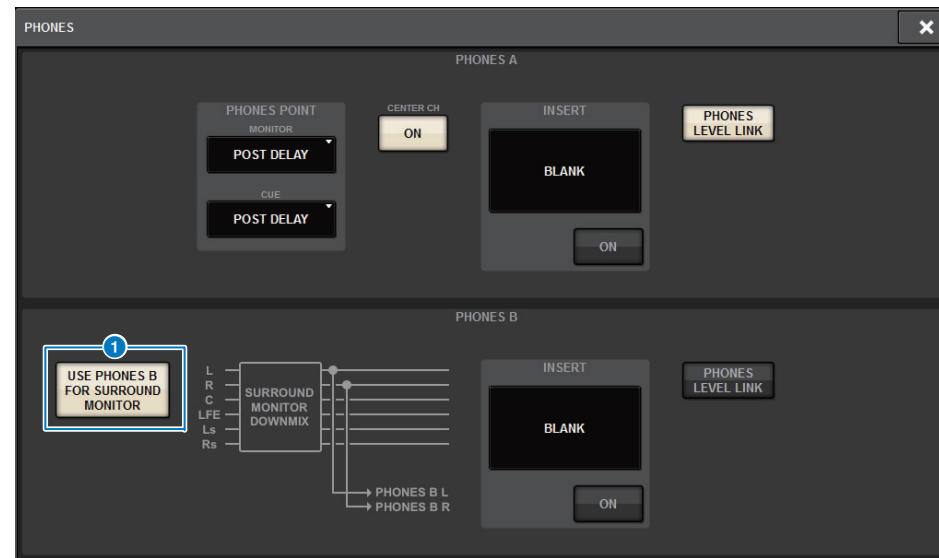
### 3 OUTPUT PATCH buttons

Press these buttons to access the OUTPUT PATCH [SURROUND CUE] popup window, in which you can select output ports to patch to the surround cue outputs.

### 4 CLEAR CUE button

Cancels all surround cue selections simultaneously. If the CUE MODE setting is MIX CUE, all of the selected channels will be cleared.

## PHONES popup window



### 1 USE PHONES B FOR SURROUND MONITOR button

In surround mode, the USE PHONES B FOR SURROUND MONITOR button is displayed. If you turn this on, a block diagram graphic is shown, and PHONE B is used for surround monitor.

# Patching

This chapter explains how to edit the input patching and output patching.

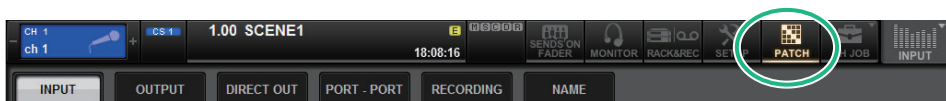
## Patching the input ports

You can assign input channel patches into two groups (A and B) and switch between these groups.

This function is convenient in the following applications:

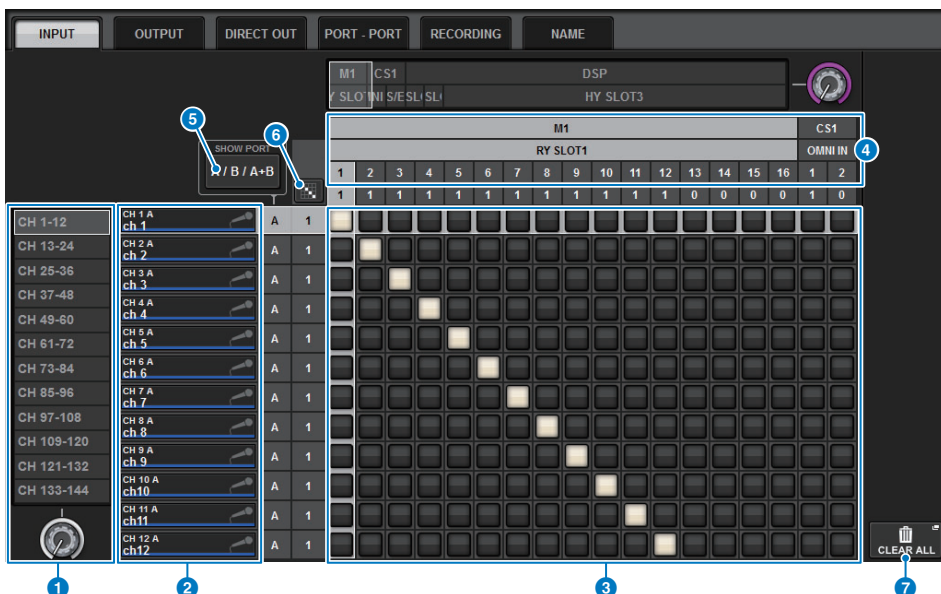
- Assigning back-up patches as group B, and switching to this group in case of emergency.
- Quickly switching between the input channel groups depending on the programs on the stage or situations.

1. Press the **PATCH** button on the menu bar to access the **PATCH** screen.



2. Press the **INPUT** tab to access the **INPUT** patch window.

The window contains the following items.



- 1 Channel list (Input channels)**  
Indicates the input channel numbers as patching destinations.
- 2 Channel display**  
Indicates the channels that will be assigned to the input port.
- 3 Grid**  
This grid lets you patch input ports (horizontal lines) to input channels (vertical columns). Currently-patched grids are indicated by white squares. Press or click a desired grid to set or disable the patch.
- 4 INPUT COMPONENT/SLOT/CH**  
This section indicates the type of the input component, slot number, and channel number for the input port. The abbreviations displayed in this section have the following meaning.
  - M1–M8, S1–S8.....I/O rack 1–8
  - CS1, CS2 .....Control surface
  - DSP .....DSP engine
  - PLUG-IN.....Effect plug-in already mounted in PLUG-IN [SEND]

**NOTE**

The number below is the number of channels that are patched. If the background is red, no sound is output even if the channel is patched (such as when the HY144-D is used and ROUTING MODE is set to MODE1).

- 5 SHOW PORT button**  
Enables you to select the ports that are displayed in the grid from A, B, and A+B.
- 6 Continuous patch button**  
Press the continuous patch button, and then rotate the select knob to in the upper right to patch the intersecting channels continuously. If you press the continuous patch button, the  button and the  button will appear. Press the  button again to confirm the selected continuous patches. Press the  button to revert the continuous patches to the previous state.
- 7 CLEAR ALL button**  
Press this button to clear all patches.



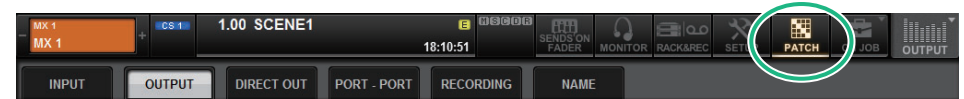
3. Use the knob in the upper right to display the desired input ports.
4. Use the knob in the lower left corner to display the input channels.
5. Press the desired grid cell to patch a desired channel.

**NOTE**

- You can patch a single input port to multiple input channels, but you cannot patch multiple input ports to a single input channel.
- Input ports for an I/O rack that is not assigned to the TWINLANe network will not be displayed. During off-line setting, no I/O racks will be displayed unless the DSP engine has been set as the word clock master. If you want to patch the input ports for an I/O rack while off-line, set the DSP engine as the word clock master temporarily to assign the I/O rack to the TWINLANe network band.

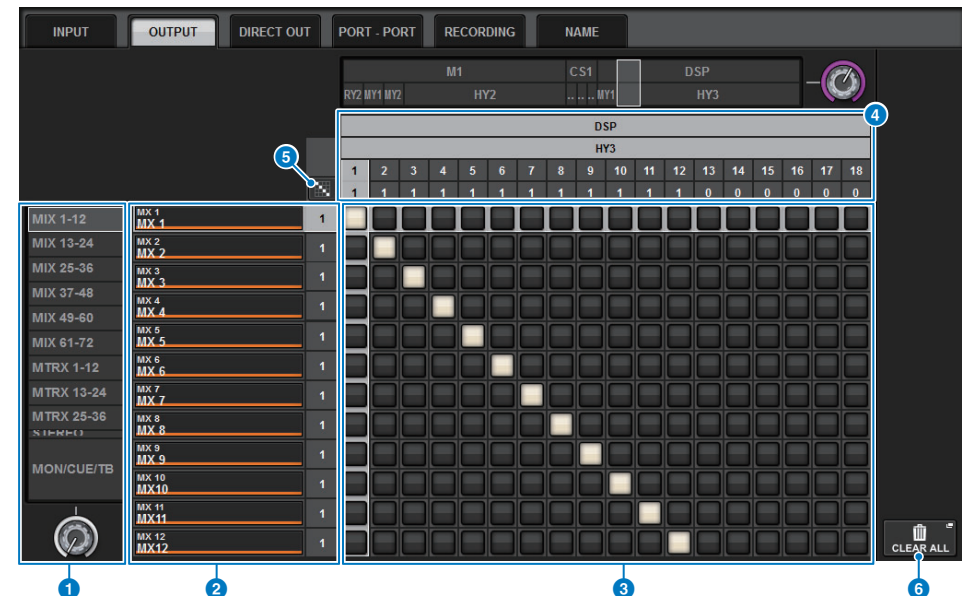
## Patching the output ports

1. Press the PATCH button on the menu bar to access the PATCH screen.



2. Press the OUTPUT tab to access the OUTPUT patch window.

The window contains the following items.



- 1 **Channel list (Output channels)**

Indicates the output channel numbers as patching destinations.

- 2 **Channel display**

Indicates the channels that will be assigned to the output port.

**NOTE**

The number at right is the number of channels that are patched. If the background is red, no sound is output even if the channel is patched, since sound is not being output to the TWINLANe network by the TWINLANe CONFIGURATION settings. In the case of the CS-R10 or CS-R10-S, if the left half is red, there is no output to the TWINLANe (MAIN) network; if the right half is red, there is no output to the TWINLANe (SUB) network. In the case of the CSD-R7, if the entire area is red, there is no output to the TWINLANe network.



**3 Grid**

This grid lets you patch output ports (horizontal lines) to output channels (vertical columns). Currently-patched grids are indicated by white squares. Press or click a desired grid to set or disable the patch.

**4 OUTPUT COMPONENT/SLOT/CH**

This section indicates the type of the output component, slot number, and channel number for the output port.

The abbreviations displayed in this section have the following meaning.





- **M1–M8, S1–S8**.....I/O rack 1–8
- **CS1, CS2**.....Control surface
- **DSP** .....DSP engine
- **PLUG-IN**.....Effect plug-in already mounted in PLUG-IN [SEND]

**NOTE**

The number below is the number of channels that are patched. If the background is red, no sound is output even if the channel is patched (such as when the HY144-D is used and ROUTING MODE is set to MODE1).

**5 Continuous patch button**

Press the continuous patch button, and then rotate the select knob to in the upper right to patch the intersecting channels continuously.

If you press the continuous patch button, the  button and the  button will appear. Press the  button again to confirm the selected continuous patches. Press the  button to revert the continuous patches to the previous state.

**6 CLEAR ALL button**

Press this button to clear all selections.

**3. Use the knob in the upper right to display the desired output ports.**

**4. Use the knob in the lower-left corner to display the output channels.**

**5. Press the desired grid cell to patch a desired channel.**

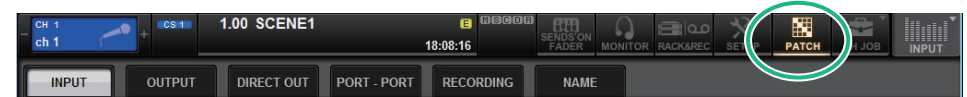
**NOTE**

On the RPi0622 or RPi0222, the output to HY slot 2 can be patched if the routing mode is set to Mode 2. (See [page 113](#).) However, the routing mode setting is not included in scene data. Therefore, if you recall a scene, you must switch to Mode 2.

## Changing the name

In the PATCH/NAME popup window, you can view and change the icon, channel color, and name of the input channels, output channels and DCAs.

**1. Press the PATCH button on the menu bar to access the PATCH screen.**



**2. Press the NAME tab to open the PATCH/NAME window.**



**1 Tabs**

Use these tabs to switch between items.

**2 NAME EDIT popup buttons**

Indicate the current name of channels, DCAs and MUTE group. Press one of these buttons to display the keyboard window or icon edit window, in which you can edit the name.

**3 LIBRARY button**

Press this button to open the NAME library window.

**4 Channel/group select tab**

Use the corresponding screen encoder or the [TOUCH AND TURN] knob.

- 3. Access the NAME/ICON EDIT popup window by pressing the NAME EDIT popup button of channel for which you want to edit the channel name, icon or channel color.**

**NAME/ICON EDIT popup window**

The window contains the following items.

**1 Channel name edit box**

Indicates the name of the channel that is currently selected for editing. You can also directly enter the name from the USB keyboard.

**2 Keyboard switch button**

Toggles between the keyboard window and CH COLOR/ICON popup window.

**3 SAVE AS A TEMPLATE button**

Turn this button on and press a template select button (7) to store the setting as a template.

**4 HIDE ICON Button**

Press this button to hide the icon.

**5 Channel color select buttons**

Enable you to select a channel color. Pressing the button will immediately apply the change. If you select OFF, the channel color and icon will be grayed out.

**6 Icon select buttons**

Enable you to select a channel icon. Pressing the button will immediately apply the change.

**7 Template select buttons**

Enable you to select a template. Pressing the button will immediately apply the change.

- 4. Use the icon select buttons to select the icon you want to use for the channel. You can use the channel color select buttons to select the color of the channel.** The selected icon and color are shown in the icon button in the upper part of the window.

- 5. To edit the channel name based on a template name, use the template select buttons to select a template.**

The selected template will be entered in the channel name field in the upper part of the window.

To enter the channel name directly, proceed to step 6.

**NOTE**

You can also add or edit characters in the channel name field after you have entered the name from the template. If you want to quickly assign channel names that consist of a common name plus a consecutive number, such as "Vocal 1" or "Vocal 2," enter the name from a template first, and then add a number.

**6. If you want to directly enter a channel name from one of the touch screens, press the keyboard switch button in the upper part of the window.**

The keyboard window will appear, allowing you to enter or edit the text. For details on how to assign a name, refer to [page 90](#).



**7. When you are finished with your input, press the X symbol in the upper right of the window.**

**NOTE**

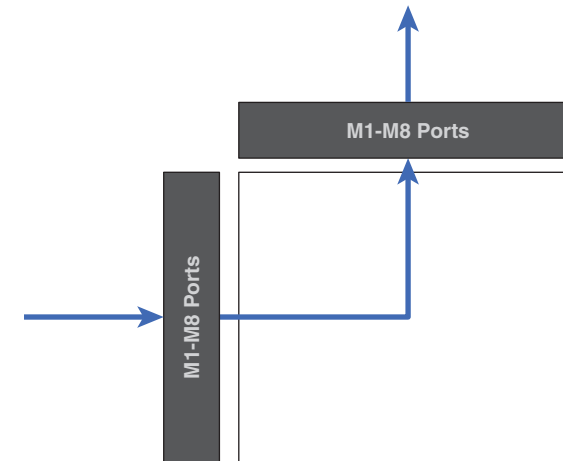
Press the TAB button to switch to the next channel. You can also press the ENTER button to close the popup window in the same way as using the “x” symbol.

## Port-to-port

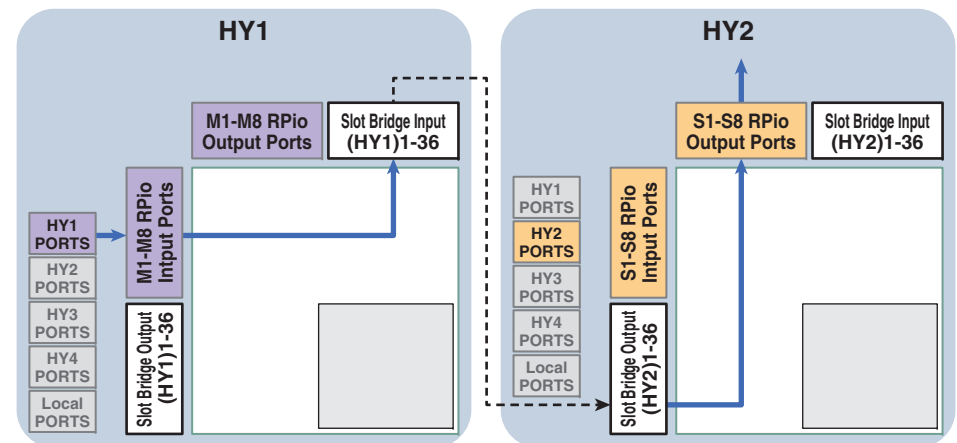
This function freely routes the input and output of each component from an input port to an output port via the TWINLANe network without passing it through a mixing channel.

Port to port can be used with the following inputs and outputs.

- RPi0622/222 (RY/MY/HY card slots)
- DSP-R10 (MY/HY card slots)
- Console 1/2 (OMNI IN connectors, OMNI OUT connectors, AES/EBU connectors, MY card slots)
- Port to port within the same HY slot (HY1 or HY2 (only on the RIVAGE PM10 system)) can be patched directly.



- Between slots, patching can be done via SLOT BRIDGE patch (36 outputs and 36 inputs for each slot).



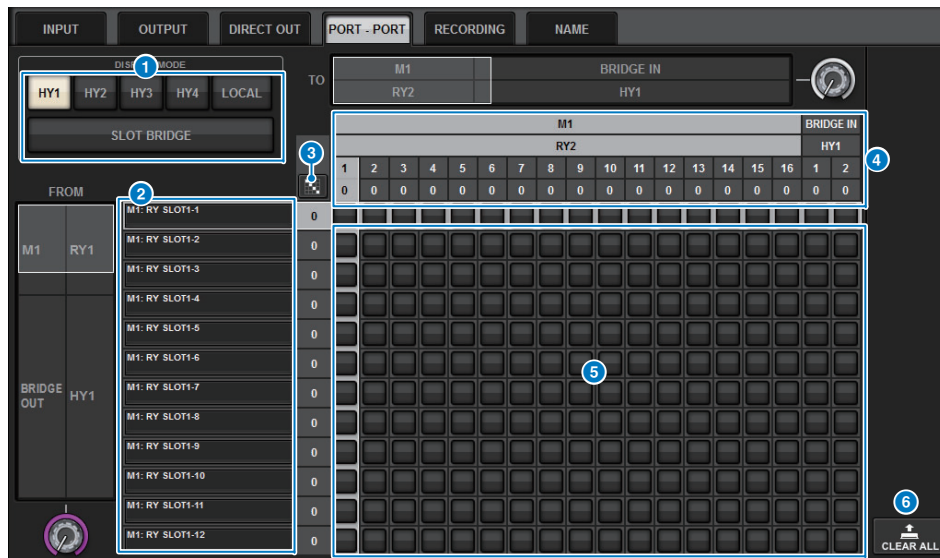
As an example here, we explain the procedure for patching from an RPi of a RIVAGE PM10 system's main network to an RPi of a sub network. In this case, multiple patches are required.

**Patch 1 (patch target HY1):** Patch from an RPi on the main network to SLOT BRIDGE input (BRIDGE IN: HY1)

**Patch 2 (patch target SLOT BRIDGE):** Patch from a SLOT BRIDGE input (BRIDGE IN: HY1) to SLOT BRIDGE output (BRIDGE OUT: HY2)

**Patch 3 (patch target HY2):** Patch from a SLOT BRIDGE output (BRIDGE OUT: HY2) to an RPi on the sub network

1. Press the PATCH button on the menu bar to access the PATCH screen.
2. Press the PORT-PORT tab to access the PORT-PORT patch window.



This screen contains the following items.

- 1 **DISPLAY MODE buttons**  
Press a button to switch the patch target that is shown in the patch grid. The upper line of buttons are for patching within a slot and to the bridge, and the lower line of buttons are for bridge patching between slots.
- 2 **Input components/slots/channels**  
This section shows input component and bridge information, slot numbers, and channel numbers.

- 3 **Continuous patch button**  
Press the continuous patch button, and then rotate the select knob in the upper right to patch the intersecting channels continuously.  
If you press the continuous patch button, the button and the button will appear. Press the button again to confirm the selected continuous patches. Press the button to revert the continuous patches to their previous state.

- 4 **Output components/slots/channels**  
This section shows output component and bridge information, slot numbers, and channel numbers.

- 5 **Grid**  
This grid lets you patch output jacks (horizontal lines) to input jacks (vertical columns). Currently patched grid cells are shown in white.  
Press (or click) a desired grid cell to set or disable the patch.

- 6 **CLEAR ALL button**  
Press this button to clear all selections.

3. Use the knob in the lower left to display the desired input ports.
4. Use the knob in the upper right to display the desired output ports.
5. Press a grid cell to patch the corresponding channel.
6. Create patches 2 and 3 by repeating steps 3–5.

**NOTE**

The Port-to-port patch setting will not be included in a scene nor overwritten by scene recall. Also, output ports that have been patched Port-to-port will appear to be patchable in the OUTPUT/DIRECT OUT patch screens; however, the audio will not be output (the Port-to-port patch takes priority). On these patch screens, the number of output ports that have been patched Port-to-port will be displayed in red. The number of patches is also shown in red for HY1 and HY2 SLOT BRIDGE output channel numbers that are not assigned to the TWINLANE network.

# Monitor

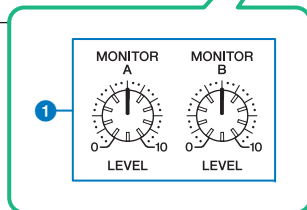
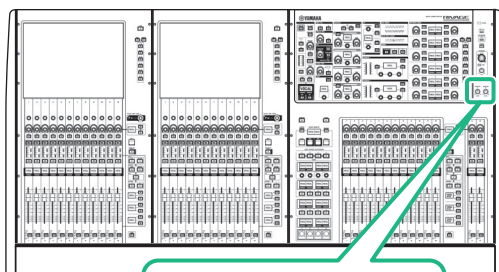
## MONITOR

The RIVAGE PM series features two monitor outputs (MONITOR A and MONITOR B). You can select the monitor source and set the output level for each monitor output individually. There are the following features:

- You can specify, mix and monitor up to eight channel signals.
- You can select not only channel or bus signals, but signals directly from input patches as monitor signals.
- You can assign and switch out up to eight combinations of monitor signals.
- The monitor section provides an 8-band parametric EQ specialized for monitoring.

### Using the Monitor function

#### ■ Controlling the Monitor function via the UTILITY section



- 1 **MONITOR A/B knobs**  
Adjust the output level of the monitoring signals.

#### ■ Controlling the Monitor function via the MONITOR screen

In this screen, you can select desired monitor sources to monitor them from the PHONES A/B output jacks or external monitor speakers.

1. **Connect your monitor system to the OMNI OUT jacks or AES/EBU jack on the rear panel.**

Monitor signals can be sent to any desired output jack or output channel. If you are monitoring through headphones, make sure that your headphones are connected to the front panel PHONES A/B output jacks.

2. **Press the MONITOR button on the menu bar to access the MONITOR screen.**  
The MONITOR field on the MONITOR screen enables you to check the current monitoring settings, and turn monitoring on or off.



- 1 **MONITOR popup button**  
Enables you to access the MONITOR SETTINGS popup window, in which you can make detailed monitoring settings. Select MONITOR A or B as the control target, and set the parameters in the corresponding field.
- 2 **DIMMER field**  
Enables you to make settings for the Dimmer function, which temporarily attenuates monitor signals.
  - **DIMMER LEVEL knob**  
Adjusts the amount by which the monitor signals will be attenuated when the dimmer is on.



- **DIMMER ON button**

Turn on this button to enable the dimmer function and attenuate the monitor signal.

**3 Console select buttons**

When using Dual Console, these buttons select whether the MONITOR knob of Console 1 or 2 is used.

**4 PHONES LEVEL LINK button**

If this button is on, the MONITOR FADER LEVEL knob will adjust the level of signals sent to the PHONES A or PHONES B output jack.

**5 MONITOR SOURCE SELECT buttons**

Enable you to select one of the DEFINE 1–8 sources that will be output to the MONITOR bus.

**6 MONITOR FADER LEVEL knob**

Adjusts the monitor fader level.

**7 MONITOR OUTPUT button**

Switches Monitor Out on or off.

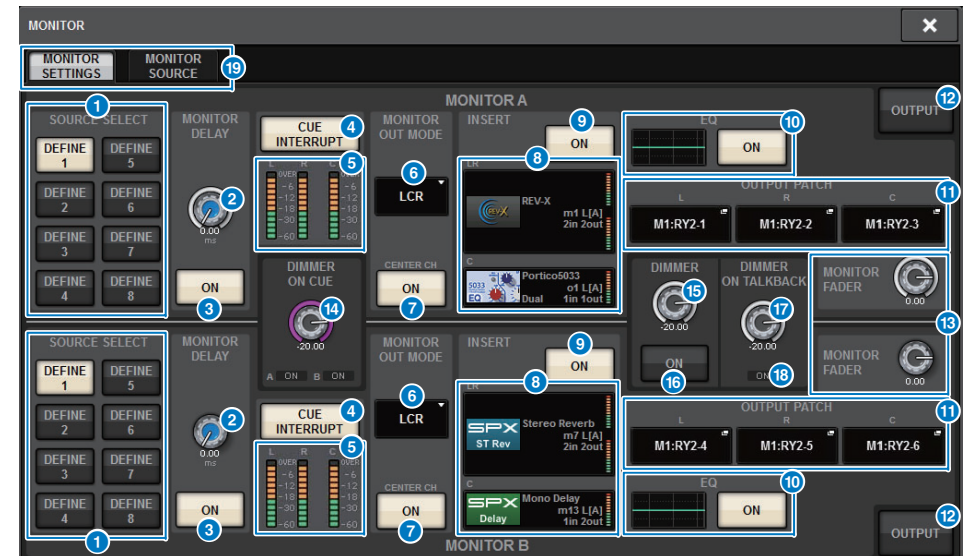
**8 Meter field**

Indicates the output level of Monitor Out channels L, R, and C. Press this field to open the MONITOR SETTINGS popup window.

**3. Press the MONITOR popup button or the meter field to open the MONITOR SETTINGS popup window.**

In the MONITOR SETTINGS popup window you can make detailed monitoring settings.

## MONITOR SETTINGS popup window



**1 SOURCE SELECT DEFINE buttons**

Enable you to select one of the DEFINE 1–8 sources that will be output to the MONITOR bus.

**2 MONITOR DELAY knob**

Indicates the currently-specified delay time. The millisecond value is indicated above the knob, and the delay time value in currently-selected units and the currently-selected scale type are indicated below the knob. However if the scale is set to ms, the delay time value is not shown above the knob.

**3 MONITOR DELAY ON button**

If this button is on, the monitor signal will be delayed according to the setting of the MONITOR DELAY knob.

**4 CUE INTERRUPT button**

Press this button to interrupt the monitor signal by the cue signal. If this button is on and the cue is enabled, the cue signal will be sent to the monitor output.

**5 Meters**

This field indicates the output level of the monitor L/R/C channels.

**6 MONITOR OUT MODE**

This section enables you to select one of the following monitor output modes:

- **LR + C DOWNMIX**  
In this mode, the L/C/R channel signals will be downmixed and output in stereo.
- **MONO**  
In this mode, monitor signals will be output in monaural.
- **LCR**  
In this mode, the L/C/R channel signals will be output.

**7 CENTER CH ON button**

If you plan not to monitor the center channel, turn this button off. If this button is off, the center channel will not be included in the downmix signal.

**8 INSERT button**

Press this button to display the window, in which you can insert plug-ins into the monitor signal.

**9 INSERT ON button**

Switches the plug-in insert on or off. The currently-specified plug-ins are displayed to the left of the button.

**10 EQ field**

- **EQ graph**  
This field graphically indicates the approximate response of the EQ. Press this field to open the window, in which you can set the EQ parameters.
- **EQ ON button**  
Switches the EQ on/off.

**11 OUTPUT PATCH popup buttons**

Indicate the monitor output destination slot or port for the L, C and R channels respectively. Press these buttons to access the OUTPUT PATCH popup window.

**12 MONITOR OUTPUT button**

Switches Monitor Out on or off.

**13 MONITOR FADER LEVEL knobs**

Adjusts the monitor fader level.

**14 DIMMER ON CUE knob**

Adjusts the amount by which the monitor signal will be attenuated when cue is on.

**DIMMER ON CUE indicators**

When cue is active, CUE A and/or CUE B will light.

**15 DIMMER LEVEL knob**

Adjusts the amount by which the monitor signal will be attenuated when dimmer is on.

**16 DIMMER ON button**

Turn on this button to enable the dimmer function and attenuate the monitor signal.

**17 DIMMER ON TALKBACK LEVEL knob**

Adjusts the amount by which the monitor signal will be attenuated when talkback is on.

**18 DIMMER ON TALKBACK indicator**

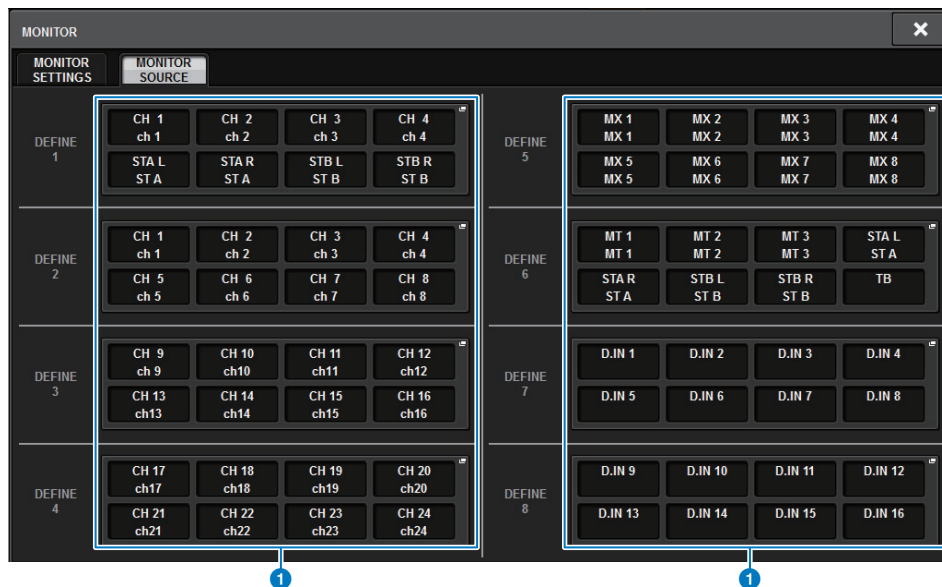
Indicates the on/off status of the talkback dimmer function.

**19 Tabs**

Use these tabs to switch between the MONITOR SETTINGS popup window and MONITOR SOURCE popup window.



- 4. Press the tab to access the MONITOR SOURCE popup window.**  
 This window enables you to view the list of monitor sources that have been assigned to DEFINE 1-8.



**1 MONITOR SOURCE DEFINE buttons**

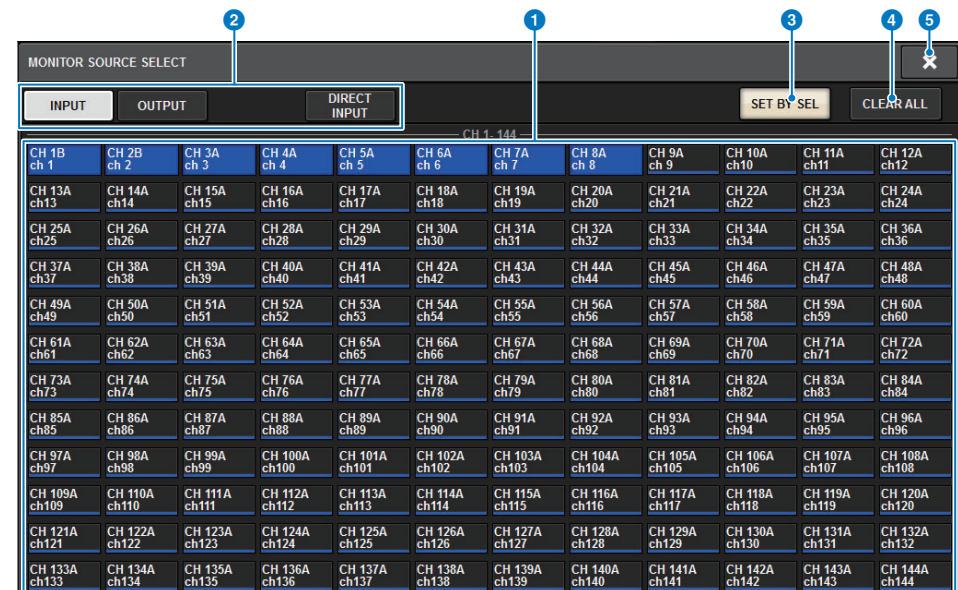
Each button displays the name of the assigned monitor source. Press these buttons to access the MONITOR SOURCE SELECT popup window, in which you can assign monitor sources to individual DEFINE buttons.

- 5. Press the desired MONITOR SOURCE DEFINE button to open the MONITOR SOURCE SELECT popup window, then select the monitor sources.**  
 You can assign up to 8 channel signals to each DEFINE.

Pressing the CLEAR ALL button will clear all selections. You can choose from the following sources.

<b>CH1-CH144</b>	Input channel 1-144 signals (DIRECT OUT)
<b>MIX1-MIX72</b>	MIX channel 1-72 signals (DIRECT OUT)
<b>MTX1-MTX36</b>	MATRIX channel 1-36 signals
<b>STA, STB</b>	STEREO A L channel, STEREO A R channel, STEREO B L channel and STEREO B R channel signals
<b>TALKBACK</b>	TALKBACK signal
<b>DIRECT IN1-16</b>	Signals directly input from the external terminals

**MONITOR SOURCE SELECT popup window (INPUT)**



**1 Monitor source selection buttons**

Enable you to select monitor sources that will be assigned to the DEFINE buttons. The selected monitor sources will be highlighted. Press the same button again to cancel the selection.

**NOTE**

You can select up to eight monitor sources. If you select eight monitor sources, no further selections will be possible. First, turn off the buttons for unneeded sources.

**2 Display switching tabs**

Use these tabs to select the type of channels, buses, output jacks, etc. that you want to view on the screen.

**3 SET BY SEL button**

If this button is on, you will be able to add a channel by using the corresponding [SEL] key.

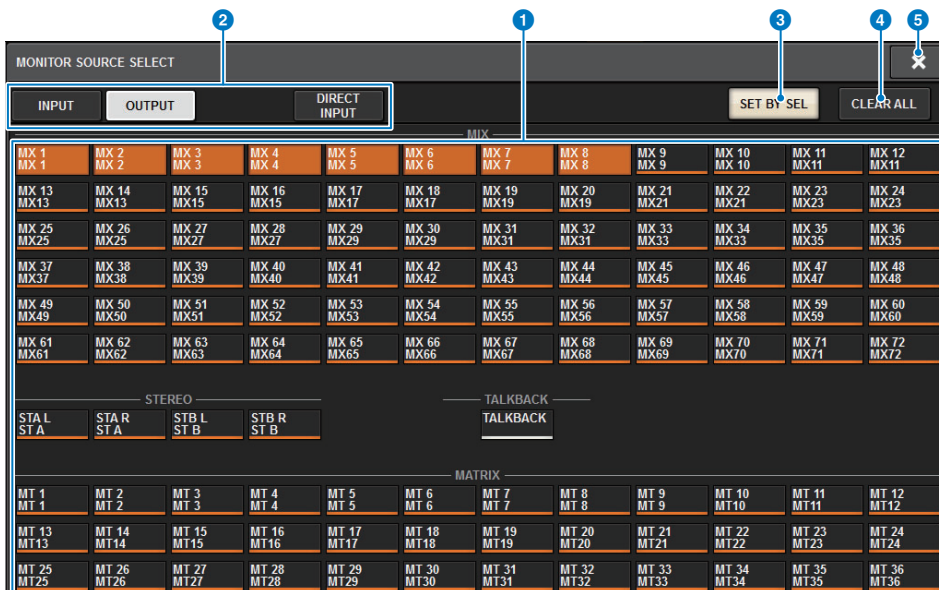
**4 CLEAR ALL button**

Press this button to clear all selections.

**5 CLOSE button**

Press this button to close the popup window and return to the previous screen.

## MONITOR SOURCE SELECT popup window (OUTPUT)



### 1 Monitor source selection buttons

Enable you to select monitor sources that will be assigned to the DEFINE buttons. The selected monitor sources will be highlighted. Press the same button again to cancel the selection.

#### NOTE

You can select up to eight monitor sources. If you select eight monitor sources, no further selections will be possible. First, turn off the buttons for unneeded sources.

### 2 Bus display switching tabs

Use these tabs to select the type of channels, buses, output jacks, etc. that you want to view on the screen.

### 3 SET BY SEL button

If this button is on, you'll be able to add a bus by using the corresponding [SEL] key.

### 4 CLEAR ALL button

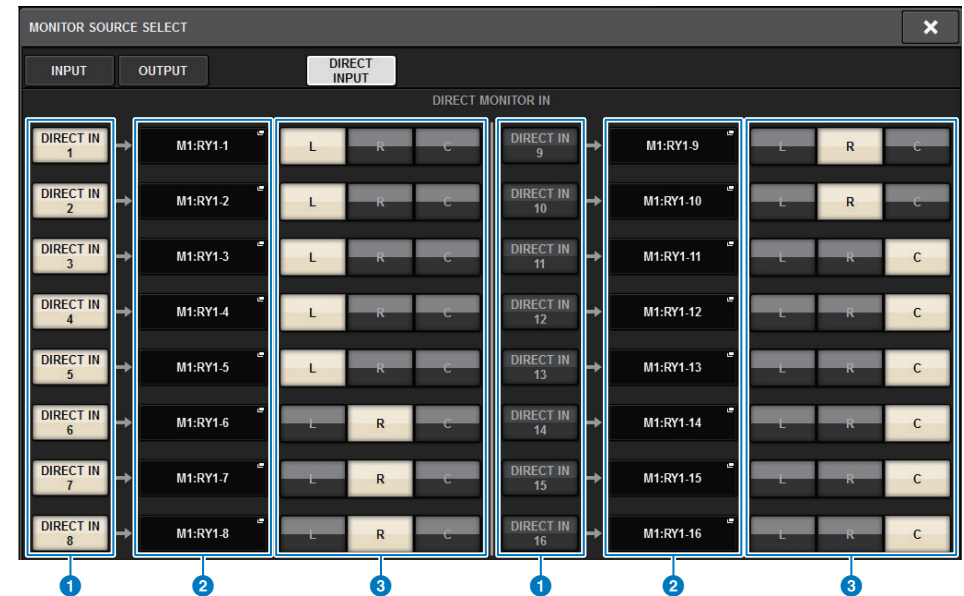
Press this button to clear all selections.

### 5 CLOSE button

Press this button to close the popup window and return to the previous screen.

## MONITOR SOURCE SELECT popup window (DIRECT INPUT)

In this window you can assign the slots or ports to up to 16 channel direct inputs as the possible direct monitor sources. You can select up to eight direct monitor sources.



### 1 Monitor source selection buttons

Enable you to select the direct inputs.

#### NOTE

You can select up to eight monitor sources. If you select eight monitor sources, no further selections will be possible. First, turn off the buttons for unneeded sources.

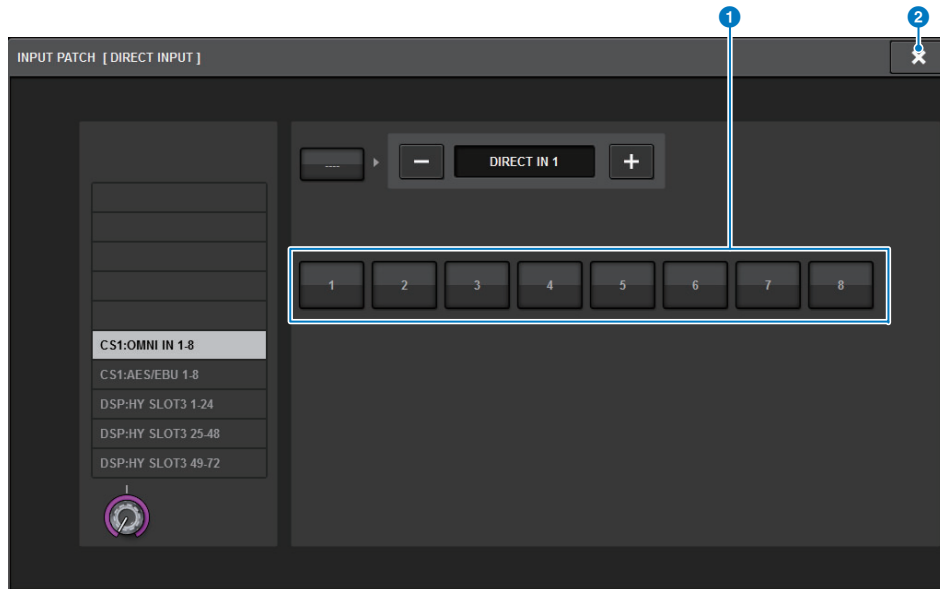
### 2 INPUT PATCH popup buttons

Indicate the selected jacks. When you press one of these buttons, the INPUT PATCH popup window will appear, in which you can select input jacks, slots and channels.

### 3 L/R/C select buttons

Enable you to select to which channel (L/R/C) the monitor signal is input.

## INPUT PATCH popup window

**1 Input jack select buttons**

Enable you to select the input jacks from which you want to monitor the signals.

**2 CLOSE button**

Press this button to close the popup window and return to the previous screen.

**6. Use the SOURCE SELECT DEFINE buttons to select monitor sources.****7. To specify a port as the output destination for monitor signals L, R, and C, press one of the OUTPUT PATCH buttons (L/R/C) on the MONITOR SETTINGS popup window to open the OUTPUT PATCH popup window. In this window, choose from the following monitor signal output destinations (multiple selections are allowed).**

When you have selected an output port, press the CLOSE button to close the popup window. In the same way, specify the output ports for MONITOR OUT L, R, and C.

**NOTE**

If desired, you can specify output ports only for MONITOR OUT L and R to monitor through two speakers.

**8. To enable monitoring, press the MONITOR OUTPUT button to turn it on.**

The monitor source you selected in step 5 will be sent to the output destination you specified in step 7.

**NOTE**

The PHONES A/B output jacks will always output the monitor signal, regardless of whether the MONITOR OUTPUT button is on or off.

**9. To adjust the monitor level, use the corresponding MONITOR LEVEL knob located in the UTILITY section of the top panel.**

If PHONES LEVEL LINK is ON, use the MONITOR LEVEL knob and the monitor fader, as well as the PHONES LEVEL knob to adjust the monitor level when monitoring through headphones.

**10. Make settings for Dimmer, Delay, Monaural, and Cue Interruption as desired.****NOTE**

Monitor on/off operations, selection of the monitor source, and dimmer on/off operations can also be assigned to USER DEFINED keys ([page 366](#)).

## Inserting a plug-in into monitor signals

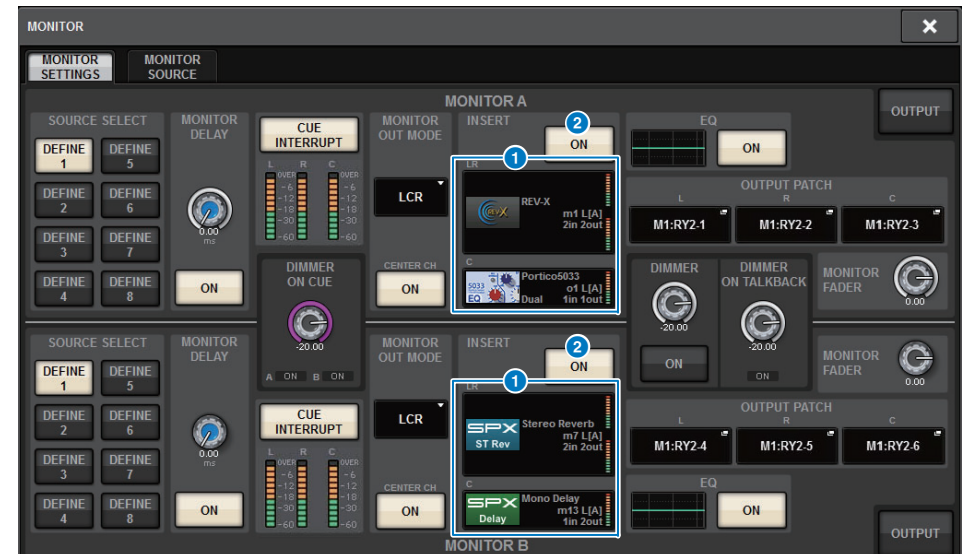
You can insert a plug-in into the monitor signals (L, R and C) of MONITOR A and MONITOR B individually.

You can insert plug-ins and GEQ/PEQ.

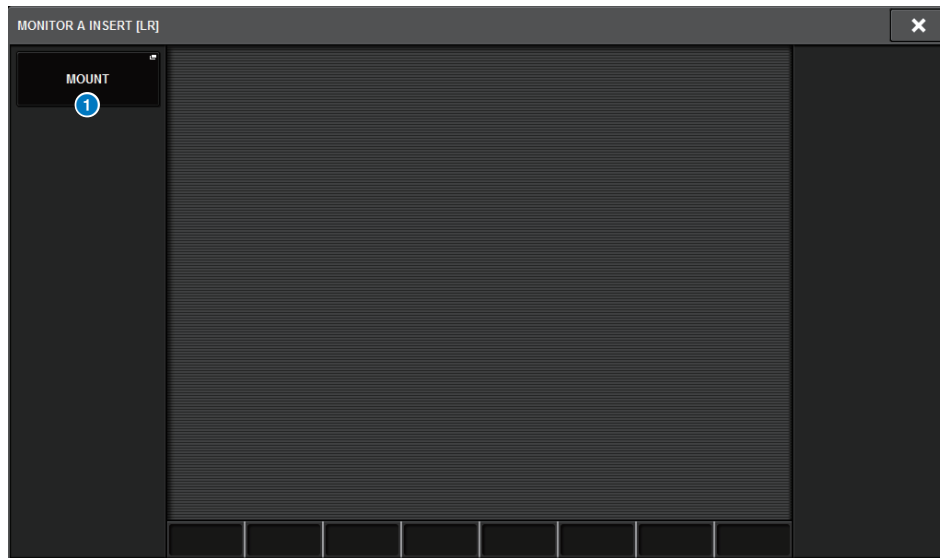
1. Press the MONITOR button on the menu bar to access the MONITOR screen.



2. Press the MONITOR popup button or the meter field to open the MONITOR SETTINGS popup window.



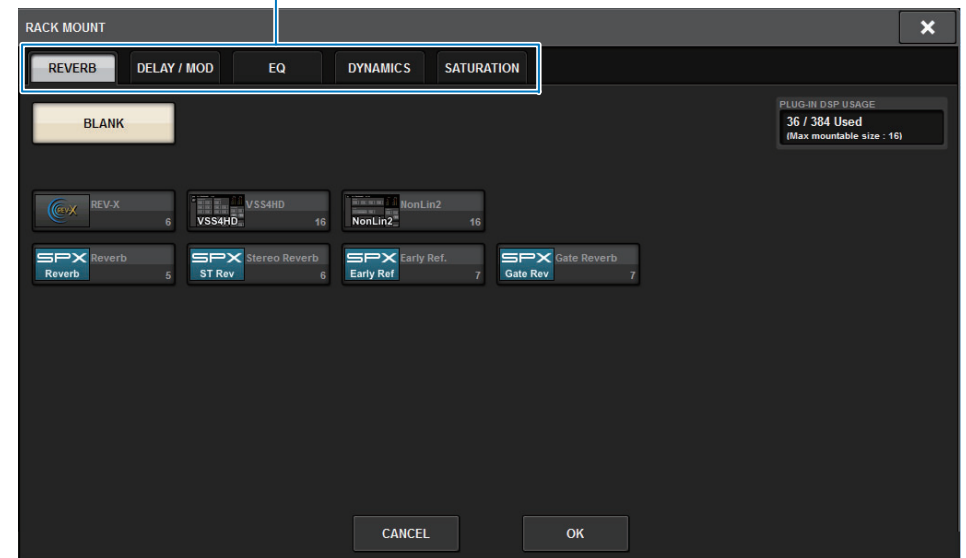
1. **INSERT button**  
Press this button to display the window, in which you can insert plug-ins into the monitor signal.
2. **INSERT ON button**  
Switches the plug-in insert on or off. The currently-specified plug-ins are displayed to the left of the INSERT ON button.
3. **Press the INSERT button to access the MONITOR INSERT popup window.**  
If effects have already been inserted, the EDIT window for the plug-ins will appear.



#### 1 MOUNT popup button

Press this button to display the window, in which you can insert plug-ins to the monitor signal.

#### 4. Press the MOUNT popup button to access the INSERT MOUNT window.



#### 1 Tabs

Enable you to select REVERB, DELAY/MOD, EQ/DYNAMICS, or GEQ/PEQ.

#### 5. Press the desired insert plug-in button.

#### 6. Press the OK button.

#### 7. Edit the effect parameters as desired.

For details on editing the effect parameters, refer to “[Controlling the parameters of a plug-in](#)” (page 265).



## CUE

The RIVAGE PM10 features two cue outputs: CUE A and CUE B. You can also use a very flexible Cue/Solo function.

### About Cue mode and Solo mode

All input channels, output channels, and DCAs feature the [CUE] key for the Cue/Solo function. The [CUE] key provides two modes: Cue mode and Solo mode. These modes differ as follows.

#### • Cue mode

If you press the [CUE] key for the channels or DCAs, the corresponding cue signals will be sent to the dedicated CUE bus and then output from MONITOR OUT, PHONES OUT, and CUE OUT (Cue function). Choose this mode if you want to monitor certain channel signals without affecting other output buses.

#### • Solo mode

If you press the [CUE] key for the channels or DCAs, only the solo signals will be output from the MIX/MATRIX/STEREO buses. Other channels/DCAs will be muted (Solo function). The same signal can also be monitored from MONITOR OUT, PHONES OUT, and CUE OUT.

#### NOTE

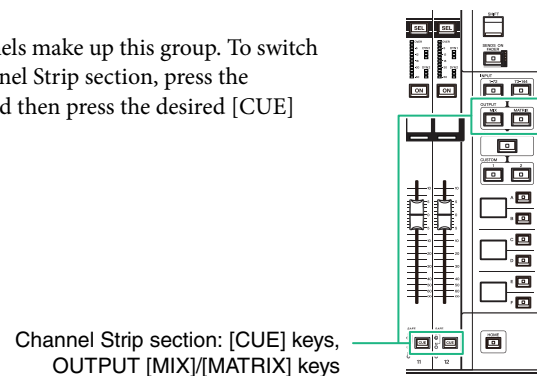
In Solo mode, you can exclude specific certain channels from Solo operations ([page 175](#)).

### About cue/solo groups

The cue signals can be categorized into the following four groups.

#### 1 OUTPUT CUE group

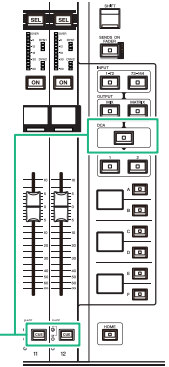
The cue/solo signals of output channels make up this group. To switch Cue/Solo for this group, in the Channel Strip section, press the OUTPUT [MIX]/[MATRIX] key, and then press the desired [CUE] key.



#### 2 DCA CUE group

The cue/solo signals of DCAs make up this group. To enable Cue/Solo for this group, in the Channel Strip section, press the [DCA] key, and then press the desired [CUE] key.

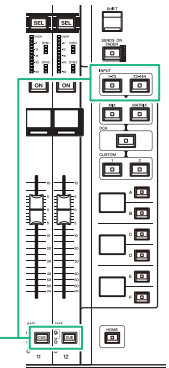
Channel Strip section: [CUE] keys, [DCA] key



#### 3 INPUT CUE group

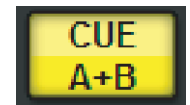
The cue/solo signals of input channels make up this group. To enable Cue/Solo for this group, in the Channel Strip section, press the INPUT [1-72]/[73-144] key, and then press the desired [CUE] key.

Channel Strip section: [CUE] keys, INPUT [1-72]/[73-144] keys



#### 4 Other CUE group

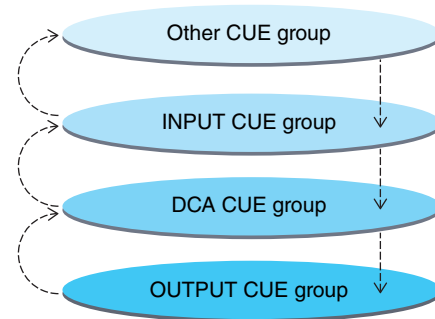
These cue signals are operated via buttons displayed on the touch screen. This group is enabled if you turn on the KEY IN CUE button in any plugin's popup window or in the DYNAMICS 1/2 popup window. This group will automatically be disabled when you exit the corresponding popup window. You cannot turn Cue on for different groups simultaneously. Normally, the group to which the most recently-pressed [CUE] key (or on-screen CUE/KEY IN CUE button) belongs will take priority, and the [CUE] keys for the previously-selected group will be defeated. However, if you have switched the cue signal group in a specific order, the state of the [CUE] keys for the previously-selected group will be restored when the current cue signal is defeated.



On-screen CUE buttons

The illustration on the right shows the priority of the [CUE] keys.

After you have switched groups from lower to upper levels, if you then defeat cue for the upper group, the previous [CUE] key status of the group immediately below will be restored. For example, if you switch groups in the order of OUTPUT CUE group → DCA CUE group → INPUT CUE group → Other CUE group, you can then successively defeat the [CUE] keys (CUE/KEY IN CUE buttons) to successively restore the [CUE] key status of the previously-selected group.



## About CUE OPERATION mode in Cue mode

### • CH (Channel) mode

This mode assumes only one operator will operate the system. You can specify the cue destination (CUE A, B, and A+B) for each channel individually.

You can change this destination for each channel individually by holding down the [SHIFT] key and pressing the desired [CUE] key. (A → B → A+B → A → B → ...)

### • BAY mode

This mode assumes two operators will operate the system. You can specify the cue destination (CUE A and B) for each bay. For example, you can send the same channel signal from bay L to CUE B, and bay C to CUE A.

### NOTE

You can also set the mode in the OPERATION MODE field in the PREFERENCES popup window (page 354).

## Using the Cue function

This section explains how to use the [CUE] key of a desired channel or DCA to monitor the Cue signal.

### NOTE

Be aware that if you turn CUE INTERRUPTION off in the MONITOR SETTINGS popup window, the cue signal will not be sent to the connected monitor speakers. However, the PHONES output jacks on the front panel will always output cue signals regardless of the Monitor on/off setting. For details on the Monitor function settings, refer to “Using the Monitor function” (page 162).

1. Press the **MONITOR** button on the menu bar to access the **MONITOR** screen. The CUE field on the MONITOR screen enables you to check the current cue settings, and turn Cue on or off.



### 1 CUE popup button

Enables you to access the CUE popup window, in which you can make detailed cue settings. Select CUE A or B as the control target, and set the parameters in the corresponding field.

### 2 CUE MODE buttons

Enable you to specify the operation mode when multiple [CUE] keys are on.

- **MIX CUE mode**..... All selected channels will be cue-monitored.
- **LAST CUE mode**..... Only most recently selected channel will be cue-monitored.



**3 INPUT/DCA/OUTPUT CUE field**

Indicates the settings for input cue, DCA cue, and output cue. Press this field to open the CUE popup window.

**4 Meter popup button**

This field indicates the output level of the cue L/R channels.

**5 CUE LEVEL knob**

Sets the output level of each Cue bus.

**6 CLEAR CUE button**

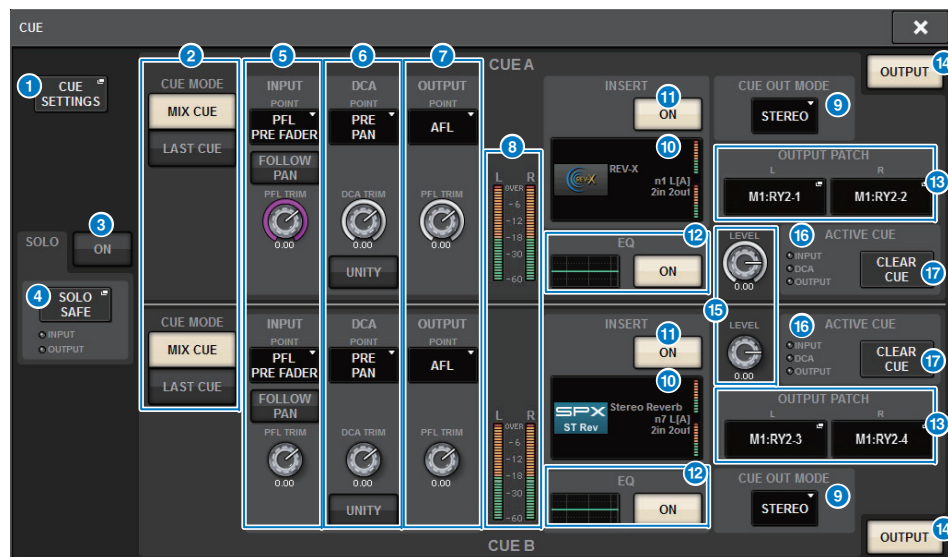
Cancels all cue selections simultaneously. If the CUE MODE setting is MIX CUE, all of the selected channels will be cleared.

**7 CUE OUTPUT button**

Switches Cue Out on or off.

## 2. Press the CUE popup button or the INPUT/DCA/OUTPUT CUE field to open the CUE popup window.

This popup window includes the following items.

**1 CUE SETTINGS popup button**

Press this button to access the CUE SETTINGS popup window, in which you can select the cue destination (CUE A, CUE B, or A+B) for each channel.

**NOTE**

If CUE OPERATION MODE is set to BAY on the PREFERENCES popup window the cue destination will be specified for each bay. Therefore, this setting will be invalid ([page 354](#)).

**2 CUE MODE buttons**

Select one of the following two cue modes:

- **MIX CUE**  
All selected channels will be mixed and auditioned.
- **LAST CUE**  
Only most recently selected channel will be auditioned.

**3 SOLO ON button**

Switches the Solo function on or off.

**4 SOLO SAFE popup button**

Press this button to access the SOLO SAFE popup window, in which you can exclude a channel from the mute target in Solo mode ([page 176](#)).

**5 INPUT CUE field**

This field enables you to make settings related to the input channel cue.

- **Cue point select button**

Sets the cue point to PRE FILTER (immediately before the filter), PRE FADER (immediately before the fader), AFL (immediately after the fader), or POST PAN (immediately after PAN).

**NOTE**

Be aware that if you select POST PAN, you will be unable to monitor signals sent to the MONO bus from an input channel that is set to LCR mode.

- **INPUT FOLLOW PAN button**

If this button is on, the TO STEREO PAN setting will be applied to the pan setting of the signal sent from input channels to the CUE bus.

- **PFL TRIM knob**

Specifies the monitor levels when PFL is selected. Use the screen encoder to adjust the value.

**6 DCA CUE field**

This section enables you to make settings related to DCA cue.

**• Cue point select button**

Sets the cue point for DCA to PRE PAN (immediately before PAN) or POST PAN (immediately after PAN).

**• DCA TRIM knob**

Indicates the monitor level of cue signals from a DCA. Use the screen encoder to adjust the value.

**• UNITY button**

Turn on this button to monitor signals at the same volume level that was obtained when the master level for each DCA was set to 0 dB (unity gain).

**7 OUTPUT CUE field**

Enables you to make settings related to output channel cue.

**• Cue point select button**

Enables you to set the cue point for the output channel to PFL (immediately before fader) or AFL (immediately after fader).

**• PFL TRIM knob**

Indicates the monitor levels when PFL is selected. Use the screen encoder to adjust the value.

**8 Meters**

This field indicates the output level of the cue L/R channels.

**9 CUE OUT MODE select button**

You can output the cue signal in stereo or monaural.

**10 INSERT button**

Press this button to display the window to insert plug-ins to the cue signal.

**11 INSERT ON button**

Switches the plug-in insert on or off. The currently-specified plug-in is displayed to the left of the INSERT ON button.

**12 EQ field****• EQ graph**

This field graphically indicates the approximate response of the EQ. Press this field to open the window, in which you can set the EQ parameters.

**• EQ ON button**

Switches the EQ on or off.

**13 CUE OUT PATCH button**

Press this button to access the PORT SELECT popup window, in which you can select output ports to patch to the cue out L/R channels.

**14 CUE OUTPUT button**

Switches cue output on or off.

**15 CUE LEVEL knob**

Indicates the cue output level. Use the screen encoder to adjust the value.

**16 ACTIVE CUE indicator**

Lights to indicate the type of cue currently being monitored.

**17 CLEAR CUE button**

Press this button to clear all cue selections simultaneously.

1. Press the CUE SETTINGS popup button to open the CUE SETTINGS popup window, and select the cue destination (CUE A, CUE B, or A+B).



3. Use the buttons and knobs of the INPUT CUE field, DCA CUE field, and OUTPUT CUE field to specify the output position and output level for each Cue group. Refer to the explanation for each item in step 2 on [page 172](#), and make the desired settings.
4. To specify a port as the output destination for cue signals L and R, press one of the CUE OUTPUT PATCH buttons (L/R) to open the OUTPUT PATCH popup window, and choose from the following cue signal output destinations (multiple selections are allowed).

### 1 Channel select list

Enables you to select a channel.

### 2 ALL button

Press this button to apply or cancel the selected cue destination (CUE A, CUE B) for all channels simultaneously.

If the cue destination is not selected for some channels in the column, “...” will appear.

### 3 CUE select buttons

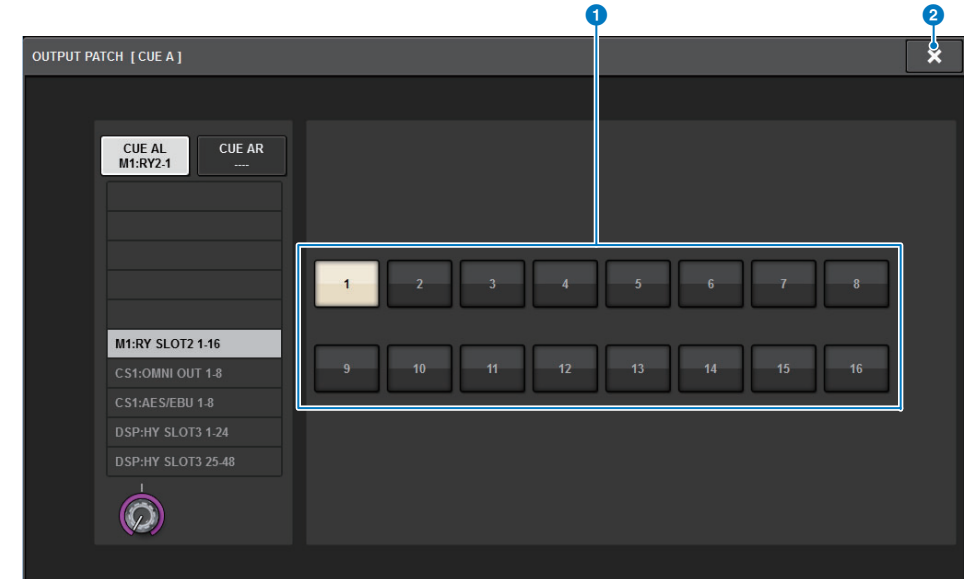
Enable you to select the cue destination for each channel.

2. Use the CUE MODE buttons to select either the mode in which channels are mixed for monitoring, or the mode in which only the last-selected channel is monitored.

Select the MIX CUE button or LAST CUE button.

### NOTE

In MIX CUE mode, it is not possible to simultaneously turn on Cue for different Cue groups. The Cue group to which the last-cued signal belongs will be turned on, allowing only the signals of that Cue group to be monitored. However, if CUE OPERATION MODE is set to BAY and if LAST CUE is selected, the cue setting in each bay will be active individually.



### 1 Output jack select buttons

Enable you to select the output jacks to which the signals will be routed.

### 2 CLOSE button

Press this button to close the popup window and return to the previous screen.

When you have selected output ports, press the CLOSE button to close the CUE OUTPUT PATCH popup window.

- To enable Cue Out for the ports you specified in step 4, press the CUE OUTPUT button to turn it on.

**NOTE**

The cue signal is sent to the monitor output and PHONES output jacks regardless of whether the CUE OUTPUT button is on or off.

However, be aware that the cue signal will no longer be sent to monitor output if CUE INTERRUPTION is turned off. The cue signal is always sent to the PHONES output jack, regardless of the CUE INTERRUPTION setting.

- Press the [CUE] key of a desired channel or DCA to turn it on.

The cue signal of the corresponding channel will be sent to the output destination specified in step 4, and also to the monitor output.

You can also view the Cue meter in the meter area to check the output level of the cue signal.

**NOTE**

- When using the MIX/MATRIX bus select buttons in the SENDS ON FADER popup window, you can press the selected button once again to turn on Cue for the corresponding MIX/MATRIX channel (page 222).
- If you want cue operations and channel select operations to be linked, open the SETUP window, choose PREFERENCES popup window, and then turn on “[CUE]→[SEL] LINK” (page 354).



- If you are auditioning the cue signal in the monitor, adjust the cue signal level by using the MONITOR A/B knobs located in the UTILITY section of the top panel. Also adjust the MONITOR FADER LEVEL in conjunction with this.

If PHONES LEVEL LINK is ON, you can use the MONITOR A/B knob, the monitor fader, and the PHONES A/B LEVEL knob to adjust the cue signal level while monitoring through headphones.

**NOTE**

To adjust the level of the signal sent to the Cue Out port (which you specified in step 4), use OUTPUT PORT GAIN for the patch destination.

- To defeat cue, press the currently-on [CUE] key once again.

You can press the CLEAR CUE button in the CUE popup window to clear all cue selections.

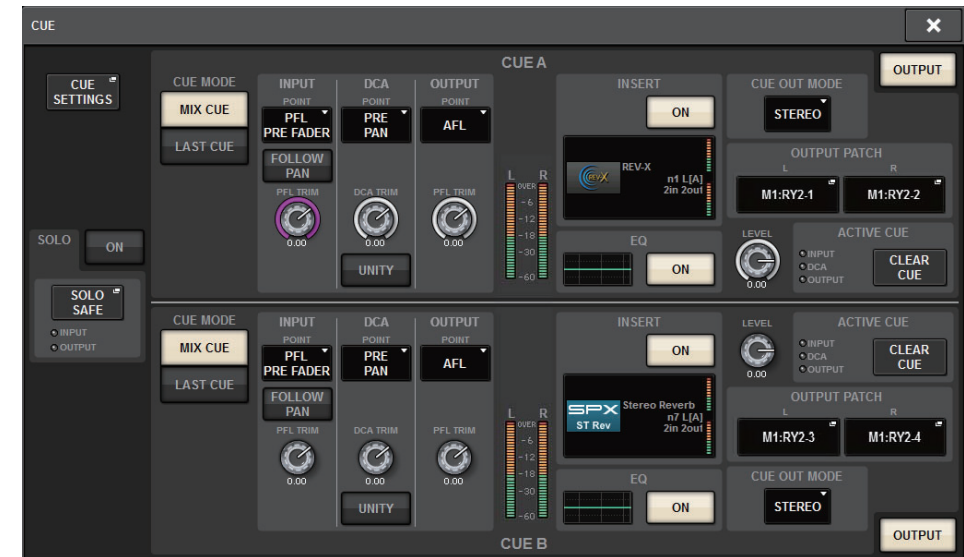
**NOTE**

- If you press the cue meter in the meter area, all cue selections will be cleared.
- All cue selections will be cleared if you switch between MIX CUE mode and LAST CUE mode in the CUE MODE section.
- You can also assign the function of the CLEAR CUE button to a USER DEFINED key (page 366).

## Using the Solo function

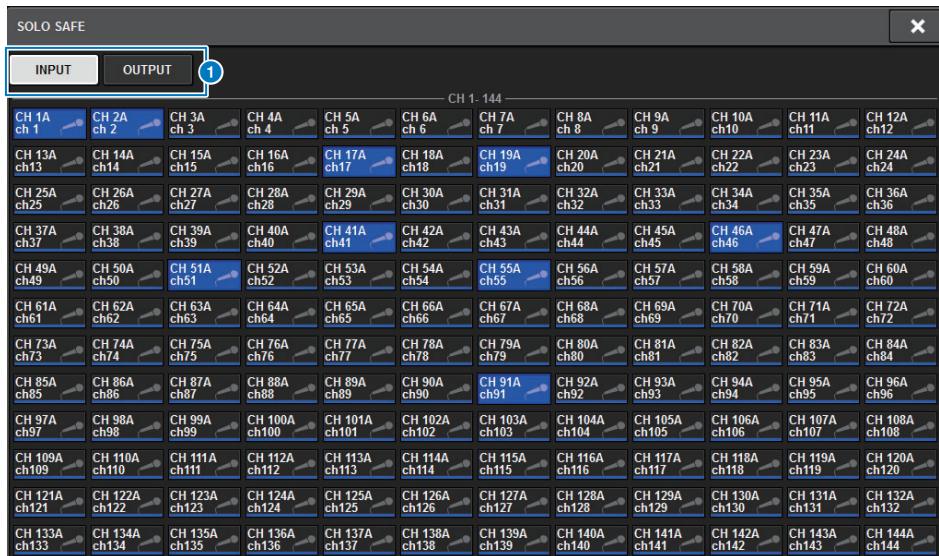
This function enables you to monitor the signals routed from one or more specified channels to the main mix outputs.

- On the MONITOR screen, press the CUE popup button or the INPUT/DCA/OUTPUT CUE field to open the CUE popup window.



- Use the CUE MODE buttons to select either the mode in which channels are mixed for monitoring, or the mode in which only the last-selected channel is monitored.  
Select the MIX CUE button or LAST CUE button.
- Press the SOLO ON button to turn Solo on.  
The confirmation window for solo operation appears.
- To execute the solo operation, press the OK button.  
The button will light up and Solo mode will be enabled.
- If you want to exclude certain channels or groups from Solo operations, press the SOLO SAFE popup button to open the SOLO SAFE popup window.

## SOLO SAFE popup window (INPUT)

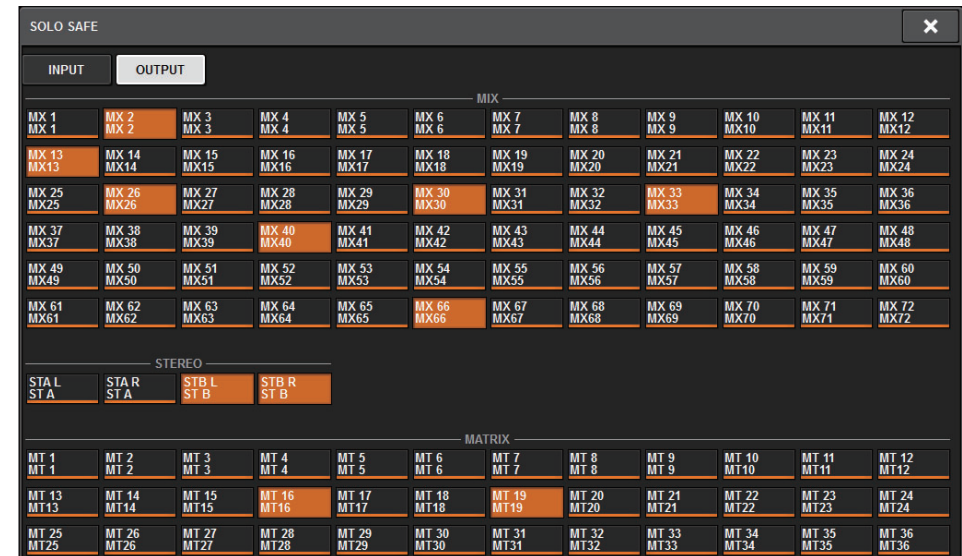


## 1 Tabs

You can select desired input channels and/or output channels as the Solo Safe target. When you switch the INPUT/OUTPUT tabs, the following buttons will appear to enable you to select channels.

- **If you select the INPUT tab:**  
CH1-CH144 buttons
- **If you select the OUTPUT tab:**  
MIX 1-MIX 72, MATRIX 1-MATRIX 36, ST A L, ST A R, ST B L, and ST B R buttons

## SOLO SAFE popup window (OUTPUT)



6. **Select input channels that will be excluded from Solo operations. (You can specify more than one.)**  
The channels specified here will not be muted in Solo mode. The Solo Safe function is useful if you do not want to accidentally mute certain channels during Solo operations, such as the main Stereo channels, or Mix channels that send out mix signals to an external recorder.
7. **Press the [CUE] key of a desired channel or DCA to turn it on.**  
Only the corresponding channel or DCA will be output to the buses and output jacks; other channels and DCAs will be muted. The same signal will also be output from the CUE OUT jacks and the MONITOR OUT jacks.

**NOTE**

If you turn on the [CUE] key of an output channel, the signal will be sent only to the corresponding bus.

8. **To defeat Solo, press the currently-on SOLO ON/OFF button once again.**

**NOTE**

If you select the LAST CUE button to switch from LAST CUE mode to MIX CUE mode (or vice versa), all previously-enabled Cue (Solo) signals will be defeated.



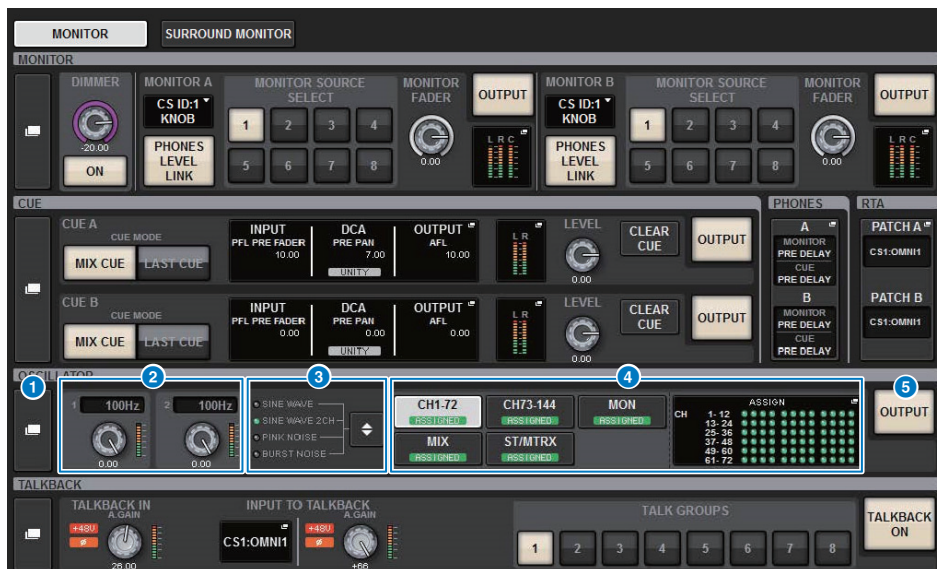
# OSCILLATOR

The RIVAGE PM10 features two oscillators that output individual sine waves with different frequencies to any buses. Also, LPF and HPF are provided for noise output.

## Using the oscillators

You can send a sine wave or pink noise from the internal oscillator to a desired bus.

1. **Press the MONITOR button on the menu bar to access the MONITOR screen.**  
The OSCILLATOR field in the MONITOR screen lets you check the current oscillator settings, and turn the oscillator on or off.



If you want to view or edit the oscillator settings in greater detail, use the OSCILLATOR popup window described in step 2 and subsequent steps.

1. **OSCILLATOR popup button**  
Enables you to access the OSCILLATOR popup window, in which you can make detailed oscillator settings.
2. **OSCILLATOR LEVEL field**  
Adjusts the level of the oscillator. A meter beside the LEVEL knob indicates the output level of the oscillator. If OSCILLATOR MODE is set to SINE WAVE, the frequency of the oscillator is shown.  
Press the LEVEL knob to adjust the oscillator level using the corresponding screen encoder. The range is  $-96.00$  dB to  $0.00$  dB.
3. **OSCILLATOR MODE field**  
Indicates the selected oscillator mode. Pressing the MODE button repeatedly will switch modes.
  - SINE WAVE
  - SINE WAVE 2CH
  - PINK NOISE
  - BURST NOISE
4. **OSCILLATOR ASSIGN field**  
An indicator lights to indicate the currently-selected oscillator output destination (input channels, buses or monitor). Use the buttons at the left to switch the indicators. A green "ASSIGNED" indicator lights up on buttons that contain a channel/bus selection. Press this field to open the OSCILLATOR popup window, in which you can assign the oscillator output to buses.
5. **OSCILLATOR OUTPUT button**  
Turns the oscillator output on or off.

**2. Press the OSCILLATOR popup button or the ASSIGN field to open the OSCILLATOR popup window.**

In this popup window, you can make detailed settings for the oscillator.



**1 OSCILLATOR MODE buttons**

Select one of the following four oscillator operating modes:

<b>SINE WAVE</b>	A sine wave is output continuously.
<b>SINE WAVE 2CH</b>	Two sine waves (with different frequencies) are output separately.
<b>PINK NOISE</b>	Pink noise is output.
<b>BURST NOISE</b>	Pink noise is output intermittently.

**2 Parameter field**

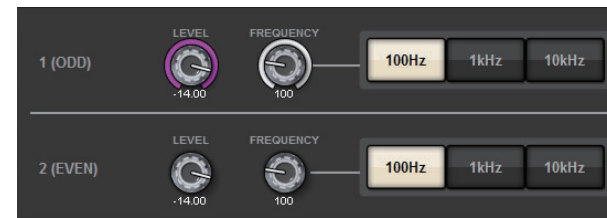
Enables you to set the oscillator parameters. The controllers and their functions in this field vary depending on the operating mode 1.

**SINE WAVE:**



- **LEVEL knob**  
Indicates the output level of the sine wave. Use the screen encoder to adjust the value.
- **FREQUENCY knob**  
Indicates the frequency of the sine wave. Use the screen encoder to adjust the value.
- **FREQUENCY buttons**  
Enables you to select the sine-wave frequency from 100 Hz, 1 kHz, and 10 kHz.

**SINE WAVE 2CH:**



- **LEVEL knob (ODD)**  
Indicates the output level of the odd-channel sine wave. Use the screen encoder to adjust the value.
- **FREQ knob (ODD)**  
Indicates the frequency of the odd-channel sine wave. Use the screen encoder to adjust the value.
- **LEVEL knob (EVEN)**  
Indicates the output level of the even-channel sine wave. Use the screen encoder to adjust the value.
- **FREQ knob (EVEN)**  
Indicates the frequency of the even-channel sine wave. Use the screen encoder to adjust the value.
- **FREQUENCY buttons**  
Enables you to select the sine-wave frequency from 100 Hz, 1 kHz, and 10 kHz.

The default frequency is 1 kHz for the odd channel and 400 Hz for the even channel. Two meters (odd and even) will be displayed.

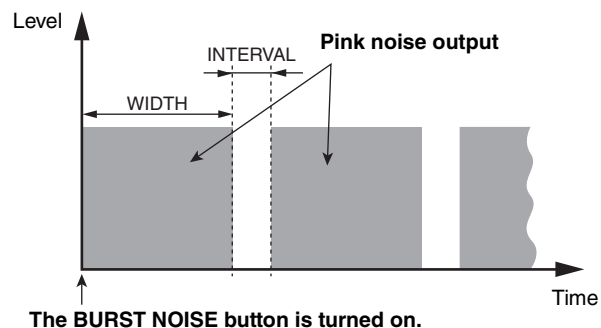


**PINK NOISE:**

- **LEVEL knob**  
Indicates the output level of the pink noise. Use the screen encoder to adjust the value.
- **HPF knob**  
Indicates the cutoff frequency of the HPF that processes the pink noise. Use the screen encoder to adjust the value. Use the button below the knob to switch the HPF on or off.
- **LPF knob**  
Indicates the cutoff frequency of the LPF that processes the pink noise. Use the screen encoder to adjust the value. Use the button below the knob to switch the LPF on or off.

**BURST NOISE:**

- **LEVEL knob, HPF knob, LPF knob**  
These are the same as for the PINK NOISE mode.
- **WIDTH knob**  
Indicates the length of noise being output intermittently. Use the screen encoder to adjust the value.
- **INTERVAL knob**  
Indicates the length of silence between noise bursts. Use the screen encoder to adjust the value.

**3 ASSIGN section**

Enables you to select a channel to which the oscillator signal will be sent. Press one of the five tabs below to select the type of channels/buses displayed, and then press the button(s) for the desired channels/buses (multiple selections are allowed).

If SINE WAVE 2CH mode is selected, output signals will vary depending on whether the selected channel number is odd or even. For example, the odd-channel signal will be routed to MIX1 and the even-channel signal will be routed to MIX2. You can press the CLEAR ALL button to defeat all selections.

**4 Channel display select buttons**

Select the type of channels that you want to view on the screen. Available options are CH1-72, CH73-144, MIX, and ST/MTRX, MONITOR. A green "ASSIGNED" indicator lights up on buttons that contain a channel/bus selection.

**5 Meter section**

Indicates the oscillator output level.

**6 OSCILLATOR OUTPUT button**

Turns the oscillator on or off. If this button is turned on, the oscillator signal will be sent to the input channel or bus you selected in the ASSIGN section. When you press the button again, the oscillator will turn off.

**7 CLEAR ALL button**

Excludes all output channels from the oscillator signal destination.

**8 CLOSE button**

Closes the OSCILLATOR popup window.

**3. Press a button in the MODE field to select the type of signal you want to output.****4. Use the knobs and buttons in the parameter field to adjust the oscillator parameters.**

The displayed parameters will vary depending on the oscillator selected in the MODE field. To control the knobs shown in the parameter field, use the corresponding screen encoders.

5. Press a button in the **ASSIGN** field to specify the input channel(s) or bus(es) to which the oscillator signal will be sent (multiple selections are allowed).

The buttons correspond to the following buses.

<b>CH1-72 button</b>	Input channels 1–72
<b>CH73-144 button</b>	Input channels 73–144
<b>MIX button</b>	MIX buses 1–72
<b>ST / MTRX button</b>	STEREO A bus L, STEREO A bus R, STEREO B bus L, STEREO B bus R, MATRIX buses 1–36
<b>MONITOR button</b>	MONITOR A, MONITOR A R, MONITOR A C, MONITOR B, MONITOR B R, MONITOR B C

6. To enable the oscillator, press the **OUTPUT** button to turn it on. The oscillator signal will be sent to the input channel or bus you selected in step 5. When you press the button again, the oscillator will turn off.

#### NOTE

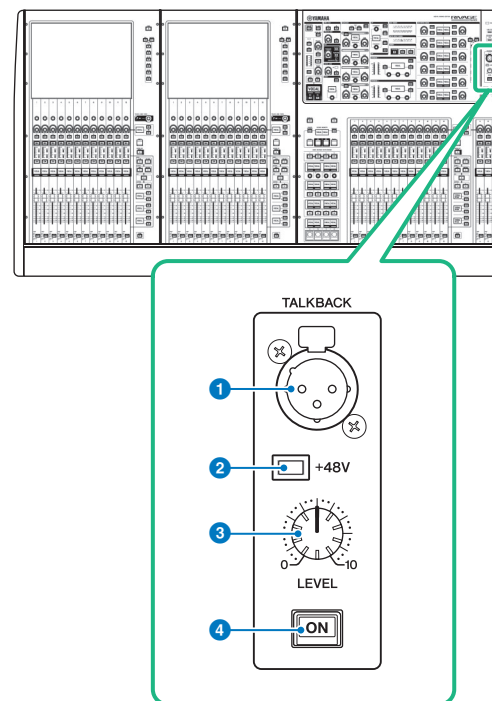
You can also assign oscillator on/off or an ASSIGN change to a USER DEFINED key (page 366).

## TALKBACK

As a talkback input, you can select any input port from input patches, as well as the TALKBACK jack on the top panel of the Control Surface.

### Using talkback

#### ■ Controlling the Monitor function via the UTILITY section



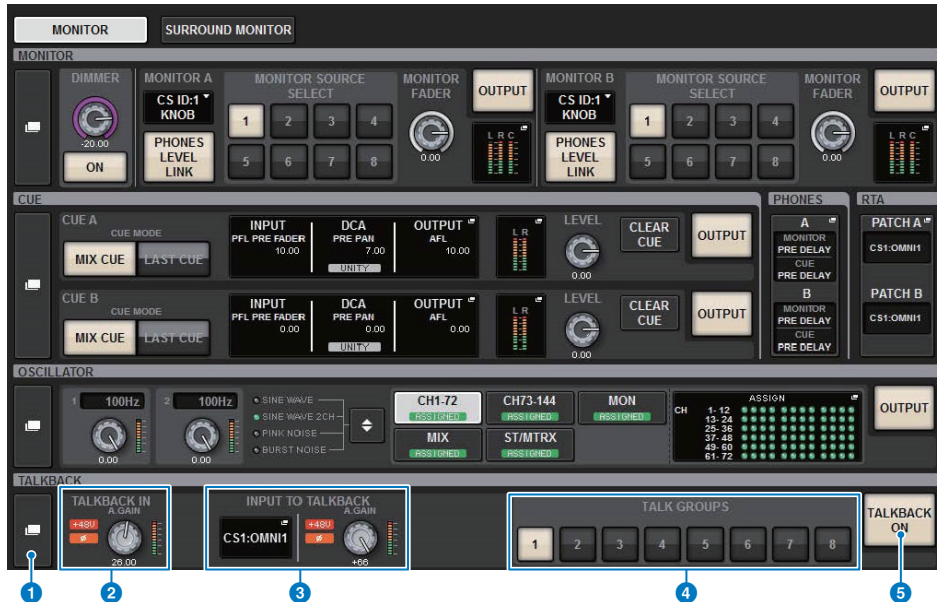
- TALKBACK jack**  
This is a balanced XLR-31 jack to which a talkback mic can be connected.
- +48V indicator**  
Lights up when +48V phantom power is supplied to the TALKBACK jack.
- TALKBACK LEVEL knob**  
Adjusts the input level of the mic connected to the TALKBACK jack.
- TALKBACK [ON] key**  
Switches the Talkback function on or off.

## ■ Controlling the Monitor function via the MONITOR screen

The Talkback function sends the signal (that is input at the input ports) to the desired bus.

### 1. Press the MONITOR button on the menu bar to access the MONITOR screen.

In the MONITOR screen, the TALKBACK field enables you to check the current talkback settings, and turn talkback on or off.



If you want to view or edit the talkback settings in greater detail, use the TALKBACK popup window described in step 2 and following.

#### 1 TALKBACK popup button

Enables you to access the TALKBACK popup window, in which you can make detailed talkback settings.

#### 2 TALKBACK IN field

- **TALKBACK IN +48 indicator**  
Indicates the +48V on/off status for the TALKBACK jack.
- **TALKBACK IN  $\emptyset$  indicator**  
Indicates the normal-phase/reverse-phase status for the TALKBACK jack.
- **ANALOG GAIN knob**  
Sets the analog gain of the TALKBACK jack. Use the screen encoder to adjust the value.
- **TALKBACK IN level meter**  
Indicates the level of signals after the input gain at the TALKBACK jack.

#### 3 INPUT TO TALKBACK field

##### • INPUT TO TALKBACK patch button

Press the button to open the INPUT PORT SELECT popup window, in which you can patch a desired input port/slot to talkback. The selected port/slot name will appear on the button. If no patch is assigned, button will indicate “---”.

##### • INPUT TO TALKBACK +48 indicator

Indicates the +48V on/off status for the corresponding input port/slot.

##### • INPUT TO TALKBACK $\emptyset$ indicator

Indicates the normal-phase/reverse-phase status for the corresponding input port/slot.

##### • ANALOG GAIN knob

Indicates the analog gain setting for the corresponding input port/slot. Use the screen encoder to adjust the value.

##### • INPUT TO TALKBACK level meter

Indicates the level of signals after the input gain at the corresponding input port/slot.

#### 4 TALK GROUPS DEFINE buttons

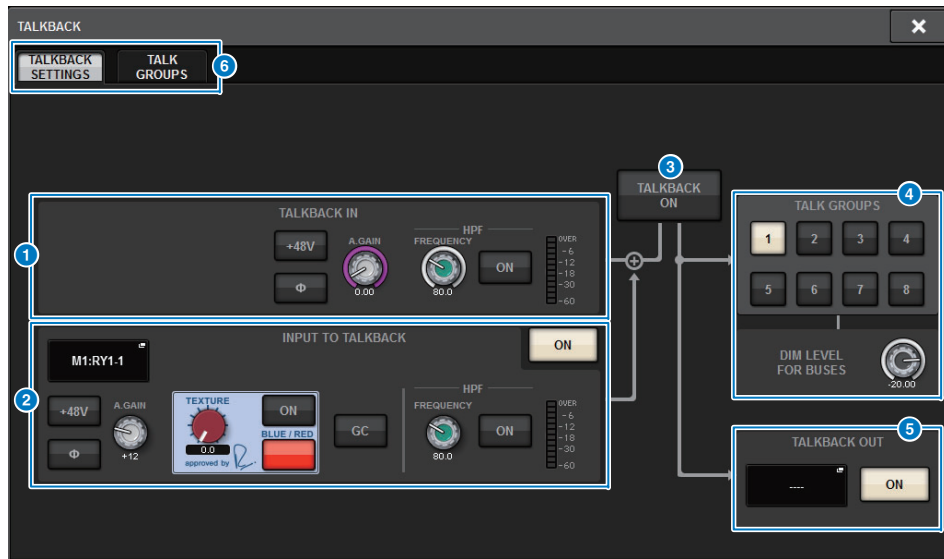
Enable you to select one of the DEFINE monitor mixes assigned via the TALK GROUPS window ([page 183](#)).

#### 5 TALKBACK ON button

Switches talkback on or off. This button is effective for the talkback signals selected in the TALKBACK IN field and the INPUT TO TALKBACK field.

## 2. Press the TALKBACK popup button to access the TALKBACK SETTINGS popup window.

In this popup window, you can make detailed settings for talkback.



### 1 TALKBACK IN field

- **TALKBACK IN +48V button**  
Switches on or off the phantom power (+48V) supplied to the TALKBACK jack.
- **TALKBACK IN  $\emptyset$  button**  
Switches between normal and reverse phase settings for the corresponding head amp.
- **ANALOG GAIN knob**  
Sets the analog gain of the TALKBACK jack. Use the screen encoder to adjust the value.
- **TALKBACK IN HPF knob**  
Sets the cutoff frequency of the HPF for the TALKBACK jack. Use the button to the right of the knob to switch the HPF on or off.
- **TALKBACK IN level meter**  
Indicates the input level of the mic connected to the TALKBACK jack.

### 2 INPUT TO TALKBACK field

This field allows a mic connected to a conventional input port to be used as a talkback input. If you want to use an input jack other than the TALKBACK jack as supplementary input for talkback, select an input port here, and set the input level and other parameters.

- **INPUT TO TALKBACK patch button**  
Press the button to open the INPUT PATCH popup window, in which you can patch a desired input port to talkback. The selected port name will appear on the button.

- **INPUT TO TALKBACK +48V button**  
This is an on/off switch for the phantom power (+48V) supplied to an input port.
- **INPUT TO TALKBACK  $\emptyset$  button**  
Sets the phase for the corresponding jack to normal or reverse when you use an input port as a talkback input.
- **INPUT TO TALKBACK gain knob**  
Sets the input gain of the corresponding HA when you use any input port as a talkback input.
- **INPUT TO TALKBACK SILK**  
Adjusts the corresponding SILK setting when you use any input port as a talkback input.
- **INPUT TO TALKBACK GC**  
Turns the corresponding gain compensation on or off when you use any input port as a talkback input.
- **INPUT TO TALKBACK HPF knob**  
Sets the cutoff frequency for the HPF when you use any input port as a talkback input. Use the button to the right of the knob to switch the HPF on or off.
- **INPUT TO TALKBACK meter**  
Indicates the level of signals input from the corresponding HA when you use any input port as a talkback input.
- **INPUT TO TALKBACK ON button**  
Switches talkback on or off when you use any input port as a talkback input.

### NOTE

These parameters and meters will not appear if no input port is selected.

### 3 TALKBACK ON button

Switches talkback on or off.

### 4 TALK GROUPS field

This field enables you to set the output destination of the talkback signal.

- **ASSIGN select button**  
Specifies the output destination of the talkback signal that is assigned by DEFINE.
- **DIM LEVEL FOR BUSES knob**  
Adjusts the amount by which the talkback signal (that is being output to the selected bus) will be attenuated.

### NOTE

The setting in this field is linked with the setting in the TALKBACK field on the MONITOR screen ([page 181](#)).

**5 TALKBACK OUT field**

In this field, you can patch the TWINLANE network and assign talkback out signals directly to the output jack of an I/O rack, any OMNI OUT jack, or an output jack on a card slot.

- **TALKBACK OUT patch button**

Press the button to open the OUT PATCH popup window, in which you can patch any desired output port to talkback.

- **TALKBACK OUT ON button**

This button switches talkback output on or off when you use any output port as a talkback out.

**NOTE**

Use the TWINLANE CONFIGURATION popup window (page 115) to assign the talkback direct out to the TWINLANE network.

**6 Tabs**

Use these tabs to switch between the TALKBACK SETTINGS popup window and TALK GROUPS popup window.

**3. Connect a mic to the TALKBACK jack on the front panel, and then rotate the TALKBACK gain knob to adjust the input sensitivity of the mic signal.**

The meter in the TALKBACK IN field indicates the input level of the mic connected to the TALKBACK jack. Turn phantom power on or off, and set the phase to normal or reverse, as required by the connected mic.

**4. If you want to use an input jack other than the TALKBACK jack as supplementary input for talkback, follow the steps below.**

**4-1. Press the INPUT TO TALKBACK patch button to open the INPUT PATCH popup window.**

**4-2. Press the button for the input that you want to use for talkback.**

You can select only one input at a time.

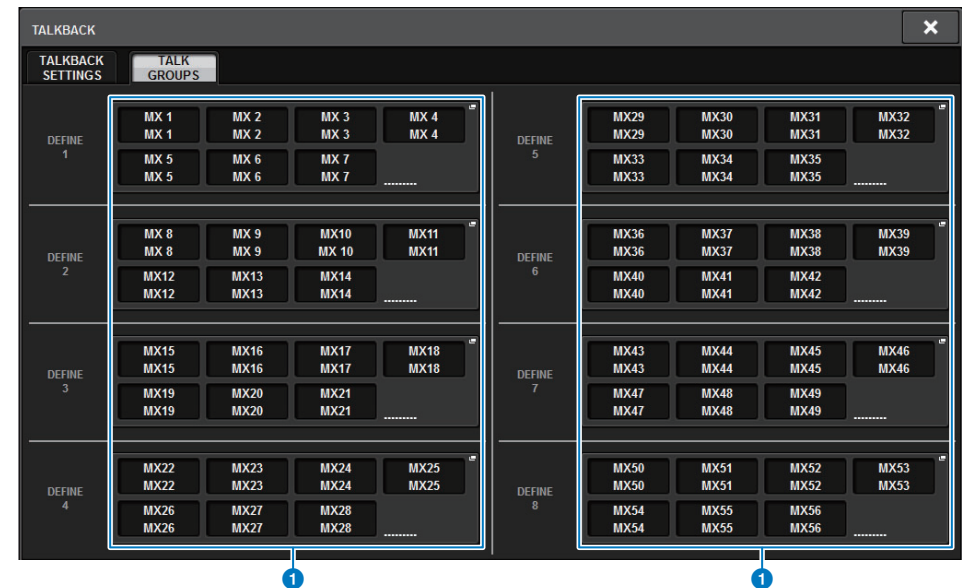
**4-3. Use the GAIN knob and level meter in the INPUT TO TALKBACK field to adjust the input level of the connected mic.**

**NOTE**

The PAD will be switched on or off internally when the HA gain is adjusted between +17 dB and +18 dB.

Keep in mind that noise may be generated when using phantom power if there is a difference between the Hot and Cold output impedance of an external device connected to the INPUT jack.

**5. Press the tab to access the TALK GROUPS popup window.**

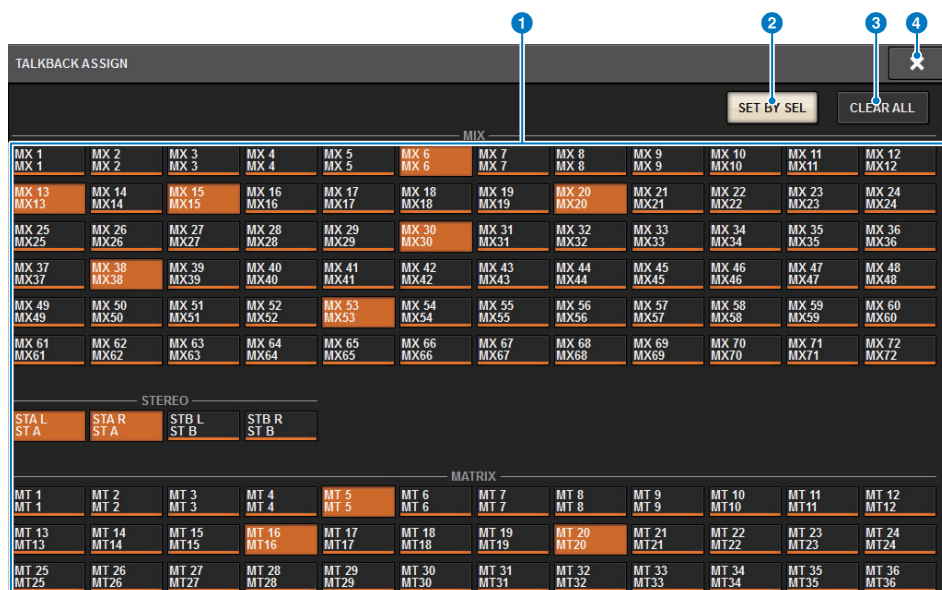


**1 DEFINE 1–8 buttons**

Press these buttons to access the bus selection popup window, in which you can select the signal destination.

**6. Press the target DEFINE button to access the TALKBACK ASSIGN popup window.**

## TALKBACK ASSIGN popup window

**1 Bus selection buttons**

Select the bus as the signal destination from the following options:

- MX(MIX) 1–72..... Output signals of MIX bus 1–72 output signal
- MT(MATRIX)1–36..... Output signals of MATRIX bus 1–36
- ST A L–ST B R..... Output signals of STEREO A L–STEREO B R

**2 SET BY SEL button**

If this button is on, you'll be able to add a bus by using the corresponding [SEL] key.

**3 CLEAR ALL button**

Press this button to clear all selections.

**4 CLOSE button**

Press this button to close the popup window and return to the previous screen.

**7.** Select the bus(es) or output jack(s) as the destination of the talkback signal (multiple selections are allowed).

**8.** When you finish making settings, press the CLOSE button to close the popup window.

**9.** Repeat steps 6–8 to assign the buses to other DEFINE buttons, as needed.

**10.** Select a DEFINE that you want to use for talkback, using DEFINE buttons in the TALK GROUPS field on the MONITOR screen or in the TALK GROUPS field in the TALKBACK SETTINGS popup window.

**11.** To enable talkback, press the TALKBACK ON button to turn it on.

The TALKBACK ON button will alternately turn on or off each time you press the button (Latch operation).

While talkback is on, signals from the TALKBACK jack and the selected INPUT jack will be output to the destination buses.

**NOTE**

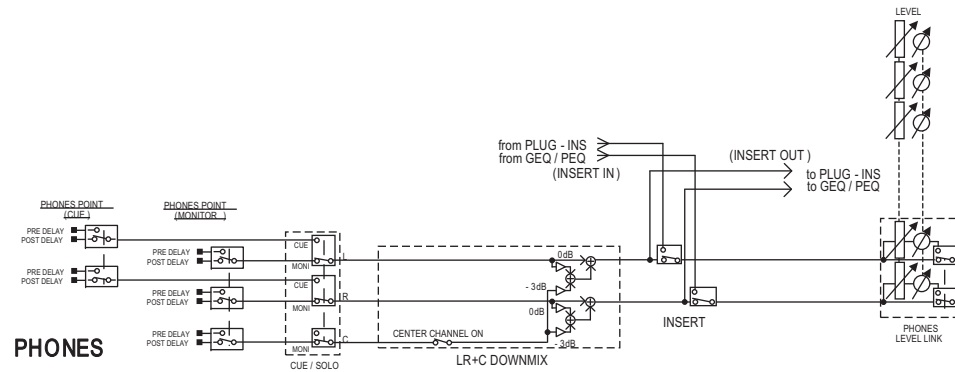
- You can also assign talkback on/off or an ASSIGN change to a USER DEFINED key. In this case, you can select either a Latch operation or an Unlatch operation (the function will be enabled only while you continue holding down the key) ([page 366](#)).
- You can also use the DIMMER ON TALKBACK function to attenuate the monitor level of the non-talkback signals while talkback is on ([page 164](#)).



# PHONES

This section explains how to set parameters related to monitoring using headphones.

The following diagram shows the PHONES signal flow.



## PHONES

- PHONES POINT (headphone send point)**  
 Monitor signals are typically output from this point. However, if Cue is on, the cue signal will be output.
- CENTER CHANNEL**  
 If you plan not to monitor the center channel, turn this button off.
- INSERT (plug-in insert)**  
 You can insert plug-ins into the PHONE signal.
- PHONES LEVEL (headphone volume level)**  
 Adjusts the output level at the PHONES output jack.
- PHONES LEVEL LINK (Headphone Level Link function)**  
 You can adjust the level of the signal sent to the PHONE output jack using the MONITOR LEVEL knob.

## Using PHONES

- Press the MONITOR button on the menu bar to access the MONITOR screen.

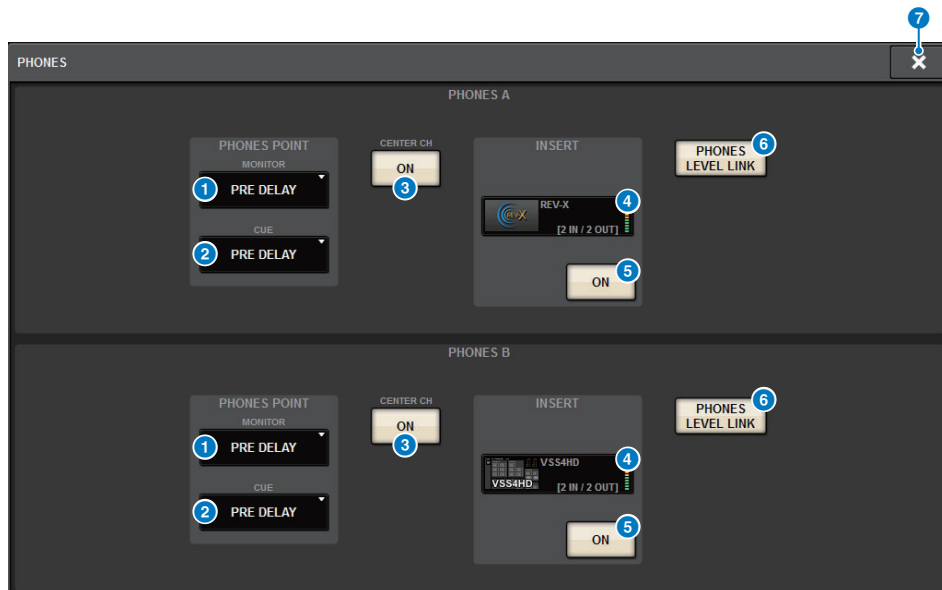


- PHONES popup display buttons**

Indicate the PHONES POINT assigned to PHONES A and PHONES B respectively. Press these buttons to access the PHONES popup window, in which you can make detailed PHONES settings.



## 2. Press the PHONES popup button to open the PHONES popup window.



- 6 PHONES LEVEL LINK button**  
If this is on, the MONITOR FADER LEVEL knob will adjust the level of signals sent to the PHONES A or PHONES B output jack.
  - 7 CLOSE button**  
Press this button to close the popup window and return to the previous screen.
- 3. Use the buttons on screen to make PHONES settings.**
- 4. When you finish making settings, press the CLOSE button.**

### 1 MONITOR PHONES POINT button

Select one of the following monitor source points:

- PRE DELAY
- POST DELAY

### 2 CUE PHONES POINT button

Select one of the following cue source points:

- PRE DELAY
- POST DELAY

### 3 CENTER CH ON button

If you plan not to monitor the center channel, turn this button off. When this button is off, the center channel will not be monitored.

### 4 INSERT button

Indicates the mount status of the currently-selected rack. If nothing is selected, the button will indicate “BLANK.” Press this button to display the window, in which you can set the insert for the PHONES signal.

### 5 INSERT ON button

Switches the insert on or off.

## RTA (Real Time Analyzer)

The RIVAGE PM10 features a real time analyzer (RTA), which provides visual feedback of the frequency spectrum of cued sources for 1/12 octaves (121 bands).

The RTA accepts a single-channel signal, and enables you to switch between inputs A and B. If you select A+B MIX, the signal with higher levels will be displayed.

### Using the Real Time Analyzer

There are four ways to access the RTA.

- Using a popup window dedicated to the RTA
- Using the HPF/EQ popup window for the channel parameters
- Using the popup window for the inserted GEQ
- Using the popup window for the inserted PEQ

#### ■ Using a popup window dedicated to the RTA

1. Press the MONITOR button on the menu bar to access the MONITOR screen.

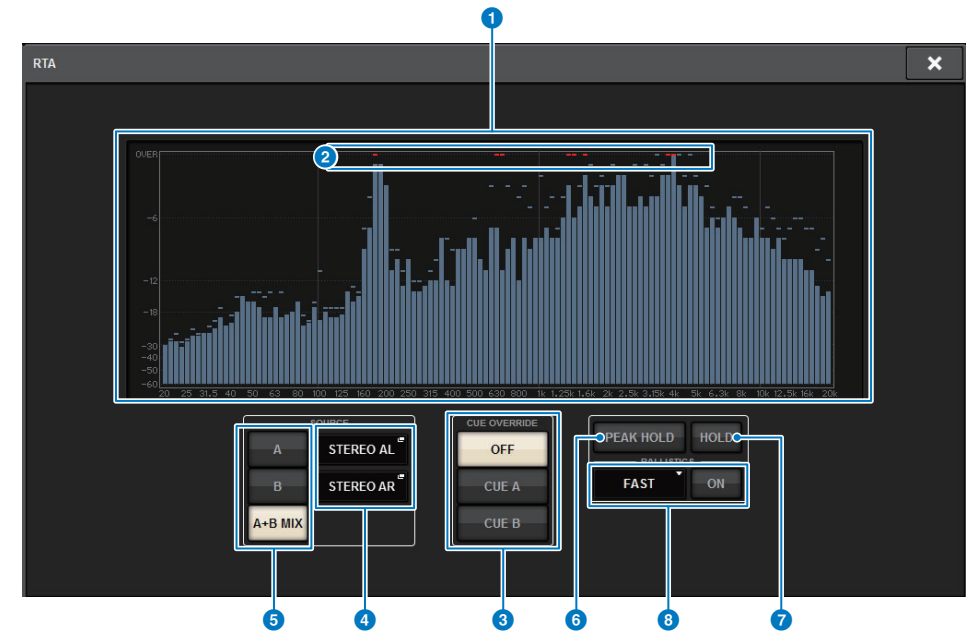


#### 1 RTA popup display buttons

Indicate the name of ports assigned to RTA A and RTA B. If CUE OVERRIDE is on, these buttons will indicate the name of cues set by CUE OVERRIDE. Press these buttons to access the RTA popup window, in which you can make detailed RTA settings.

2. Press the RTA popup button to access the RTA popup window.

#### RTA popup window



#### 1 Frequency response graph

The frequency response graph indicates the result of frequency analysis by 1/12 octave bands.

#### 2 OVER indicators

If data exceeds 0 dB, OVER indicators will appear.

#### 3 CUE OVERRIDE button

The frequency response of the cue signal selected here will be displayed in the graph.

#### 4 INPUT PATCH popup button

Press this button to display a popup window, in which you can select a signal that will be input to the RTA.

#### 5 Input switch buttons

You can select A, B, or A+B MIX as the input channel displayed on the RTA graph. If you select A+B MIX, signals A and B will be compared and the signal with higher levels will be displayed.

#### 6 PEAK HOLD

If this button is on, the analyzed frequency response graph will hold the peak level indication.

**7 HOLD button**

If this button is on, the frequency response graph will indicate and hold the result of the frequency analysis.

**8 BALLISTICS field**

- **BALLISTICS button**

If this button is on, you will be able to add rate of decay to the analyzed frequency response graph.

- **FAST/SLOW switch button**

Switches the decay rate of graph rendering (FAST/SLOW).

**■ About the RTA display**

Only one RTA module is installed for the following three popup windows.

Therefore, the RTA response graph will be displayed in only one of these windows.

If you try to open two or more windows, the latest popup window will display the response graph. If you want to view the response graph while two or more windows are open, the popup window in which you clicked the EQ graph will display the response graph.

- HPF/EQ popup window (1ch)
- GEQ popup window
- PEQ popup window

**■ Using the HPF/EQ popup window for the channel parameters**

1. Press the EQ graph field on the SELECTED CHANNEL VIEW screen, or press the EQ field on the OVERVIEW screen to open the HPF/EQ popup window.

**HPF/EQ popup window (1ch)****1 RTA button**

If this button is on, a semi-opaque frequency analysis graph of the input signal (immediately after EQ) will be superimposed on top of the EQ frequency response graph.

**2 PEAK HOLD**

If this button is on, the analyzed frequency response graph will hold the peak level indication.

**3 HOLD button**

If this button is on, the frequency response graph will indicate and hold the result of the frequency analysis.

**4 BALLISTICS field**

- **BALLISTICS button**

If this button is on, you will be able to add rate of decay to the analyzed frequency response graph.

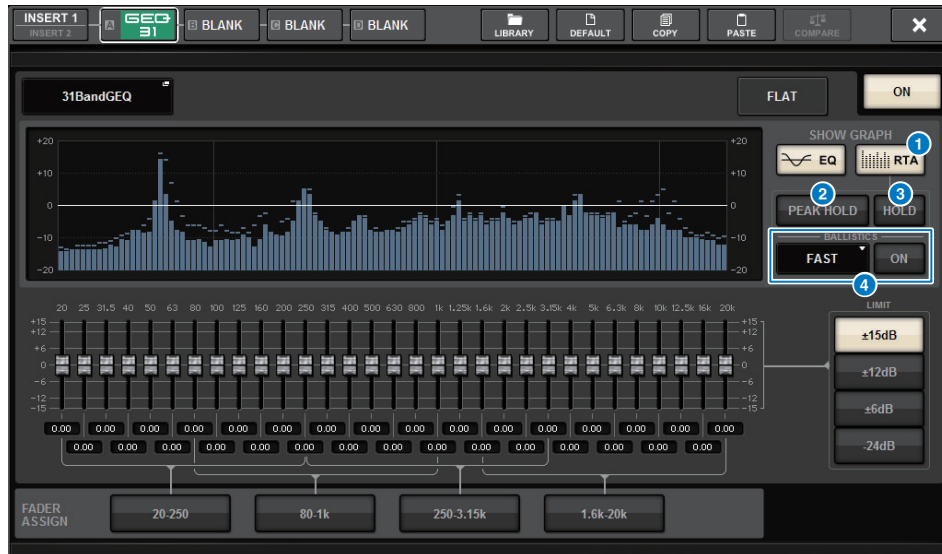
- **FAST/SLOW switch button**

Switches the decay rate of graph rendering (FAST/SLOW).

■ Using the GEQ popup window for the inserted GEQ

1. Press the rack container of the rack (which contains an inserted GEQ) to open the GEQ popup window.

GEQ popup window



- 1 **RTA button**  
If this button is on, a semi-opaque frequency analysis graph of the input signal (immediately after EQ) will be superimposed on top of the EQ frequency response graph.
- 2 **PEAK HOLD**  
If this button is on, the analyzed frequency response graph will hold the peak level indication.
- 3 **HOLD button**  
If this button is on, the frequency response graph will indicate and hold the result of the frequency analysis.
- 4 **BALLISTICS field**
  - **BALLISTICS button**  
If this button is on, you will be able to add rate of decay to the analyzed frequency response graph.
  - **FAST/SLOW switch button**  
Switches the decay rate of graph rendering (FAST/SLOW).

■ Using the PEQ popup window for the inserted PEQ

1. Press the rack container of the rack (which contains an inserted PEQ) to open the PEQ popup window.

PEQ popup window



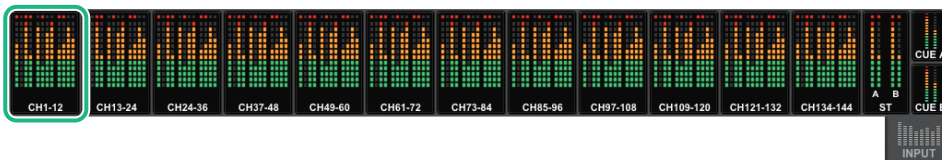
- 1 **RTA button**  
If this button is on, a semi-opaque frequency analysis graph of the input signal (immediately after EQ) will be superimposed on top of the EQ frequency response graph.
- 2 **PEAK HOLD**  
If this button is on, the analyzed frequency response graph will hold the peak level indication.
- 3 **HOLD button**  
If this button is on, the frequency response graph will indicate and hold the result of the frequency analysis.
- 4 **BALLISTICS field**
  - **BALLISTICS button**  
If this button is on, you will be able to add rate of decay to the analyzed frequency response graph.
  - **FAST/SLOW switch button**  
Switches the decay rate of graph rendering (FAST/SLOW).

# Meters

This chapter explains how to operate the METER screen that shows the input and output level meters for all channels.

## About the meter area

The meter area displays various meters. Press any part of the meter area to recall the corresponding fader layer to the panel.



### 1 Σ clipping indicator

Lights to indicate that a signal is clipping at some point in the channel.

### 2 OVER indicator

Lights to indicate that a signal is clipping at the metering point of the channel.

### NOTE

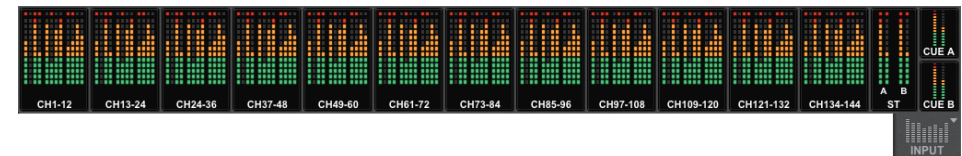
To switch the metering point, use the METERING POINT field ([page 192](#)).

To display the meter area, press the meter icon button located on the right end of the menu bar to open the meter menu, in which you can select INPUT meter, OUTPUT meter, or IN/OUT meter.



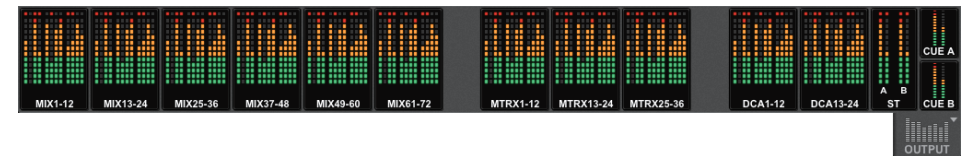
## Input meter

This screen shows the meters for all input channels, Stereo A/B, and Cue A/B simultaneously.



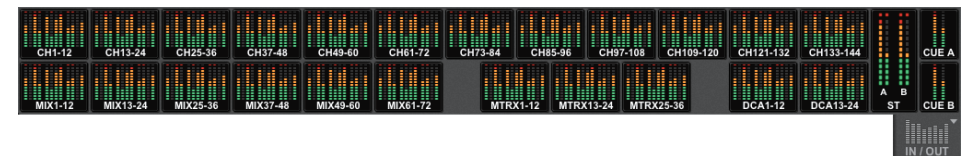
## Output meter

This screen shows the meters for all output channels, Stereo A/B, DCA, and Cue A/B simultaneously.



## IN/OUT meter

This screen shows the meters for all input channels, output channels, Stereo A/B, DCA, and Cue A/B simultaneously.



### NOTE

- If you press part of the cue meters when the cue is on, the cue will be canceled.
- In surround mode, SURROUND A/B is shown instead of MIX1–12, and SURROUND CUE is shown instead of CUE B.



# Using the METER screen

By accessing the METER screen (a full screen), you can view the input and output levels of all channels on the screen, and switch the level meter's metering points (the points in the signal route at which the level is detected).

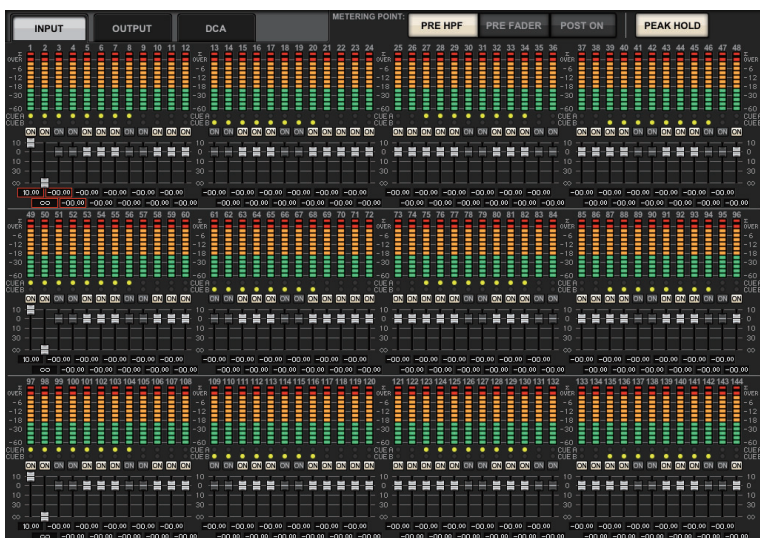
## INPUT/OUTPUT/DCA tabs

Use these tabs to select the INPUT METER screen, OUTPUT METER screen, or the DCA METER screen.



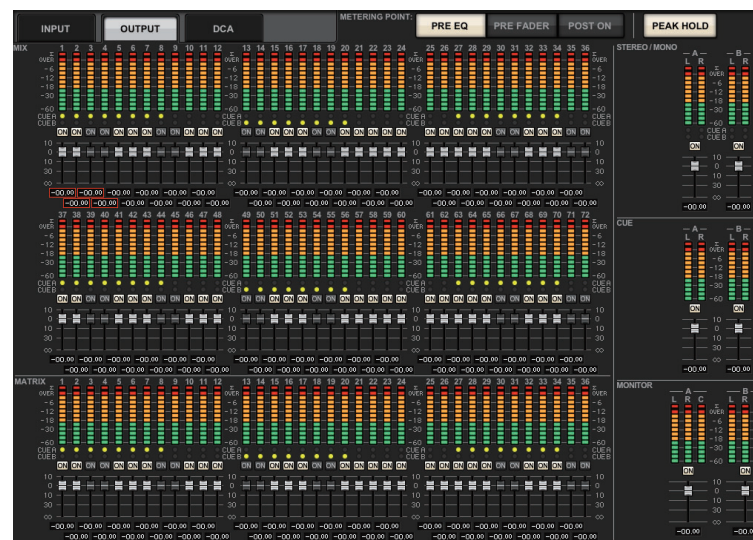
## FULL SCREEN METER (INPUT) screen

This screen shows the meters and faders for all input channels.



## FULL SCREEN METER (OUTPUT) screen

This screen shows the meters for all output channels, Stereo A/B, CUE A/B, and MONITOR A/B simultaneously.



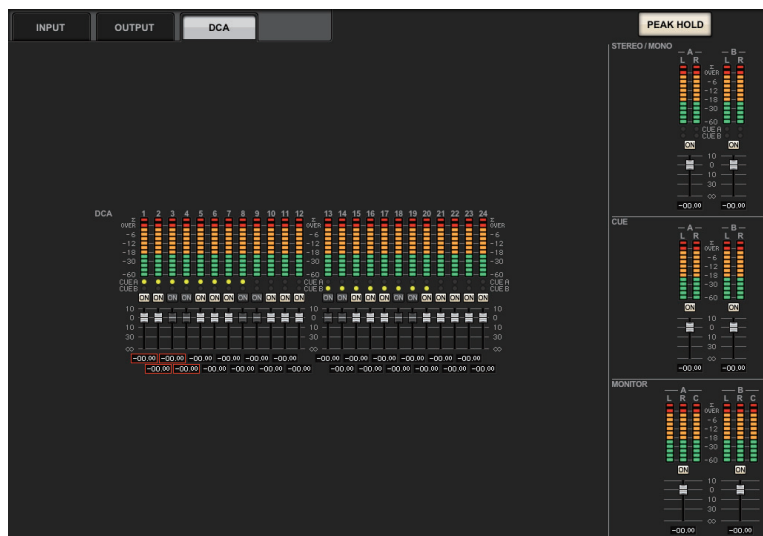
### NOTE

In surround mode, SURROUND A/B is shown instead of MIX1-12, SURROUND CUE is shown at the left of CUE, and SURROUND MONITOR is shown at the left of MONITOR.



## FULL SCREEN METER (DCA) screen

This screen shows the meters for DCA, STEREO A/B, CUE A/B, and MONITOR A/B simultaneously.



### NOTE

In surround mode, SURROUND CUE is shown at the left of CUE, and SURROUND MONITOR is shown at the left of MONITOR.

## Fader level and meter display

This area displays the meters and faders for each channel.

### 1 Channel number

Indicates the channel number.

### 2 $\Sigma$ clipping indicator

Lights to indicate that a signal is clipping at some point in the channel.

### 3 OVER indicator

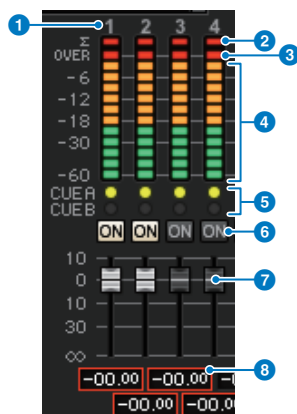
Lights to indicate that a signal is clipping at the metering point of the channel.

### 4 Meter

Indicates the input or output level of a channel.

### 5 CUE A/B indicator

Indicates the cue status.



### 6 ON indicator

Indicates the channel on/off status.

### 7 Fader

The channel level is indicated by the fader position and by a numeric value (in dB) that appears immediately below the fader. If you turn the channel [ON] key off, the corresponding fader will be grayed out.

### 8 ISOLATE indicator

Indicates the Isolate mode status with a red frame.

### NOTE

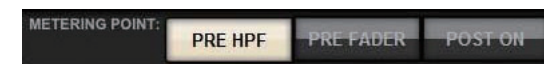
Press any part of the meter area to recall the corresponding fader layer to the panel.

## METERING POINT field

You can select one of the following options as the metering point at which the level will be detected. The metering point for the level meter can be specified independently for input channels and output channels.

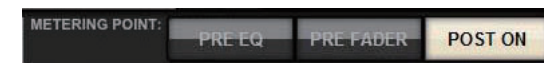
### ■ For INPUT METER

- PRE HPF
- PRE FADER
- POST ON



### ■ For OUTPUT METER

- PRE EQ
- PRE FADER
- POST ON



## PEAK HOLD button

Turn on this button to hold the peak level indication on each meter. Turn off this button to clear the peak hold indication. On/off operations of the PEAK HOLD button will apply to both input channels and output channels. When you turn this button off, the peak level indication that had been held will be cleared.



### NOTE

You can also assign the PEAK HOLD button on/off function to a USER DEFINED key ([page 366](#)).

# CH Parameter

## GAIN/SILK

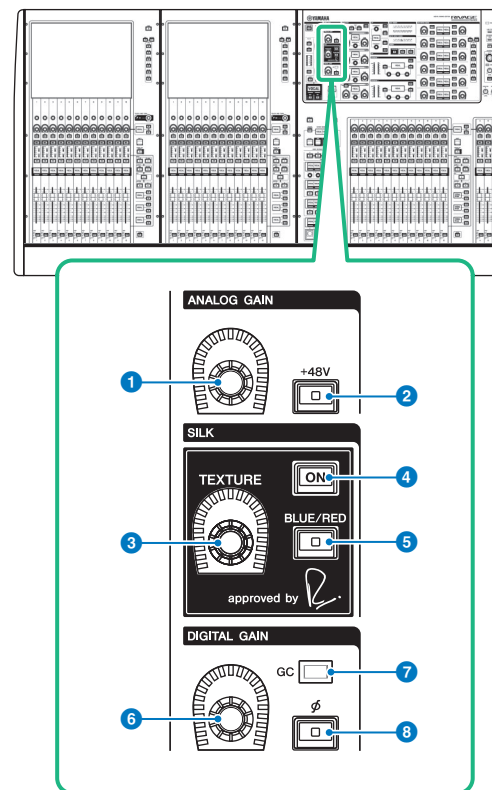
Here you can make settings for the input channel's HA (head amp), such as phantom power on/off, gain, phase, and SILK.

### GAIN/SILK settings

There are three ways to control GAIN/SILK.

- Controlling via the Selected Channel section
- Controlling via the OVERVIEW screen
- Controlling via the SELECTED CHANNEL VIEW screen

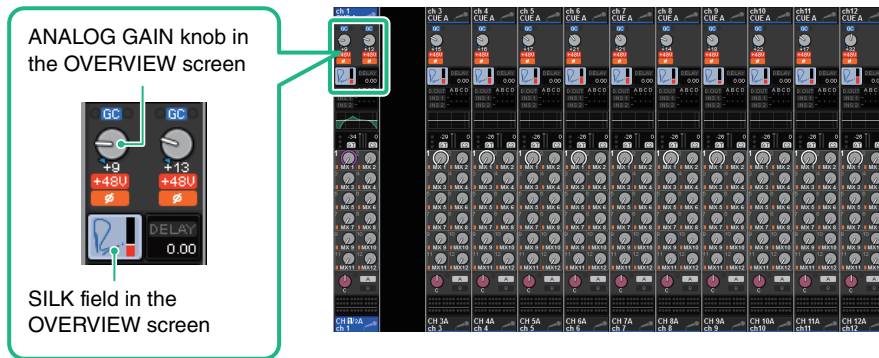
### ■ Controlling via the Selected Channel section



- [ANALOG GAIN] knob**  
Sets the analog gain for the head amp.
- [+48V] key**  
Switches phantom power (+48V) on or off.
- SILK [TEXTURE] knob**  
Adjusts the intensity of SILK processing.
- SILK [ON] key**  
Switches SILK on or off.  
SILK processing can be applied only to specific channels to bring the corresponding parts to life within the mix, or to all channels to add depth and perspective to the mix overall.
- SILK [BLUE/RED] key**  
Toggles between BLUE and RED: “BLUE” for solidity and power, and “RED” for sparkling energy.
- [DIGITAL GAIN] knob**  
Sets the digital gain of the channel.
- GC indicator**  
Lights up when GC (GAIN COMPENSATION) is enabled.
- [∅] (Phase) key**  
Reverses the phase of the input signal.

■ Controlling via the OVERVIEW screen

1. Press the [VIEW] key to access the OVERVIEW screen.
2. Select the channel that you want to operate.
3. Press the ANALOG GAIN knob or the SILK field to open the GAIN/SILK popup window.



GAIN/SILK popup window



- 1 **Channel select button**  
Indicates the channel. Press the button to select the on-screen selected channel. The icon, number, and color of the current channel appear on the button, and the channel name appears below the button.
- 2 **PATCH button**  
Displays the channel's patch status.
- 3 **+48V button**  
Switches the HA phantom power (+48V) on or off.
- 4 **A. GAIN knob**  
Indicates the HA analog gain setting. Use the screen encoder to adjust the value. If gain compensation is on, an indicator shows the analog gain position at the time that gain compensation was turned on.
- 5 **HA meter**  
Displays the level (PRE GC) of the HA input signal.
- 6 **SILK ON button**  
Switches Silk on or off.
- 7 **BLUE/RED switch button**  
Toggles between BLUE and RED: "BLUE" for solidity and power, and "RED" for sparking energy.
- 8 **SILK [TEXTURE] knob**  
Adjusts the TEXTURE parameter of Silk.
- 9 **GC (GAIN COMPENSATION) button**  
Switches the gain compensation on or off for that channel.
- 10 **HPF indicator**  
Indicates the high pass filter on/off status for each port.
- 11 **D.GAIN knob**  
Indicates the digital gain setting. Use the screen encoder to adjust the value.
- 12 **Meter (channel input)**  
This meter indicates the level after passing through GC (before D.GAIN).
- 13 **Meter (post digital gain)**  
This meter indicates the level after passing through digital gain.
- 14 **Φ button**  
Switches the phase of the input signal.

**15 GANG button**

This is shown only in the case of stereo. If this is on, the difference in the LR analog gain is maintained as the value changes.  
The same applies to digital gain.

**4. Use the on-screen buttons and screen encoders to make HA settings.****NOTE**

- The PAD will be switched on or off internally when the HA gain is adjusted between +11 dB and +12 dB.
- Keep in mind that noise may be generated when using phantom power if there is a difference between the Hot and Cold output impedance of an external device connected to the input jack.
- The ANALOG GAIN knob and +48V button are enabled for the input jacks of an I/O rack and the OMNI IN jacks of the control surface.
- HA settings can also be made in the SYSTEM CONFIG parameter settings screen (page 117).

**5. Edit the SILK settings as needed.****NOTE**

SILK settings can also be made in the SYSTEM CONFIG parameter settings screen (page 117).

**6. Perform the same operations for other input channels as desired.**

If you are viewing the GAIN/SILK popup window, you can also use the [SEL] keys to switch the channel for editing.

**7. When you finish making settings, press the X symbol in the upper right of the window.****■ Controlling via the SELECTED CHANNEL VIEW screen**

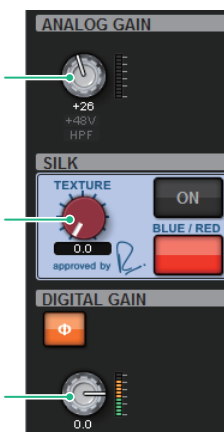
1. Press the [VIEW] key to access the SELECTED CHANNEL VIEW screen.
2. Select the channel that you want to operate.
3. Press the ANALOG GAIN knob, the SILK [TEXTURE] knob, or the DIGITAL GAIN knob to open the GAIN/SILK popup window (page 194).



ANALOG GAIN knob in the SELECTED CHANNEL VIEW screen

SILK [TEXTURE] knob in the SELECTED CHANNEL VIEW screen

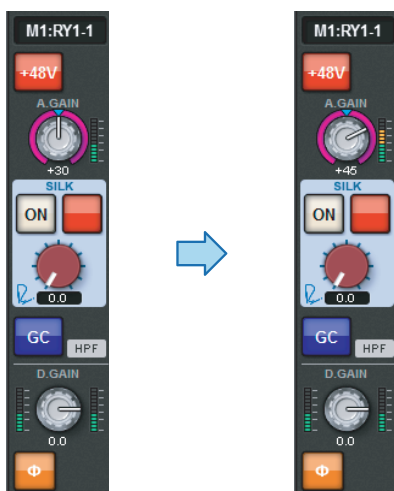
DIGITAL GAIN knob in the SELECTED CHANNEL VIEW screen



## Signal level that flows on the TWINLANE network when gain compensation is on

If gain compensation is turned on, changing the analog gain will cause the signal being output to the TWINLANE network to be compensated by an equal and opposite amount as the change in the analog gain. This means that the signal on the audio network will be compensated to a consistent level in the digital domain.

For example, if the analog gain value is set to +30 dB and you turn gain compensation on, raising the analog gain to +45 dB will apply -15 dB of compensation to the audio network so that the signal is sent at a +30 dB level.



When a single I/O rack unit is shared by the FOH console and the monitor console, even if the analog gain is changed on the FOH console, the signal that flows on the audio network stays at the same level, so that the input level to the monitor console is not affected.

It is important to note that if the analog gain is raised excessively so that distortion occurs, you must temporarily turn gain compensation off, readjust the input level appropriately, and then turn gain compensation on again. If you lower the analog gain while gain compensation is still on, gain compensation operates to boost the signal on the audio network by the same amount, so the signal will still be distorted.

## EQ

The RIVAGE PM10 features a full-parametric channel EQ (4-band for input and 8-band for output). It includes the following features:

- EQ can be used on all input channels and all output channels.
- High/low pass filters are independent of the EQ, and they can be used on either input channels or output channels.
- You can store and switch between two sets (A/B) of parameter settings.
- The FREQUENCY parameter for each band can be set in 1/24 oct steps.
- Two bands can be changed to L SHELL (Low Shelving) and H SHELL (High Shelving).

The available EQ types include:

<b>PRECISE</b>	This EQ strives for ultimate precision and controllability. It enables you to adjust the target point precisely, and flexibly satisfies various requirements for sound making. Low/High Shelving filters feature a “Q” parameter, which enables you to adjust the knee characteristics.
<b>AGGRESSIVE</b>	This EQ is musical and effective. It enables you to add a powerful, creative edge and serves as a powerful tool for artistic expression.
<b>SMOOTH</b>	This EQ focuses on smooth sound qualities. It contributes to a natural sound without changing the atmosphere of the original.
<b>LEGACY</b>	This is a standard EQ that has been equipped with many of Yamaha’s legacy digital mixers, such as PM1D and PM5D.

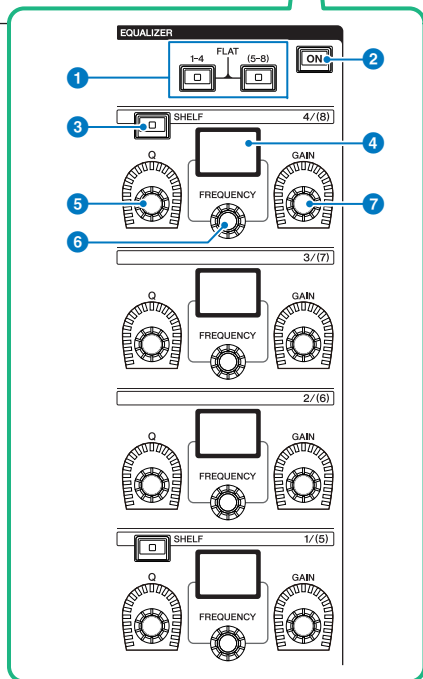
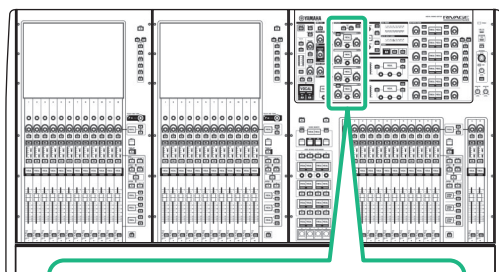
## Using EQ

There are three ways to control EQ.

- Controlling the EQ via the Selected Channel section
- Controlling the EQ via the OVERVIEW screen
- Controlling the EQ via the SELECTED CHANNEL VIEW screen

### ■ Controlling the EQ via the Selected Channel section

#### EQUALIZER section



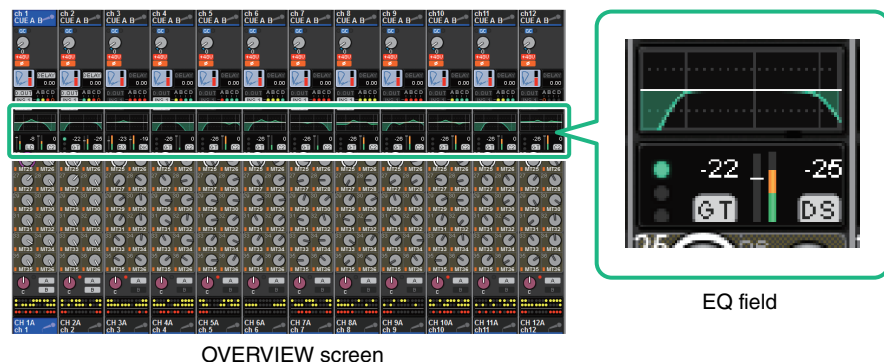
- [1-4]/[(5-8)] keys**  
Switch EQUALIZER parameter settings. Pressing both [1-4] and [(5-8)] keys simultaneously will set the gain for all bands to 0 (FLAT).
- [ON] key**  
Switches EQ on or off.
- [SHELF] key**  
Switches the shelving filter on/off.
- Display**  
Indicates the selected EQUALIZER parameter.
- [Q] knob**  
Specifies the Q value.
- [FREQUENCY] knob**  
Sets the frequency.
- [GAIN] knob**  
Sets the gain.

- 1. Select the channel that you want to edit.**  
Four-band EQ (HIGH, HIGH MID, LOW MID, LOW) is provided on all input channels. Eight-band EQ is provided on all output channels. (Control is divided into [1-4] and [5-8] groups of four bands each.)
- 2. If you selected an output channel in step 1, use the [1-4]/[(5-8)] keys in the Selected Channel section to select the [1-4]/[(5-8)] group of four bands.**
- 3. Use the [Q] knob (5), [FREQUENCY] knob (6), and [GAIN] knob (7) for each band in the Selected Channel section to set the Q, center frequency, and gain for each band.**  
**NOTE**  
Pressing the [Q] knob and the [FREQUENCY] knob simultaneously enables you to bypass the corresponding band.
- 4. If you want to restore the EQ of the currently-operated channel to a flat state, simultaneously press the [1-4] and [(5-8)] keys in the Selected Channel section.**  
When you press these two keys simultaneously, the boost/cut amount of all bands will be reset to 0 dB.
- 5. If you want to use the HIGH band or LOW band as a shelving-type EQ, turn on the [SHELF] key for the corresponding band.**



## ■ Controlling the EQ via the OVERVIEW screen

1. Press the [VIEW] key to access the OVERVIEW screen.  
The EQ field shows the response of the EQ.



2. Select the channel that you want to edit.
3. Press the EQ field to access the HPF/EQ popup window.  
If the HPF/EQ popup window (1ch) is displayed, you will be able to edit all of the EQ parameters.
4. Use the corresponding screen encoder or the [TOUCH AND TURN] knob to adjust the EQ parameters.

## HPF/EQ popup window (1CH)

This window enables you to edit all EQ parameters of the currently-selected channel. This is convenient if you want to make detailed EQ settings for a specific channel.



- 1 **HPF ON/OFF button**  
Switches the HPF on or off.
- 2 **HPF FREQUENCY knob**  
Indicates the cutoff frequency of the HPF. Use the screen encoder to adjust the value.
- 3 **HPF type select button**  
Enables you to set the HPF attenuation per octave to  $-6$  dB/oct,  $-12$  dB/oct,  $-18$  dB/oct, or  $-24$  dB/oct.
- 4 **LPF ON/OFF button**  
Switches the LPF on or off.
- 5 **LPF FREQUENCY knob**  
Indicates the cutoff frequency of the LPF. Use the screen encoder to adjust the value.
- 6 **LPF type select button**  
Enables you to set the LPF attenuation per octave to  $-6$  dB/oct, or  $-12$  dB/oct.

**7 EQ type select button**

Switches the EQ type to PRECISE, AGGRESSIVE, SMOOTH, or LEGACY.

**8 A/B switch buttons**

Enable you to switch between A and B as the storing destination for the EQ parameters.

**9 EQ FLAT button**

Press this button to reset the GAIN parameters of all EQ band to 0 dB.

**10 EQ button**

Press this button to display the EQ graph.

**11 RTA button**

If this button is on, a semi-opaque frequency analysis graph of the EQ-processed input signal will be superimposed on top of the EQ frequency response graph.

**12 EQ graph**

Displays the parameter values for the EQ and filters.

**13 PEAK HOLD**

The frequency response graph holds the peak level indication.

**14 HOLD button**

If this button is on, the RTA graph will continue to be displayed.

**15 BALLISTICS field**

- **BALLISTICS button**  
Setting this button to ON allows you to add rate of decay to the graph.
- **FAST/SLOW switch button**  
Switches the decay rate of graph rendering (FAST/SLOW).

**16 EQ ON/OFF button**

Switches the EQ on or off.

**17 EQ IN/OUT level meters**

Indicate the peak level of signals before and after the EQ. For a stereo channel, these meters indicate the level of both the L and R channels.

**18 LOW SHELVING ON/OFF button**

Turn on this button to switch the LOW band to a shelving type filter.

**19 HIGH SHELVING ON/OFF button**

Turn on this button to switch the HIGH band to a shelving type filter.

**20 BYPASS button**

Temporarily bypasses the EQ.

**21 EQ parameter setting knobs**

Indicate the Q, FREQUENCY, and GAIN parameters for the LOW, LOW MID, HIGH MID, and HIGH bands. Press this button, and you will be able to use the screen encoder to adjust the value.

**22 Tabs**

Use these tabs to select a channel that you want to view on the screen.

**23 LIBRARY button**

Press this button to open the EQ library window.

**24 DEFAULT button**

Press this button to reset all EQ/filter parameters to the initial values.

**25 COPY button**

Copies the EQ parameter settings stored in the bank (selected via the A/B switching buttons) to buffer memory.

**26 PASTE button**

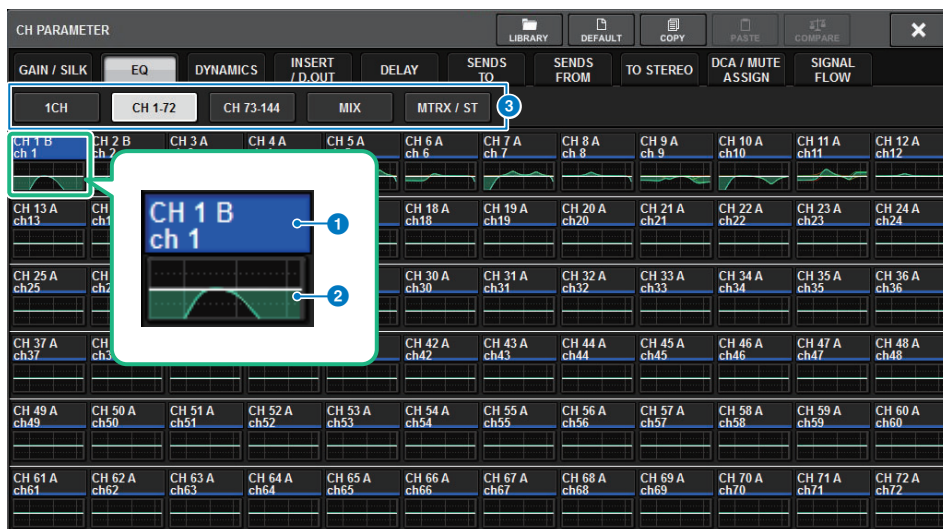
Press this button to paste the settings copied in buffer memory to the EQ of the currently-selected bank. If valid data has not been copied into buffer memory, you will be unable to paste it.

**27 COMPARE button**

Press this button to switch between and compare the settings stored in buffer memory and the currently-selected channel settings. If valid data has not been stored in buffer memory, you will be unable to compare the data.

## HPF/EQ popup window (CH 1-72, CH 73-144, MIX, MTRX/ST)

This window displays the corresponding input channels (or output channels) simultaneously. This page is only for display, and does not allow the parameters to be edited. It is useful when you need to quickly check multiple EQ settings, or when you want to copy and paste EQ settings between distant channels.



### 1 Channel select buttons

Enable you to select the channel that you want to operate. The current channel icon, channel number, channel name, and color appear on the button.

### 2 EQ graph

This field graphically indicates the approximate EQ/filter response.

### 3 Tabs

Use these tabs to select a channel that you want to view on the screen.

## ■ Controlling the EQ via the SELECTED CHANNEL VIEW screen

### 1. Press the [VIEW] key to access the SELECTED CHANNEL VIEW screen.



SELECTED CHANNEL VIEW screen

### 2. Select the channel that you want to edit.

### 3. Press the EQ field to access the HPF/EQ popup window ([page 198](#)).

### 4. Use the corresponding screen encoder or the [TOUCH AND TURN] knob to adjust the EQ parameters.

## DYNAMICS

Input Channels feature two dynamics processors: Dynamics 1 and Dynamics 2. Output Channels feature one dynamics processor. They include the following features:

- You can select a dynamics function from six types, including GATE and COMP.
- You can store two sets (A/B) of parameter settings.
- You can use the parameter copy, paste, and library functions for Dynamics 1 and Dynamics 2 individually.
- The key-in signals can be selected from other input or output channels, or from input patches.

The available dynamics types include:

<b>LEGACY COMP</b>	This is a standard compressor that has been equipped with many of Yamaha's legacy digital mixers, such as PM1D and PM5D.
<b>Comp 260</b>	This is an analog-flavored compressor built using Yamaha's proprietary VCM (Virtual Circuitry Modeling) technology. It emulates the characteristics of compressors and limiters of the mid-1970s, which are now a standard for live sound reinforcement. This compressor has faithfully modeled the VCA (Voltage Controlled Amplifier) circuit and the RMS (Root Mean Square) detection circuit. Compression curve (Knee) can be set to Hard, Medium, or Soft. Attack time and release time are variable. The preset settings recreate the fixed value of the early legacy models. Designed under the supervision of top SR engineers, the parameter effects have been optimized for live sound reinforcement.
<b>GATE</b>	This dynamics type reduces the output by a fixed value (RANGE) when a signal smaller than the THRESHOLD level is input.
<b>DE-ESSER</b>	This dynamics type detects only the sibilants and other high-frequency consonants of the vocal, and compresses its bandwidth.
<b>EXPANDER</b>	This dynamics type reduces the output by a fixed ratio (RATIO) when a signal smaller than the THRESHOLD level is input.
<b>DUCKING</b>	This dynamics type reduces the output by a fixed value (RANGE) when a signal greater than the THRESHOLD level is input. This is effective if you want to lower the volume level of background music using the KEY IN SOURCE signal.

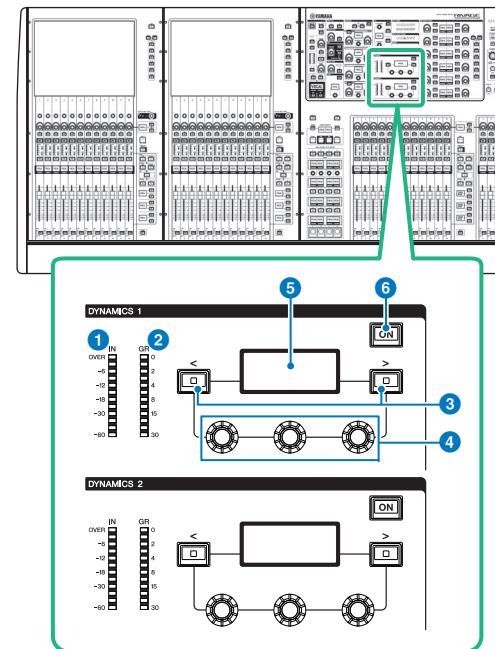
## Using dynamics

There are three ways to control the dynamics processors.

- Controlling the dynamics processors via the Selected Channel section
- Controlling the dynamics processors via the OVERVIEW screen
- Controlling the dynamics processors via the SELECTED CHANNEL VIEW screen

### ■ Controlling the dynamics processors via the Selected Channel section

#### DYNAMICS section



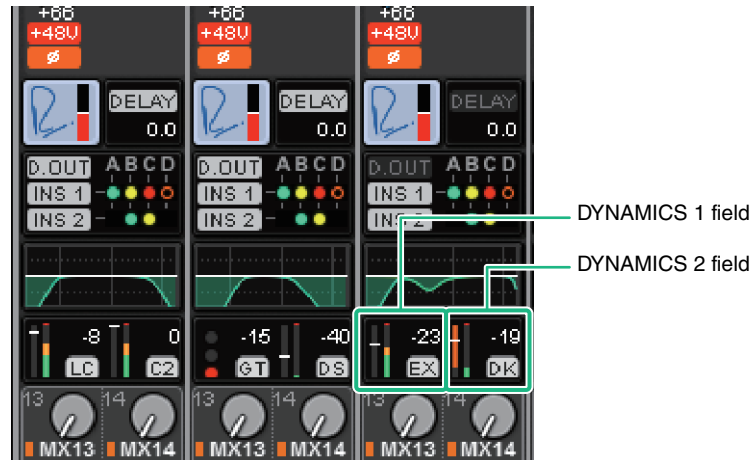
- 1 DYNAMICS 1/2 IN LED**  
Indicates the DYNAMICS input level.
- 2 DYNAMICS 1/2 GR LED**  
Indicates the amount of DYNAMICS gain reduction.
- 3 DYNAMICS 1/2 [<]/[>] keys**  
Switch parameters that are indicated on the DYNAMICS display.
- 4 DYNAMICS 1/2 setting knobs**  
Enable you to set the DYNAMICS parameters.
- 5 DYNAMICS 1/2 display**  
Indicates the DYNAMICS parameters.
- 6 DYNAMICS 1/2 [ON] key**  
Switches the corresponding dynamics processor on or off.

1. Use a [SEL] key to select the channel you want to control.
2. Turn on the DYNAMICS 1/2 [ON] key in the Selected Channel section.
3. Use the DYNAMICS 1/2 [<]/[>] keys to select the parameter that you want to adjust.
4. Use the DYNAMICS 1/2 setting knobs to adjust the corresponding parameter.

## ■ Controlling the dynamics processors via the OVERVIEW screen

### 1. Press the [VIEW] key to access the OVERVIEW screen.

The DYNAMICS 1/2 field displays the dynamics processor on/off status and the amount of gain reduction.



These fields include the following items.



#### 1 Dynamics IN/OUT level meters

This green bar graph shows the level of the signal before it passes through dynamics processing.

#### 2 GR meter

This orange bar graph indicates the amount of gain reduction produced by the dynamics processor.

#### 3 Dynamics processor type

Indicates the abbreviated name of the currently-selected dynamics processor type.

#### 4 Threshold

The horizontal line indicates the currently-specified threshold value and its approximate position in the GR meter.

### 2. Select the channel that you want to edit.

### 3. Press the DYNAMICS 1/2 field to access the DYNAMICS 1/2 popup window.

In the DYNAMICS 1/2 popup window, you can edit the dynamics settings and turn the processor on or off.

### 4. Press the DYNAMICS ON button to adjust the dynamics settings.

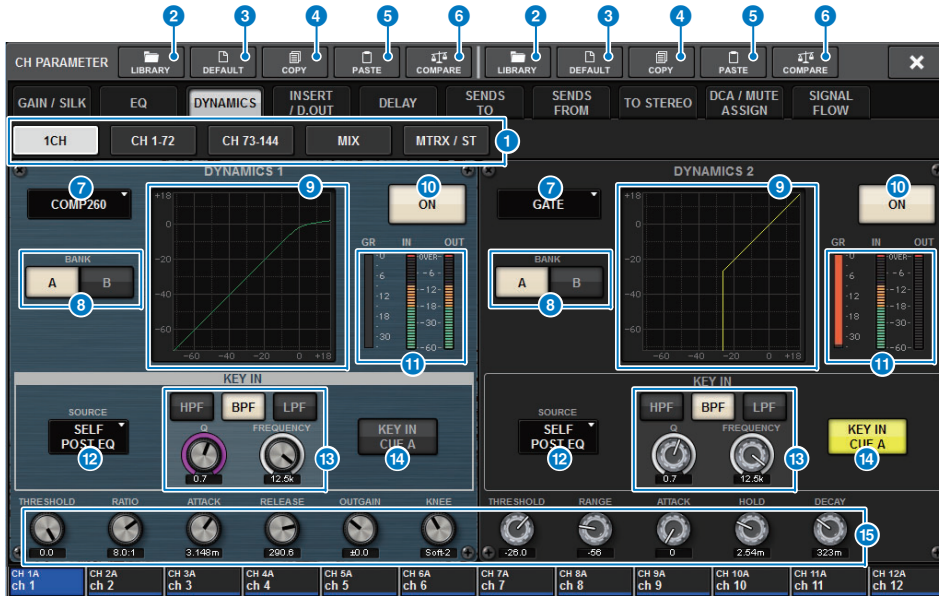
#### NOTE

Even when the DYNAMICS 1/2 popup window is displayed, you can use the knobs in the Selected Channel section to control dynamics.



## DYNAMICS 1/2 popup window (1CH)

All dynamics parameters can be viewed and edited. This is convenient when you want to make detailed dynamics settings for a specific channel.



### 6 COMPARE button

Press this button to switch between and compare the settings stored in buffer memory and the currently-selected settings. If valid data has not been stored in buffer memory, you will be unable to compare the data.

### 7 Dynamics processor type button

Enables you to select the dynamics processor type from the following: LEGACY COMP, COMP260, GATE, DE-ESSER, EXPANDER, DUCKING.

### 8 A/B switch buttons

Enable you to switch between A and B as the storing destination for the dynamics parameters.

### 9 Dynamics graph

Displays the input/output response of the dynamics processors.

### 10 DYNAMICS ON/OFF button

Switches the dynamics processor on or off.

### 11 Dynamics IN/OUT level meters, GR meter

These meters indicate the peak level of the signals before and after the dynamics processing, and the amount of gain reduction. For a stereo channel, these meters indicate the level of both the L and R channels.

### 12 KEY IN SOURCE select button

Enables you to select one of the following as the key-in signal that will trigger dynamics processing.

- SELF PRE EQ.....The pre-EQ signal of the same channel
- SELF POST EQ.....The post-EQ signal of the same channel
- OTHER PRE EQ.....The signal immediately after the EQ of other input or output channels
- DIRECT INPUT.....Press this button to access the INPUT PATCH window that enables you to select the key-in signal.

### 13 KEY IN FILTER field

**(This area will not appear if DE-ESSER is selected.)**

Enables you to make various settings for a filter that lets the key-in signal pass.

#### • Filter select buttons

Select the type of filter from HPF, BPF, or LPF. To disable the filter, press the button that is turned on.

#### • Q knob

Indicates the filter Q setting. Use the screen encoder to adjust the value.

#### • FREQUENCY knob

Indicates the cutoff frequency of the filter. Use the screen encoder to adjust the value.



### 1 Tabs

Use these tabs to select a channel that you want to view on the screen.

### 2 LIBRARY button

Press this button to open the DYNAMICS library window.

### 3 DEFAULT button

Press this button to reset all dynamics parameters to the initial values.

### 4 COPY button

Copies the dynamics parameter settings stored in the bank (selected via the A/B switching buttons) to buffer memory.

### 5 PASTE button

Press this button to paste the settings that were copied in buffer memory to the dynamics of the currently-selected bank. If valid data has not been copied into buffer memory, you will be unable to paste it.

### NOTE

You can copy and paste the parameters between Dynamics 1 and Dynamics 2.



**14 KEY IN CUE button**

This button cue-monitors the signal that is selected as the KEY IN SOURCE. CUE will be defeated if you select a dynamics processor for which this button is not displayed, or if you move to a different screen.

**NOTE**

Even if the Cue mode is set to MIX CUE (the mode in which all channels whose [CUE] key is on are mixed for monitoring), turning on the KEY IN CUE button will cause only the signal of the corresponding channel to be monitored. All [CUE] keys that had been turned on at that time will be forcibly defeated.

**15 Dynamics parameter setting knobs**

Indicate the dynamics parameter values. Use the corresponding screen encoder to adjust the value.

The type of parameters will vary depending on the currently-selected dynamics processor type.

- LEGACY COMP, COMP206, or EXPANDER:



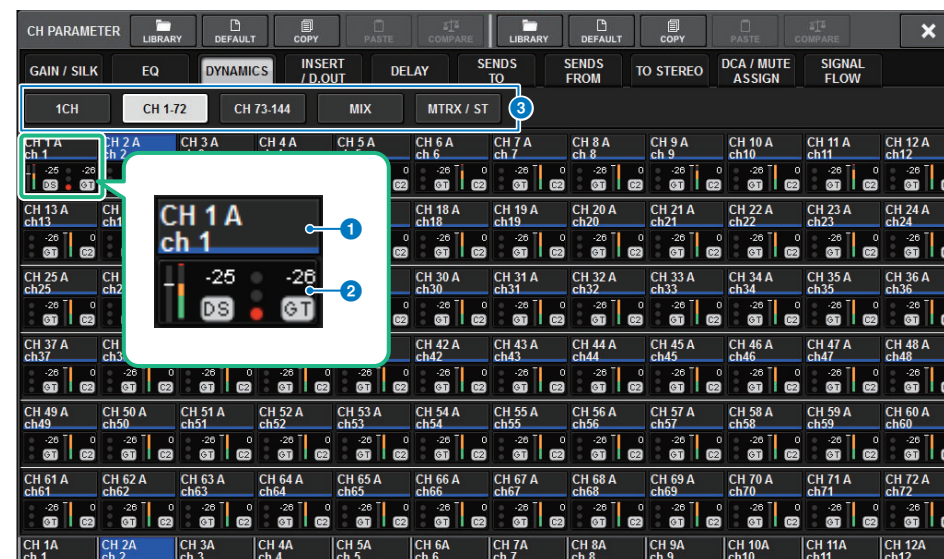
- GATE or DUCKING:



- DE-ESSER:

**DYNAMICS 1/2 popup window (CH 1-72, CH 73-144, MIX, MTRX/ST)**

This window enables you to make settings of the global dynamics parameters for the corresponding channel.

**1 Channel select buttons**

Enable you to select the channel that you want to operate. The current channel icon, number, threshold, and color appear on the button.

**2 Dynamics parameter area**

Displays the type of dynamics processor, meters that indicate the levels of signals after dynamics processing, the GR meter, and the threshold (a numeric value). Press the area to access the DYNAMICS 1ch window of that channel.

If LEGACY COMP, COMP260, DE-ESSER, EXPANDER, or DUCKING has been selected as the dynamics processor type, the abbreviated name of the type appears near the top of this area.

Each abbreviated name means as follows:

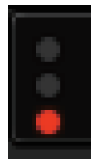
- LC: LEGACY COMP
- C2: COMP260
- GT: GATE
- DS: DE-ESSER
- EX: EXPANDER
- DK: DUCKING

If the dynamics processor is any type other than GATE, the threshold setting is indicated as a horizontal line in the meter area.

Type = Any type other than GATE



Type = GATE



If GATE is selected as the dynamics processor type, the indicator status means the following:

Gate status indicator	Red	Yellow	Green	Dark
On/Off status	On	On	On	Off
Open/Close status	Close	Open	Open	—
Amount of gain reduction	30 dB or higher	Lower than 30 dB	0 dB	—

**3 Tabs**

Use these tabs to select a channel that you want to view on the screen.

**Controlling the dynamics processor via the SELECTED CHANNEL VIEW screen**

1. Press the [VIEW] key to access the SELECTED CHANNEL VIEW screen.



SELECTED CHANNEL VIEW screen

DYNAMICS field

2. Select the channel that you want to operate.
3. Press the DYNAMICS field to access the DYNAMICS 1/2 popup window (page 203).
4. Use the corresponding screen encoder or the [TOUCH AND TURN] knob to adjust the EQ parameters.

# INSERT/D.OUT (Insert/Direct Out)

## About insert

Each channel provides two inserts: Insert 1 and Insert 2. In each insert, you can insert up to four plug-ins, GEQ/PEQ, or external devices (via the I/O jacks). The insert point can be freely selected independently for INSERT 1 and INSERT 2.

For details on inserting plug-ins, refer to “Using plug-ins” (page 263).

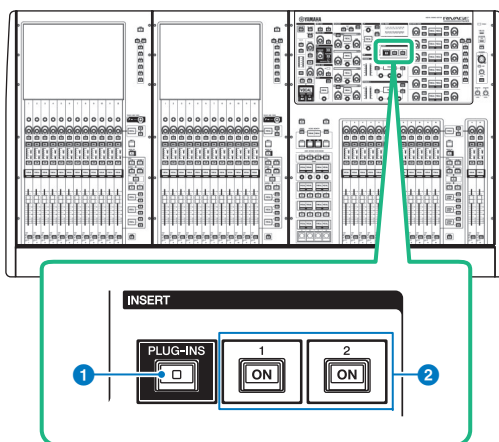
For details on inserting GEQ/PEQ, refer to “Inserting a GEQ/PEQ into a channel” (page 247).

## Inserting an external device (OUTBOARD) into a channel

An external device such as an effect processor can be inserted into the signal route of each channel. There are three ways to control the external device.

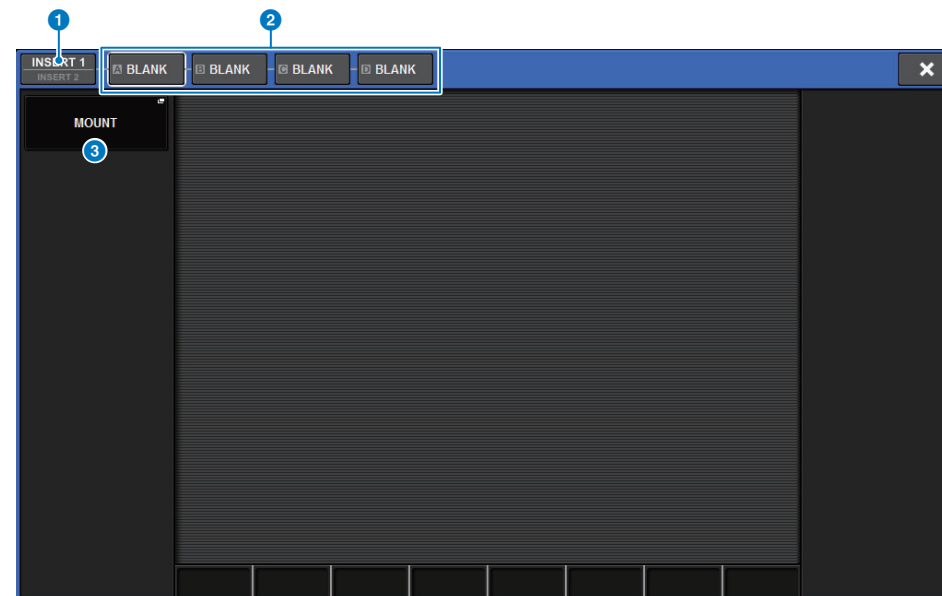
- Controlling via the Selected Channel section
- Controlling via the OVERVIEW screen
- Controlling via the SELECTED CHANNEL VIEW screen

### ■ Controlling via the Selected Channel section

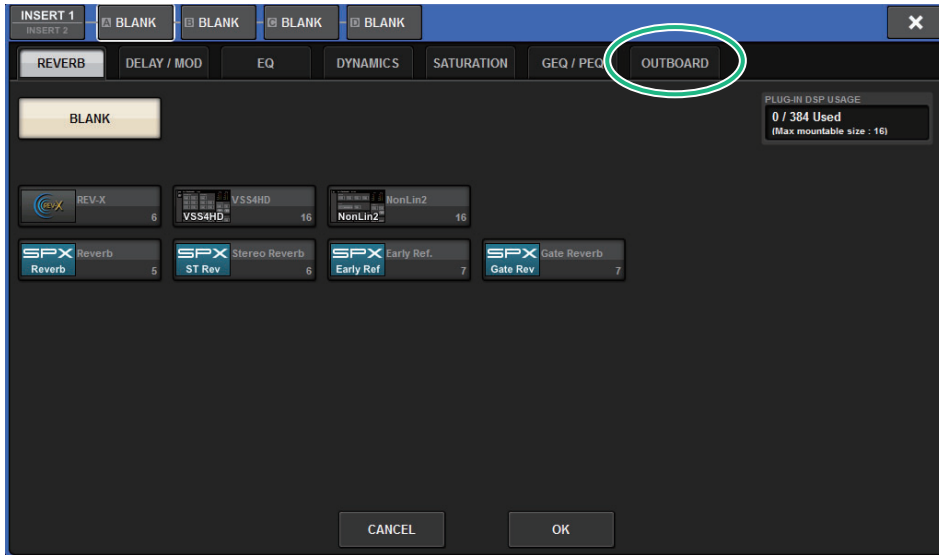


- 1 INSERT [PLUG-INS] key**  
Enables you to recall a parameter setting screen for the inserted plug-ins.
- 2 INSERT 1/2 [ON] keys**  
Switch the INSERT1 and INSERT2 on or off respectively.

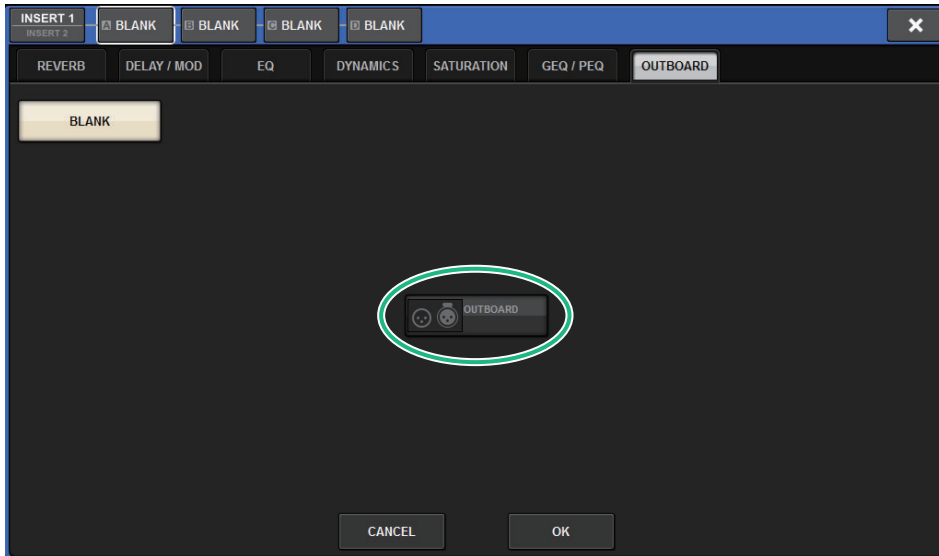
- 1. Select the channel that you want to operate.**
- 2. Press the INSERT [PLUG-INS] key to access the INSERT screen.**



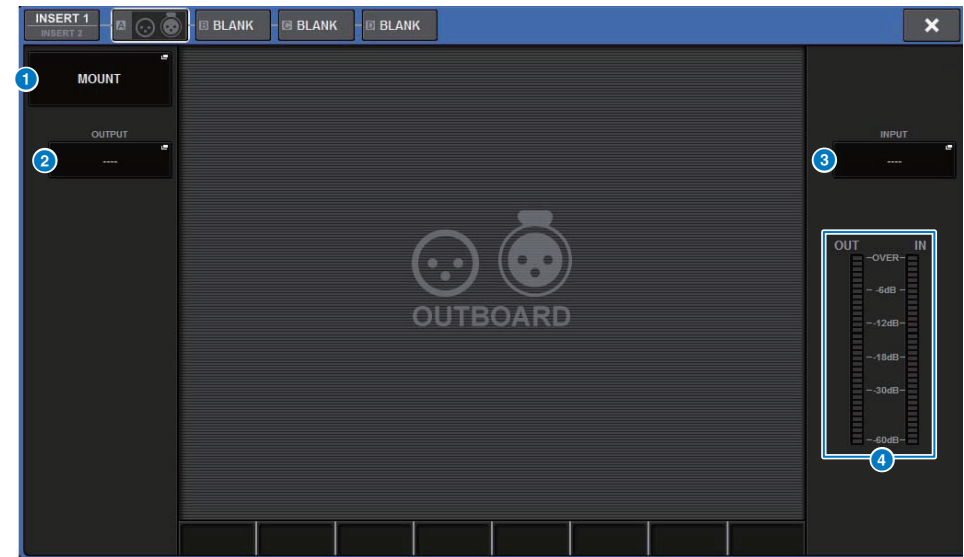
- 1 INSERT 1/2 switch button**  
Switches between INSERT1 and INSERT2.
  - 2 INSERT block [A]-[D] buttons**  
Indicate four plug-ins that have been assigned to INSERT1 and INSERT2 respectively. Press this button to display the edit screen for the assigned plug-in.
  - 3 MOUNT popup button**  
Press this button to display the Mount popup window.
- 3. Use the INSERT 1/2 switch button and INSERT [A]-[D] buttons to select an insert channel and block for which you want to assign the external device.**
  - 4. Press the MOUNT popup button to access the MOUNT popup window.**



5. Press the **OUTBOARD** tab and select **OUTBOARD**.



6. Press the **OK** button to access the **OUTBOARD** screen.



**1 MOUNT popup button**

Press this button to display the MOUNT screen.

**2 INSERT OUT patch select popup button**

Press this button to access a popup window in which you can select an output port. The currently-selected port is indicated on the button. To insert an external device to a channel via the RPi0, you must assign the channel to the TWINLANe network.

**3 INSERT IN patch select popup button**

Press this button to access a popup window in which you can select an input port. The currently-selected port is indicated on the button.

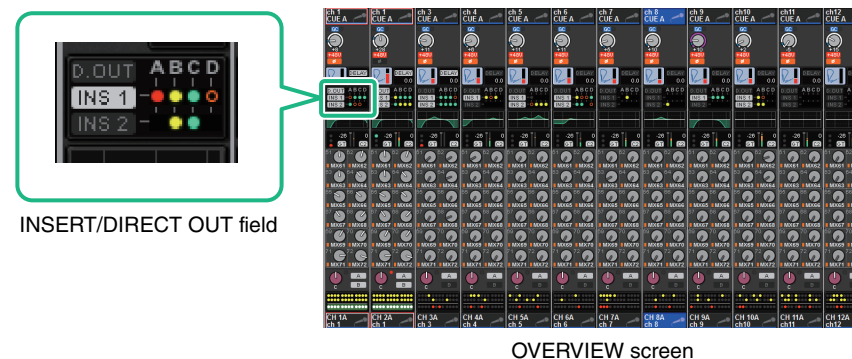
**4 Level meter**

Indicates the level of the signal being output from the insert and the level of the signal being input to the insert.

7. Press the INSERT OUT patch select popup button to access the OUTPUT PATCH popup window.
8. Specify the output port that you want to use as the insert out.
9. Press the INSERT IN patch select popup button to access the INPUT PATCH popup window.
10. Specify the input port that you want to use as the insert in.
11. If necessary, make insert settings for other channels in the same way.

■ Controlling via the OVERVIEW screen

1. Press the [VIEW] key to access the OVERVIEW screen.



2. Press the INSERT/DIRECT OUT field for the channel into which you want to insert: The INSERT/D.OUT popup window appears.  
There are two types of INSERT/D.OUT popup window: 1CH, and 12CH INSERT 1/2. Each window contains the following items.

INSERT/D.OUT popup window (1CH)



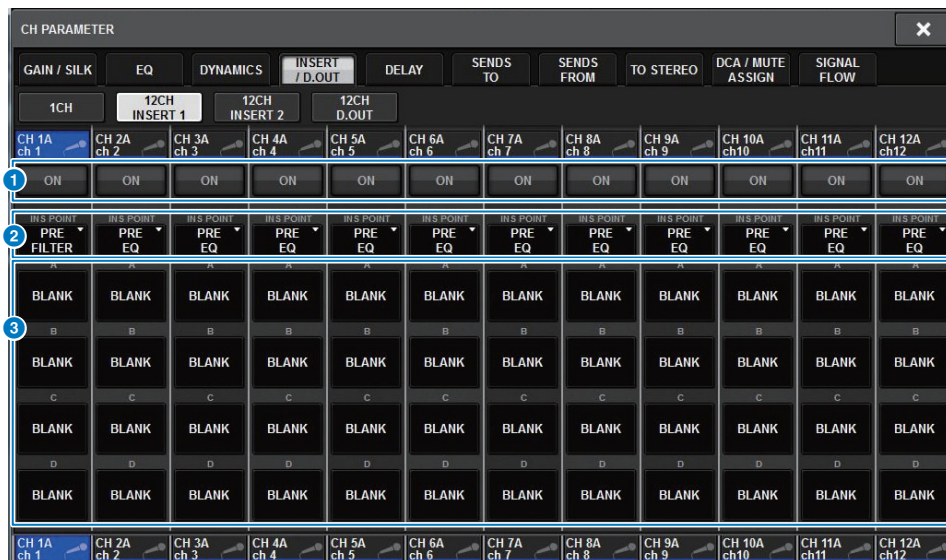


**1 INSERT block [A]–[D] buttons**

These buttons represent four plug-ins that have been assigned to INSERT1 and INSERT2 respectively.

Press one of these buttons to display the edit screen for the assigned plug-in.

**INSERT/D.OUT popup window (12CH INSERT 1, 12CH INSERT 2)**



**1 INSERT ON button**

Switches the insert on/off.

**2 INSERT POINT**

Enables you to select the signal source point from the following:

**Input channels:** PRE FILTER, PRE EQ, PRE DYN1, PRE DYN2, PRE FADER, POST ON

**Output Channels:** PRE FILTER, PRE EQ, PRE DYNA, PRE DELAY, PRE FADER, POST ON

**3 INSERT block [A]–[D] buttons**

These buttons represent four plug-ins that have been assigned to INSERT1 and INSERT2 respectively.

Press this button to display the edit screen for the assigned plug-in.

**3. Press the INSERT block button to which you want to assign the external device: The MOUNT screen appears.**

**4. Follow steps 5–11 on page 207.**

**Controlling via the SELECTED CHANNEL VIEW screen**

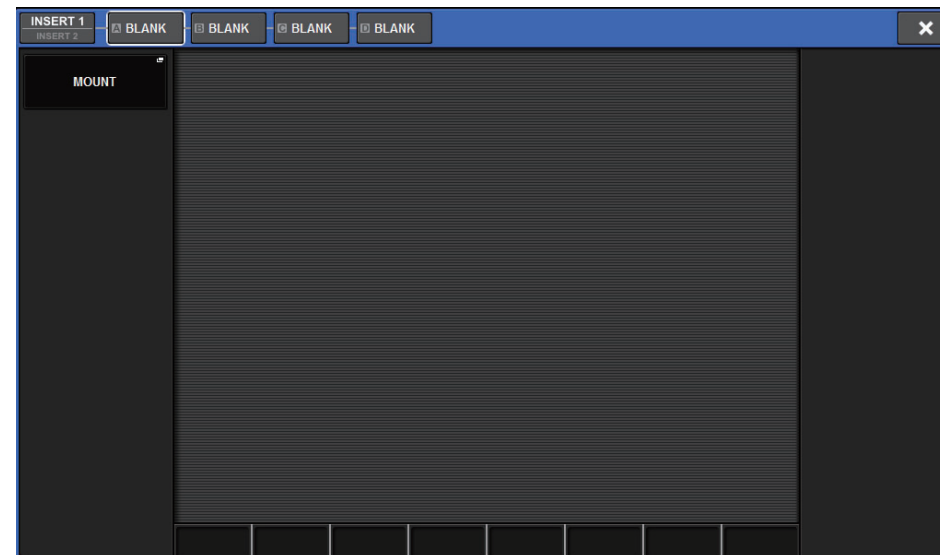
**1. Select the channel that you want to operate.**

**2. Press the [VIEW] key to access the SELECTED CHANNEL VIEW screen.**



SELECTED CHANNEL VIEW screen

**3. Press the INSERT field to access the MOUNT screen.**

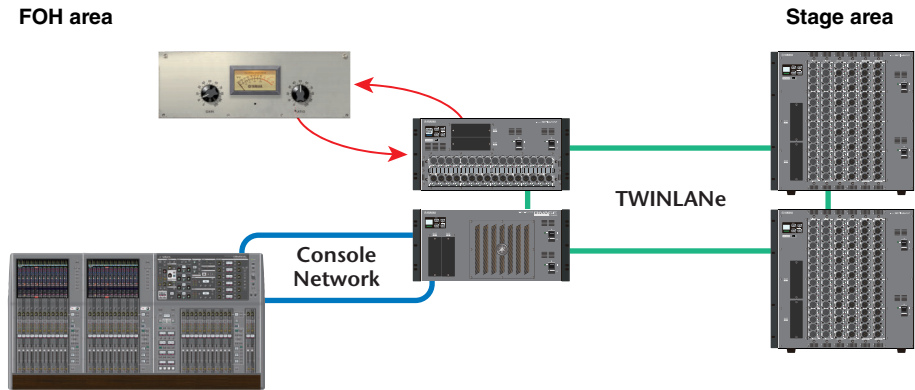


**4. Follow steps 5–11 on page 207.**



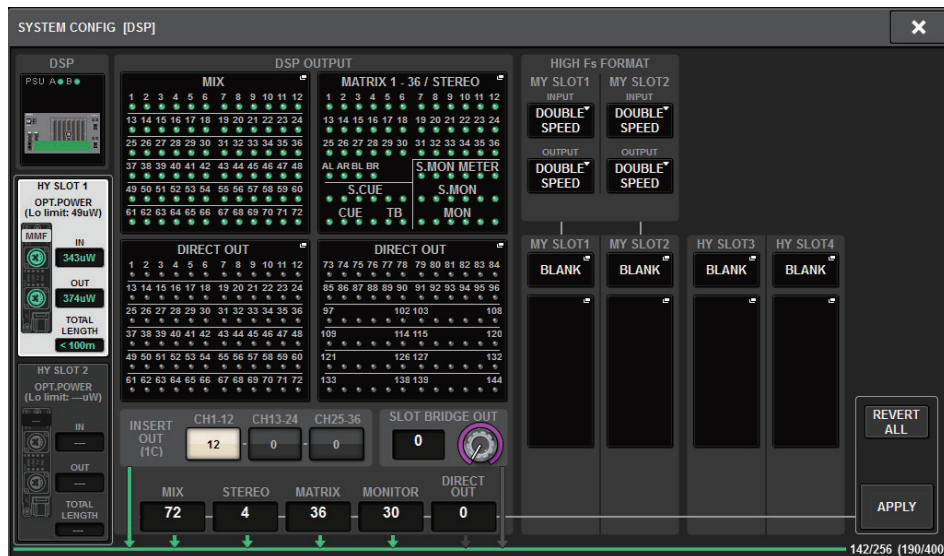
## Inserting an external device into a channel

You can insert an external device (compressor, EQ, etc.) into a channel via on the RPiO. Only the INSERT IC for channels 1-36 supports this function.



1. Assign the channels that will be used by the DSP engines to the TWINLANe network. (page 114)

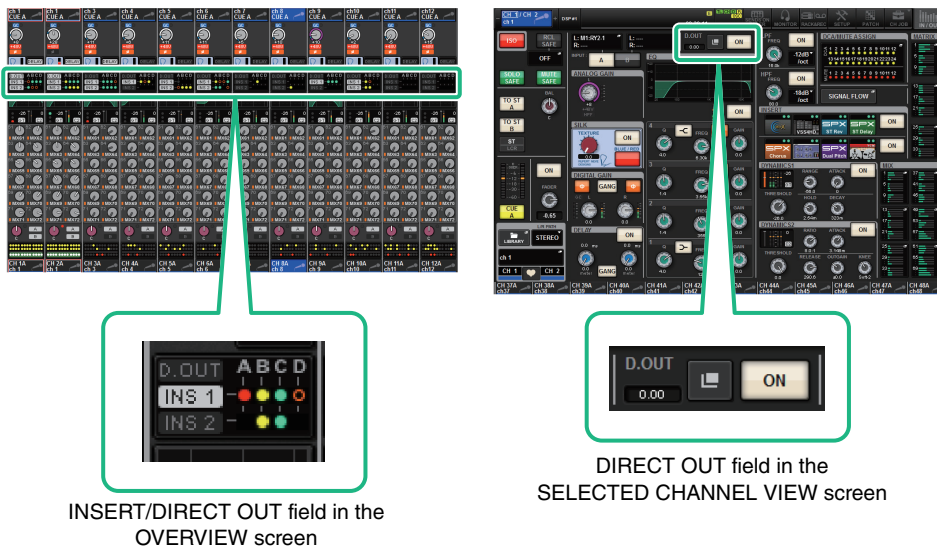
2. Specify the input/output ports that you want to use as the insert out for INSERT IC of channels 1-36.



## Directly outputting an input channel

The signal of an input channel can be directly output from the OUTPUT jack of an I/O rack, any desired OMNI OUT jack, or an output channel of a desired card slot.

1. In the OVERVIEW screen of the input channel that you want to directly output, press the INSERT/DIRECT OUT field, or press the DIRECT OUT field in the SELECTED CHANNEL VIEW screen. The INSERT/D.OUT popup window appears.



INSERT/DIRECT OUT field in the OVERVIEW screen

DIRECT OUT field in the SELECTED CHANNEL VIEW screen

There are two types of INSERT/D.OUT popup window: 1CH and 12CH D. OUT. Each screen contains the following items.

## INSERT/D.OUT popup window (1CH)



### 1 DIRECT OUT point

Enables you to select the signal extraction point as PRE FILTER, PRE EQ, PRE DYN1, PRE DYN2, PRE FADER, POST FADER, or POST ON.

### 2 DIRECT OUT LEVEL knob

Indicates the output level of the Direct Out. You can press this knob, and then use the screen encoder or the [TOUCH AND TURN] knob to adjust the level.

### 3 DIRECT OUT PATCH popup button

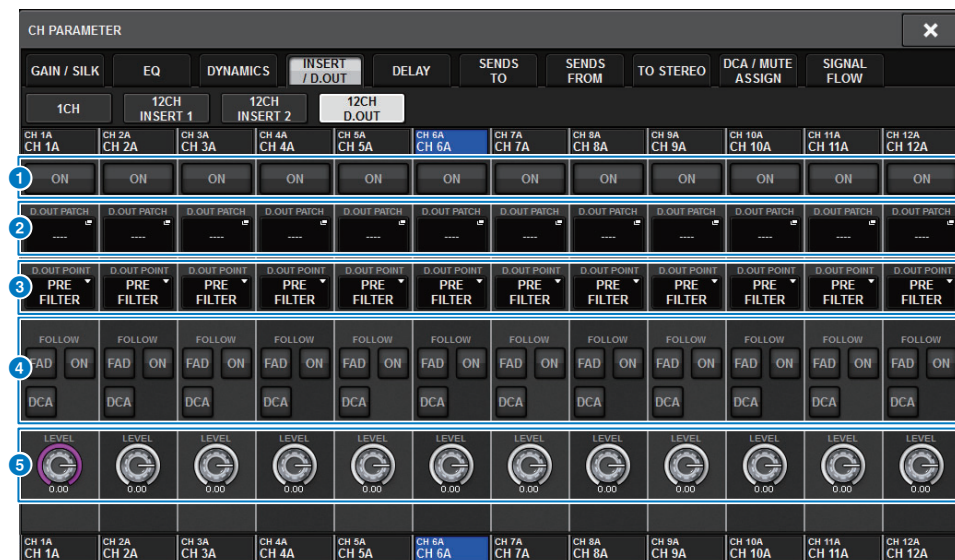
Indicates the currently-selected port. If nothing is selected, the button indicates ----. Press this button to access the patch window.

### 4 DIRECT OUT ON button

Switches direct out on/off. The currently-specified Direct Out point is indicated in the lower part of the button.

## INSERT/D.OUT popup window (12CH/D.OUT)

This window is convenient if you want to make settings for multiple channels at one time.



### 1 DIRECT OUT ON button

Switches direct out on/off. The currently-specified Direct Out point is indicated in the lower part of the button.

### 2 DIRECT OUT PATCH popup button

Indicates the currently-selected port. If nothing is selected, the button indicates “----”. Press this button to access the patch window.

### 3 DIRECT OUT point

Enables you to select the signal extraction point as PRE FILTER, PRE EQ, PRE DYN1, PRE DYN2, PRE FADER, POST FADER, or POST ON.

### 4 FOLLOW setting buttons

Enable you to set parameters for signals routed from input channels to the direct out so that the parameters will follow the FADER/ON/DCA settings.

### 5 DIRECT OUT LEVEL knob

Indicates the output level of the Direct Out. You can press this knob and then use the screen encoder or the [TOUCH AND TURN] knob to adjust the level.

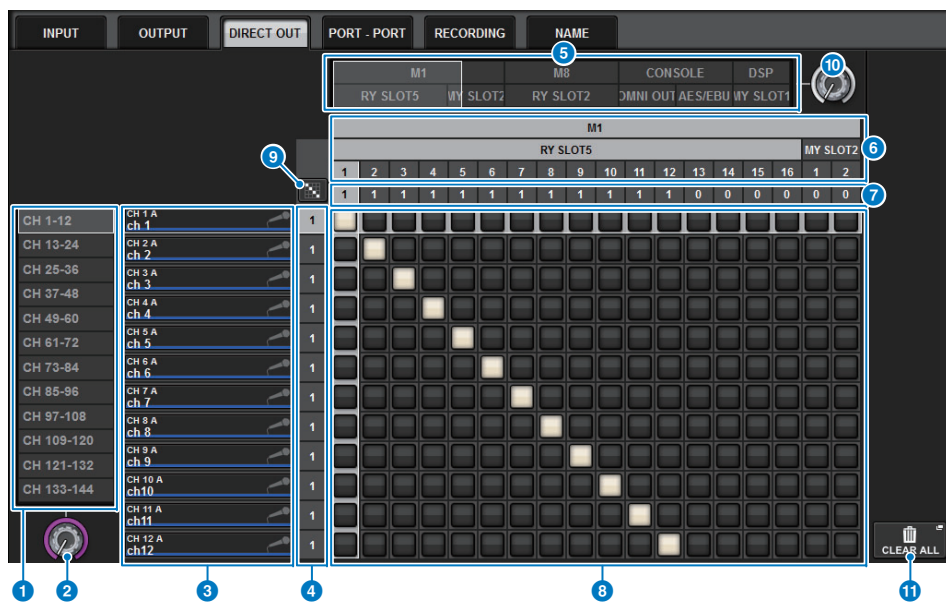
2. Press the DIRECT OUT PATCH popup button to access the DIRECT OUT PATCH popup window.
3. In the DIRECT OUT PATCH popup window, select the output port that you want to use for Direct Out, and then press the CLOSE button.  
You will return to the INSERT/D.OUT popup window.
4. Use the DIRECT OUT point to switch the point from which the Direct Out signal is taken.
5. Use the DIRECT OUT LEVEL knob to adjust the output level of the Direct Out.
6. Press the DIRECT OUT ON button to turn it ON.  
Direct output is now enabled. Adjust the input level and other settings on the external device as necessary.
7. If necessary, make Direct Out settings for other channels in the same way.

## Patching multiple Direct Outs simultaneously

1. Press the PATCH button on the menu bar to access the PATCH screen. This screen includes several pages, which you can switch between using the tabs located at the top of the screen.



2. Press the DIRECT OUT tab to access the DIRECT OUT page. The window contains the following items.



- 1 **Channel select list**  
Enables you to select the channels that you want to view on the screen.
- 2 **Channel select knob**  
Enables you to select the channel that you want to use for Direct Out.
- 3 **Channel display**  
This area displays the channel name of each input channel that will be a patch source.

- 4 **Output patch number indication**  
Indicates the number of Direct Outs assigned to each input channel.
  - 5 **Category select list**  
Select the ports that you want to view on the screen.
  - 6 **OUTPUT COMPONENT/SLOT/CH (output components/slots/channels)**  
From the top, this section indicates the type of the output component, slot number, and channel number for the output port. The abbreviations displayed in the output component column have the following meaning.
    - Mx, Sx.....I/O rack (x is the UNIT ID number)
    - CS1, CS2.....Control surface
    - DSP .....DSP engine
  - 7 **DIRECT OUT ASSIGN (assign)**  
Indicates the number of channels assigned to each port.
  - 8 **Grid**  
This grid enables you to patch input channels (vertical columns) to output ports (horizontal lines). Currently-patched grids are indicated by white squares. Press or click a desired grid to set or disable the patch.
  - 9 **Continuous patch button**  
Press the continuous patch button, and then rotate the select knobs (2) (10) to patch the range of intersecting channels. If you press the continuous patch button, the checkmark button and the X button will appear. Press the checkmark button again to confirm the selected continuous patches. Press the X button to revert the continuous patches to the previous state.
  - 10 **Port select knob**  
Selects the port that will be used for Direct Out.
  - 11 **CLEAR ALL button**  
Press this button to clear all patches.
3. Use the port select knob to display the ports of the slot that will be used for REC OUT.
  4. Use the channel select knob to display channels.
  5. Press a grid cell to patch the corresponding channel.

# DELAY

## About delay

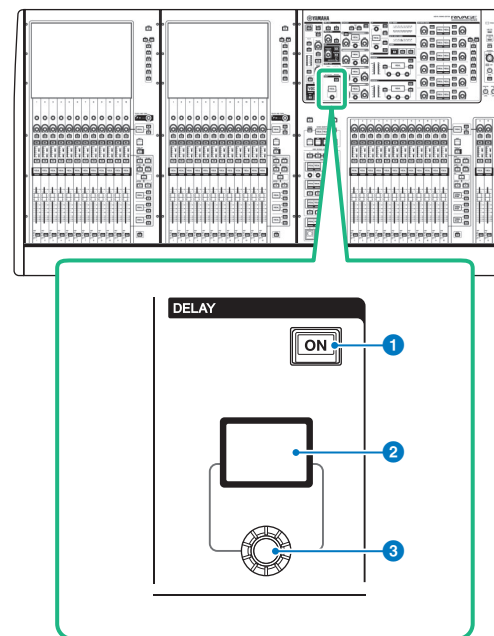
Each input/output channel features a channel delay of up to 1000 msec. You can select the delay time unit from the following: meter, feet, sample, msec, frame, depending on your application. You can also specify insert points for the delay on each channel individually.

## Using delay

There are three ways to set the delay:

- Controlling the delay via the Selected Channel section
- Controlling the delay via the OVERVIEW screen
- Controlling the delay via the SELECTED CHANNEL VIEW screen

### ■ Controlling the delay via the Selected Channel section



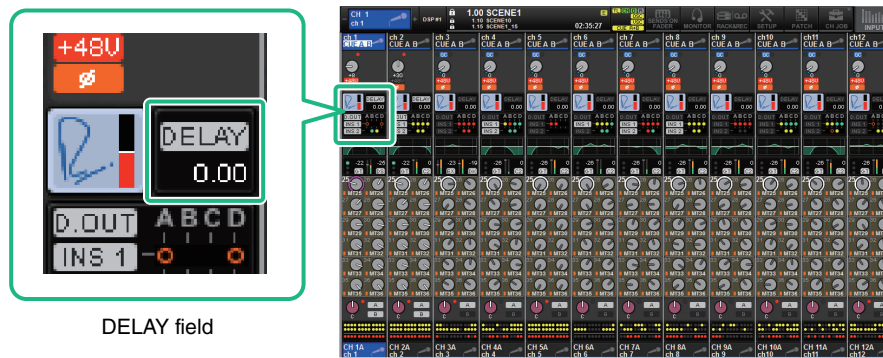
- 1 DELAY [ON] key**  
Switches the delay on or off.
- 2 DELAY display**  
Indicates the delay value.
- 3 [DELAY] knob**  
Sets the delay value.

- 1.** Use a [SEL] key to select the channel you want to control.
- 2.** Turn on the DELAY [ON] key in the Selected Channel section.
- 3.** Use the [DELAY] knob to adjust the DELAY value.



## ■ Controlling the delay via the OVERVIEW screen

1. Press the [VIEW] key to access the OVERVIEW screen.



DELAY field

OVERVIEW screen

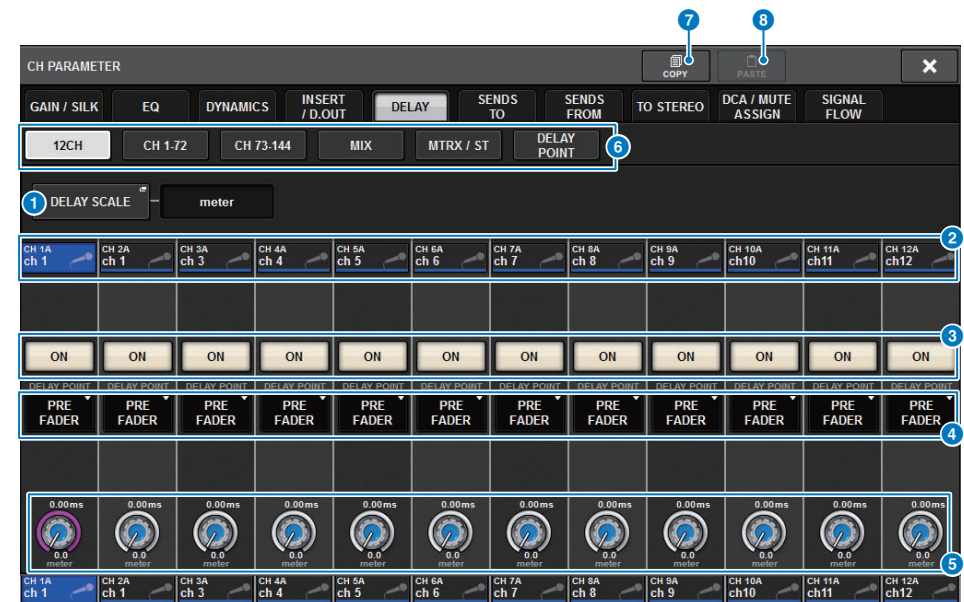
2. Press the DELAY field to access the DELAY popup window.

This window includes several pages, which you can switch between using the tabs located at the top of the window.



3. Press the 12CH tab to open the DELAY popup window (12CH).
4. Use the on-screen buttons, screen encoders, and the [TOUCH AND TURN] knob to set the delay.
5. Perform the same operations for other channels as desired.  
If you are viewing the 12ch DELAY popup window, you can use the Layer Select keys to switch the channels being controlled in groups of twelve. You can also press the meter area to switch channels.
6. When you finish making settings, press the X symbol in the upper right of the window.

## DELAY popup window (12ch)



### 1 DELAY SCALE popup button

Press this button to access the DELAY SCALE popup window ([page 217](#)), in which you can select the unit for the delay time.

### 2 Channel select buttons

Each button will light to indicate that the corresponding channel is selected. Press the button to select the channel.

### 3 DELAY ON buttons

Switch delay on or off.

### 4 Delay insert point select buttons

Enable you to select the delay insert point from the following: PRE HPF, PRE EQ, PRE DYN1, PRE DYN2, PRE FADER, POST FADER.

### 5 Delay setting knobs

Indicate the channel delay value. Use the corresponding screen encoder or the [TOUCH AND TURN] knob to adjust the parameters. You can view the current value immediately above the knob (always shown in unit of ms) and below the knob (shown using the currently-selected scale). Press the knob to display a popup window, in which you can set the delay time.

#### NOTE

If msec (millisecond) has been selected for the DELAY SCALE, nothing will appear above the knob.



**6 Tabs**

Use these tabs to select a channel that you want to view on the screen. Press this button to reset all dynamics parameters to the initial values.

**7 COPY button**

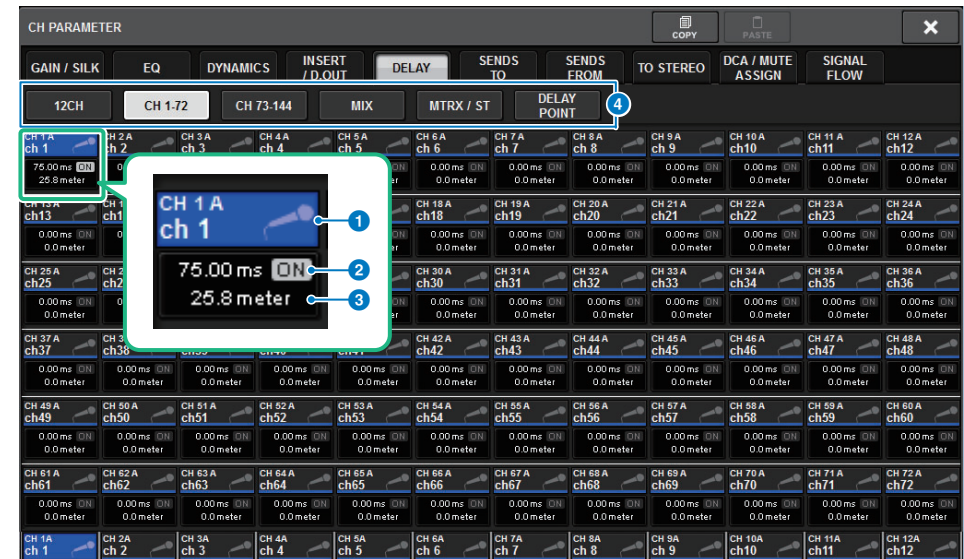
Copies the delay parameter settings to buffer memory.

**8 PASTE button**

Press this button to paste the settings that were copied in buffer memory to the delay of the currently-selected channel. If valid data has not been copied into buffer memory, you will be unable to paste it.

**DELAY popup window (CH 1-72, CH 73-144, MIX, MTRX/ST)**

This window displays the corresponding input channels (or output channels) simultaneously. It is useful when you want to quickly check the delay setting for multiple channels.

**1 Channel select buttons**

Enable you to select the channel that you want to operate. The current channel icon, number, and color appear on the button.

**2 DELAY ON indicator**

Indicates the on/off status of the delay.

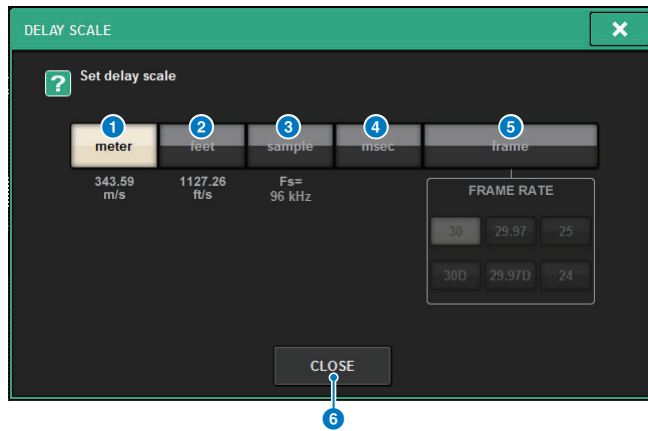
**3 DELAY TIME button**

You can view the delay value when the delay is turned on (always displayed in units of ms on the upper row, and in the currently-selected scale on the bottom row). Press this button to access the DELAY TIME popup window ([page 217](#)), in which you can set the delay time.

**4 Tabs**

Use these tabs to select a channel that you want to view on the screen.

## DELAY SCALE popup window



You can select the delay scale from the following five options.

### 1 METER

The distance in meter, calculated as the speed of sound at an air temperature of 20 °C (343.59m/s) × the delay time (seconds).

### 2 FEET

The distance in feet, calculated as the speed of sound at an air temperature of 20 °C (68 °F) (1127.26 feet/s) × the delay time (seconds).

### 3 SAMPLE (number of samples)

The delay time is shown as the number of samples. If you change the sampling frequency on which the RIVAGE PM series operates, the number of samples will change accordingly.

### 4 msec (milliseconds)

The delay time is shown in units of milliseconds.

### 5 FRAME

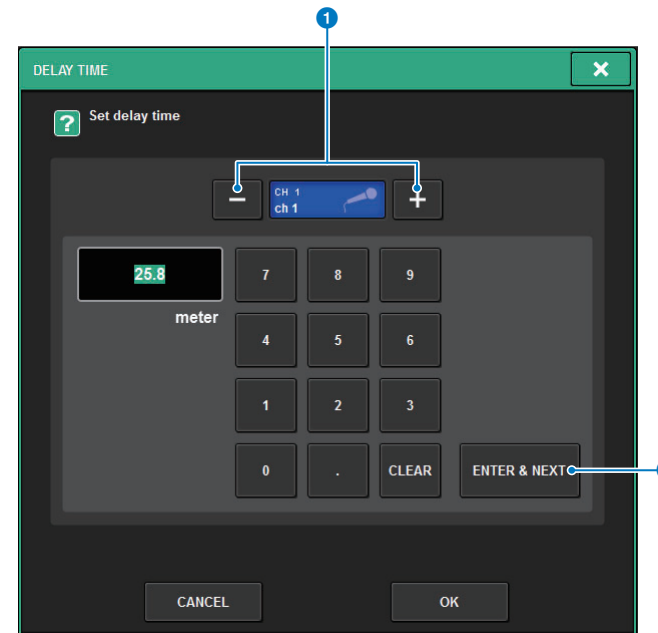
The delay time is shown in units of frames.

Use the six buttons located below the FRAME button to select the number of frames per second.

### 6 CLOSE button

Closes the DELAY SCALE popup window.

## DELAY TIME popup window



Using the ENTER & NEXT button enables you to set the delay time for each channel consecutively.

### 1 Channel select +/- buttons

The field indicates the currently-selected channel. Press the + button to select the next channel. Press the – button to select the previous channel.

### 2 ENTER & NEXT button

Press this button to confirm the delay time setting, and then move to the next channel.

■ Controlling the delay via the SELECTED CHANNEL VIEW screen

1. Press the [VIEW] key to access the SELECTED CHANNEL VIEW screen.



DELAY field

SELECTED CHANNEL VIEW screen

2. Select the channel that you want to edit.
3. Use the corresponding screen encoder or the [TOUCH AND TURN] knob to adjust the delay parameters.
4. Set the insert point if necessary.  
Use the DELAY popup window (page 215) to set the insert point.

**NOTE**

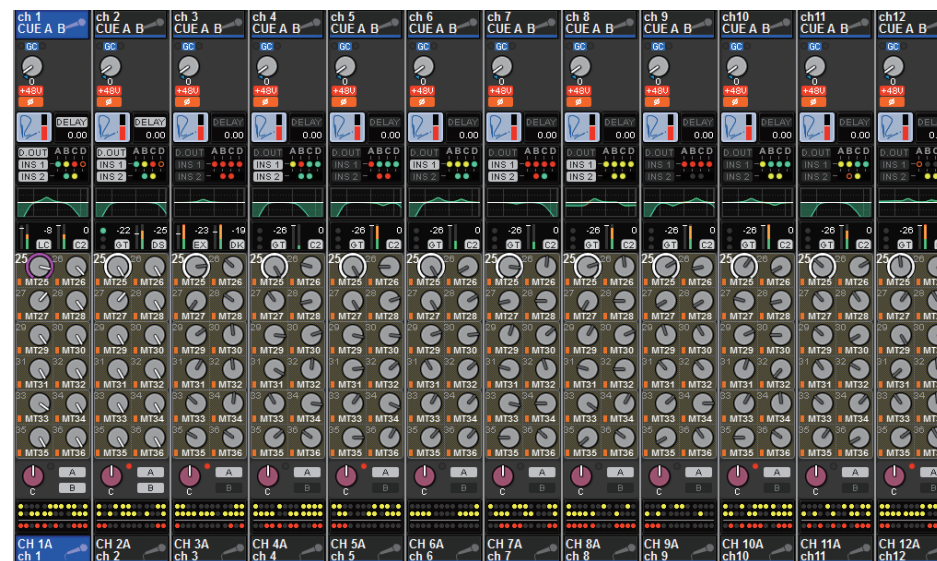
For information on monitor/cue delay, refer to page 163.

## SENDS TO/SENDS FROM

### Using SENDS TO

By using SENDS TO, you can specify the sends to a specific MIX or MATRIX bus for 12 channels at a time.

1. Press the [VIEW] key to access the OVERVIEW screen.



2. Use the MIX/MATRIX SENDS [MIX]/[MATRIX] keys to switch the type of send-destination bus.
3. Use the MIX/MATRIX SENDS [1-12]/[13-24]/[25-36]/[37-48]/[49-60]/[61-72] keys to select a bank of send-destination buses.
4. Select the SEND knob of the corresponding send-destination MIX/MATRIX bus, and press it again to access the SENDS TO popup window.

**NOTE**

When MATRIX channels are selected, pressing the SEND knob again will access the SENDS FROM popup window (page 220).

## SENDS TO popup window

**1 ALL PRE button**

Sets the send point to “PRE” for all send sources (input channels, MIX channels, STEREO channels) of the selected send destination. At this time, the PRE button (5) will light.

**2 ALL POST button**

Sets the send point to “POST” for all send sources (input channels, MIX channels, STEREO channels) of the selected send destination. At this time, the PRE button goes dark.

**3 Send destination select button**

Indicates the currently-selected send destination.

You can use the -/+ buttons at left and right to switch to adjacent channels. You can use the <</>> buttons to switch in steps of 12 channels.

**NOTE**

Use the [MIX]/[MATRIX] keys to switch the send-destination selection. You can also switch by holding down the [SHIFT] key and pressing the meter area display section.

**4 Channel select buttons**

Indicate the send-source channel being controlled. Press this button to select the on-screen selected channel. The current channel icon, number, and color appear on the button, and the channel name appears below the button.

**NOTE**

You can use the layer select keys to switch the send-source selection.

**5 PRE button**

Switches the send point to PRE or POST for each send-source channel. If a button is lit, the send point is set to PRE.

**6 SEND ON button**

Switches send on/off for each send-source channel.

**7 FOLLOW setting buttons**

Enable you to set parameters for signals routed from input channels to the MIX/MATRIX bus so that the parameters will follow the FADER/ON/DCA settings.

**8 SEND PAN/BALANCE knob**

Adjusts the pan or balance when the send-destination bus is stereo. If the send destination is monaural or is set to FIXED, this knob does not appear. If the send source is monaural, the knob adjusts pan. If the send source is stereo, the knob adjusts balance.

**9 SEND LEVEL knob**

Indicates the send level to the selected send destination. You can press this and then use the screen encoder or the [TOUCH AND TURN] knob to adjust it. If the send destination is set to FIXED, this knob will not appear.

**5.** You can use the SEND ON button to turn on/off the signal that is sent from each input or MIX channel to the currently-selected MIX/MATRIX bus.

**6.** If necessary, use the PRE button to select the send point of the signal that is sent from each input channel, MIX channel, or STEREO channel to a VARI-type MIX bus or MATRIX bus.

**NOTE**

- You can flexibly select the send point for each channel (page 142).
- The PRE button is not shown for a FIXED-type MIX bus.

**7.** Use the SEND LEVEL knob to adjust the send level.



## Using SENDS FROM

By using SENDS FROM, you can specify the sends from a specific channel to the MIX or MATRIX buses for 12 channels at a time.

1. Press the [VIEW] key to access the SELECTED CHANNEL VIEW screen.



2. Press the MIX popup button or the MATRIX popup button to access the SENDS FROM popup window.

## SENDS FROM popup window



- 1 **Send-source select button**  
Indicates the currently-selected send source. You can use the -/+ buttons at left and right to switch to adjacent channels. You can use the <</>> buttons to switch in steps of 12 channels. This indication is linked with the on-screen selected channel.
- 2 **Bus indication**  
Shows the send-destination bus. Use the [MIX]/[MATRIX] keys to switch the send-destination selection. You can also switch this by holding down the [SHIFT] key and pressing the meter area display section.
- 3 **PRE button**  
Selects either PRE or POST as the send point of the signal that is sent to each bus. If a button is lit, the send point is set to PRE.
- 4 **SEND ON button**  
This button switches send to each bus on/off.
- 5 **FOLLOW setting buttons**  
Enable you to set parameters for signals routed from input channels to the MIX/MATRIX bus so that the parameters will follow the FADER/ON/DCA settings.

**6 SEND PAN/BALANCE knob**

Adjusts the pan/balance when the send-destination bus is stereo. If the bus is monaural or is set to FIXED, this knob will not be shown.

If the send source is monaural, the knob adjusts pan.

If the send source is stereo, the knob adjusts balance.

**7 SEND LEVEL knob**

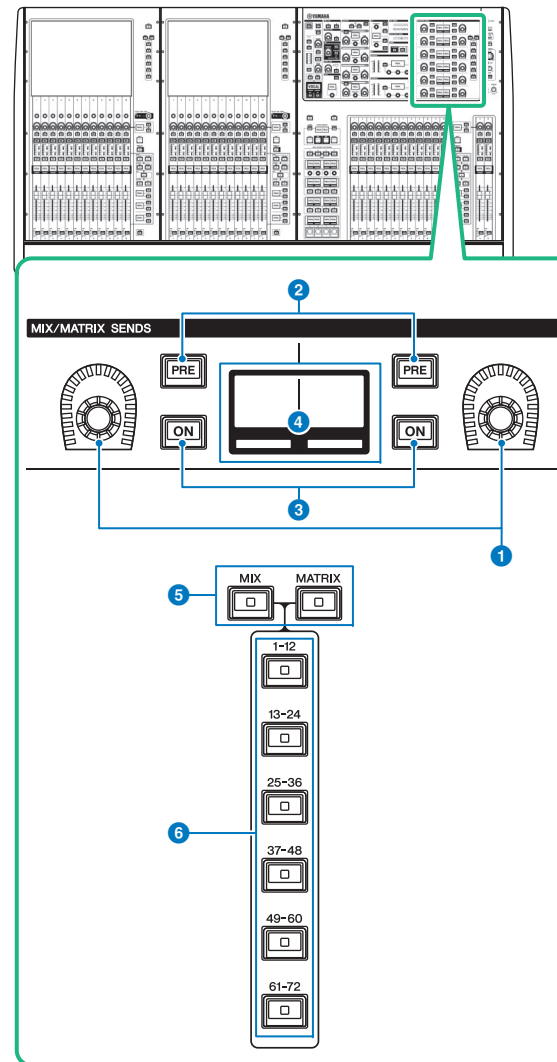
Adjusts the send level to the corresponding bus. If the send-destination bus is set to FIXED, this knob will not be shown.

**3. Use the SEND ON button to switch on/off the signal that is sent from the currently-selected channel to the MIX or MATRIX bus.****4. If necessary, use the PRE button to select the send point of the signal that is sent to the MIX or MATRIX bus.****NOTE**

- You can flexibly select the send point for each channel ([page 142](#)).
- The PRE button is not shown for a FIXED-type MIX bus.

**Using the Selected Channel section to make send settings**

You can use the knobs of the Selected Channel section to adjust the send levels.

**MIX/MATRIX SEND section**

- MIX/MATRIX knobs**  
Adjust the send levels for the corresponding buses.
- MIX/MATRIX SENDS [PRE] keys**  
Toggle the send point between PRE and POST. If a key lights up, the send point is set to PRE.
- MIX/MATRIX SENDS [ON] keys**  
Switch the send signal to the corresponding bus on or off.
- MIX/MATRIX SENDS display**  
Indicates the corresponding bus.
- MIX/MATRIX SENDS [MIX]/[MATRIX] keys**  
Switch the type of the send destination bus.
- MIX/MATRIX SENDS [1-12]/[13-24]/[25-36]/[37-48]/[49-60]/[61-72] keys**  
Selects a bank for the send destination bus.



1. Verify that an output port is assigned to the MIX/MATRIX bus to which the signal is sent, and that the corresponding output port is connected to the monitor system or an external effect processor.
2. Use the top panel [SEL] keys to select the channel that will send a signal to the MIX/MATRIX bus.
3. Press the MIX/MATRIX SENDS [PRE] key to switch the send point to PRE or POST.

**NOTE**

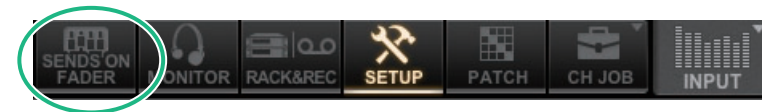
If the send destination is set to FIXED, the MIX/MATRIX SENDS [PRE] key is unavailable.

4. Press the MIX/MATRIX SENDS [ON] key to turn it on.
  5. Use the MIX/MATRIX SENDS knobs of the Selected Channel section to adjust the send levels to the MIX/MATRIX buses.
- NOTE**
- If the send-destination bus is stereo, the left knob adjusts the pan/balance and the right knob adjusts the send level.
  - To monitor the signal that is being sent to a specific MIX/MATRIX bus, recall the corresponding MIX/MATRIX channel and press the corresponding [CUE] key.
6. Use the top panel [SEL] keys to switch channels, and adjust the send levels to all MIX/MATRIX buses in the same way.

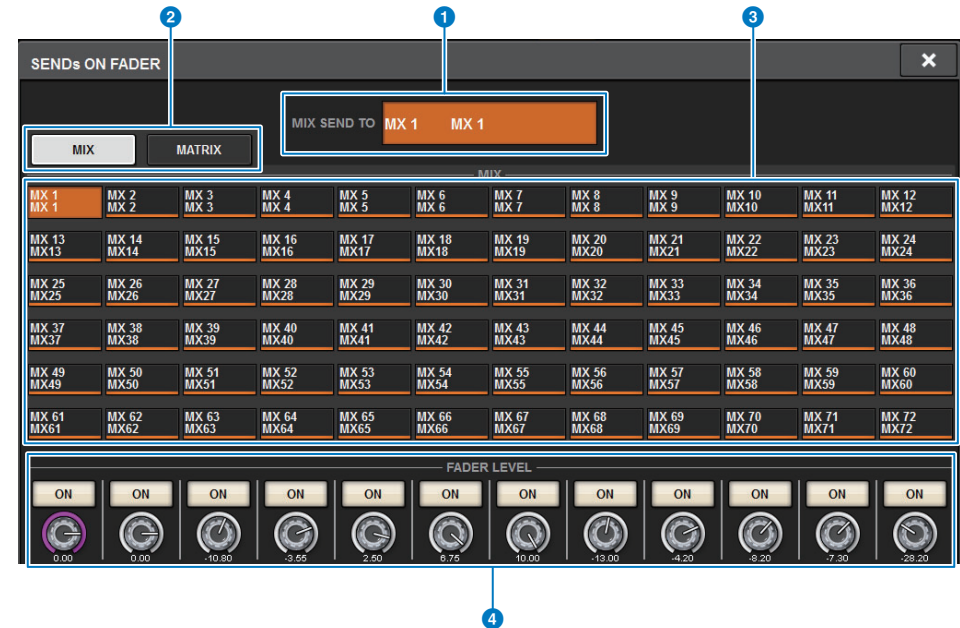
## Using the faders to adjust the sends (SENDS ON FADER mode)

You can use the top panel faders to adjust the signals that are sent from a specific channel to the MIX/MATRIX buses.

1. Verify that an output port is assigned to the MIX/MATRIX bus to which the signal is sent, and that the corresponding output port is connected to the monitor system or an external effect.
2. Press the SENDS ON FADER button on the menu bar or press the top panel [SENDS ON FADER] key to access the SENDS ON FADER popup window.



The RIVAGE PM series switches to SENDS ON FADER mode, and the SENDS ON FADER popup window appears. The faders in the Channel Strip section move to indicate the send level of the signals that are routed from each channel to the currently-selected MIX/MATRIX bus. The [ON] keys also change to the SEND ON status.



**1 SEND TO indication**

Indicates the currently-selected send destination. This is linked with the on-screen selected channel/parameter.

**2 Tabs**

Switch between MIX and MATRIX.

**3 MIX/MATRIX bus select buttons**

You can press a button to select the send destination. This is linked with the on-screen selected channel/parameter.

**4 FADER LEVEL ON field**

This field indicates the content that is selected by the PARAMETER SHOWN ON SoF SCREEN setting in PREFERENCES (page 356). You can select FADER LEVEL, SEND PAN, or SEND LEVEL.

**3. Press a tab to switch between MIX and MATRIX.****4. Use the MIX/MATRIX select buttons to select the send-destination MIX/MATRIX bus.****NOTE**

If you press the currently-selected MIX/MATRIX select button once again, cue monitor turns on for the corresponding MIX/MATRIX channel. This method is convenient when you want to monitor the signal that is being sent to the selected MIX/MATRIX bus.

**5. Using the faders of the top panel Channel Strip section, adjust the send level to the selected MIX/MATRIX bus from the channels that are recalled (rolled out) to the layer.****6. Repeat steps 4–5 to adjust the send levels for other MIX/MATRIX buses in the same way.****7. When you finish adjusting the MIX/MATRIX send levels, press the [SENDS ON FADER] key or the SENDS ON FADER button.**

The main area display returns to its previous state, and the RIVAGE PM series exits SENDS ON FADER mode and returns to normal mode.

**NOTE**

If you press the × button in the upper right of the screen, SENDS ON FADER mode will be maintained when you close the screen. To exit SENDS ON FADER mode, perform step 7.

## Using the Quick data copy function

This function enables you to copy desired channel parameters to multiple channels. It is very useful and efficient if you need to program the day before a concert.

Parameters that can be copied include send levels, send on/off, pan/balance, send points, EQ and dynamics types, and FOLLOW settings.

- **Send level**

You can copy the send level of an input channel to the send levels for multiple input channels to MIX/MATRIX buses.

- **Send on/off**

You can copy the send on/off status of an input channel to the send on/off status for multiple input channels to MIX/MATRIX buses.

- **Pan/balance**

You can copy the pan/balance settings of an input channel to the pan/balance settings for multiple input channels to MIX/MATRIX buses.

- **Send point**

You can copy the send point of an input channel to the send points for multiple input channels to MIX/MATRIX buses.

- **EQ and dynamics processor type**

You can copy the EQ/dynamics processor type on an input channel to multiple input channels. You can also copy the EQ/dynamics processor type from a MIX bus to multiple MIX buses, or from a MATRIX bus to multiple MATRIX buses.

- **FOLLOW settings**

You can copy the settings that allow the parameters for the input channel signal (routed to the MIX/MATRIX bus or direct out) to follow the FADER/ON/DCA settings.

## ■ Using the copy function in the OVERVIEW screen, SENDS TO popup window, or SENDS FROM popup window

The following table lists the controllers and corresponding parameters.

Screen	Controller	Parameter
OVERVIEW screen	SEND knob	Send level*
	SEND ON/OFF button	Send on/off
SENDS TO popup window	SEND LEVEL knob	Send level*
	SEND PAN/BALANCE knob	Pan/balance
	SEND ON button	Send on/off
	PRE button	Send point
SENDS FROM popup window	SEND LEVEL knob	Send level*
	SEND PAN/BALANCE knob	Pan/balance
	SEND ON button	Send on/off
	PRE button	Send point
SENDS TO popup window SENDS FROM popup window	FOLLOW setting buttons	To follow the FADER/ON/ DCA settings.

\* Overlay offset values will not be copied.

1. In the OVERVIEW screen, while pressing and holding down the [SHIFT] key, press the SEND LEVEL knob or the SEND ON/OFF button to display the PARAMETER COPY popup window.



The window contains the following items.

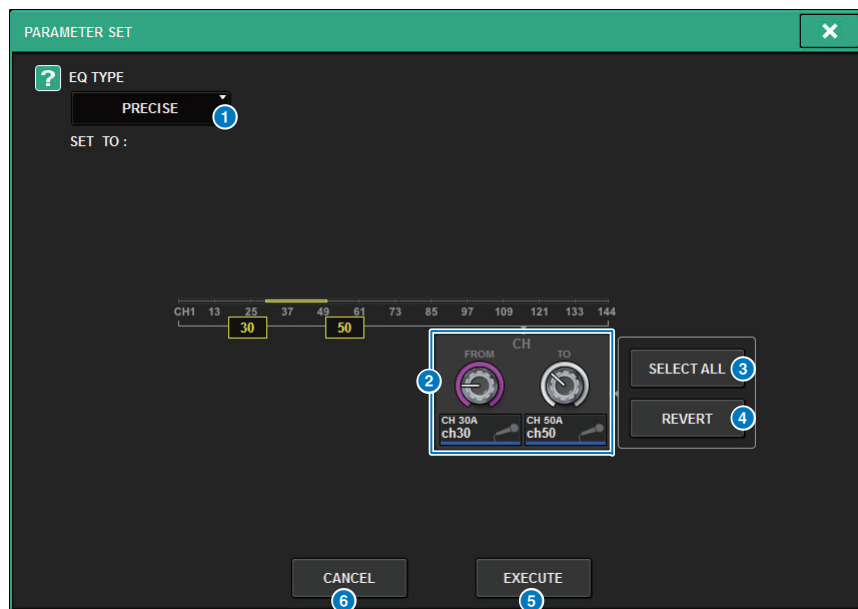
1. **Copy source**  
Displays the copy source channel (and its destination bus) and the parameter value.
  2. **Copy destination select knob**  
Selects the copy destination channel (or its destination bus).
  3. **SELECT ALL button**  
Selects all channels (or the destination buses) as the copy destination.
  4. **REVERT button**  
Revert the copy destination settings to status obtained when the PARAMETER COPY popup window was displayed.
  5. **EXECUTE button**  
Copies the selected parameter and closes the window.
  6. **CANCEL button**  
Aborts the copy operation and closes the window.
2. **Select the copy destination, and then press the EXECUTE button.**  
The parameter is copied to the selected channel number. To abort the copy operation, press the CANCEL button instead of the EXECUTE button.

## ■ Using the copy function in the HPF/EQ popup window or the DYNAMICS1/2 popup window

The following table lists the controllers and corresponding parameters.

Screen	Controller	Parameter to copy
HPF/EQ popup window	EQ type select button	EQ Type
DYNAMICS 1/2 popup window	Dynamics processor type select button	Dynamics processor type
INSERT/D.OUT popup window (12CH/D.OUT)	FOLLOW setting buttons	To follow the FADER/ON/DCA settings.

1. In the HPF/EQ popup window, while pressing and holding down the [SHIFT] key, press the dynamics processor type select button to display the PARAMETER SET popup window.



The window contains the following items.

- 1 **Copy source**  
Indicates the type to copy. Select the type as needed.
- 2 **Copy destination select knob**  
Selects the channel number as the copy destination.

- 3 **SELECT ALL button**  
Selects all channels as the copy destination.
- 4 **REVERT button**  
Cancels the SELECT ALL button setting.
- 5 **EXECUTE button**  
Copies the selected parameter and closes the window.
- 6 **CANCEL button**  
Aborts the copy operation and closes the window.

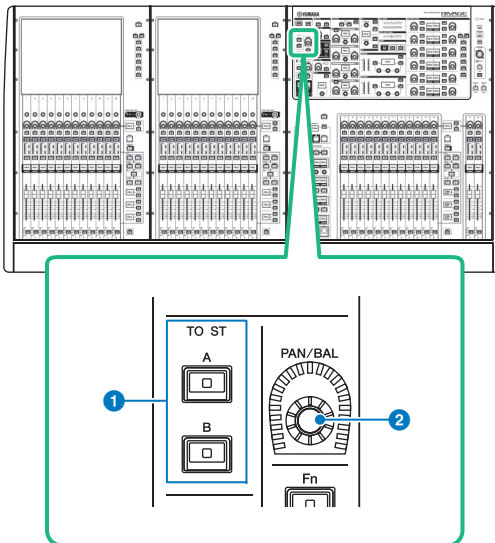
2. **Select the copy destination, and then press the EXECUTE button.**

The parameter is copied to the selected channel number. To abort the copy operation, press the CANCEL button instead of the EXECUTE button.

# TO STEREO

## Controlling via the TO STEREO section

### TO STEREO section



- 1 **TO ST [A]/[B] keys**  
Switch on or off the signal sent from the input channel to stereo bus A or B.
- 2 **[PAN/BAL] knob**  
Sets the panning/balance of the signal sent to the stereo buses.

## Sending a signal to a STEREO bus

The STEREO buses are used for outputting signals to the main speakers. Signals can be sent to a STEREO bus in one of two modes, ST mode or LCR mode, and you can make this selection individually for each channel. These modes differ in the following ways.

### ■ ST mode

This method allows an input channel or MIX channel to individually send independent signals to the STEREO A bus and STEREO B bus.

- The signals sent to the STEREO A bus and STEREO B bus can be switched on or off individually.
- The pan of the signal sent from the input channel or MIX channel to L/R of the STEREO A bus or STEREO B bus is controlled by the TO ST PAN knob.

### About MONO

By using the L/R PATH pull-down menu in the SELECTED CHANNEL VIEW screen, STEREO B can be set to MONO. If it is set to MONO, the same signal will be output to L and R of STEREO B.



L/R PATH pull-down menu in the SELECTED CHANNEL VIEW screen

### ■ LCR mode

This method allows an input channel or MIX channel to send its signals to the three buses: STEREO A (L/R) and STEREO B (C) simultaneously.

- The signals sent to the STEREO A bus and STEREO B bus can be switched on/off together.
- The level difference between the signals sent from the input channel or MIX channel to the STEREO A (L/R) bus and to the STEREO B (C) bus is controlled by the CSR (center/side ratio) knob.
- The level of the signal sent from the input channel or MIX channel to the STEREO A (L/R) bus and the STEREO B (C) bus will change according to the settings of the TO ST PAN knob and the BALANCE knob.

### NOTE

- When using LCR mode, set STEREO B to MONO.
- STEREO B is used as the CENTER channel.

1. Verify that an input source is connected to the channel that you are controlling, and set the head amp's phantom power, gain, and phase to obtain the optimal input signal.
2. Access the TO STEREO popup window, either by pressing the TO STEREO field knob in the OVERVIEW screen of the input channel or MIX channel whose signal you want to send to the STEREO A bus and STEREO B bus, or by pressing the knob in the TO STEREO field of the SELECTED CHANNEL VIEW screen.

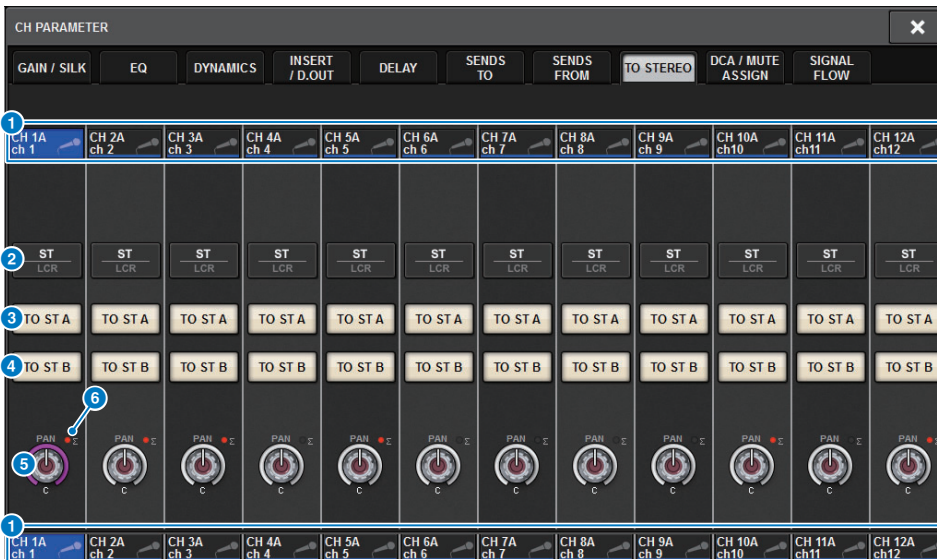




- 1 **Channel select button**  
Indicates the channel. Press the button to select the on-screen selected channel. The current channel icon, number, and color appear on the button, and the channel name appears below the button.
- 2 **ST/LCR mode select button**  
Press this to switch the mode between ST and LCR. The currently-selected mode is displayed with emphasis.
- 3 **TO ST A button**  
Turns the signal sent to the STEREO A bus on/off.
- 4 **TO ST B button**  
Turns the signal sent to the STEREO B bus on/off.
- 5 **TO ST PAN/TO ST BALANCE knob**  
For a MONO channel, this knob functions as a PAN knob that adjusts the left/right position of the signal sent to the STEREO bus. For a STEREO channel, this knob functions as a BALANCE knob that adjusts the volume balance of the left/right signals sent to the STEREO bus. To edit a value, press a knob to select it, and then use the corresponding screen encoder.

Each screen contains the following items.

**TO STEREO popup window**



- 6  **$\Sigma$  clipping indicator**  
This indicator lights to indicate that a signal is clipping at some point in the channel.
- NOTE**  
This is also shown for MATRIX channels that do not have a stereo send.
- If the ST/LCR mode select button is set to LCR mode, the following button and knob will be shown instead of the TO ST A button (3) and TO ST B button (4).

- 7 **LCR button**  
Switches on/off all signals sent from the channel to the STEREO bus. If this button is off, the corresponding channel will send no signals to the STEREO bus.
- 8 **CSR knob**  
Adjusts the ratio of the signal level sent from the channel to the STEREO A (L/R) bus and the signal level sent to the STEREO B (C) bus, in a range of 0–100%. To change the value, press the knob to select it, and then use the corresponding screen encoder.





In the case of a MIX channel, the following pull-down menu is shown above the ST/LCR select button.

### 9 TO STEREO send point

Enables you to select the send point as PRE FILTER, PRE EQ, PRE DYNA, PRE DELAY, PRE FADER, or POST FADER.



In the case of a STEREO bus MIX channel, the following button is displayed.

### 9 PAN/BALANCE select button

This button selects whether the volume balance (BALANCE) or the pan (PAN) of the signal sent to the STEREO bus will be adjusted.



- Use the ST/LCR mode select button to select either ST mode or LCR mode for each channel.
- In the channel strip section of the top panel, verify that the [ON] key is turned on for the input channel or MIX channel that you want to operate, and then raise the fader to an appropriate position.
- Press the top panel TO ST [A]/[B] key to turn it on.
- In the channel strip section of the top panel, verify that the [ON] key is turned on for the STEREO channel that you want to operate, and then raise the fader to an appropriate position.

## SIGNAL FLOW

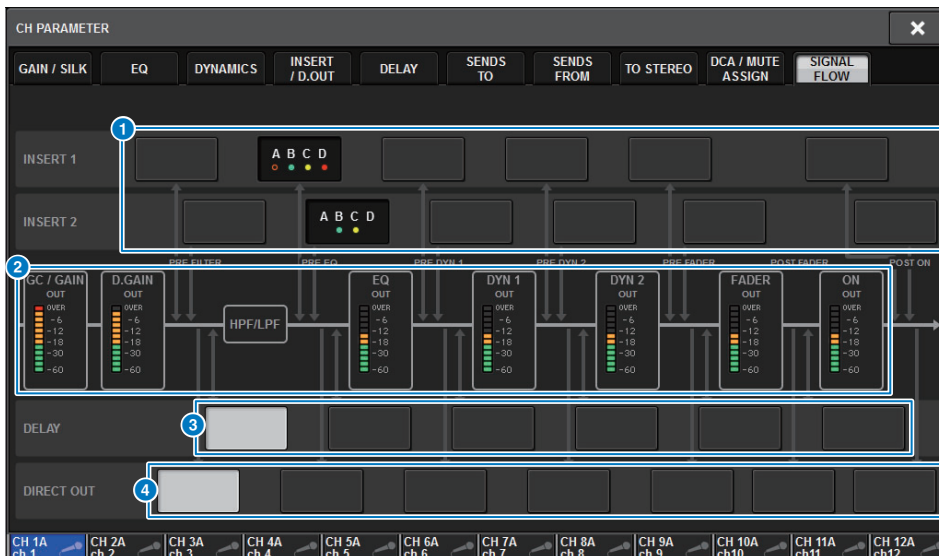
A signal flow window enables you to view the entire signal flow of a single channel. You can also specify the insert points, delay point, and direct out point in this window. In addition, you can view the location within the signal flow at which clipping may have occurred.

### Viewing the signal flow

- Press the [VIEW] key to access the SELECTED CHANNEL VIEW screen.



- Press the SIGNAL FLOW popup button to access the SIGNAL FLOW popup window.



**2 Level meters**

These meters indicate the levels at various points in the signal flow. Levels are detected at the following locations.

**INPUT**

- GC GAIN OUT (immediately after the analog gain)
- D.GAIN OUT (immediately after the digital gain)
- EQ OUT (immediately after the EQ)
- DYN1 OUT (immediately after the dynamics 1)
- DYN2 OUT (immediately after the dynamics 2)
- FADER OUT (immediately after the fader)
- ON OUT (immediately after the channel ON)

**OUTPUT**

- BUS OUT (immediately after the bus)
- EQ OUT (immediately after the EQ)
- DYN OUT (immediately after the dynamics)
- DELAY OUT (immediately after the delay)
- FADER OUT (immediately after the fader)
- ON OUT (immediately after the channel ON)

**NOTE**

If PEAK HOLD is on, the flow indication will stay red if clipping occurs even once, making it easier for you to recognize that clipping has occurred.

**3 DELAY POINT select buttons (input channels only)**

Enable you to select the delay insert point.

**4 DIRECT OUT POINT select buttons (input channels only)**

Enable you to select the direct out point.

**3. Review the signal flow.**

**4. If necessary, review the levels and the location of each insert point.**

The settings in this window link with the settings in the INSERT/D.OUT popup window and the DELAY popup window.

**1 Insert point select buttons**

Enable you to select insert points. The following indicators indicate the status of the corresponding insert point:

	A plug-in, GEQ/PEQ, or outboard unit is inserted at the insert point.
	Bypassed.
	Level indicator
	Green: -18 dB or lower
	Yellow: higher than -18 dB to 0 dB or lower
	Red: higher than 0 dB and clipping



# Channel Job

## About DCAs

The RIVAGE PM series features 24 DCAs that enable you to control the level of multiple channels simultaneously. It includes the following features:

- DCA1–24 can be used for all input channels and all output channels.
- Both input channels and output channels can be assigned to the same group at the same time.
- All channels assigned to a DCA can be cued simultaneously.
- You can monitor the corresponding DCA at unity gain (which is equivalent to the level obtained when the DCA fader is set to 0 dB).
- All channels assigned to a DCA can be temporarily recalled (rolled out) on the panel and controlled individually (DCA ROLL-OUT).

## Assigning channels to a DCA

There are two ways to assign a channel to a DCA.

- You can select a specific DCA first and then specify the channels to be assigned to the group, or
- You can select specific channel and then specify a DCA to which it should be assigned.

**NOTE**

DCA settings are saved as part of the scene.

### ■ Selecting the channels that will belong to a specific DCA

1. Press the CH JOB button on the menu bar, and then select DCA GROUP ASSIGN. The DCA GROUP ASSIGN window (ALL DCA tab) opens.



DCA/MUTE ASSIGN window (ALL DCA)



**1 Tabs**

Use these tabs to select the 1CH, ALL DCA, or ALL MUTE window.

**2 DCA select buttons**

Enable you to select a target DCA.

**3 NAME EDIT popup button**

Indicates the name of the currently-selected DCA. Press this button to display the keyboard window or icon edit window, in which you can edit the DCA name.

**4 DCA assign popup field**

Highlights in yellow the channels that are assigned to the currently-selected DCA. Press this field to open the assign popup window.

**5 CLEAR ALL button**

Press this button to clear all selections.

**6 SET BY SEL button**

If this button is on, you will be able to add a channel by using the corresponding [SEL] key. To select more channels, turn the SET BY SEL button on, and then press the corresponding [SEL] keys for the desired channels.

**7 LIBRARY button**

Press this button to open the DCA NAME/ASSIGN library window.

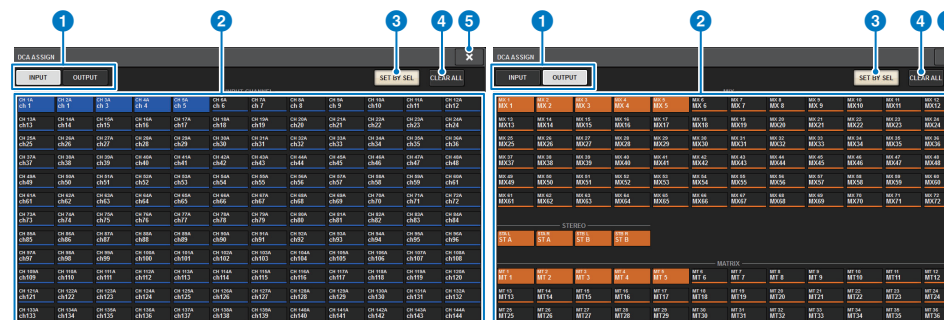
**8 CLOSE button**

Press this button to close the popup window and return to the previous screen.

**2. Use the DCA select buttons to select the DCA to which you want to assign channels.**

**3. Press the DCA assign popup field to open the DCA ASSIGN popup window.**

**DCA ASSIGN popup window**



**1 Switching tabs**

Enable you to switch between the input channel page and output channel page.

**2 Channel select buttons**

Enable you to select the channels that will be assigned to a DCA.

**3 SET BY SEL button**

If this button is on, you will be able to select a channel by using the corresponding [SEL] key.

**4 CLEAR ALL button**

Press this button to clear all selections.

**5 CLOSE button**

Press this button to close the popup window and return to the previous screen.

**4. In the DCA ASSIGN popup window, select the channels that will be assigned to a DCA (multiple selections are allowed).**

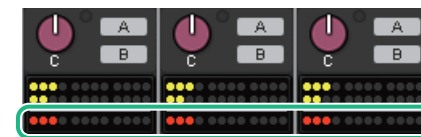
**5. Assign channels to other DCAs in the same way.**

**NOTE**

You can assign a single channel to more than one DCA. In this case, the value will be the sum of the levels of all assigned DCA faders.

**6. When you finish assigning the channels, press the CLOSE button to close the popup window.**

The DCA/MUTE ASSIGN field of the OVERVIEW screen indicates the DCA(s) to which each channel is assigned. Indicators that are lit yellow in the upper and middle row of this field indicate the DCAs to which the corresponding channel belongs.

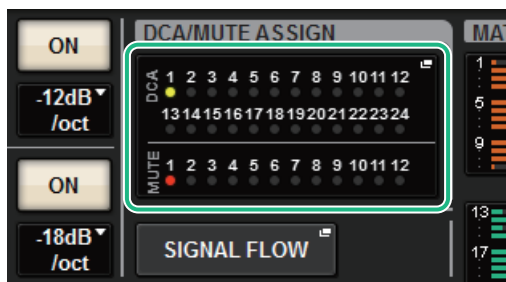


■ Selecting the DCAs to which a specific channel will belong

1. Press the DCA/MUTE ASSIGN field on the OVERVIEW screen, or press the DCA ASSIGN field on the SELECTED CHANNEL VIEW screen to open the DCA/MUTE ASSIGN window (for 1CH).



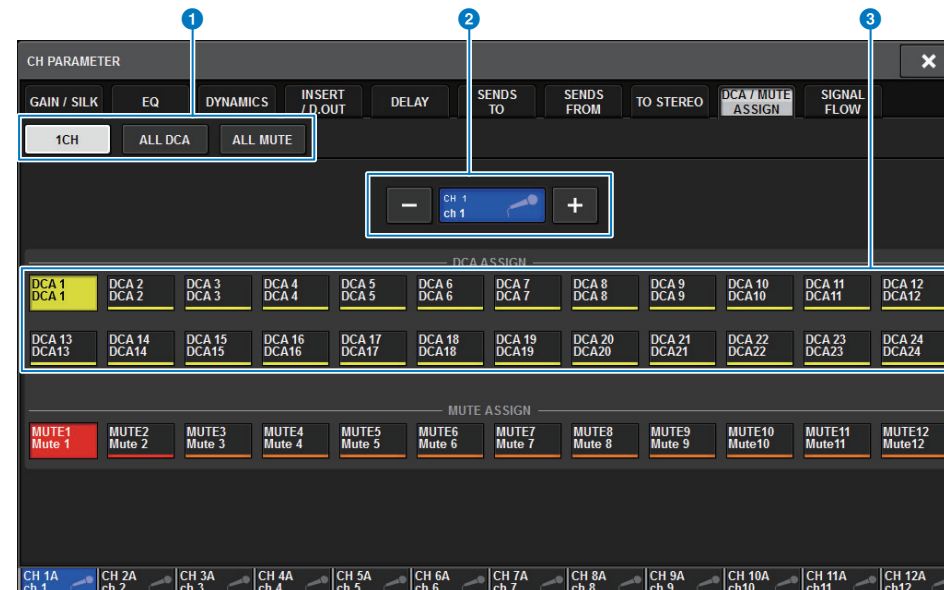
DCA/MUTE ASSIGN field on the OVERVIEW screen



DCA/MUTE ASSIGN field

DCA/MUTE ASSIGN window (1CH)

This window enables you to view and edit the DCAs to which each channel is assigned.



- 1 **1 Tabs**  
Use these tabs to select the 1CH, ALL DCA, or ALL MUTE window.
  - 2 **2 Channel select +/- buttons**  
Indicates the currently-selected channel. Press the + button to select the next channel. Press the - button to select the previous channel.
  - 3 **3 DCA ASSIGN buttons**  
Press a button to assign the selected channel to the corresponding DCA.
2. Use the channel select +/- buttons to select the channel that is assigned to a DCA.
  3. Press a DCA ASSIGN button(s) to select the DCA(s) to which the currently-selected channel will be assigned (multiple selections are allowed).
  4. Select the DCA(s) for other channels in the same way.



## Using DCAs

1. Assign input channels and output channels to a DCA.
2. Using the faders in the Channel Strip section of the top panel, adjust the relative balance between the input channels and output channels that belong to the DCA you want to use.
3. Press to illuminate the [DCA] key so that you will be able to control the DCA.
4. In the Channel Strip section, operate the fader corresponding to the DCA you want to use.  
The level of the channels assigned to that DCA will change while preserving the level differences you established in step 2.

### NOTE

Operating a DCA fader will not cause the input faders to move in tandem.

5. **To switch a DCA on/mute, press the [ON] key for that DCA.**  
When you press an [ON] key to make the key indicator go dark, the [ON] key for each channel assigned to that DCA will flash, and these channels will be muted (the same state as when the faders are lowered to the  $-\infty$ dB position).
6. **To cue-monitor a DCA, press the [CUE] key for that DCA.**  
When you press the [CUE] key to make the key indicator light, the [CUE] keys for the channels assigned to that DCA will blink, and cue monitoring will be enabled. For more information about cue, refer to “Using the Cue function” (page 171).

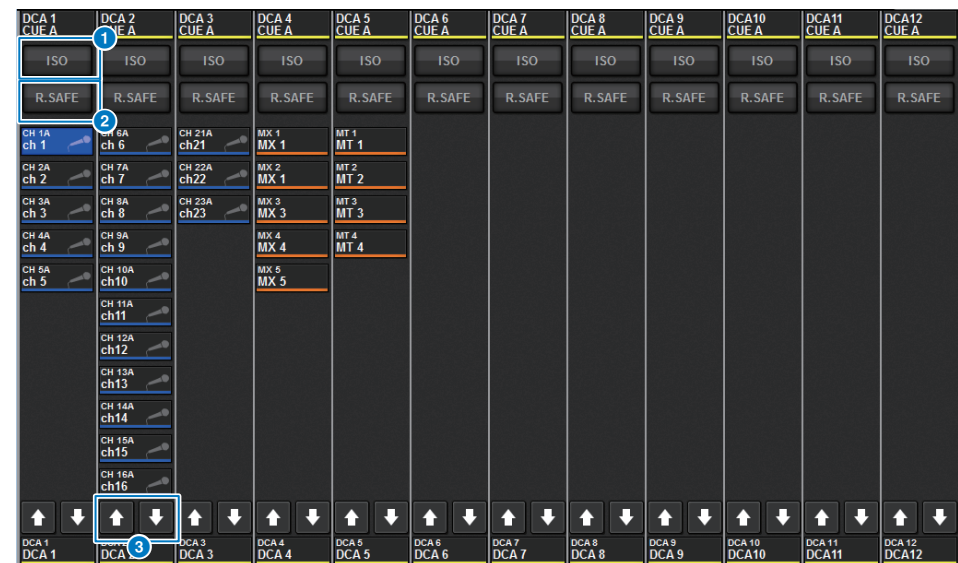
### NOTE

You can also press the [DCA], [DCA 1-8], or [DCA 9-16] key in the Channel Strip section to select the DCA that you want to control.

## Viewing the list of DCA status on the OVERVIEW screen

The OVERVIEW screen enables you to view the list of DCA status and make Recall Safe and other settings.

1. Press the [VIEW] key to switch to the OVERVIEW screen, and then press the [DCA] key on the top panel to select the DCA layer.



### 1 ISO button

If this button is on, the selected DCA will be unaffected by scene/library recall operations (Isolate mode).

### 2 R.SAFE button

Switches Recall Safe on/off for the selected DCA.

### 3 ↑ ↓ buttons (PM Editor only)

If there are 12 or more channels that are assigned to the corresponding DCA, use these buttons to view every channel that belongs to that DCA.

### NOTE

- You can also access the corresponding DCA ALL window by pressing the [SEL] key of the DCA while holding down the [SHIFT] key.
- These buttons do not appear on the control surface. Use the corresponding screen encoder to scroll.



## Using DCAs

Use the Channel Strip section to control the DCAs.

- **Level adjustment: fader** ..... You can adjust the level of the channels assigned to that DCA while preserving the relative level differences among the channels. The channel fader operation will not be linked at this time.
- **Toggling between on and mute:**  
**[ON] key** ..... When you press an [ON] key in the Channel Strip section to make the key indicator go dark, the [ON] key for each channel assigned to that DCA will flash, and these channels will be muted (the same state as when the faders are lowered to the  $-\infty$ dB position).
 

**NOTE**  
While DCA is muted, these DCA channels will not be muted if the send point for MIX/MATRIX SENDS is set to PRE. If it is set to POST, these channels will be muted.
- **Cue monitoring: [CUE] key** ..... When you press a [CUE] key in the Channel Strip section to make the key indicator light, the [CUE] keys for the channels assigned to that DCA will blink, and cue monitoring will be enabled. For more information about cue, refer to “[Using the Cue function](#)” (page 171).

## DCA Roll-out function

All channels assigned to a DCA can be temporarily recalled (rolled out) to other bays and controlled individually.

You can use the PREFERENCES setting to change how the channels will be rolled out ([page 355](#))

### ■ DCA ROLL-OUT operation

1. Press the [DCA] key on the top panel to select the DCA layer.
2. Press the [SEL] key for the DCA you want to roll out.  
The corresponding channels will be rolled out on the panel according to the DCA ROLL-OUT setting in PREFERENCES.
3. To exit from ROLL-OUT mode, select a different bank, or press the [SEL] key again for the same DCA.

#### NOTE

- You cannot turn Roll-out mode on while operating a DCA (for example, while assigning channels or editing the group name).
- If the number of channels assigned to a DCA exceeds the number of faders in the block (that is a roll-out target), you will be unable to control extra channels.
- If the number of channels assigned to a DCA exceeds the number of faders on a particular bay for roll-out, you will be able to scroll extra channels to the left or right inside the block using the channel strip encoder or screen encoder (only on bay L or C). While you are turning the knob, a message “DCA ROLLOUT: DCA members scrolling” will appear on the bottom of the touch screen or external monitor screen.

### Rolling-out channels using the DCA Roll-out function

You can use the PREFERENCES setting to change how the channels will rolled out ([page 355](#)).

The SEL LINK and No. OF BAYS TO USE settings will determine which bay will be used for the roll-out.

- If you use the DCA ROLL-OUT function on a bay that is not linked in the SEL LINK section, channels will be rolled out only on that bay.
- If you use the DCA ROLL-OUT function on a bay that is linked to another bay in the SEL LINK section, channels will be rolled out on that bay and its linked bay. The No. OF BAYS TO USE parameter in the PREFERENCES settings will determine the number of bays on which to roll out the channels.

#### NOTE

You cannot use the DCA ROLL-OUT function on multiple bays simultaneously. If you try to do so, the message “Only one DCA can be rolled out at one time” will appear near the bottom of the touch screen or external monitor screen.

# About mute groups

The RIVAGE PM series features twelve mute groups. It includes the following features:

- Mute groups 1–12 can be used for all input channels and all output channels.
- Both input channels and output channels can be assigned to the same group at the same time.
- You can temporarily defeat the muted state of an individual channel.
- You can also assign the Mute Master function to a USER DEFINED key.
- Although a mute group can be completely muted, using the Dimmer function enables you to adjust attenuation for the mute group.
- The Mute Safe function enables you to exclude (safely) certain channels from mute group operations.
- You can change the name of the mute group master.

## Assigning channels to mute groups

As with the DCAs, you can assign channels to mute groups in the following ways.

- You can select a specific mute group first and then specify the channels to be assigned to the group, or
- You can select a specific channel and then specify the mute group to which it should be assigned.

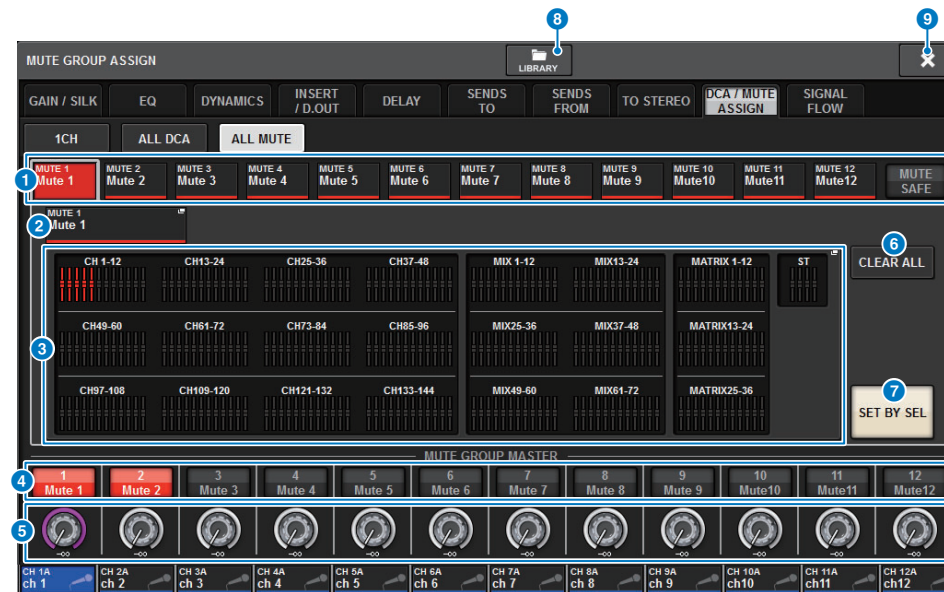
### ■ Selecting the channels that will belong to a specific mute group

1. Press the CH JOB button on the menu bar, and then select MUTE GROUP ASSIGN.

The MUTE GROUP ASSIGN window (ALL MUTE tab) opens.



## DCA/MUTE ASSIGN window (ALL MUTE)



1. **MUTE group and MUTE SAFE buttons**

Enable you to select a mute group or Mute Safe to which you want to assign channels.

2. **NAME EDIT button**

Press this button to access a keyboard window, in which you can enter the mute group name.

3. **Mute group assign field**

This area displays the channels assigned to the currently-selected mute group. While this window is displayed, press the [SEL] key for the channel that you want to assign to the mute group. The channel will be assigned to the mute group, and the on-screen fader for that channel will turn red. Press the same [SEL] key once again if you want to remove the channel from the group. If you select the MUTE SAFE button, this field will display the channels that are in Mute Safe status (that is, excluded from the mute groups). The procedure for enabling or cancelling Mute Safe for channels is the same as when assigning or removing channels to or from a mute group.

4. **MUTE GROUP MASTER button**

Switches mute on or off for the corresponding mute group. The [ON] key for each muted channel in a mute group will flash.

**5 DIMMER LEVEL knob**

Sets the dimmer level for the corresponding mute group when the Dimmer function is enabled.

**NOTE**

If the dimmer level is set to any level other than  $-\infty$  dB, and the corresponding MUTE GROUP MASTER button is turned on, this button will light orange.

**6 CLEAR ALL button**

Press this button to clear all selections.

**7 SET BY SEL button**

If this button is on, you will be able to add a channel by using the corresponding [SEL] key. To select more channels, turn the SET BY SEL button on, and then press the corresponding [SEL] keys for the desired channels.

**8 LIBRARY button**

Press this button to open the MUTE NAME/ASSIGN library window.

**9 CLOSE button**

Press this button to close the popup window and return to the previous screen.

**2. Use the MUTE GROUP 1–12 buttons to select the mute group to which you want to assign channels.**

**3. Press the [SEL] key for the input channels/output channels that you want to assign (multiple selections are allowed).**

The [SEL] keys of the assigned channels will light, and the corresponding channels will be highlighted in red in the mute group assign indication field. To cancel an assignment, press a lit [SEL] key once again to make it go dark.

**4. Assign channels to other mute groups in the same way.**

**NOTE**

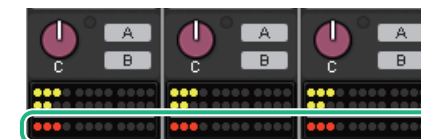
You may assign a single channel to more than one mute group.

**5. When you finish assigning the channels, press the CLOSE button to close the popup window.**

You will return to the previous screen. The DCA/MUTE ASSIGN field of the OVERVIEW screen indicates the mute group(s) to which each channel is assigned. Indicators that are lit red in the lower line of this field indicate the mute groups to which that channel belongs.

**NOTE**

- You may assign a single channel to more than one mute group.
- If the dimmer level is set to any level other than  $-\infty$  dB, these indicators will light orange. Channels that have the Mute Safe function turned on are highlighted in green.

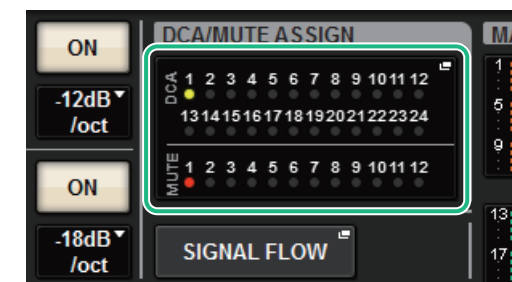


**■ Selecting the mute groups to which a specific channel will belong**

- Press the DCA/MUTE ASSIGN field on the OVERVIEW screen, or press the DCA ASSIGN field on the SELECTED CHANNEL VIEW screen to open the DCA/MUTE ASSIGN popup window (for 1CH).



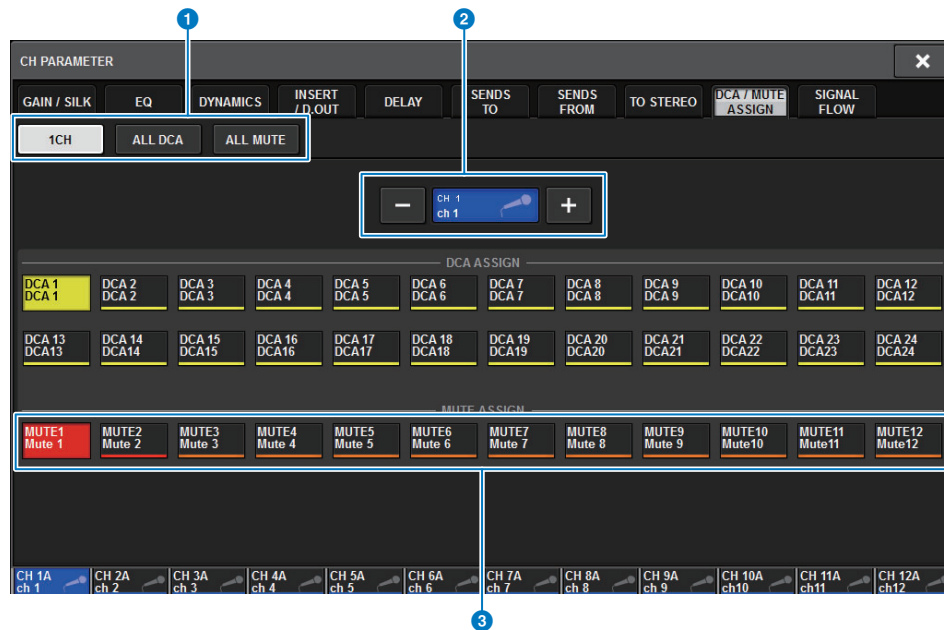
DCA/MUTE ASSIGN field on the OVERVIEW screen



DCA/MUTE ASSIGN field

## DCA/MUTE ASSIGN window (1CH)

This window enables you to view and edit the mute groups to which each channel is assigned.



### ■ Temporarily defeating the Mute function

You can temporarily defeat the Mute function for specific channels in a mute group by pressing the corresponding channel [ON] keys.

#### 1 Tabs

Use these tabs to select 1CH, ALL DCA, or ALL MUTE window.

#### 2 Channel select +/- buttons

Indicates the currently-selected channel. Press the + button to select the next channel. Press the - button to select the previous channel.

#### 3 MUTE ASSIGN buttons

Press a button to assign the selected channel to the corresponding mute group.

2. Use the channel select +/- buttons to select the channel you want to assign to the group.
3. Press a DCA ASSIGN button(s) to select the mute group(s) to which the currently-selected channel will be assigned (multiple selections are allowed).
4. Select the mute group(s) for other channels in the same way.

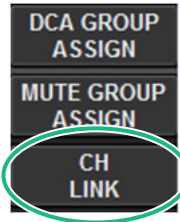
# Channel link

Channel link is a function that links the operations (such as fader movements or EQ parameters) of input channels or output channels. Two or more channels that are linked are called a link group. You can create up to 52 link groups for input channels and up to 52 link groups for output channels. The type of parameters to be linked can be individually selected for each link group. However, input channels and output channels cannot coexist in a single link group.

While pairing is limited to use on two adjacent channels, the channel link function allows multiple channels to be joined. If you want to link channels provisionally, you can use temporarily link.

**1. Press the CH JOB button on the menu bar, and then select CH LINK.**

When you select CH LINK, the CH LINK MODE popup window will appear.



## CH LINK MODE popup window



**1 INPUT/OUTPUT buttons**

These buttons switch between the input channel page and output channel page.

**2 SET BY SEL button**

If this button is on, you will be able to select a channel by using the corresponding [SEL] key.

**3 Channel display field**

When you create a link group, the corresponding channels are highlighted. If there are multiple link groups, each group is shown in a different color. Press this field to open the CHANNEL LINK popup window.

**4 Link indicator**

If a channel belonging to a link group is selected, the link group to which it belongs is shown here.

**5 LINK PARAMETER field**

Here you can select the parameters that will operate in tandem for the entire link group. The following table lists the parameters that you can select.

Button	Parameter
ANALOG GAIN	Analog gain
SILK	Silk settings
INPUT A/B	INPUT A/B
DIGITAL GAIN	Digital gain
HPF/LPF	HPF/LPF settings
EQ	EQ settings
DYNA1	Dynamics 1 settings
DYNA2	Dynamics 2 settings
INSERT1	Insert 1 settings
INSERT2	Insert 2 settings
MIX SEND	Send level of the signals sent to MIX buses
MATRIX SEND	Send level of the signals sent to MATRIX buses
DIRECT OUT	Direct out settings
DELAY	Channel delay settings
FADER	Fader operations
CH ON	Channel on/off
MIX ON	On/off of the signals sent to MIX buses



Button	Parameter
MATRIX ON	On/off of the signals sent to MATRIX buses
TO STEREO	On/off of the signals sent to the STEREO/MONO buses
DCA ASSIGN	DCA group assignments
MUTE ASSIGN	MUTE group assignments

## 6 INPUT/OUTPUT buttons

These buttons switch between the MIX bus screen and the MATRIX bus screen.

## 7 SEND PARAMETER field

If a MIX ON, MIX SEND, MATRIX ON, or MATRIX SEND button is turned on in the LINK PARAMETER field, use the buttons of this field to specify the send-destination buses.

## 8 CLOSE button

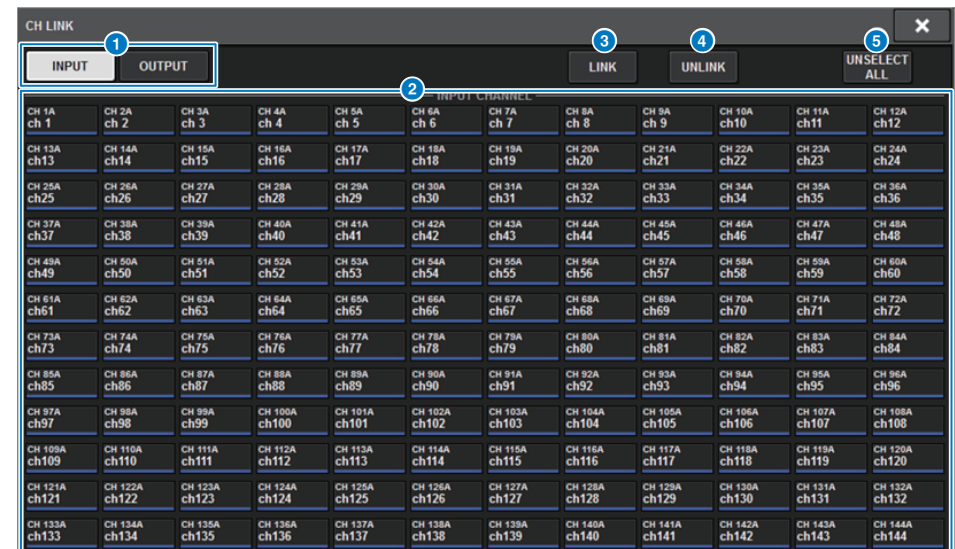
Press this button to close the popup window and return to the previous screen.

2. Press an INPUT/OUTPUT button to select the channels that you want to link.
3. Link channels by holding down the the [SEL] key of the link-source channel and pressing the [SEL] key of the link-destination.
4. Using the buttons of the LINK PARAMETER field in the CH LINK MODE screen, select the parameters that you want to link.
5. If a MIX ON, MIX SEND, MATRIX ON, or MATRIX SEND button was turned on in step 4, use the buttons of the SEND PARAMETER field to specify the applicable buses.
6. To close the CH LINK MODE popup window, press the CLOSE button.

## Channel link operations

- **Linking three or more channels**  
Hold down the [SEL] key of the link-source, and successively press the [SEL] keys of the input channels that you want to add to the link group.
- **Adding new channels to an existing link group**  
Hold down any [SEL] key within the group, and press the [SEL] keys that you want to add to the group.
- **Canceling a link**  
Hold down any [SEL] key that is registered within the same link group, and press the [SEL] key of the channel that you want to remove from the group.
- **Editing the level balance between channels assigned to a link group**  
Hold down the [SEL] key of any linked channel, and operate the parameter that you want to edit.

## CH LINK popup window



## 1 INPUT/OUTPUT buttons

These buttons switch between the input channel page and output channel page.

## 2 Channel select buttons

Use these buttons to select the channels that you want to link. Linked channels will show an alphabetical character that indicates the link group.



**NOTE**

- When you select a linked channel, all channels of the same group are selected.
- If you want to add a channel to a group, select the group and the channel that you want to add, and then press the LINK button.
- By selecting two groups and pressing the LINK button, you can combine two groups into one group. In this case, the subsequent group is combined into the preceding group. (If you combine group A and group B, the result will be group A.)
- To unlink a channel, select the group and then press the channel that you want to remove, deselecting it.

**3 LINK button**

Links the channels that you selected in **2**.

**4 UNLINK button**

Unlinks the channels that you selected in **2**.

**5 UNSELECT ALL**

Clears all channel selections.

## Temporary link

The Temporary link function enables you to link multiple channels temporarily so that you can simultaneously change the settings for only the parameters of the linked channels. This useful function enables you to adjust parameters in real time and more quickly than a copy or recall operation, if you want to apply fader operations or EQ adjustments to multiple channels quickly. This link is not permanent, and only one group of channels can be linked. However, the number of channels in the group is unlimited. Please note that you cannot link input channels and output channels in this temporary link group at the same time.

The following parameters will be linked.

Gain and level settings will change relatively.

**Input channels:**

- Input patch settings
- Digital gain and analog gain settings
- Insert on/off and point settings
- Direct out on/off, level, point, and FOLLOW settings
- HPF settings
- LPF settings
- PEQ settings
- Dynamics settings
- Delay settings
- On/off, level, PRE/POST, and FOLLOW settings for signals sent to MIX buses
- On/off, level, PRE/POST, and FOLLOW settings for signals sent to MATRIX buses
- TO STEREO settings
- DCA/MUTE ASSIGN settings
- Fader operations
- [ON] key operations

**Output channels:**

- Insert on/off and insert point settings
- Direct out on/off, level, point, and FOLLOW settings
- HPF settings
- LPF settings
- PEQ settings
- Dynamics settings
- Delay settings
- On/off, level, PRE/POST, and FOLLOW settings for signals sent to MATRIX buses
- TO STEREO settings
- DCA/MUTE ASSIGN settings
- Fader operations
- [ON] key operations

## Configuring a temporary channel link

Press and hold down the [SHIFT] key and press the [SEL] key.

Alternatively, press and hold down the [SHIFT] key and press the channel name area located at the bottom of the OVERVIEW screen.

The [SEL] keys for the specified channels will flash. The meter area, and the channel name areas in the OVERVIEW screen will be marked by a yellow frame and a link icon.



If you press any [SEL] key, the temporary link will be canceled. Also, if you turn off the power to the unit or load a file, the temporary link will be canceled. In general, scene recall will not cancel the temporary link. However, if the channel pair setting is changed due to a scene recall, the temporary link will be canceled.

## Copying, moving, and initializing channels

You can copy or move mix parameters between multiple channels, and initialize a specific channel's parameters to the default values.

### Copying channel parameters

You can copy channel mix parameter settings to other channels. When the copy operation is executed, the parameter settings will overwrite those of the copy destination.

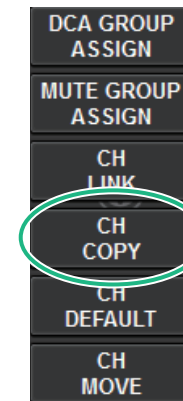
You can copy parameter settings between the following channel combinations.

- Between input channels
- Between STEREO L/R and MONO channels
- Between MIX channels
- Between MATRIX channels

#### NOTE

Analog HA, patch, channel name, and phantom settings will not be copied.

1. Press the CH JOB button on the menu bar, and then select CH COPY.  
The CH COPY popup window will appear.



## CH COPY popup window



### 1 FROM button

This button is highlighted when the CH COPY popup window opens. Press this button if you want to select a different copy source channel.

### 2 TO button

Enables you to select the copy destination.

### 3 PASTE button

After specifying the copy source and destination channels, press this button to execute the copy operation.

### 4 Channel display select buttons

Select the type of channels that you want to view on screen. Available options include CH1-72, CH73-144, MIX, and ST/MATRIX.

### 5 ASSIGN section

Enables you to select the copy source and destination channels.

### 6 SET BY SEL button

If this button is on, you will be able to select a channel by using the corresponding [SEL] key.

### 7 CLOSE button

Press this button to close the popup window and return to the previous screen.

## 2. Select the copy source channel.

Once you select the copy source channel, the system automatically engages a mode that enables you to select the copy destination. The fader graphics for the copy source channel will be highlighted in green.

## 3. Select the copy destination channel(s) (multiple selections are allowed).

The fader graphics for the copy destination channel(s) will be highlighted in pink.

## 4. To execute the copy operation, press the PASTE button.

The copy operation will be executed, and the parameter settings will overwrite those of the copy destination(s).

## 5. To close the CH COPY popup window, press the CLOSE button.

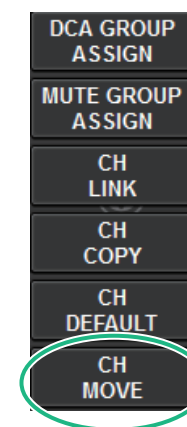
## Moving channel parameters

You can move the settings of a specific input channel to a different input channel. When you execute a move, the channels between the move-source and move-destination are renumbered forward or backward.

### NOTE

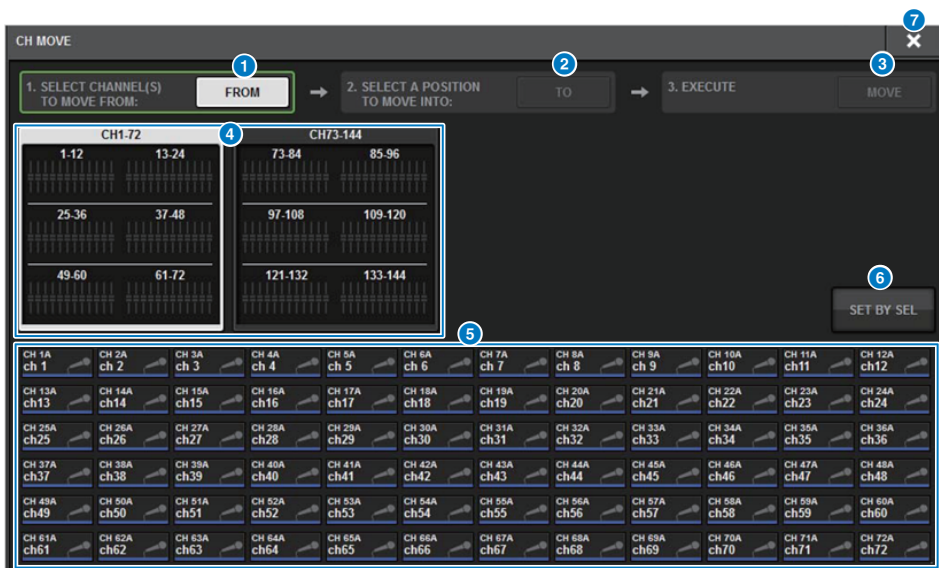
The channel insert assignment (INSERT OUT (1C)) settings of the SYSTEM CONFIG [DSP] popup window will not move.

## 1. Press the CH JOB button on the menu bar, and then select CH MOVE.



When you select CH MOVE, the CH MOVE popup window will appear.

## CH MOVE popup window



### 1 FROM button

This button is automatically selected when the CH MOVE popup window opens. Press this button if you want to select a different move-source channel.

### 2 TO button

Switches to a mode in which you can select the move-destination.

### 3 MOVE button

After specifying the move-source and destination channels, press this button to execute the channel move operation.

### 4 Channel display select buttons

These buttons select the type of channels that you want to view on screen. You can select CH1-72 or CH73-144.

### 5 ASSIGN section

Enables you to select the move-source and destination channels.

### 6 SET BY SEL button

If this button is on, you will be able to select a channel by using the corresponding [SEL] key.

### 7 CLOSE button

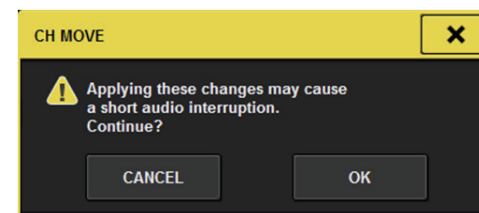
Press this button to close the popup window and return to the previous screen.

2. Select the move-destination channel(s) (multiple selections are allowed). The fader graphics for the move-source channel will be highlighted in green.

3. Press the TO button, and then select the move-destination channel. The fader graphics for the move-destination channel(s) will be highlighted in pink.

4. To execute the move operation, press the MOVE button. A dialog box will ask you to confirm the operation.

5. Press the OK button.



### Caution

When you execute CH MOVE, the audio might be interrupted in some cases.

6. To close the CH MOVE popup window, press the CLOSE button.

## About CH MOVE

If the channels being moved include channels that are located before the move-destination channels, they are moved after the move-destination channels.

If the channels being moved include channels that are located after the move-destination channels, they are moved before the move-destination channels.

Before move



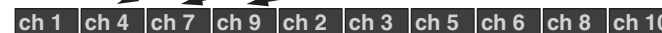
After move



Before move



After move



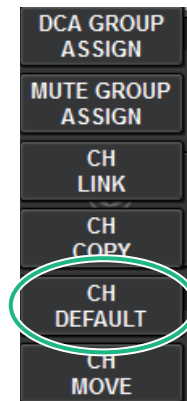
## Initializing channel parameters

You can restore the parameters of a channel to an initialized state. This operation can be performed on any channel(s).

### NOTE

Analog HA, channel name, patch, and Recall Safe settings will not be initialized.

1. Press the **CH JOB** button on the menu bar, and then select **CH DEFAULT**. The **CH DEFAULT** popup window will appear.



## CH DEFAULT popup window

This popup window enables you to initialize parameters.



- 1 **DEFAULT button**  
After selecting the channel, press this button to execute the initialization operation.
- 2 **Channel display select buttons**  
Select the type of channels that you want to view on the screen. Available options are CH1-72, CH73-144, MIX, and ST/MTRX.
- 3 **ASSIGN section**  
Enables you to select the channels for which you want to restore parameters to their initial values.
- 4 **SET BY SEL button**  
If this button is on, you will be able to select a channel by using the corresponding [SEL] key.
- 5 **CLOSE button**  
Press this button to close the popup window and return to the previous screen.

**2. Select the channel(s) that you want to initialize (multiple selections are allowed).**

The corresponding channel will be highlighted.

**3. To execute the initialization, press the DEFAULT button.**

A dialog box will ask you to confirm the Initialization operation.

**4. Press the OK button in the confirmation dialog box.**

The parameters of the selected channel(s) will be initialized.

**5. To close the CH DEFAULT popup window, press the CLOSE button.**



# GEQ/PEQ/Automixer

## Graphic EQ, parametric EQ and Automixer

The RIVAGE PM series features 31BandGEQ, Flex15GEQ, 8BandPEQ and Automixer. These can be inserted at the desired insert points.

EQ type	Number of insert points
31BandGEQ	48
Flex15GEQ	96
8BandPEQ	96
Automixer	1

### About using a graphic EQ (GEQ)

#### ■ 31BandGEQ

This is a monaural 31-band GEQ. The bands have a width of 1/3 octave, and the gain can be adjusted in the range of ±15 dB for each of the 31 bands.

#### ■ Flex15GEQ

This is a monaural 15bandGEQ. Each band is 1/3 octave wide, and the adjustable gain range is ±15 dB.

The Flex15GEQ enables you to adjust the gain for any fifteen of the same bands as the thirty-one bands of the 31bandGEQ. (Once you have used up fifteen bands of adjustment, you will not be able to adjust the gain of another band until you reset a previously-adjusted band to the flat setting.)

The GEQ features a 1/12 oct (121-band) Real Time Analyzer (also called a spectrum analyzer). The range of gain adjustment can be selected from the following: ±15 dB, ±12 dB, ±6 dB (these are valid in both the boost and cut directions), or -24 dB (valid only in the cut direction). If you are using a stereo source, you can link the two GEQ units.

### About using a parametric EQ (PEQ)

#### ■ 8BandPEQ

This is a monaural 8-band PEQ. It also features four notch filters.

The PEQ features a 1/12 oct (121-band) Real Time Analyzer (also called spectrum analyzer).

#### NOTE

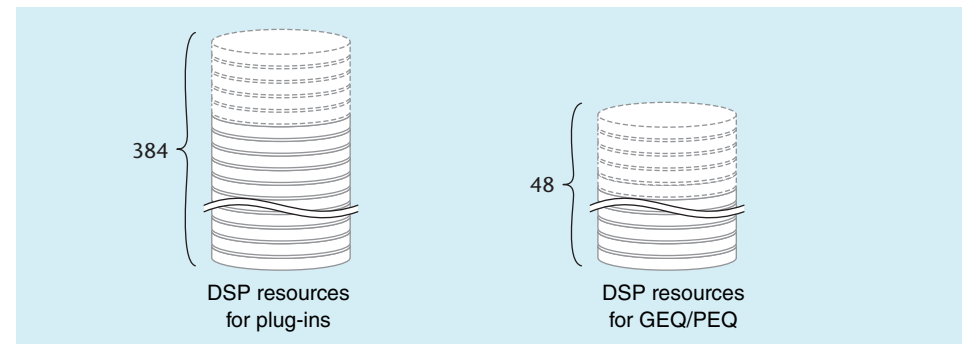
Notch filters A–D are independent of the PEQ, and thus not affected by the PEQ's BYPASS buttons. You can bypass the PEQ and use only the notch filters.

### About Automixer

#### ■ Automixer

Automixer provides high-clarity sound mixing, and enables you to automatically adjust the microphone input levels when multiple persons are speaking.

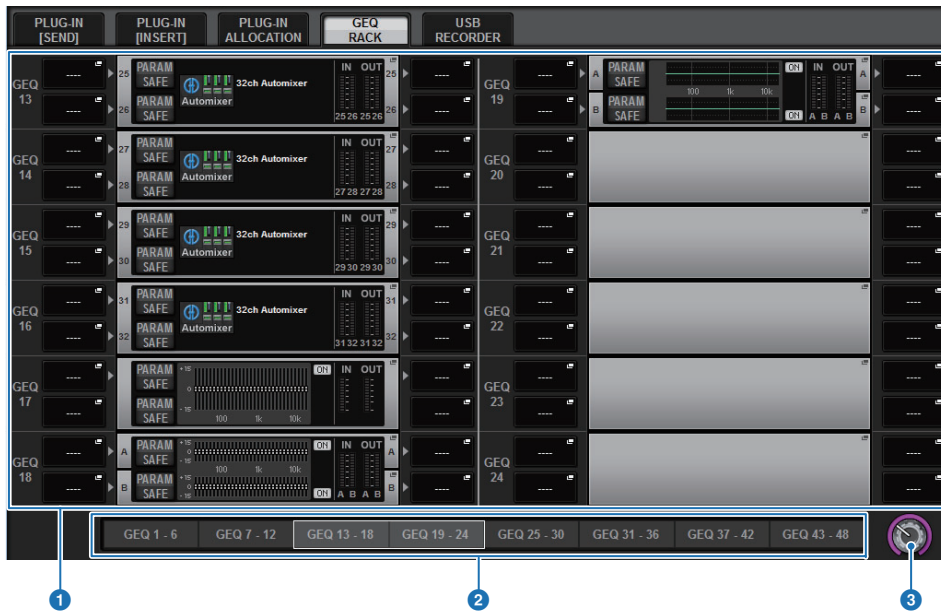
### DSP resource management for GEQ



Plug-ins and GEQ/PEQ each feature their dedicated DSP resources. DSP resources are consumed each time a plug-in is mounted or a GEQ/PEQ is inserted.

DSP resources usable by plug-ins are divided into 384 units, and the DSP resources that are usable by GEQ/PEQ are divided into 48 units. For details on the DSP resources used by each plug-in or GEQ/PEQ, refer to the data list.

You can view the GEQ resource allocation on the GEQ RACK page.



This screen contains the following items.

- 1 GEQ allocation field**  
Indicates the GEQ allocation status. You can view 48 available DSP resources.
- 2 GEQ position bar**  
Indicates the location of the page associated with the current display of the GEQ allocation field.
- 3 Page select knob**  
Use the corresponding screen encoder or the [TOUCH AND TURN] knob to select a page to view.

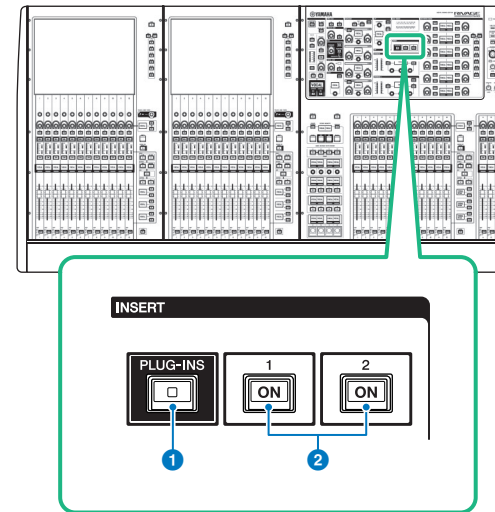
## Inserting a GEQ/PEQ into a channel

This section explains how to insert a GEQ/PEQ into the selected channel for use.

There are three ways to control the GEQ/PEQ.

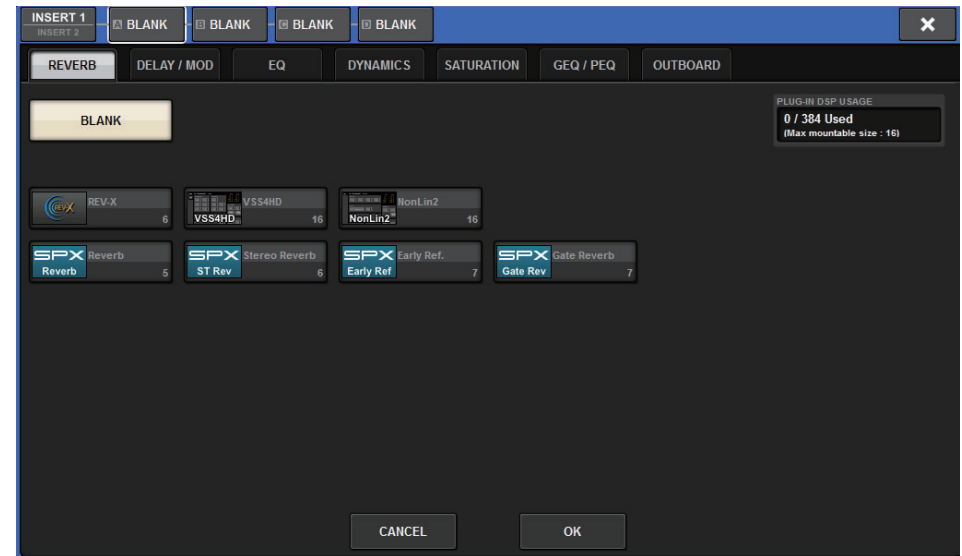
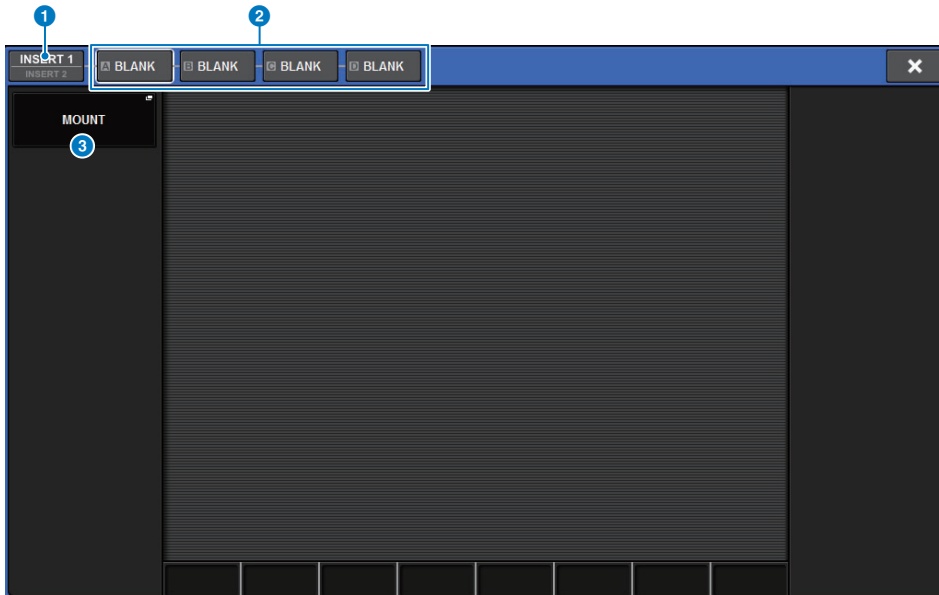
- Controlling a GEQ/PEQ via the Selected Channel section
- Controlling a GEQ/PEQ via the OVERVIEW screen
- Controlling a GEQ/PEQ via the SELECTED CHANNEL VIEW screen

### ■ Controlling a GEQ/PEQ via the Selected Channel section



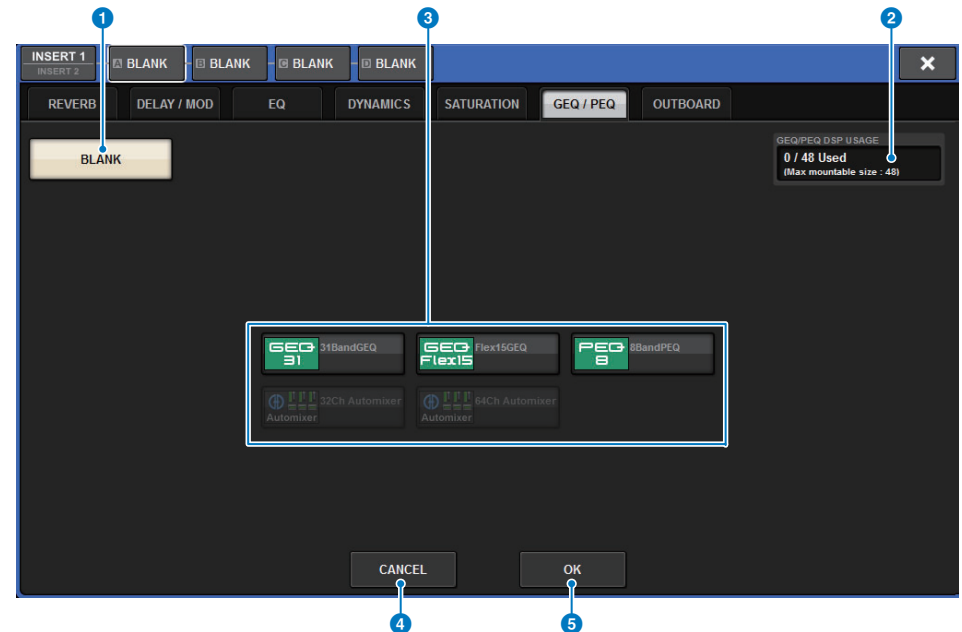
- 1 INSERT [PLUG-INS] key**  
Enables you to recall a parameter setting screen for the inserted plug-in.
- 2 INSERT 1/2 [ON] keys**  
Switch INSERT1 and INSERT2 on or off respectively.

- 1. Select the channel that you want to operate.**
- 2. Press the INSERT [PLUG-INS] key to access the INSERT screen.**



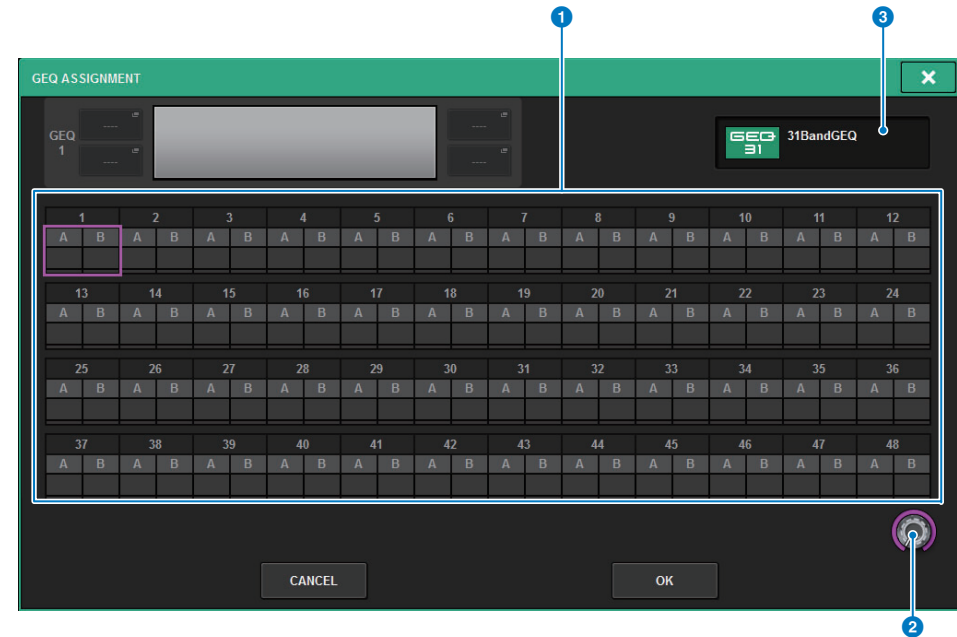
5. Press the GEQ/PEQ tab to open the MOUNT GEQ/PEQ screen.

1. **INSERT 1/2 switch buttons**  
Switches between INSERT1 and INSERT2.
2. **INSERT block [A]-[D] buttons**  
Indicate four plug-ins that have been assigned to INSERT1 and INSERT2 respectively. Press this button to display the edit screen for the assigned plug-in.
3. **MOUNT popup button**  
Press this button to display the Mount popup window.
3. Use the INSERT 1/2 switch buttons and INSERT [A]-[D] buttons to select an insert channel and block for which you want to assign the GEQ/PEQ.
4. Press the MOUNT popup button to access the MOUNT popup window.



- 1 **BLANK button**  
Defeat the currently-inserted GEQ/PEQ.
- 2 **Used slots indicator**  
Indicates the number of slots that are being used.
- 3 **MODULE SELECT**  
Use these buttons to select the GEQ or PEQ that will be inserted. Each button has the following function.
  - **31BandGEQ button**.....Inserts a 31BandGEQ in the specified channel.
  - **Flex15GEQ button**.....Inserts a Flex15GEQ in the specified channel.
  - **8Band PEQ button**.....Inserts a 8Band PEQ in the specified channel.
- 4 **CANCEL button**  
Cancels the changes you made in the INSERT popup window, and closes the window.
- 5 **OK button**  
Applies the changes you made in the INSERT popup window, and closes the window.

6. Use the **MODULE SELECT** buttons to select the item you want to insert, and then press the **OK** button.  
The GEQ\_ASSIGNMENT popup window will appear.

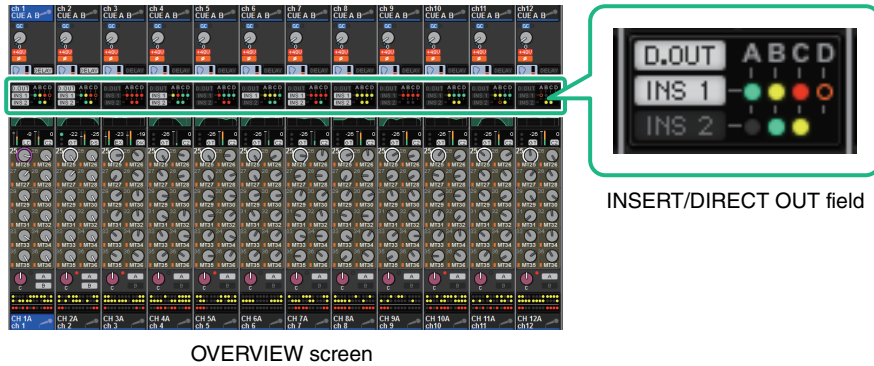


This screen contains the following items.

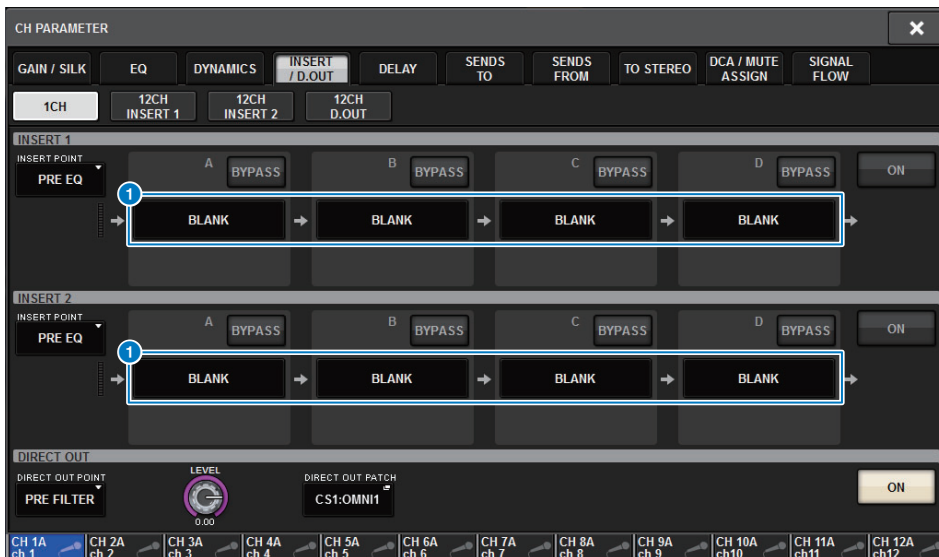
- 1 **GEQ/PEQ allocation field**  
Indicates the GEQ/PEQ allocation status. You can view 48 available DSP resources at a glance. A location to which you can allocate GEQ/PEQ is indicated in a pink frame. A gray frame means a GEQ/PEQ cannot be allocated to that location.
  - 2 **GEQ/PEQ allocation knob**  
Allocates GEQ/PEQ. You can also allocate them by tapping the touch screens.
  - 3 **GEQ/PEQ name**  
Indicates the name of GEQ/PEQ to be allocated.
7. Rotate the **GEQ/PEQ allocation knob** to specify the location for GEQ/PEQ (indicated in a pink frame).
  8. Press the **OK button** to allocate GEQ/PEQ.  
If you decide to cancel the operation, press the **CANCEL** button instead of the **OK** button. The inserted GEQ/PEQ will be displayed.

■ Controlling a GEQ/PEQ via the OVERVIEW screen

1. Press the [VIEW] key to access the OVERVIEW screen.



2. Press the INSERT/DIRECT OUT field of the channel into which you want to insert the GEQ/PEQ. The INSERT/D.OUT popup window (1CH) will appear.



1 INSERT block [A]–[D] buttons

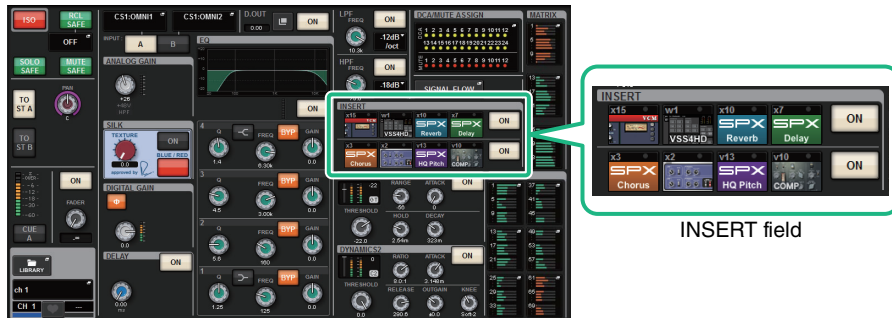
Indicate four plug-ins that have been assigned to INSERT1 and INSERT2 respectively. Press this button to display the edit screen for the assigned plug-in.

3. Press the INSERT block button to which you want to assign the GEQ/PEQ to access the INSERT screen.

4. Follow steps 4–8 on [page 248](#).

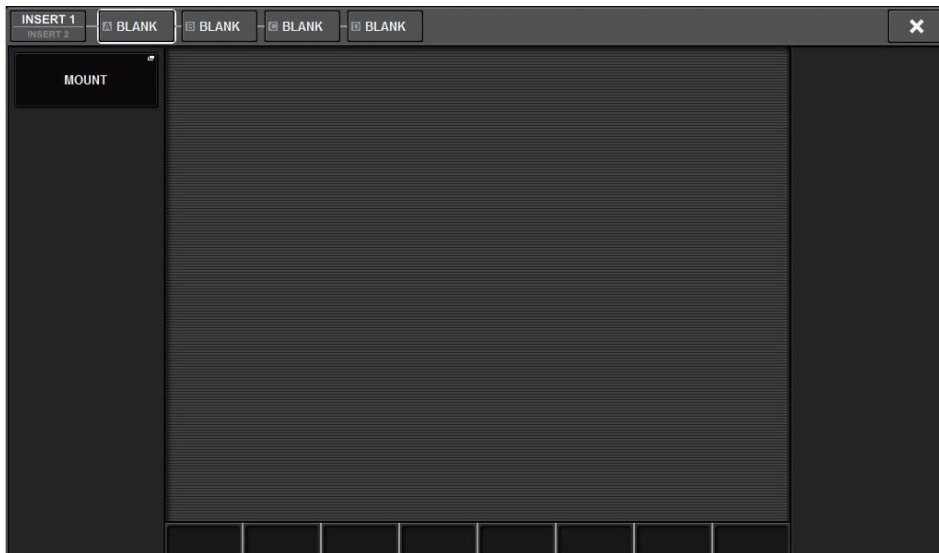
■ Controlling a GEQ/PEQ via the SELECTED CHANNEL VIEW screen

1. Select the channel that you want to operate.
2. Press the [VIEW] key to access the SELECTED CHANNEL VIEW screen.



SELECTED CHANNEL VIEW screen

3. Press the INSERT field to access the INSERT screen.

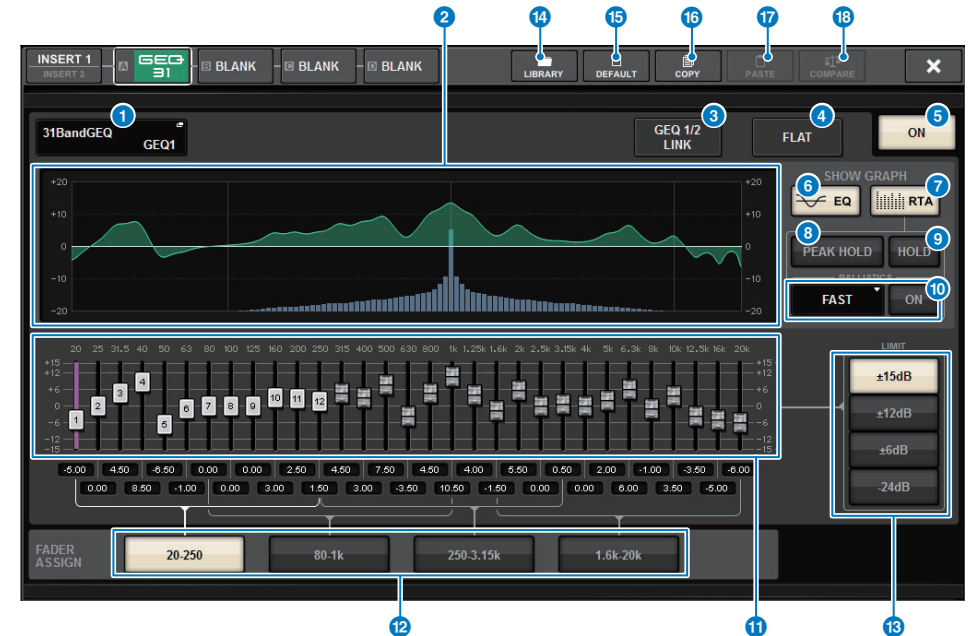


4. Follow steps 4–8 on page 248.

Using the 31BandGEQ

1. Follow steps 1–8 under “Inserting a GEQ/PEQ into a channel” (page 247), insert the 31BandGEQ into a channel.

The system displays the EDIT screen for the GEQ/PEQ that you inserted.



- 1 **MOUNT GEQ/PEQ popup button**  
Press this button to access the MOUNT GEQ/PEQ popup window.
  - 2 **EQ graph**  
Indicates the approximate current response of the 31BandGEQ.
  - 3 **GEQ LINK button**  
Press this button to access the GEQ LINK window, in which you can link the GEQ of paired channels.
- NOTE**  
The GEQ LINK button appears only for paired GEQs.
- 4 **FLAT button**  
Press this button to reset the GAIN parameters of all GEQ bands to 0 dB.

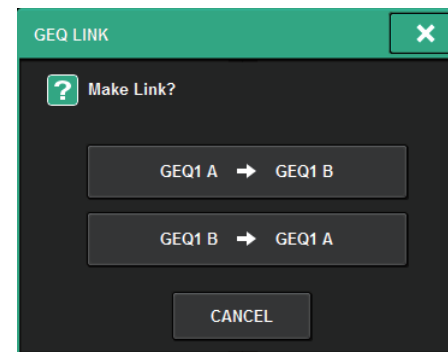


- 5 **GEQ ON button**  
Switches the currently-selected GEQ on or off.
- 6 **EQ button**  
Press this button to display the EQ graph.
- 7 **RTA button**  
If this button is on, a semi-opaque frequency analysis graph of the input signal (immediately after EQ) will be superimposed on top of the EQ frequency response graph.
- 8 **PEAK HOLD**  
If this button is on, the analyzed frequency response graph will hold the peak level indication.
- 9 **HOLD button**  
If this button is on, the frequency response graph will indicate and hold the result of the frequency analysis.
- 10 **BALLISTICS field**
  - **BALLISTICS button**  
If this button is on, you will be able to add rate of decay to the analyzed frequency response graph.
  - **FAST/SLOW switch button**  
Switches the decay rate of graph rendering (FAST/SLOW).
- 11 **Faders**  
Indicate the amount of boost and cut for each band of the 31BandGEQ. The actual values are shown in the numerical boxes below.  
You can control the faders (that have been selected for operation on the touch screen) by using the screen encoder or the [TOUCH AND TURN] knob.
- 12 **FADER ASSIGN field**  
In this field you can select the group of bands that will be controlled by the faders in the Channel Strip section.
- 13 **LIMIT select buttons**  
Enable you to select the range of gain adjustment from the following options:  $\pm 15$  dB,  $\pm 12$  dB,  $\pm 6$  dB (these are valid in both the boost and cut directions), or  $-24$  dB (valid only in the cut direction).
- 14 **LIBRARY button**  
Press this button to open the GEQ library window.
- 15 **DEFAULT button**  
Press this button to restore the default parameter setting.

- 16 **COPY button**  
Copies the selected GEQ settings to buffer memory.
- 17 **PASTE button**  
Press this button to paste the settings that were copied in buffer memory to the current GEQ. If valid data has not been copied into buffer memory, you will be unable to paste it.
- 18 **COMPARE button**  
Press this button to switch between the current GEQ settings and the data in buffer memory. If valid data has not been copied into buffer memory, you will be unable to compare the data.

## 2. If you are using a stereo source, link two GEQ units.

When you press the GEQ LINK button, the following popup window will appear. To enable linking, press any button other than CANCEL. The popup window contains the following items.



- **GEQ\*A→GEQ\*B button**  
The channel L parameter values will be copied to channel R, and then those parameters will be linked.  
An asterisk (\*) represents the GEQ location.
- **GEQ\*B→GEQ\*A button**  
The channel R parameter values will be copied to channel L, and then those parameters will be linked.  
An asterisk (\*) represents the GEQ location.
- **CANCEL button**  
Cancels the link and closes the popup window.

## 3. Press the GEQ ON/OFF button to turn the 31BandGEQ on.

**4. Press one of the buttons in the FADER ASSIGN field to select the group of bands you will control using the faders in the Channel Strip section.**

The buttons in the FADER ASSIGN field correspond to the following groups of bands.

<b>20-250</b>	Twelve bands within 20.0Hz–250Hz
<b>80-1k</b>	Twelve bands within 80.0Hz–1.00 kHz
<b>250-3.15k</b>	Twelve bands within 250Hz–3.15 kHz
<b>1.6k-20k</b>	Twelve bands within 1.60kHz–20.0 kHz

When you press one of these buttons, the faders for the bands selected on screen will turn white, and the numbers of the corresponding faders in the Channel Strip section will be displayed. Also, you will be able to use the faders in the Channel Strip section to control the corresponding bands.

**NOTE**

The above operation is possible even if the Channel Strip section is locked. When you turn off the button in the FADER ASSIGN field, the faders will return to the locked state.

**5. Raise the corresponding fader of the Channel Strip section.**

The corresponding frequency region will be boosted or cut.

**NOTE**

When a fader in the Channel Strip section is set to the center (flat) position, the corresponding [ON] key indicator will turn off. This indicates that the corresponding band is not being modified. If you raise or lower the fader even the slightest amount, the [ON] key will light, indicating that this band is being modified. If you press a lit [ON] key to make it go dark, the corresponding band will immediately return to the flat state.

**6. Repeat steps 4 and 5 to adjust each band.**

**NOTE**

If you switch the touch screen display to a different screen or to the GEQ window, the fader assignments in the Channel Strip section will forcibly be defeated. However, if you once again display the same GEQ, the group of bands you had previously been controlling will automatically be assigned to the faders.

**7. When you finish making settings, turn off the buttons in the FADER ASSIGN field.**

The faders and [ON] keys in the Channel Strip section will return to their previous function.

**NOTE**

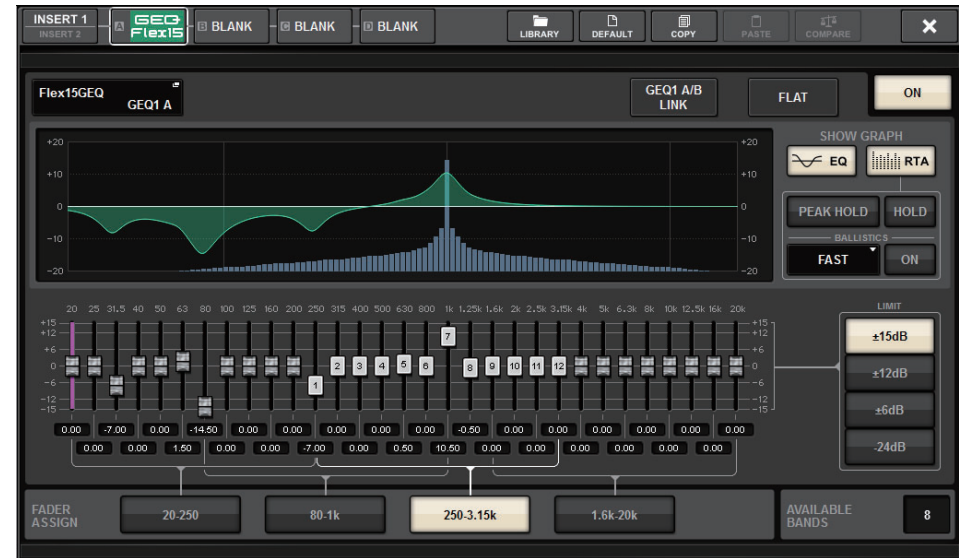
When you close the GEQ popup window, the buttons in the FADER ASSIGN field automatically turn off.

## Using the Flex15GEQ

You can use faders 1–12 and [ON] keys in the Channel Strip section to control the Flex15GEQ.

**1. Follow steps 1–8 under “Inserting a GEQ/PEQ into a channel” (page 247), insert the Flex15GEQ into a channel.**

The system displays the EDIT screen for the GEQ/PEQ that you inserted.



This window is the same as that for the 31BandGEQ, except that the AVAILABLE BANDS field is a real-time indication of the number of additional bands (maximum 15) that can be controlled for the current GEQ.

**2. Press the GEQ ON/OFF button to turn the Flex15GEQ on.**

**3. Press one of the buttons in the FADER ASSIGN field to select the group of bands you will control using the faders in the Channel Strip section.**

For details on the bands corresponding to each button in the FADER ASSIGN field, refer to step 4 under “Using the 31BandGEQ” (page 251).

When you press one of these buttons, the faders for the bands selected on the touch screen will turn white, and the numbers of the corresponding faders in the Channel Strip section will be displayed. Also, you will be able to use the faders in the Channel Strip section to control the corresponding bands.

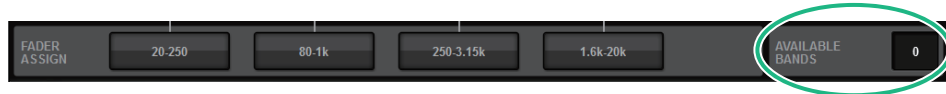
**NOTE**

The above operation is possible even if the Channel Strip section is locked. When you turn off the button in the FADER ASSIGN field, the faders will return to the locked state.

#### 4. Raise the corresponding fader of the Channel Strip section.

For each of a Flex15GEQ's two GEQ units (A and B), a maximum of fifteen bands can be controlled.

The real-time number of additional bands that can be controlled is shown to the right of "AVAILABLE BANDS" in the FADER ASSIGN field. If you have used all fifteen bands, you will have to return one of these bands to the flat position before you can operate any other band.



#### NOTE

- The [ON] key will light if you raise or lower a fader even the slightest amount. This indicates that the corresponding band is being modified.
- To quickly return a boosted or cut band to the flat position, press the corresponding [ON] key in the Channel Strip section to make it go dark.

#### 5. Repeat steps 3 and 4 to adjust up to fifteen bands.

#### NOTE

If you switch the touch screen display to a different screen or to the GEQ window, the fader assignments in the Channel Strip section will forcibly be defeated. However, if you once again display the same GEQ, the group of bands you had previously been controlling will automatically be assigned to the faders.

#### 6. When you finish making settings, turn off the buttons in the FADER ASSIGN field.

The faders and [ON] keys in the Channel Strip section will return to their previous function.

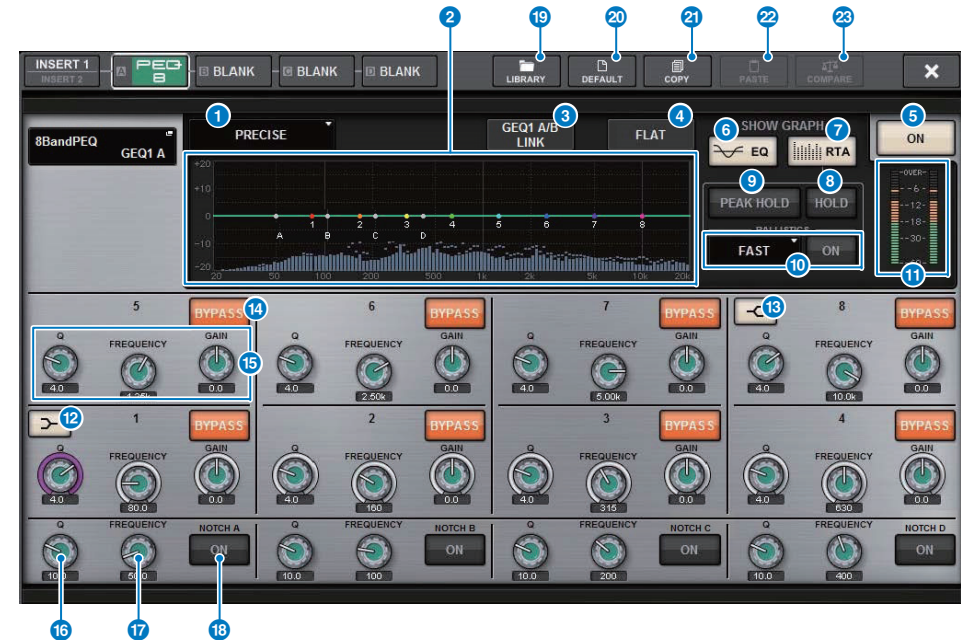
#### NOTE

When you close the GEQ popup window, the buttons in the FADER ASSIGN field automatically turn off.

## Using the 8BandPEQ

### 1. Follow steps 1–8 under "Inserting a GEQ/PEQ into a channel" (page 247), insert the 8BandPEQ into a channel.

The system displays the EDIT screen for the GEQ/PEQ that you inserted.



#### 1 EQ type select button

Switches the EQ type to PRECISE, AGGRESSIVE, SMOOTH, or LEGACY.

#### 2 PEQ graph

Displays the parameter values for the PEQ and filters.

#### 3 PEQ LINK button

Press this button to access the PEQ LINK window, in which you can link the PEQ of paired channels.

**4 FLAT button**

Press this button to reset the GAIN parameters of all PEQ band to 0 dB.  
All ON buttons for the notch filter will be turned off.  
All parameter values other than those above will retain the same values, without being reset.

**5 PEQ ON/OFF button**

Switches the currently-selected PEQ on or off.

**6 EQ button**

Press this button to display the EQ graph.

**7 RTA button**

If this button is on, a semi-opaque frequency analysis graph of the input signal (immediately after EQ) will be superimposed on top of the EQ frequency response graph.

**8 HOLD button**

If this button is on, the frequency response graph will indicate and hold the result of the frequency analysis.

**9 PEAK HOLD**

If this button is on, the analyzed frequency response graph will hold the peak level indication.

**10 BALLISTICS field****• BALLISTICS button**

If this button is on, you will be able to add rate of decay to the analyzed frequency response graph.

**• FAST/SLOW switch button**

Switches the decay rate of graph rendering (FAST/SLOW).

**11 EQ IN/OUT level meters**

Indicate the peak level of signals before and after the EQ. For a stereo channel, these meters indicate the level of both the L and R channels.

**12 LOW SHELIVING ON/OFF button**

Turn on this button to switch the LOW band to a shelving type filter.

**13 HIGH SHELIVING ON/OFF button**

Turn on this button to switch the HIGH band to a shelving type filter.

**14 BYPASS button**

Enables you to bypass bands independently.

**15 EQ parameter setting knobs**

Indicate the Q, FREQUENCY, and GAIN parameters for BAND 1–8.  
Use the corresponding screen encoder or the [TOUCH AND TURN] knob to adjust the parameters.

**16 Notch filter Q knob**

Adjusts the notch filter Q.

**17 Notch filter frequency knob**

Adjusts the notch filter frequency.

**18 Notch ON button**

Each of four notch filters features an ON button.

**19 LIBRARY button**

Press this button to open the OUTPUT EQ library window.

**20 DEFAULT button**

Press this button to restore the default parameter setting.

**21 COPY button**

Copies EQ parameter settings to buffer memory.

**22 PASTE button**

Press this button to paste the settings that were copied in buffer memory to the current EQ. If valid data has not been copied into buffer memory, you will be unable to paste it.

**23 COMPARE button**

Press this button to switch between the current EQ settings and data in buffer memory. If valid data has not been copied into buffer memory, you will be unable to compare the data.

**2. If you are using a stereo source, link two PEQ units.**

When you press the PEQ LINK button, the following popup window will appear. To enable linking, press any button other than CANCEL. This popup window includes the following items.



• **GEQ\*A→GEQ\*B button**

The channel L parameter values will be copied to channel R, and then those parameters will be linked.

An asterisk (\*) represents the GEQ location.

• **GEQ\*B→GEQ\*A button**

The channel R parameter values will be copied to channel L, and then those parameters will be linked.

An asterisk (\*) represents the GEQ location.

• **CANCEL button**

Cancels the link and closes the popup window.

**NOTE**

The PEQ LINK button appears only for paired PEQs.

**3. Press the PEQ ON/OFF button to turn the PEQ on.**

## Automixer

Automixer detects effective audio from multiple microphones and automatically optimizes the gain distribution for multiple live microphones in unpredictable dialog situations. In this way, the sound engineer can maintain consistent system gain throughout multiple microphones without having to focus on the operation of multiple faders.

### Theory of Automixer operation

Automixer employs the Dugan Speech System, which automatically adjusts the automix gain of up to 64 live speech microphones.

One person speaking with multiple microphones	Two people speaking with multiple microphones
<p>If one person speaks, that microphone's gain level will fade up instantly, while the other microphone gains will be reduced. If a different person speaks, the same effect will be obtained.</p>	<p>If two people speak, the gain of two microphones will be automatically distributed so that the total gain will stay constant. The gain of the third microphone will be reduced.</p>

The behavior of the Dugan Speech System is different than that of a limiter or auto-level controller function. This system enables an engineer to adjust the level balance as usual, even for multiple speakers. Also, while no one is speaking, the system detects the microphone input levels and automatically distributes the gain. So, the faders can be left in a raised position.

Automixer distributes automix gain more preferentially to channels with higher input levels. Therefore, insert it to POST ON. Automixer provides the following benefits:

- It prevents the annoying fluctuation of levels and uneven ambient noise that is input from microphones on the channels with Channel Off or the minimum fader setting.
- It adjusts the gain and fader settings according to the speaker's voice level on each microphone, and inputs even signal levels, resulting in more accurate automix gain distribution.
- It achieves preferential distribution of automix gain for the speaker you want to emphasize by raising the fader for that speaker or lowering others.

## Inserting Automixer into a channel

1. Press the **RACK&REC** button on the menu bar to access the **RACK&REC** screen.



This window includes several pages, which you can switch between using the tabs located at the top of the window.

2. Press the **GEQ RACK** tab on the **RACK&REC** screen that displays **GEQs**. The **GEQ RACK** screen will appear.



- 1 **GEQ MOUNT popup button**

Press this button to display the **GEQ MOUNT** popup window, in which you can select a plug-in to mount.

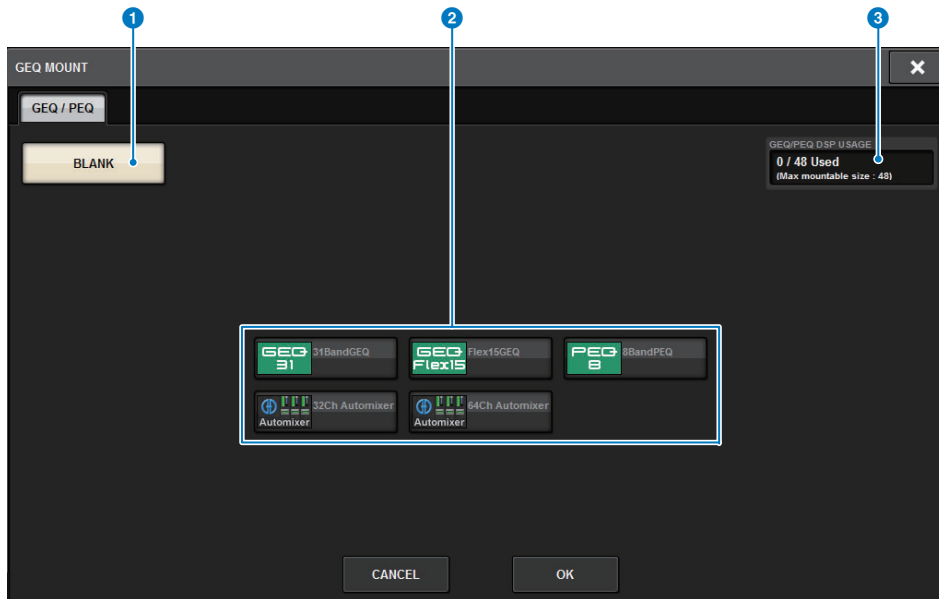


**3. Press the GEQ MOUNT popup button.**

**NOTE**

You can mount Automixer only to GEQ1.

The GEQ MOUNT popup window appears.



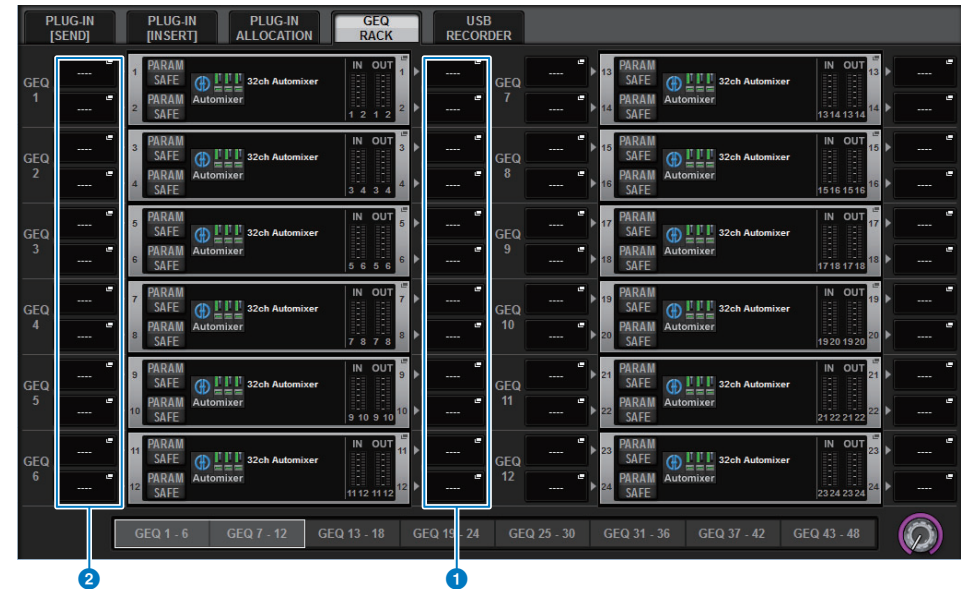
**NOTE**

The GEQ MOUNT popup window is displayed on only one of the bays.

This screen contains the following items.

- 1 BLANK button**  
Unmounts the GEQ/PEQ/Automixer from the rack.
- 2 GEQ/PEQ/Automixer select buttons**  
Select the GEQ/PEQ/Automixer that will be mounted in the rack.
- 3 GEQ/PEQ DSP USAGE indication**  
Shows the state of GEQ/PEQ resource usage.

**4. In the GEQ MOUNT popup window, use the GEQ/PEQ/Automixer select buttons to select the item you want to mount, and then press the OK button.**  
The GEQ RACK screen will appear.



- 1 INPUT popup buttons**  
Press these buttons to access the INPUT PATCH popup window, in which you can select a signal to patch to the channel.
  - 2 OUTPUT popup buttons**  
Press these buttons to access the OUTPUT PATCH popup window, in which you can select a signal to patch to the channel.
- 5. Press the INPUT popup button.**
  - 6. In the INPUT PATCH popup window, select the input source and then press the x button to close the window.**
  - 7. Press the OUTPUT popup button.**
  - 8. In the OUTPUT PATCH popup window, select the output destination and then press the x button to close the window.**
  - 9. Repeat steps 5–8 to insert Automixer into the desired channels.**

## Controlling the Automixer parameters



### Master field

#### 1 MOUNT popup button

Press this button to display the GEQ MOUNT popup window.

#### 2 Channel display select buttons

These buttons contains the auto mix gain meters and mode indicators: man[ual] (yellow), auto (green), or mute (red) for each channel. Press one of these buttons to select channels to be displayed in the channel control field below.

#### 3 OVERRIDE/PRESET/MUTE buttons

These buttons are used to set up each group (a/b/c/d/e) selected in the channel control field. Only the buttons for the selected groups will be displayed.

##### • OVERRIDE

Press this button to smoothly fade-in the levels of the channels (for which the override buttons are turned on) to 0 dB (unity gain). All channels for which the override buttons are turned off will be muted.

##### • PRESET

Press this button to place the corresponding group of channels into a mode (man, auto, or mute) as indicated next to the lit preset indicator.

##### • MUTE

Press this button to fade out all channels immediately (in 0.5 seconds).

#### 4 meters button

Switches the meter indicators displayed in the channel control field. Pressing the button repeatedly will switch among gain (auto mix gain), input (input level), and output (output level).

##### NOTE

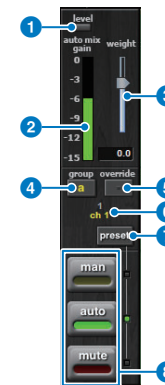
“gain” is the most useful choice during normal operation.

#### 5 reset button

Initializes the Automixer settings.

### Channel control field

Each channel is always in man, auto, or mute mode. The indicators for the engaged channel mode will light up. To select a mode, press the corresponding mode button or the PRESET button in the master field.



#### 1 Level indicator

Lights up green when the audio signal reaches the level appropriate for automatic mixing.

##### NOTE

- If the level indicator flashes, raise the input gain.
- If the level indicator lights up red, lower the input gain.

#### 2 Meter indicator

The meter indicator features three indication modes. Pressing the meters button in the master field repeatedly will switch modes.

gain	Indicates auto mix gain.	green
input	Indicates the input level.	yellow
output	Indicates the output level.	blue

##### NOTE

“gain” is the most useful choice during normal operations.

#### 3 weight

The weight controls balance relative sensitivity of the input channels. Balance the weight controls so that the auto mix gain meters will display approximately equal levels when no one is talking. For example, if there is ongoing noise near one microphone (e.g., computer fan or air vent), suppress it by reducing that channel’s weight.

To change the channel’s weight level, use the [TOUCH AND TURN] knob to manipulate the weight slider.

Automixer calculates the ratios of the input levels of a specific channel against all input channels within the group. The following example explains how the weight control works.

**■ Raising the weight control for one channel:**

- Increases that channel's auto mix gain, and slightly decreases other channels' auto mix gains.
- Makes it easier for the channel with the higher weight setting to obtain auto mix gain (thus, easier to be heard) than other channels.

**■ Lowering the weight control for one channel:**

- Decreases that channel's auto mix gain, and increases other channels' auto mix gains.
- Makes it more difficult for that channel's speaker to be heard over other speakers when multiple people are speaking on multiple microphones.

**4 group**

Each channel can be assigned to one of five groups (a/b/c/d/e).

This group function is helpful in the following applications:

- **Using multiple rooms:** Assign the microphones in each room to different groups so that they can function as separate automixers.
- **Stereo panning:** Assign the microphones panned left, right, and center to separate groups to maintain a stable stereo ambience.

**5 override**

Turning on the OVERRIDE button in the master field will place the corresponding channels into man or mute mode, according to the channels' override button status.

- While the channels' override buttons are on, turning on the OVERRIDE button in the master field will place the corresponding channels into man[ual] mode.
- While the channels' override buttons are off, turning on the OVERRIDE button in the master field will place the corresponding channels into mute mode.
- Turn off the Master OVERRIDE button to restore the previous channel mode.

The Override function is useful when the panel discussion leader wants to control the system.

Follow the steps below.

1. Turn on the override button on the channel for the leader.
2. Turn off the override button on all other channels.
3. Turn on the OVERRIDE button in the master field as necessary.

**6 Channel number**

This area displays the channel number and name, where a specific channel is inserted.

**7 preset button**

Press this button to select a channel mode (man, auto, or mute) that will be engaged if the PRESET button in the master field is turned on. The channel preset button will light up indicating that the preset has been programmed for that channel.

**8 man/auto/mute buttons**

Pressing each button repeatedly toggles the corresponding mode on and off.

**man:** There is no automixing, and the audio signal passes through at unity gain. Use this mode for singing through a microphone.

**auto:** Auto mixing is turned on. Use this mode for dialog.

**mute:** The channel's output is muted.

# Plug-ins

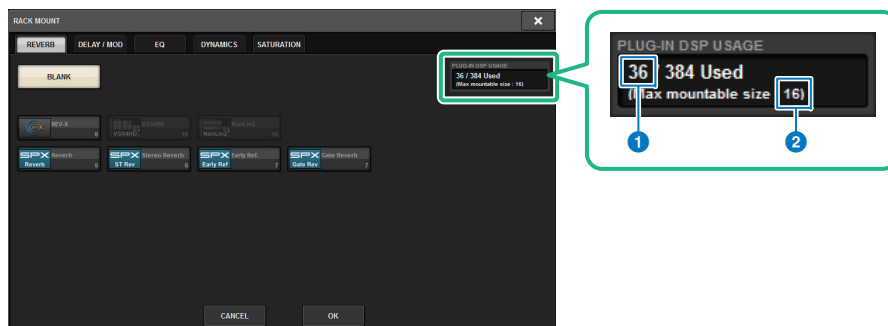
## About plug-ins

Plug-ins can be used by inserting them into a channel, or via send or return. The RIVAGE PM system provides a rich variety of plug-in types, including the Rupert EQ 773 and Rupert Comp 754 newly designed in a collaboration with Rupert Neve Designs. The maximum number of plug-ins that can be mounted depends on the type of plug-in.

## About plug-in resources

**NOTE**

Plug-in resources can be viewed in the upper right of the RACK MOUNT popup window



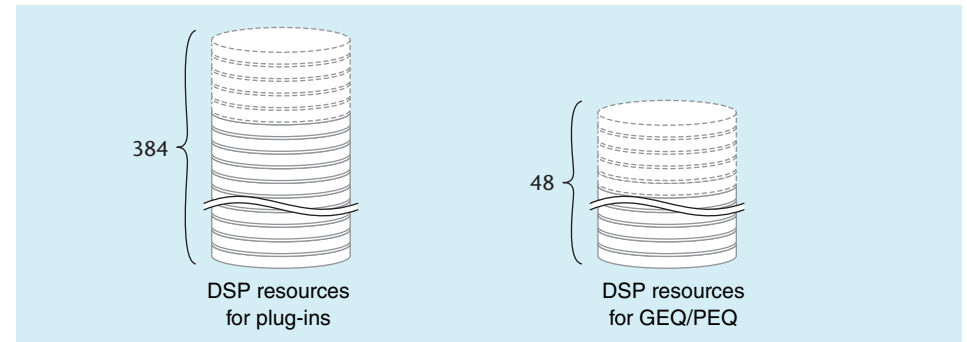
- 1 Number of slots currently in use
- 2 (Max mountable size: XX)  
The maximum number of slots in which plug-ins can be mounted.

**NOTE**

Depending on the mounted state, the Max mountable size: XX may be less than the remaining number of slots. The number of slots used by plug-ins is shown on the plug-in select button.



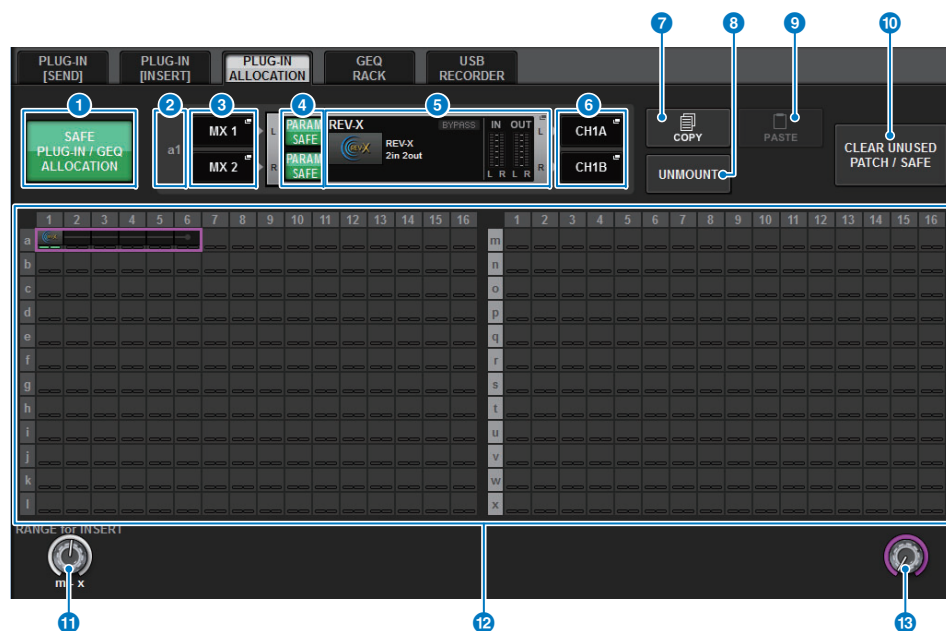
## DSP resource management for plug-ins



Plug-ins and GEQ/PEQ each feature their dedicated DSP resources. DSP resources are consumed each time a plug-in is mounted or a GEQ/PEQ is inserted.

DSP resources usable by plug-ins are divided into 384 units, and the DSP resources that are usable by GEQ/PEQ are divided into 48 units. For details on the DSP resources used by each plug-in or GEQ/PEQ, refer to the data list.

You can view the plug-in resource allocation on the PLUG-IN ALLOCATION screen.



This screen contains the following items.

- 1 SAFE PLUG-IN/GEQ ALLOCATION button**  
This button turns on/off recall safe for resource allocation used to mount plug-ins and GEQ.
- 2 Plug-in allocation number**  
Indicates the locations of the allocated plug-ins (expressed by the row name <a-x> and the column number).
- 3 INPUT popup buttons (L/R)**  
Press these buttons to access the INPUT PATCH popup window, in which you can select a signal to patch to the L/R channel.
- 4 PARAM SAFE button (L/R)**  
Switches Recall Safe on/off for plug-in parameters.
- 5 RACK MOUNT popup button**  
Press this button to access the popup window of the currently-selected plug-in. While a plug-in is not allocated in the selected location, press this button to display the RACK MOUNT popup window, in which you can select a plug-in to mount.

- 6 OUTPUT popup buttons (L/R)**  
Press these buttons to access the OUTPUT PATCH popup window, in which you can select a signal to patch to the L/R channel.
- 7 COPY button**  
Use this button to copy the currently-selected plug-in when you want to mount a single plug-in in multiple locations.
- 8 UNMOUNT button**  
Use this button to unmount the currently-selected plug-in.
- 9 PASTE button**  
Use this button to paste the copied plug-in to the selected location.
- 10 CLEAR UNUSED PATCH/SAFE button**  
Use this button to cancel unused patches or recall safe.
- 11 Insert plug-in allocation knob**  
This knob specifies the position at which the inserted plug-in will be placed.
- 12 Plug-in allocation field**  
Indicates the plug-in allocation status. You can view 384 available DSP resources at a glance. The currently-selected plug-in is indicated in a pink frame.
- 13 Plug-in allocation number**  
Allocates plug-ins. You can also allocate plug-ins by tapping the touch screens.



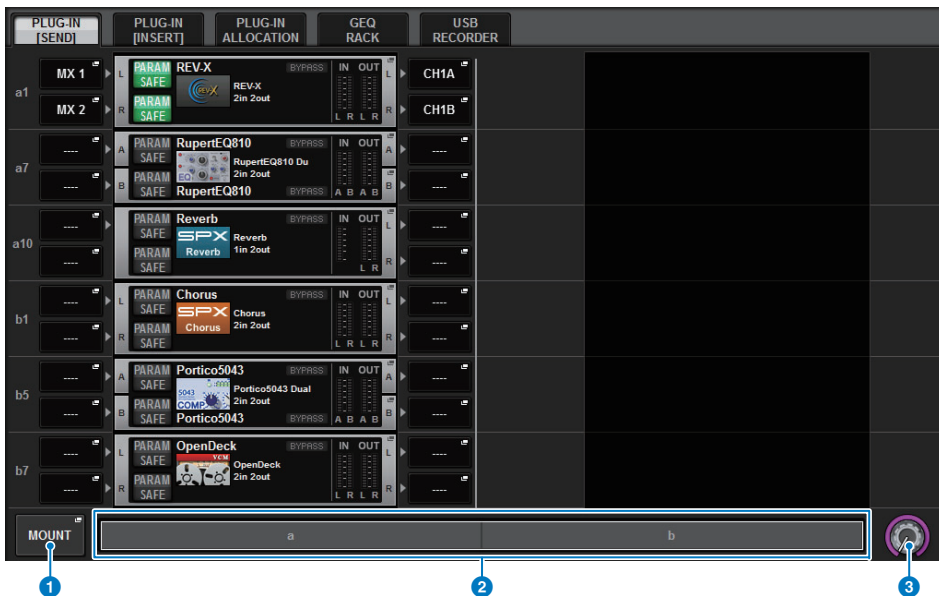
# Using plug-ins

1. Press the RACK&REC button on the menu bar to access the RACK&REC screen.



This window includes several pages, which you can switch between using the tabs located at the top of the window.

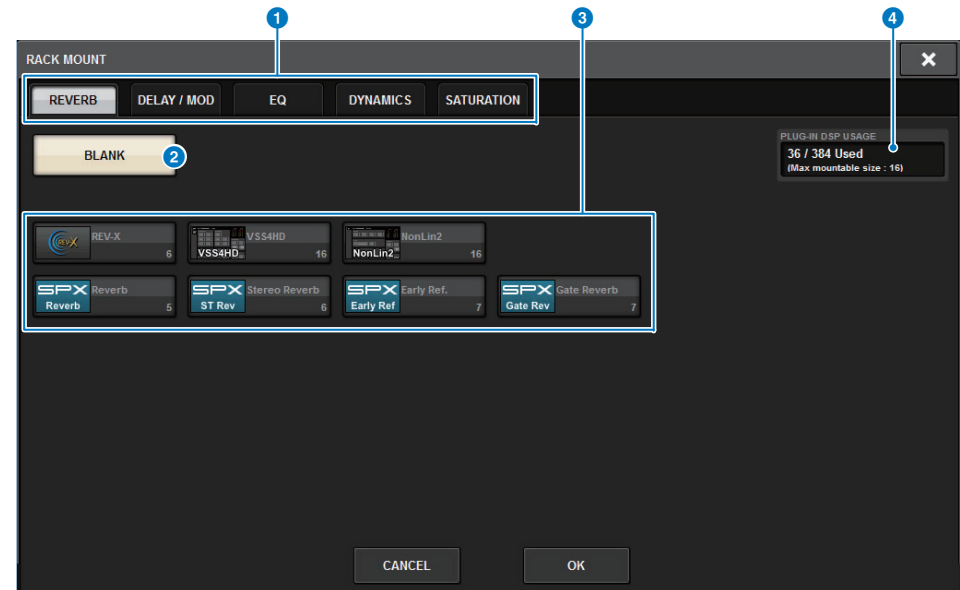
2. Press the PLUG-IN RACK tab on the RACK&REC screen that displays plug-ins. The PLUG-IN RACK page of the RACK&REC screen appears.



This screen contains the following items.

- 1 **MOUNT popup button**  
Press this button to display the RACK MOUNT popup window, in which you can select a plug-in to mount.
- 2 **Plug-in allocation bar**  
You can view the plug-in allocation status at a glance.
- 3 **Rack select knob**  
Use the corresponding screen encoder or the [TOUCH AND TURN] knob to select a rack.

3. Press the MOUNT popup button.



The RACK MOUNT popup window appears.

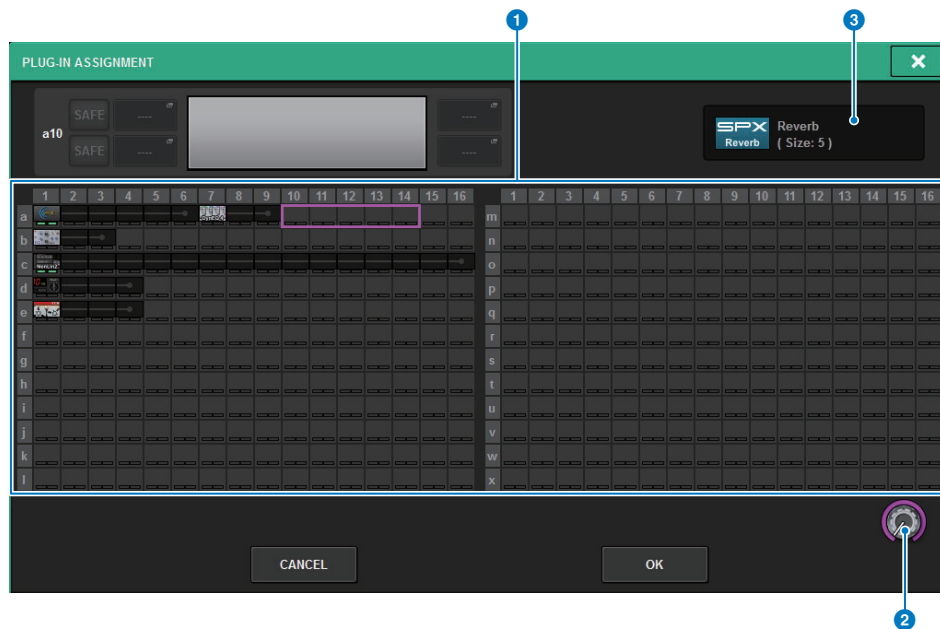
**NOTE**  
The RACK MOUNT popup window is displayed on only one of the bays.

This screen contains the following items.

- 1 **Category select tabs**  
Enable you to select the category of plug-in that will be mounted in the rack.
- 2 **BLANK button**  
Unmounts the plug-in from the rack.  
**NOTE**  
If you open this window by pressing the MOUNT button on the PLUG-IN RACK page, you will see this BLANK button and be able to select a plug-in to unmount. However, if you press the BLANK button, a message will appear and you will be unable to unmount the plug-in. To unmount a specific plug-in, open the plug-in popup window for the corresponding RACK, and then press the MOUNT button to display the RACK MOUNT popup window, in which you can select a plug-in to unmount.
- 3 **PLUG-IN select buttons**  
Select the plug-in that will be mounted in the rack.
- 4 **PLUG-IN DSP USAGE indication**  
Shows the state of plug-in resource usage.



- In the RACK MOUNT popup window, use the PLUG-IN select buttons to select the item you want to mount, and then press the OK button.  
The PLUG-IN ASSIGNMENT popup window appears.



This screen contains the following items.

- Plug-in allocation field**  
Indicates the plug-in allocation status. You can view 384 available DSP resources at a glance. A location to which you can allocate the selected plug-in is indicated in a pink frame. A gray frame means you cannot allocate the selected plug-in to that location.
  - Plug-in allocation knob**  
Allocates plug-ins. You can also allocate plug-ins by tapping the touch screens.
  - Plug-in indicator**  
Indicates the plug-in to be allocated.
- Rotate the plug-in allocation knob to specify the location for the plug-in (indicated in a pink frame).

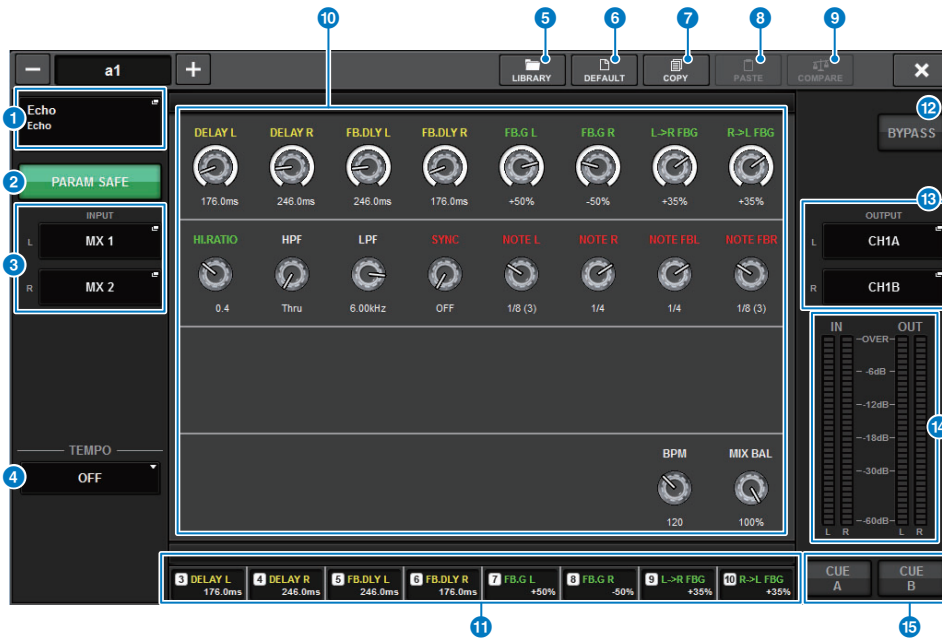
- Press the OK button to allocate the plug-in.  
If you decide to cancel the operation, press the CANCEL button instead of the OK button. The mounted plug-in is displayed.



This screen contains the following items.

- Plug-in allocation number**  
Indicates the locations of plug-ins (expressed by the row name <a-x> and the column number).
  - INPUT popup buttons (L/R)**  
Press these buttons to access the INPUT PATCH popup window, in which you can select a signal to patch to the L/R channel.
  - PARAM SAFE button (L/R)**  
Switches Recall Safe on/off for plug-in parameters.
  - RACK MOUNT popup button**  
Press this button to access the popup window of the currently-selected plug-in.
  - OUTPUT popup buttons (L/R)**  
Press these buttons to access the OUTPUT PATCH popup window, in which you can select a signal to patch to the L/R channel.
- Press the INPUT popup button.
  - In the INPUT PATCH popup window, select the input source and then press the x button to close the window.
  - Press the OUTPUT popup button.
  - In the OUTPUT PATCH popup window, select the output destination and then press the x button to close the window.

# Controlling the parameters of a plug-in



The popup window for each plug-in contains the following items.

- 1 RACK MOUNT popup button**  
Press this button to display the RACK MOUNT popup window, in which you can select a plug-in to mount.
- 2 PARAM SAFE button**  
Switches Recall Safe on/off for plug-in parameters.
- 3 INPUT popup buttons (L/R)**  
Press these buttons to access the INPUT PATCH popup window, in which you can select a signal to patch to the L/R channel.
- 4 TEMPO button**  
Enables you to select the tempo of the tap tempo function. For details on the plug-ins that can be used, refer to the data list.  
This button will appear if a delay-type or modulation-type effect is selected.
- 5 LIBRARY button**  
Press this button to open the corresponding plug-in library window.

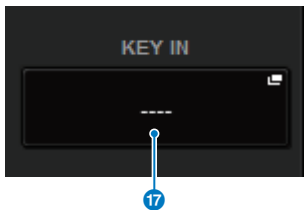
- 6 DEFAULT button**  
Restores the default parameter settings.
- 7 COPY button**  
Copies the setting of the selected plug-in to buffer memory.
- 8 PASTE button**  
Press this button to paste the settings that were copied in buffer memory to the current plug-in. If valid data has not been copied into buffer memory, you will be unable to paste it.
- 9 COMPARE button**  
Press this button to switch between the current plug-in settings and data in buffer memory. If valid data has not been copied into buffer memory, you will be unable to compare the data.
- 10 Parameter field**  
Shows the parameters of the currently-selected plug-in.
- 11 Screen encoder access field**  
Shows the name and value of the parameters that are assigned to the screen encoders. To switch the parameters that are being controlled, press a tab within the screen.
- 12 BYPASS button**  
Bypasses plug-ins.
- 13 OUTPUT popup buttons (L/R)**  
Press these buttons to access the OUTPUT PATCH popup window, in which you can select a signal to patch to the L/R channel.
- 14 IN/OUT meters**  
Indicate the level of the signal before and after it passes through the plug-in.
- 15 CUE A/B buttons**  
Turn on one of the buttons to audition the signal processed by the plug-in. You can choose CUE A, or CUE B.



- 16 ASSIST button**  
When you press this button, the screen shows the parameter assignments that can be operated by the screen encoders.

**NOTE**

- If the ASSIST button is on, you will be able to easily identify the parameters that are currently available for editing, and the parameters that will be available for editing after you select them.
- Rotate the screen encoder while holding it down to fine-tune the parameter value.

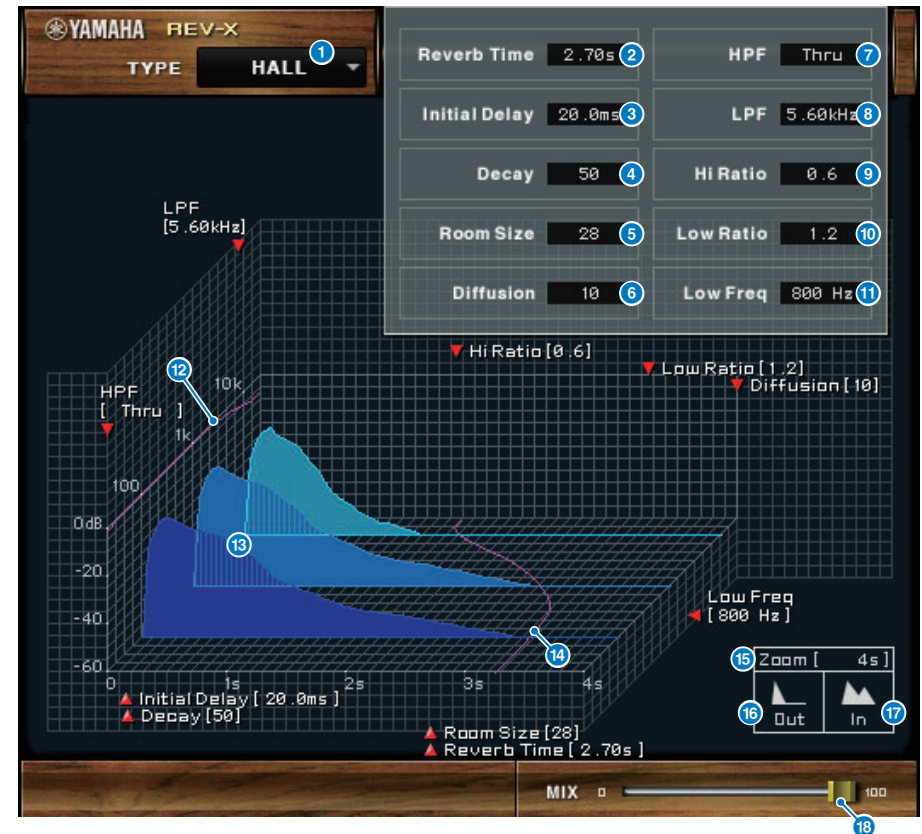


**17 KEY IN button**

Press the button to open the KEY IN SOURCE SELECT popup window, in which you can select a key-in signal source.

**REV-X**

REV-X is a reverb algorithm that provides a high-density, richly reverberant sound quality, with smooth attenuation, and spread and depth that work together to enhance the original sound. You can choose one of three programs to suit the acoustic sound field and your intentions: REV-X Hall, REV-X Room, and REV-X Plate.



**1 EFFECT TYPE**

Enables you to select an effect type.

**2 Reverb Time**

Duration of time until the reverberation attenuates and stops. Higher values extend the reverberation.

**3 Initial Delay**

Duration of time between sound input and the start of reverberation. Higher values delay the start of reverberation.

**4 Decay**

Shape of reverberation envelope. Reverberation characteristics are determined by the value.

**5 Room Size**

Size of space. Higher values simulate larger spaces. This value is linked with the Reverb Time value. When you change this value, the Reverb Time value changes.

**6 Diffusion**

Density and spread of reverberation. Higher values increase the density and enhance the spread.

**7 HPF**

This filter cuts the low frequency range of the reverberation. The range below the frequency specified by this value is cut. This filter does not affect the original source sound.

**8 LPF**

This filter cuts the high frequency range of the reverberation. The range above the frequency specified by this value is cut. This filter does not affect the original source sound.

**9 Hi Ratio**

Length of reverberation in the high frequency range. The reverberation duration of the high frequency range is expressed as a ratio relative to Reverb Time.

**10 Lo Ratio**

Length of reverberation in the low frequency range. The reverberation duration of the low frequency range is expressed as a ratio relative to Reverb Time.

**11 Low Freq**

Frequency value that serves as the basis for the Lo Ratio value. The frequency band below this value is affected by the Lo Ratio parameter setting.

**12 Filter frequency response curve**

The curve changes depending on the HPF and LPF values.

**13 Reverberation images**

These images represent the high-range (10kHz), mid-range (1kHz), and low-range (100Hz) reverberation. These images change shape depending on the parameter values. The vertical axis represents the level; the horizontal axis represents reverb time; the shape represents the envelope.

**14 Reverb time curve**

This curve represents the high-range (10kHz), mid-range (1kHz), and low-range (100Hz) reverb time. The curve changes depending on the Reverb Time, Hi Ratio, and Lo Ratio parameter values.

**15 Zoom**

This field indicates the time duration (in seconds) as displayed by the time axis (horizontal axis).

**16 Zoom Out button**

Click this button to increase the time value (in seconds) as displayed by the time axis (horizontal axis).

As a result, the display zooms out on the horizontal axis.

**17 Zoom In button**

Click this button to decrease the time value (in seconds) as displayed by the time axis (horizontal axis).

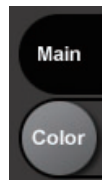
As a result, the display zooms in on the horizontal axis.

**18 MIX slider**

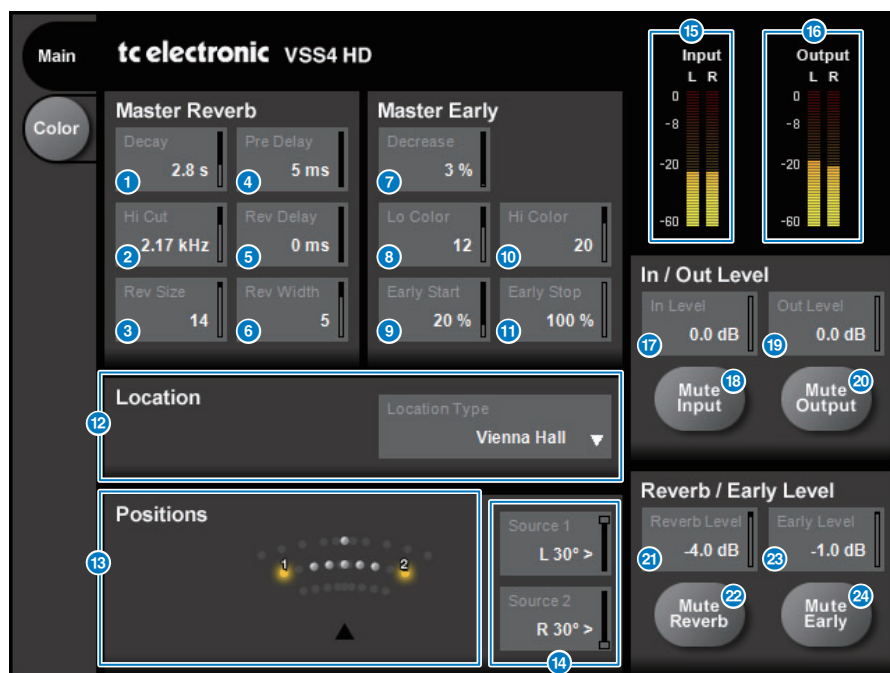
This control enables you to adjust the mix balance of the dry and wet (effect) sounds. When the balance is 0%, only the dry sound is output. When the balance is 100%, only the wet sound is output.

## ■ VSS4HD

VSS4HD is a room simulation reverb made by TC Electronic. It provides musical-sounding reverberation with a variety of reflected sounds. This plug-in includes several pages, which you can switch between using the tabs.



### Main page



**1 Decay button**

Adjusts the decay time of the reverb.

**2 Hi Cut button**

Adjusts the frequency of the high cut filter at the input stage of the reverb.

**3 Rev Size button**

Adjusts the perceptual size of the reverb.

**4 Pre Delay button**

Adjusts the delay of the reverb input.

**5 Rev Delay button**

Adjusts the delay of the reverb tail.

**6 Rev Width button**

Adjusts the width of the reverb tail.

**7 Decrease button**

Adjusts the number of reflections for the early reflections.

**8 Lo Color button**

Adjusts the low-frequency range of the early reflections.

**9 Early Start button**

Adjusts the first early reflections to eliminate them.

**10 Hi Color button**

Adjusts the high-frequency range of the early reflections.

**11 Early Stop button**

Adjusts the end of the early reflections to reduce them.

**12 Location Type list**

Selects the type of location.

**13 Positions indicator**

Indicates the positions of the input sources.

**14 Source 1/2 buttons**

Select the position of input sources 1/2.

**15 Input meter**

Indicates the input level.

**16 Output meter**

Indicates the output level.

**17 In Level button**

Adjusts the input level.

**18 Mute Input button**

Mutes the input.

**19 Out Level button**

Adjusts the output level.

**20 Mute Output button**

Mutes the output.

**21 Reverb Level button**

Adjusts the level of the reverb tail.

**22 Mute Reverb button**

Mutes the reverb.

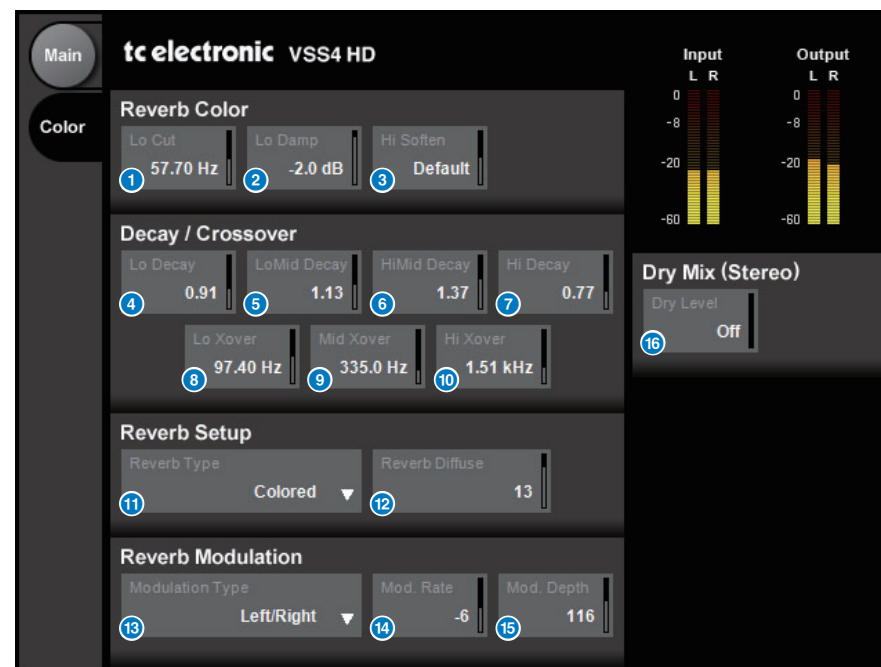
**23 Early Level button**

Adjusts the level of the early reflections.

**24 Mute Early button**

Mutes the early reflections.

**Color page**



**1 Lo Cut button**

Adjusts the low-cut frequency.

**2 Lo Damp button**

Adjusts the low-cut amount in dB units.

**3 Hi Soften button**

Adjusts the high-frequency range of the reverb tail.

**4 Lo Decay button**

Adjusts the multiple of decay for the frequency range below Lo Xover.

**5 Lo Mid Decay button**

Adjusts the multiple of decay for the low-mid frequency range.

**6 Hi Mid Decay button**

Adjusts the multiple of decay for the middle frequency range.

**7 Hi Decay button**

Adjusts the multiple of decay for the frequency range above Hi Xover.



**8 Lo Xover button**

Adjusts the crossover frequency between the low and low-mid frequency ranges of the reverb tail.

**9 Mid Xover button**

Adjusts the crossover frequency between the low-mid and middle frequency ranges of the reverb tail.

**10 Hi Xover button**

Adjusts the crossover frequency between the middle and high frequency ranges of the reverb tail.

**11 Reverb Type button**

Selects the type of reverb effect.

**12 Reverb Diffuse button**

Adjusts the diffusion for the decay time.

**13 Modulation Type button**

Selects the type of modulation.

**14 Modulation Rate button**

Selects the rate of modulation.

**15 Modulation Depth button**

Selects the depth of modulation.

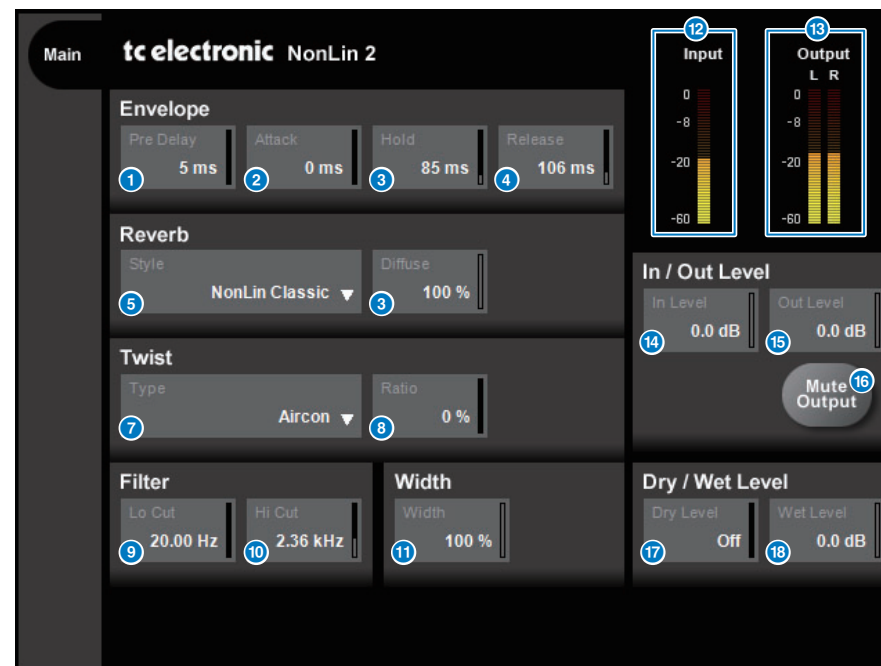
**16 Dry Level button**

Adjusts the level of the dry signal at the output stage.

**■ NonLin2**

NonLin2 is a processor that emulates an effect reverb made by TC Electronic that enables the user to adjust an envelope.

It provides vocal ambience, drum sound, reverse reverb, and a Twist effect.



**1 Pre Delay button**

Adjusts the delay of the envelope.

**2 Attack button**

Adjusts the attack time of the envelope.

**3 Hold button**

Adjusts the hold time of the envelope.

**4 Release button**

Adjusts the release time of the envelope.

**5 Style list**

Selects the basic reverb style.

**6 Diffuse button**

Adjusts the diffusion (spread) for the selected reverb style.

- 7 Type list**  
Selects the type of Twist that affects the reverb.
- 8 Ratio button**  
Adjusts the proportion of Twist for the reverb.
- 9 LoCut button**  
Adjusts the frequency of the low cut filter at the input stage of the reverb.
- 10 HiCut button**  
Adjusts the frequency of the high cut filter at the input stage of the reverb.
- 11 Width button**  
Adjusts the stereo width of the output.
- 12 Input meter**  
Indicates the input level.
- 13 Output meter**  
Indicates the output level.
- 14 In Level button**  
Adjusts the input level.
- 15 Out Level button**  
Adjusts the output level.
- 16 Mute Output button**  
Mutes the output.
- 17 Dry Level button**  
Adjusts the level of the dry signal.
- 18 Wet Level button**  
Adjusts the level of the wet signal (reverb component).

## ■ Analog Delay

This delay effect is based on the Yamaha E1010 analog delay released in the 1970s, with a few refinements to bring it up to date for modern applications. It delivers the same deep, organic echo sound that was a characteristic of the BBD analog delay devices used in the original E1010. Modulation can be added for a thick chorus sound. And, taking versatility to the next level, it is possible to select BBD sounds that were not available in the original E1010 so you have characters ranging from clear and precise to warm.



- 1 Drive meter**  
Indicates a drive amount influenced by the input level. Since Analog Delay features BBD and dynamics circuit, higher input level would bring the delayed sound up to maximum and increase the drive amount.
- 2 Delay time indicator**  
Indicates the current delay time and converted BPM value. You can use the Tap tempo functionality. The delay time and BPM value will change according to the tap tempo.
- 3 BBD TYPE switches**  
Adjust the characteristics of the delay sound. The characteristics become stronger in the order of switch A to E.  
  - A:** Clear sound as heard from a vintage digital delay
  - B–D:** Natural sound equivalent to the E1010
  - E:** Warm sound similar to a stomp box
- 4 TIME RANGE switches**  
Specify the delay time range controlled via the DELAY knob.

**5 INPUT knob**

Adjusts the input gain. As the input increases, the delay's drive amount also increases. If the input level is lower, you will get a cleaner sound. If the input level is higher, you will get a deeper delay sound.

**6 BASS knob**

Adjusts the low frequency range level at the input stage.

**7 TREBLE knob**

Adjusts the high frequency range level at the input stage.

**8 DELAY knob**

Adjusts the delay time.

**9 FEEDBACK knob**

Adjusts the feedback amount of the delay signal.

**10 FREQUENCY knob**

Adjusts the frequency of modulation.

**11 DEPTH knob**

Adjusts the depth of modulation.

**12 MIX knob**

Adjusts the mix balance between dry and delay sounds.

**■ Max100**

Max100 reproduces a classic phaser that appeared in the second half of the 1970s and continues to be popular today. With just four modes and a speed knob, it produces a variety of distinctive phase sounds.



**1 MODE knob**

Switches the tonal character. There are four types that differ in modulation amplitude and feedback amount.

**2 SPEED knob**

Adjusts the modulation speed.

**3 FOOT switch**

Switches the effect on/off.

## ■ Dual Phaser

Dual Phaser reproduces a vintage phaser that was manufactured during the middle of the 1970s. Two phasers, two LFOs, and four selectable modes allow a wide range of sounds to be produced.



### 10 SWEEP LFO1/LFO2 switch

Selects the Phaser B LFO.

### 11 SWEEP NORM/REV switch

Selects the LFO phase of Phaser B.

NORM is normal phase, and REV is reverse phase.

### 12 PHASER B ON/OFF switch

Switches Phaser B on/off.

### 13 MODE knob

Rearranges the two phasers.

- I: After mixing the stereo input, the sound processed by Phaser A is output from the L-channel and the sound processed by Phaser B is output from the R-channel.
- II: After mixing the stereo input, the sound processed by Phaser A is output from the L-channel, and the sound processed by Phaser A is additionally processed by Phaser B and output from the R-channel.
- III: After mixing the stereo input, the sound processed by Phaser A and then by Phaser B is output from both the L-channel and the R-channel.
- IV: The L-channel input is processed by Phaser A and output from the L-channel, and the R-channel input is processed by Phaser B and output from the R-channel.

### 1 LFO 1 RATE knob

Adjusts the LFO 1 speed.

### 2 LFO 1 SHAPE switch

Selects the LFO 1 waveform.

### 3 LFO 2 RATE knob

Adjusts the LFO 2 speed.

### 4 LFO 2 SHAPE switch

Selects the LFO 2 waveform.

### 5 PHASER A DEPTH knob

Adjusts the modulation depth of Phaser A.

### 6 PHASER A FEEDBACK knob

Adjusts the feedback amount of Phaser A.

### 7 PHASER A ON/OFF switch

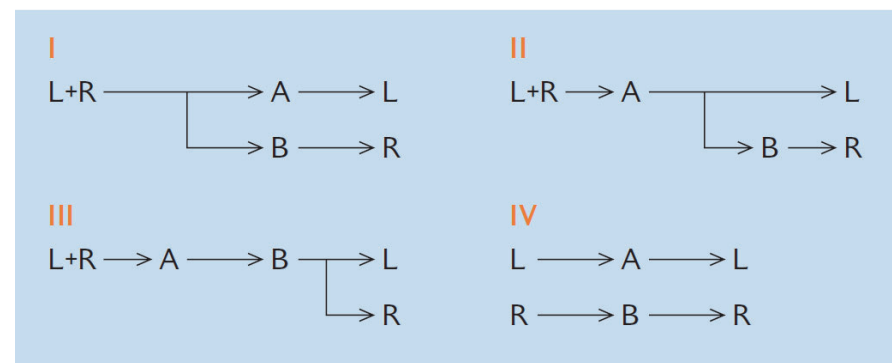
Switches Phaser A on/off.

### 8 PHASER B DEPTH knob

Adjusts the modulation depth of Phaser B.

### 9 PHASER B FEEDBACK knob

Adjusts the feedback amount of Phaser B.



## ■ Vintage Phaser

Vintage Phaser provides the high degree of sound-shaping flexibility that is expected of a phaser, but is not intended as a reproduction of any specific model. With 4/6/8/10/12/16 stages and two different modes, it can become several different types of phaser. It provides speed, center frequency, depth, feedback, and color settings for detailed control of the sound.



- 7 **STAGE switch**  
Selects the extent of the circuit that is modeled.  
The tonal character will be changed.
- 8 **FOOT switch**  
Switches the effect on/off.

- 1 **SPEED knob**  
Adjusts the modulation speed.
- 2 **MANUAL knob**  
Adjusts the center frequency of modulation.
- 3 **DEPTH knob**  
Adjusts the depth of modulation.
- 4 **FEEDBACK knob**  
Adjusts the feedback amount.
- 5 **COLOR knob**  
Makes fine adjustments to the tone.
- 6 **MODE switch** and 7 **STAGE knob** are valid only in the following combinations.

MODE	STAGE
I	10
II	6/8/12/16

- 6 **MODE switch**  
Switches the type of circuit structure that is modeled.  
The tonal character will be changed.

## ■ H3000 Live

The Eventide H3000 Ultra-Harmonizer features outstanding effect quality that has made it an enduring favorite of engineers and musicians everywhere. Now the newly-developed H3000 Live offers that same performance optimized for live-sound applications. This powerful processor provides pitch shift, delay, reverb, modulation, filter, and other modules that can be combined as required with an advanced algorithm that delivers remarkably organic overall sound. Carefully crafted presets make it is easy to achieve intricate, sonorous effects, adding rich harmonization or chorus to vocals, creating big guitar sounds with lush harmonics, or providing top-quality delay and reverb.



### 4 Value enter buttons

Use this numeric pad to enter a value for the parameter selected by the PARAMETERS buttons.

Press the numeric and [+]/[-] buttons to enter a value, and then press the [ENT] button to confirm the setting.

Press the [CXL] button to cancel the value before you confirm it.

Up or down arrow increases or decreases the value by one.

### 5 PARAMETERS display

Indicates the parameter values.

### 6 PARAMETERS buttons

Enable you to select parameters so you can modify assigned values.

Parameter	Description
MIX	Adjusts the mix balance between dry and wet signals.
MODULATION	Adjusts the amount of modulation.
SHIFT (LEFT, RIGHT)	Adjusts the pitch shift amount for each channel.
DELAY (LEFT, RIGHT)	Adjusts the delay time for each channel.
FEEDBACK (LEFT, RIGHT)	Adjusts the feedback amount for each channel.

### 1 PROGRAM display

This area shows the name of the selected preset (PROGRAM) and algorithm.

### 2 PROGRAM SELECT list button

Switches the preset. If you switch the preset, the internal algorithm and parameters will change accordingly.

### 3 Level meters

Indicate the input and output levels. The OVER indicator will light up if the output level exceeds 0 dB.



## ■ Rupert EQ 773

Rupert EQ 773 is a processor that emulates the equalizer section built into numerous classic consoles developed by Rupert Neve during the 1960s and 1970s. It accurately models this peerless EQ that is loved by engineers around the world and has been used on numerous historic sessions. With a distinctive EQ curve and rich overtones, this unit is notable for the way in which slight adjustments in the gain can produce vivid changes in the sound's expressiveness and sense of airiness. Even large EQ boosts do not fatigue the ear, but still allow the musical component of the source to be emphasized.

When the EQ is used to cut, or when the HPF is turned on, the sound becomes solid, yet without impairing the presence of that region, allowing you to control the tone while preserving the musical balance. Also, the EQ precisely emulates the input and output circuits that make lavish use of audio transformers and discrete class-A amps (which are the signature of Rupert Neve). Simply passing the signal through these circuits enhances the solidity of the sound, letting you obtain the depth and spaciousness associated with the Rupert Neve sound.



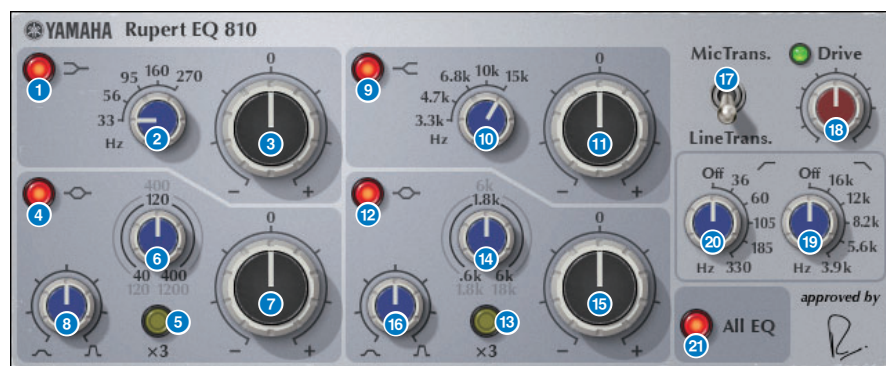
- 7 **DRIVE knob**  
Adjusts the amount of head amp overtones.
- 8 **EQL switch**  
Switches the equalizer on/off.

- 1 **LC FREQ knob**  
Selects the frequency of the low cut filter.
- 2 **LF GAIN knob**  
Adjusts the gain of the low shelving filter.
- 3 **LF FREQ knob**  
Selects the frequency of the low shelving filter.
- 4 **MF GAIN knob**  
Adjusts the peaking gain.
- 5 **MF FREQ knob**  
Selects the peaking frequency.
- 6 **HF GAIN knob**  
Adjusts the gain of the high shelving filter.

## ■ Rupert EQ 810

Rupert EQ 810 is a processor that emulates the equalizer section built into the top recording consoles developed by Rupert Neve during the 1980s.

A notable aspect of this EQ is that whether it is used to boost or to cut, the tonal changes it produces are effective and easy to understand. In contrast to the dramatic sound of Rupert EQ 773, this provides refined, detailed, and smooth tonal change, while also giving you a broad range of control, making it an all-around EQ that lets you create the sound you want. By using VCM technology, this EQ precisely models the meticulously designed audio transformer and amp circuit. Simply passing the signal through the EQ will improve the definition of the sound, and ring it to the foreground. In particular, this is ideal for channels you want to sound more present, adding a bright, colorful, and rich spatiality to the sound.



### 1 LF IN button

Switches the LF band (low shelving) on/off.

### 2 LF FREQ knob

Adjusts the cutoff frequency of the LF band (low shelving).

### 3 LF GAIN knob

Adjusts the gain of the LF band (low shelving).

### 4 LMF IN button

Switches the LMF band (peaking) on/off.

### 5 LMF x3 button

Triplies the center frequency value of the LMF band (peaking).

### 6 LMF FREQ knob

Adjusts the center frequency of the LMF band (peaking).

### 7 LMF GAIN knob

Adjusts the gain of the LMF band (peaking).

### 8 LMF Q knob

Adjusts the Q (steepness) of the LMF band (peaking).

### 9 HF IN button

Switches the HF band (high shelving) on/off.

### 10 HF FREQ knob

Adjusts the cutoff frequency of the HF band (high shelving).

### 11 HF GAIN knob

Adjusts the gain of the HF band (high shelving).

### 12 HMF IN button

Switches the HMF band (peaking) on/off.

### 13 HMF x3 button

Triplies the center frequency value of the HMF band (peaking).

### 14 HMF FREQ knob

Adjusts the center frequency of the HMF band (peaking).

### 15 HMF GAIN knob

Adjusts the gain of the HMF band (peaking).

### 16 HMF Q knob

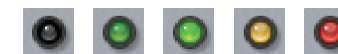
Adjusts the Q (steepness) of the HMF band (peaking).

### 17 TRANS. switch

Switches the type of input transformer that is emulated. You can choose a mic input transformer or a line input transformer.

### 18 DRIVE knob

Adjusts the input level to adjust the amount of overtones.



If the "DRIVE indicator" at the upper left of the DRIVE knob is bright green, the overtone amount is appropriate.

### 19 LPF FREQ knob

Adjusts the cutoff frequency of the high pass filter.

### 20 HPF FREQ knob

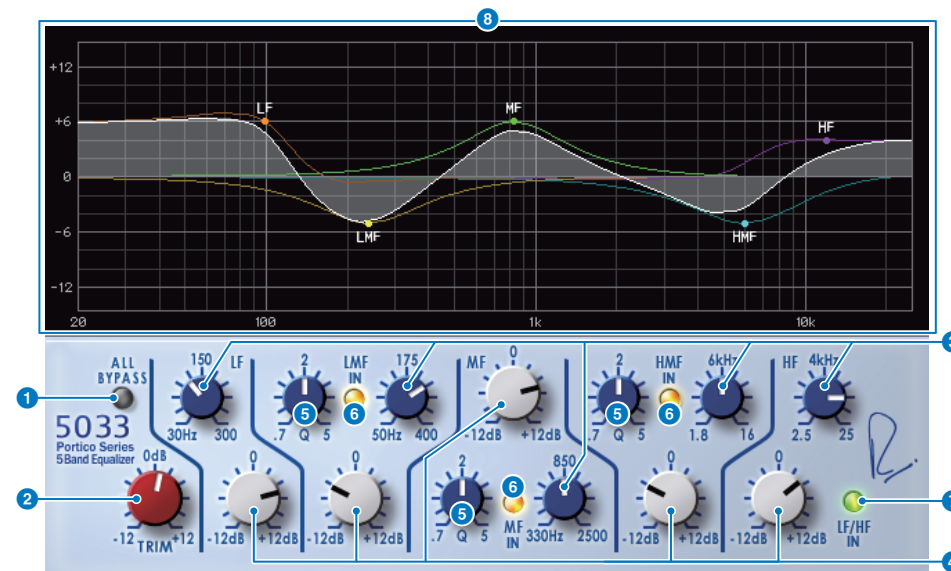
Adjusts the cutoff frequency of the low pass filter.

**21 ALL EQ button**

Turns the LF/LMF/HMF/HF bands on/off together. (This does not affect HPF/LPF.)  
 If the ALL EQ button is off, you cannot use the LF IN, LMF IN, HMF IN, or HF IN buttons to turn individual bands on/off.

**■ Portico 5033**

Portico 5033 is a processor that emulates a 5-band analog EQ made by Rupert Neve Designs. 5033EQ inherits features from the 1073, designed by Rupert Neve and now regarded as a classic. It provides distinctive tone control characteristics. The input/output transformers designed by Rupert Neve himself are also modeled using VCM technology, giving this model a highly musical sound even when in the bypassed state. The unique properties of this EQ are such that reducing the low-frequency region tightens it, and boosting the high-frequency region will raise the desired frequency band without fatiguing the ear.



**1 ALL BYPASS button**

Switches EQ bypass on/off. Even in the bypassed state, the signal passes through the input/output transformer and amp circuit.

**2 TRIM knob**

Adjusts the input gain of the effect.

**3 LF/LMF/MF/HMF/HF frequency knobs**

Adjust the frequency of each band.

**4 LF/LMF/MF/HMF/HF gain knobs**

Adjust the amount of boost or attenuation for each band.

**5 LMF/MF/HMF Q knobs**

Adjust the Q (steepness) of each band. Increasing the Q value will narrow the range whose gain is controlled in that band.

**6 LMF/MF/HMF IN buttons**

Turn the EQ on/off for the LMF/MF/HMF bands respectively.

**7 LF/HF IN buttons**

Turn the EQ on/off for the LF and HF bands simultaneously.

**8 Graph display**

Visually indicates the EQ response.

**■ EQ-1A**

EQ-1A is a processor that emulates a vintage EQ that is considered the classic passive EQ. It uses a distinctive style of operation, with controllable boost and attenuation (cut) for each of two regions, low and high. The frequency response is completely different from that of a typical EQ, giving this model its unique character. The input/output circuit and vacuum tubes also give the sound an extremely musical character, producing a well-balanced sound.



**1 IN switch**

Switches the processor on/off.

If this is off, the filter section is bypassed but the signal passes through the input/output transformer and amp circuit.

**2 LOW FREQUENCY knob**

Adjusts the frequency of the low-range filter.

**3 (LOW) BOOST knob**

Adjusts the amount of boost for the frequency region specified by the LOW FREQUENCY knob.

**4 (LOW) ATTN knob**

Adjusts the amount of attenuation for the frequency region specified by the LOW FREQUENCY knob.

**5 BAND WIDTH knob**

Specifies the width of the band controlled by the high-range filter.

Turning the knob toward the right (Broad) makes the band wider and also lowers the peak level. This affects only the response of the boost.

**6 HIGH FREQUENCY knob**

Adjusts the frequency of the high-range filter. This affects only the response of the boost.

**7 (HIGH) BOOST knob**

Adjusts the amount of boost for the frequency region specified by the HIGH FREQUENCY knob.

**8 (HIGH) ATTEN knob**

Sets the amount of attenuation applied to the frequency band specified by the ATTEN SEL knob.

**9 (HIGH) ATTEN SEL knob**

Switches the frequency band to which attenuation is applied by the ATTEN knob.

**Equalizer601**

Equalizer601 emulates the characteristics of an analog equalizer of the 1970s. It can create a sense of drive by reproducing the distortion that is distinctive of an analog circuit.



**1 Frequency response curve graph**

Shows the frequency response curve of all bands combined, and the frequency response curve of each band.

You can change the filter frequency or gain by dragging the line in the graph using the mouse.

**2 +/- buttons**

Zoom-in or out the vertical axis of the graph display.

**3 TYPE switch**

Selects one of two equalizer types with different effects.

DRIVE emulates the changes in frequency response produced by an analog circuit, adding distortion to create a sense of drive in which the analog character is emphasized.

CLEAN produces a clear, undistorted sound that is typical of digital, while emulates the changes in frequency response produced by an analog circuit.

**4 INPUT knob**

Adjusts the input level.

**5 Level meters**

Indicates the output level of the effect.

- 6 **OUTPUT knob**  
Adjusts the output gain.
- 7 **FLAT button**  
Resets the gain of all bands to 0 dB.
- 8 **Q/TYPE knobs**  
Control the shape of the frequency response curve for the filter of each band.  
For MID 1–4 you can set the steepness (Q) of the frequency response curve. For the LO band and HI band, you can individually specify one of four filter types.
- 9 **F (frequency) knobs**  
Specify the center frequency of each filter.
- 10 **G (gain) knobs**  
Specify the gain of each filter.
- 11 **SW buttons**  
Toggle each filter on/off. Bands whose filter is turned off are disabled.

## Dynamic EQ

Dynamic EQ is a newly developed equalizer; it does not emulate any specific model. It provides a filter through which the same frequency band as the EQ is extracted to a sidechain, allowing the EQ gain to be varied dynamically when a specific band of the input signal becomes louder or softer, so that EQ is applied just as you might apply a compressor or expander to a specific frequency band. For example, by using this on a vocal as a de-esser, you can apply EQ to only that specific band when sibilants and high-frequency scratchy sounds reach an obtrusive level, obtaining a natural sound without impairing the original character. There are two full-band Dynamic EQ units, so you can use them on a variety of material.



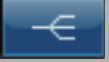


- 1 **BAND ON/OFF button**  
Switches the corresponding band on/off.
- 2 **SIDECHAIN CUE button**  
If this button is on, the sidechain signal is sent to the CUE bus for monitoring. In this case, the graph shows the response of the sidechain filter.
- 3 **SIDECHAIN LISTEN button**  
If this button is on, the sidechain signal linked to the dynamics is output to the bus (e.g., STEREO bus or MIX/MATRIX bus) to which the inserted channel is being sent. In this case, the graph shows the response of the sidechain filter.



**4 FILTER TYPE buttons**

Switch the type of the main bus equalizer and sidechain filter. The main EQ and sidechain filter are linked as follows.

FILTER TYPE	 (Low Shelf)	 (Bell)	 (Hi Shelf)
Main EQ	Low Shelf	Bell	Hi Shelf
Sidechain filter	LPF	BPF	HPF

**5 FREQUENCY knob**

Specifies the frequency that is controlled by the equalizer and the sidechain filter.

**6 Q knob**

Specifies the Q (steepness) of the equalizer and the sidechain filter. Turning the knob toward the right will broaden the region affected by the equalizer and sidechain filter.

**7 THRESHOLD knob**

Specifies the threshold value at which the processing effect begins to apply.

**8 RATIO knob**

Specifies the ratio of boost/cut for the input signal. Turning this toward the right applies boost, and turning it toward the left applies cut; turning the knob all the way in either direction produces the maximum effect.

**9 ATTACK/RELEASE buttons**

Enable you to select one of three settings for the attack time and release time at which compression or boost is applied. FAST produces a fast attack and fast release, SLOW produces a fast attack and slow release, and AUTO automatically adjusts the attack and release according to the frequency region.

**10 MODE buttons**

Specify whether processing operates when the sidechain signal exceeds the threshold value (ABOVE) or when it falls below it (BELOW).

**11 EQ GAIN meter**

Indicates the gain of the dynamically changing EQ.

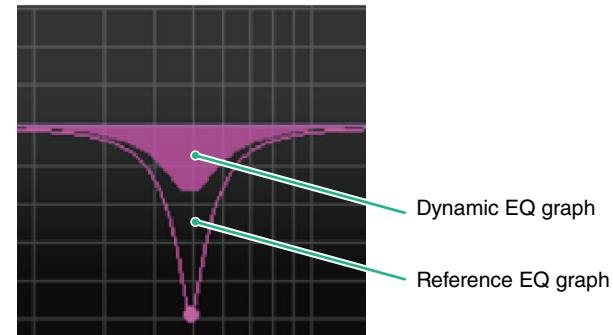
**12 THRESHOLD meter**

Indicates the level of the sidechain signal, referenced to the threshold level.

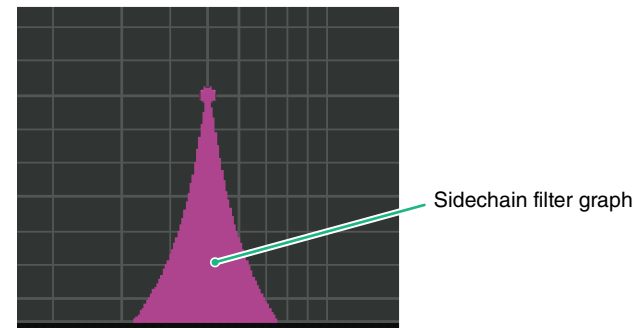
**13 Graph display**

Indicates the response of the equalizer.

Normally this area shows the reference EQ graph, which indicates the frequency and depth; and the dynamic EQ graph, which indicates the response of the dynamically changing EQ.

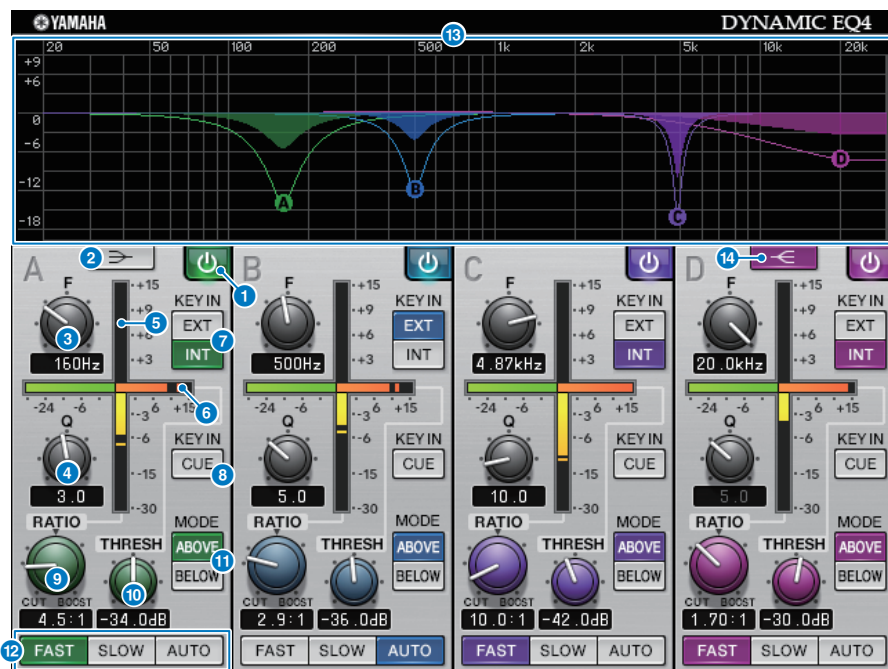


If SIDECHAIN CUE or SIDECHAIN LISTEN is on, this graph shows the response of the sidechain filter.



## ■ Dynamic EQ4

Dynamic EQ4 is a two-band dynamic equalizer that has been expanded to have four bands. The extra bands provide broader sound-shaping capability, and a KEY IN source selection function enables a variety of new applications. For example, if Dynamic EQ4 is applied to acoustic guitar and the vocal microphone is selected as the KEY IN source, the guitar midrange can automatically be dipped a little whenever the vocals come in, to give the vocals more space and make them stand out. Also, de-essing effects have been improved through modifications to the algorithm for making a high-shelf cut.



- 1 BAND ON/OFF button**  
Switches the corresponding band on or off.
- 2 LOW SHELVE ON/OFF button**  
Turn on this button to switch the LOW band to a shelving type filter, and switch the sidechain filter from BPF to LPF.
- 3 FREQUENCY knob**  
Specifies the frequency that is controlled by the equalizer and the sidechain filter.
- 4 Q knob**  
Specifies the Q (steepness) of the equalizer and the sidechain filter. Turning the knob toward the right will broaden the region affected by the equalizer and sidechain filter.
- 5 EQ GAIN meter**  
Indicates the gain of the dynamically changing EQ.
- 6 THRESHOLD meter**  
Indicates the level of the sidechain signal, referenced to the threshold level.
- 7 KEY IN source buttons**  
Select main (INT) or external (EXT) as the source for the KEY IN signal used for the corresponding band.
- 8 KEY IN CUE button**  
If this button is on, the sidechain signal is sent to the CUE bus for monitoring. In this case, the graph shows the response of the sidechain filter.
- 9 RATIO knob**  
Specifies the ratio of boost/cut for the input signal. Turning this toward the right applies boost, and turning it toward the left applies cut; turning the knob all the way in either direction produces the maximum effect.
- 10 THRESHOLD knob**  
Specifies the threshold value at which the processing effect begins to apply.
- 11 MODE buttons**  
Specify whether processing operates when the sidechain signal exceeds the threshold value (ABOVE) or when it falls below the value (BELOW).
- 12 ATTACK/RELEASE buttons**  
Enable you to select one of three settings for the attack time and release time at which compression or boost is applied. FAST produces a fast attack and fast release, SLOW produces a fast attack and slow release, and AUTO automatically adjusts the attack and release according to the frequency region.
- 13 Graph display**  
Indicates the response of the equalizer. Normally this area shows the reference EQ graph, which indicates the frequency and depth; and the dynamic EQ graph, which indicates the response of the dynamically changing EQ. If KEY IN CUE is on, this graph shows the response of the sidechain filter.
- 14 HIGH SHELVE ON/OFF button**  
Turn on this button to switch the HIGH band to a shelving type filter, and switch the sidechain filter from BPF to LPF.

## ■ Rupert Comp 754

Rupert Comp 754 is a processor that emulates the compressor/limiter section built into numerous classic consoles developed by Rupert Neve during the 1960s and 1970s.

It is a model that lies at the root of the bus compressors used as standard items in studios and broadcast stations, and is noted for its smooth and natural compression sound that does not impair the expressive power of the source. By using VCM technology, this compressor models the circuits that make lavish use of the audio transformers and discrete class-A amps (which are the signature of Rupert Neve). Simply applying the compressor lightly will help you obtain the rich, solid Rupert Neve sound. Even if applied deeply, it will not produce ear-fatiguing peaks or cause the sound to break up, allowing you to retain the natural tonality while controlling the dynamics and enhancing the depth and power of the sound.

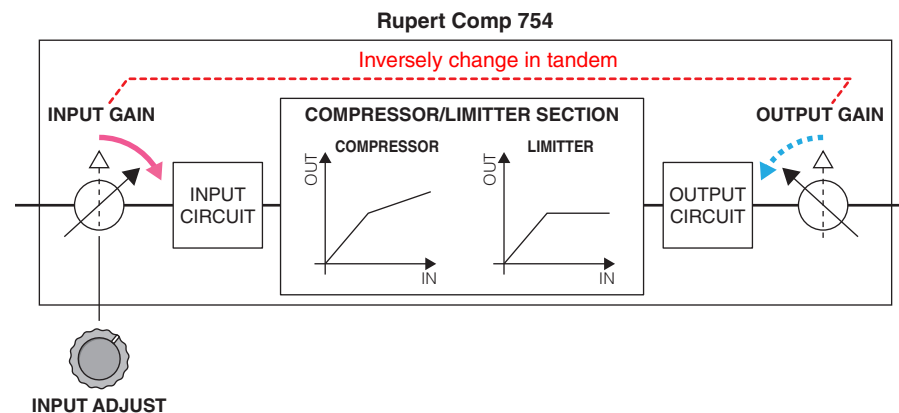


- 1 **METER RESPONSE switch**  
Selects the meter response speed.

- 2 **INPUT ADJUST knob**  
Adjusts the input gain. However, the output gain changes inversely in tandem with the level of this knob so that the volume remains the same as the pass-through volume (the volume when COMP IN and LIMIT IN are off). For example if INPUT ADJUST is +5 dB, the input gain is +5 dB and the output gain is -5 dB. INPUT ADJUST can be used in the following ways.

- If the input signal level to the effect is too low to reach the threshold, you can raise the input gain.
- You can change the input level to the input circuit (audio transformer or class-A amp) in order to modify the tonal character.

### [How INPUT ADJUST works]



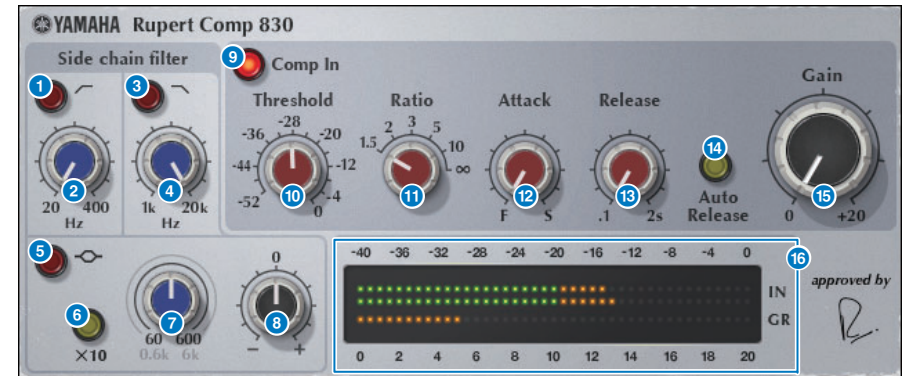
- 3 **BLEND knob**  
Adjusts the dry/wet balance of the compressor/limiter.
- 4 **METER SELECT switch**  
Selects the signal source of the meter as input level, output level, or gain reduction.
- 5 **Meter**  
Indicates the signal source that you selected in 4.
- 6 **COMPRESS IN switch**  
Switches the compressor on/off.
- 7 **COMPRESS THRESHOLD knob**  
Adjusts the threshold of the compressor.
- 8 **COMPRESS RECOVERY knob**  
Adjusts the release time of the compressor. With the AUTO setting, the release time changes automatically in the range of 50 ms to 5 sec.
- 9 **COMPRESS RATIO knob**  
Adjusts the ratio of the compressor.
- 10 **COMPRESS GAIN knob**  
Adjusts the makeup gain of the compressor. This applies before the limiter stage.

- 11 LIMIT IN switch**  
Switches the limiter on/off.
- 12 LIMIT THRESHOLD knob**  
Adjusts the threshold of the limiter.
- 13 LIMIT RECOVERY knob**  
Selects the release time of the limiter. With the AUTO setting, the release time changes automatically in the range of 50 ms to 5 sec.
- 14 LIMIT ATTACK switch**  
Switches the attack time of the limiter. FAST: 2ms, SLOW: 3ms

## ■ Rupert Comp 830

Rupert Comp 830 is a processor that emulates the compressor section built into the top recording consoles developed by Rupert Neve during the 1980s.

In addition to providing a broad range of control for Attack and Release, this compressor provides an EQ and filter on the sidechain, giving you an extremely broad range of tone-shaping possibilities, and letting you create nearly any sound. The compression is transparent and smooth-sounding, and can be used on any source in any situation. By using VCM technology, this compressor models a circuit with a further-evolved audio transformer by Rupert Neve. A shiny, colorful, and well-defined sound can be obtained simply by routing the signal through this processor.



- 1 HPF ON button**  
Toggles the sidechain's high pass filter on/off.
- 2 HPF FREQ knob**  
Adjusts the cutoff frequency of the sidechain's high pass filter.
- 3 LPF ON button**  
Toggles the sidechain's low pass filter on/off.
- 4 LPF FREQ knob**  
Adjusts the cutoff frequency of the sidechain's low pass filter.
- 5 MF ON button**  
Toggles the sidechain's MF band (peaking) on/off.
- 6 MF FREQ x10 button**  
Switches the sidechain's MF band (peaking) center frequency to 10 times its value.
- 7 MF FREQ knob**  
Adjusts the sidechain's MF band (peaking) center frequency.

- 8 **MF GAIN knob**  
Adjusts the gain of the sidechain's MF band (peaking).
- 9 **COMP IN button**  
Switches the compressor on/off.
- 10 **THRESHOLD knob**  
Adjusts the threshold of the compressor.
- 11 **RATIO knob**  
Adjusts the ratio of the compressor.
- 12 **ATTACK knob**  
Adjusts the attack time of the compressor.
- 13 **RELEASE knob**  
Adjusts the release time of the compressor.
- 14 **AUTO RELEASE button**  
Toggles the compressor's auto release on/off.
- 15 **GAIN knob**  
Adjusts the gain of the compressor.
- 16 **Meters**  
Indicate the input level and the gain reduction.

## ■ Portico 5043

Portico 5043 is a processor that emulates an analog compressor made by Rupert Neve Designs, as was the Portico 5033. The actual 5043 compressor featured the input/output transformer that was also provided on the 5033 EQ, and its natural, analog-like tonal character and method of action makes it widely usable for any source from drums to vocals. Its greatest feature is that the gain reduction type can be switched. You can switch between the FF (Feed-Forward) circuit gain reduction that is currently mainstream and the FB (Feed-Back) circuit used on vintage compressors, letting you create differing characters of sound as needed.



- 1 **IN button**  
Switches compressor bypass on/off. When bypassed, the button is unlit. However even in the bypassed state, the signal passes through the input/output transformer and amp circuit.
- 2 **INPUT meter**  
Shows the level of the input signal.  
One meter is shown in the case of DUAL, and two meters in the case of STEREO.
- 3 **FB button**  
Switches the gain reduction method between a FF (Feed-Forward) circuit and a FB (Feed-Back) circuit. The button is lit if the FB circuit type is selected. The FF circuit is the type used by most compressors today. Use it when you want to apply firm compression while minimizing changes in the tonal character.  
The FB circuit is the type used by vintage compressors. Use it when you want to apply smooth compression while adding device-specific coloration to the sound.
- 4 **GAIN REDUCTION meter**  
Indicates the amount of gain reduction.
- 5 **THRESHOLD knob**  
Adjusts the level at which the compressor begins to apply.
- 6 **RATIO knob**  
Adjusts the compression ratio. If the knob is turned all the way to the right, this becomes a limiter.

**7 ATTACK knob**

Adjusts the attack time over which the compressor begins to apply.

**8 RELEASE knob**

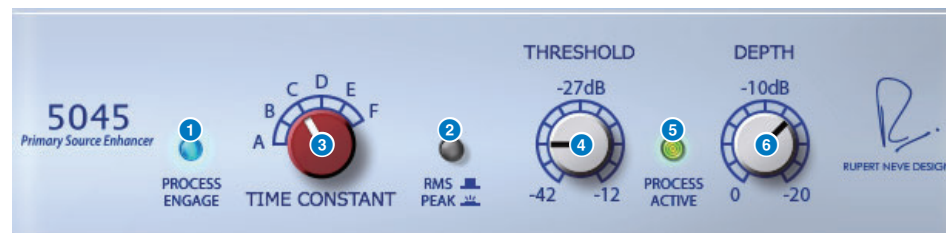
Adjusts the release time of the compressor.

**9 GAIN knob**

Adjusts the output gain.

**■ Portico 5045**

This is a processor that accurately models the Portico 5045 Primary Source Enhancer made by Rupert Neve Designs. Operation is extremely easy, allowing you to suppress background noise that enters the mic while increasing clarity, enhancing the primary source and also improving the feedback margin. It is suitable not only for a hand-held mic but also for a lavalier mic or headset mic, and can be used in a variety of situations including event PA, concerts, or broadcast. This processor is also equipped with the audio transformer and discrete amp circuit that are the signature of the Portico series, so that simply passing the signal through it will increase the luster and depth of the sound.



**1 PROCESS ENGAGE button**

Turns the enhancement circuit on/off.

**2 RMS/Peak button**

Selects the operation mode for the level detector. You can select RMS mode or Peak mode.

**3 TIME CONSTANT knob**

Switches the attack time and release time. The settings are as follows.

RMS Mode	Peak Mode
A: 50 ms	Attack: fixed at 20 ms
B: 100 ms	Release:
C: 200 ms	A: 20 ms
D: 750 ms	B: 200 ms
E: 1.5 s	C: 1 s
F: 3 s	D: 2 s
	E: 5 s
	F: 30 s

**4 THRESHOLD knob**

Adjusts the level at which enhancement begins. Signals below the THRESHOLD are attenuated.



**5 PROCESS ACTIVE indicator**

This indicator is lit when the input signal exceeds the THRESHOLD. Adjust the THRESHOLD so that this indicator is lit when the primary audio source is being input, and unlit during periods of silence or between phrases.

**6 DEPTH knob**

Adjusts the amount of attenuation for signals below the THRESHOLD.

**U76**

U76 is a processor that emulates a standard vintage compressor used in a wide variety of situations. It does not provide the threshold parameter that is typically found on a compressor; instead, the compressor's effect is adjusted by the balance between the input gain and output gain. Setting the RATIO parameter to "All mode" produces an extremely powerful compression sound that is considered to be the character of this model. It adds rich overtones that produce an aggressive-sounding tonal character.



**1 INPUT knob**

Adjusts the input gain. As the input increases, the compressor's effect also becomes stronger.

**2 ATTACK knob**

Adjusts the attack time over which the compressor begins to apply. Turning the knob all the way to the right produces the fastest attack time.

**3 RELEASE knob**

Adjusts the release time of the compressor. Turning the knob all the way to the right produces the fastest release time.

**4 RATIO switching buttons**

Use these five buttons to set the compression ratio. Buttons with higher numbers produce a higher compression ratio. Pressing the ALL button selects All mode, which not only raises the RATIO but also makes the release faster, producing sharp compression with a distorted, aggressive sound.

**5 METER switching buttons**

- Switch the meter display.
- GR ..... The amount of gain reduction applied by the compressor is shown.
  - +4/+8 ..... With the reference of the output signal level as -18 dB, a value of +4 dB or +8 dB relative to that reference is shown as 0 VU.
  - OFF ..... The meter display is turned off.

**6 OUTPUT knob**

Adjusts the output level.

If you use the INPUT knob to adjust the amount of gain reduction, the perceptual volume will also change. In this case, use the OUTPUT knob to adjust the volume.

**■ Opt-2A**

Opt-2A is a processor that emulates a standard vintage model of vacuum tube optical compressor. The level is controlled using optical components such as a CdS-Cell and EL panel to produce smooth compression. The beautiful high-frequency overtones in the warm distortion created by the vacuum tube circuit generate an elegant and sophisticated sound.

**1 GAIN knob**

Adjusts the output level.

**2 PEAK REDUCTION knob**

Adjusts the compression amount of the signal.

**3 RATIO knob**

Adjusts the compression ratio.

**4 METER SELECT knob**

GAIN REDUCTION shows the amount of gain reduction when the compressor is operating. With the OUTPUT +10 or OUTPUT +4 settings, the output signal level reference is considered as -18 dB, and a value of +10 dB or +4 dB relative to that reference is shown as 0 VU.

## ■ Comp276

Comp276 emulates the characteristics of a sought-after analog compressor commonly used in recording studios. It produces a thick and solid sound that is suitable for drums or bass.



## 9 GR/-10/-20/OFF switches

Select the signal that is monitored by the VU meters.

**GR:** The amount of gain reduction is shown.

**-10:** The signal with -10 dBu as 0 VU is shown.

**-20:** The signal with -20 dBu as 0 VU is shown.

**OFF:** The VU meter is off.

### 1 INPUT knob

Adjusts the input level.

### 2 RATIO knob

Adjusts the ratio of the compressor.

### 3 ATTACK knob

Adjusts the attack time of the compressor.

### 4 OUTPUT knob

Adjusts the output gain.

### 5 AUTO MAKEUP switch

If this switch is on, the decrease in the output gain when the compressor is applied will be compensated automatically.

### 6 SIDECHAIN HPF switch

If this switch is on, the compressor applies less to the low-frequency region, strengthening the low-frequency output.

### 7 RELEASE knob

Adjusts the release time of the compressor.

### 8 VU meters

Indicate the signal that is selected by the GR/-10/-20/OFF switches.

## ■ Buss Comp 369

Buss Comp 369 emulates a standard bus compressor that has been used in recording studios and broadcasting stations since the 1980s. It produces smooth, natural compression that does not interfere with source signal nuances, in contrast with the aggressive compression of the U76. Buss Comp 369 includes a compressor and a limiter that you can use individually or in combination. The rich overtones generated by the audio input and output transformers and discrete class-A circuitry are modeled too, adding depth and unity to the sound.

### Stereo mount



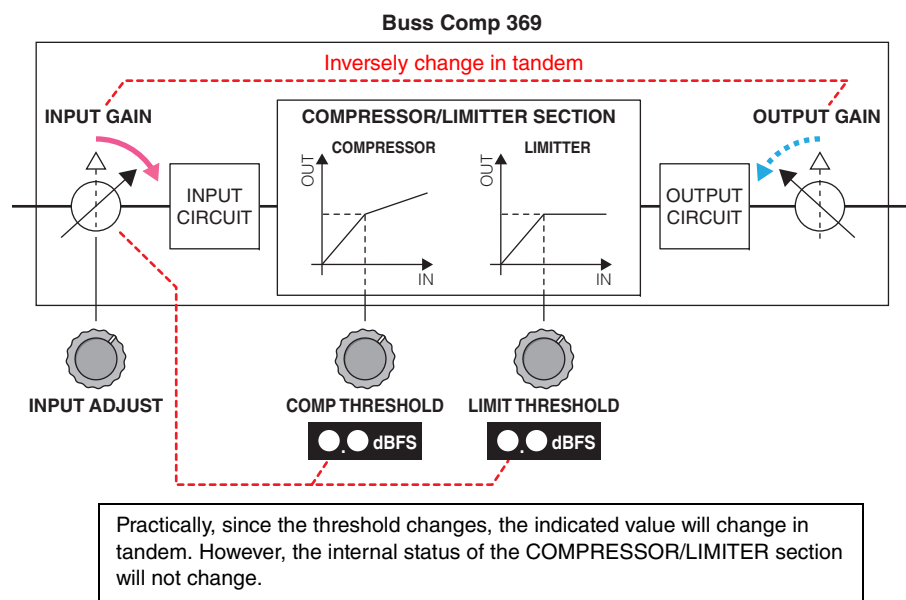
### Dual mount



#### 1 INPUT ADJUST knob

Adjusts the input gain. However, the output gain changes inversely in tandem with the level of this knob so that the volume remains the same as the pass-through volume (the volume obtained when COMP IN and LIMIT IN are off). For example if INPUT ADJUST is +5 dB, the input gain is +5 dB and the output gain is -5 dB.

[How INPUT ADJUST works]



**2 LINK switch (for Stereo mount)**

Turns the stereo link on/off

**3 COMP IN switch**

Turns the compressor on/off.

**4 COMP THRESHOLD knob**

Adjusts the threshold of the compressor. Note that the value changes in tandem with the INPUT ADJUST setting.

**5 COMP RECOVERY knob**

Adjusts the release time of the compressor. For a1 (auto 1) and a2 (auto 2), the release time changes automatically.

**a1:** automatically changes in the range of 100 ms to 2sec.

**a2:** automatically changes in the range of 50 ms to 5 sec.

**6 COMP GAIN knob**

Adjusts the makeup gain of the compressor. This applies before the limiter stage.

**7 COMP RATIO knob**

Specifies the compressor ratio.

**8 METER SELECT switch (for Stereo mount)**

Selects the signal source of the meter. You can select from IN (input level) /GR (gain reduction) / OUT (output level). If you change this selection, the meter design also changes to VU, GR, or VU respectively.

**9 VU SELECT switch (for Dual mount)**

Selects the signal source for the VU meter. You can select either the input level or output level.

**10 LIMIT IN switch**

Turns the limiter on/off.

**11 LIMIT ATTACK switch**

Specifies the attack time of the limiter.

**FAST:** 2 ms

**SLOW:** 4 ms

**12 LIMIT THRESHOLD knob**

Adjusts the threshold of the limiter. Note that the value changes in tandem with the INPUT ADJUST setting.

**13 LIMIT RECOVERY knob**

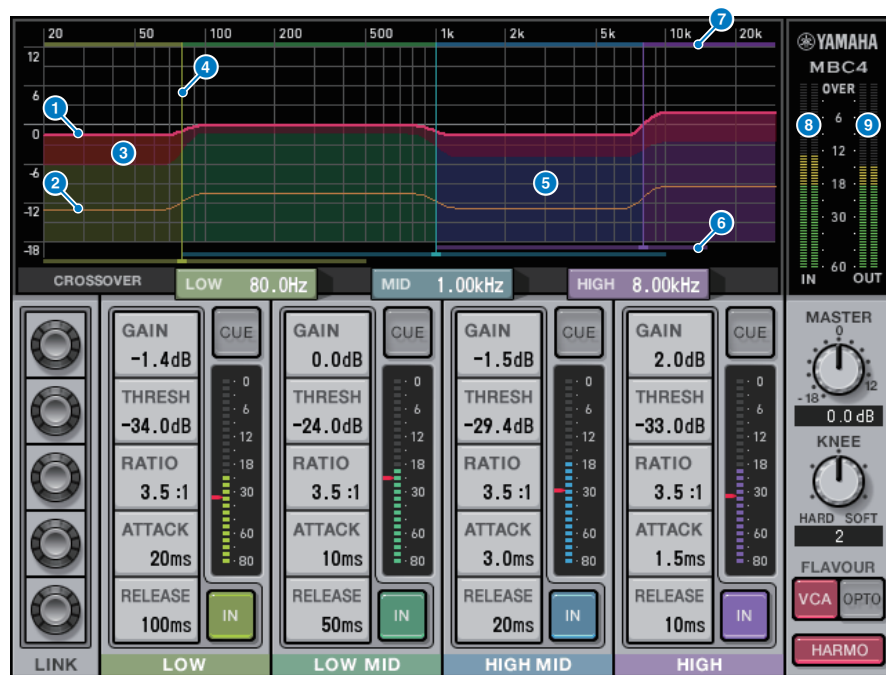
Selects the release time of the limiter. For a1 (auto 1) and a2 (auto 2), the release time changes automatically.

**a1:** automatically changes in the range of 100 ms to 2sec.

**a2:** automatically changes in the range of 50 ms to 5 sec.

## ■ MBC4

This high-quality four-band compressor utilizes VCM technology and features a GUI that offers outstanding operability and visibility. All advantages of the musical behavior of analog compressors have been built into the gain reduction circuitry of the MBC4, allowing smooth control of dynamics while retaining the overall image of the original sound. The sound image can also be visually manipulated via a graphical display.



## 5 CROSSOVER ZONE

This band-color area changes according to the CROSSOVER parameter value for the corresponding band.

## 6 CROSSOVER RANGE

This band-color horizontal bar graph indicates a variable range of the CROSSOVER parameter value for the corresponding band.

## 7 CROSSOVER BAND WIDTH

This band-color horizontal bar graph changes according to the CROSSOVER parameter value for the corresponding band.

## 8 INPUT meter

Shows the level of the input signal.  
One meter is shown in the case of DUAL, and two meters in the case of STEREO.

## 9 OUTPUT meter

Shows the level of the output signal.  
One meter is shown in the case of DUAL, and two meters in the case of STEREO.

## 1 GAIN LINE

This red horizontal line indicates the GAIN parameter values for the corresponding band.

## 2 MAXIMUM GR GUIDELINE

This orange horizontal line indicates a guideline for the maximum gain reduction. This amount is approximate, and does not necessarily show a precise maximum gain reduction amount.

## 3 GR ZONE

This red area changes according to the gain reduction amount for the corresponding band.

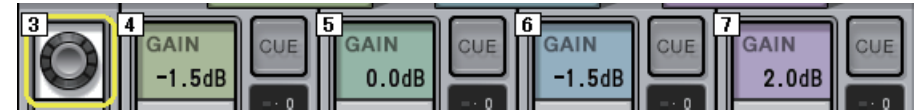
## 4 CROSSOVER LINE

This vertical line indicates the crossover point for the corresponding band.





- 6 LINK knob**  
 If you select the parameter's LINK knob, the display color will change as shown below. The corresponding parameters for four bands will link together, and the values will change collectively. Note that if the parameter value of one of the bands reaches the maximum or minimum, the link operation will stop. Parameters that can be linked are displayed in the corresponding band color.



- 7 CROSSOVER**  
 Adjusts the crossover frequencies used to divide the signal into bands.
- 8 CUE button**  
 Press this button to cue-monitor the output of the corresponding band. If the IN button is off, a signal without compressor effects will be monitored. You can turn on the CUE buttons for multiple bands.
- 9 MASTER GAIN knob**  
 Adjusts the gain of the final output signal.
- 10 INPUT meter**  
 Displays the level of the audio signal input to each band.
- 11 KNEE knob**  
 Adjusts the knee of the compressor.
- 12 IN button**  
 Switches the compressor on/off for the corresponding band. Even if this button is off, you will be able to adjust the corresponding band parameters.
- 13 FLAVOUR button**  
 Switches the type of the compressor between VCA (accurate effects) and OPTO (natural effects).
- 14 HARMONICS button**  
 Switches on/off musical harmonics that emulate analog circuitry.

- 1 GAIN**  
 Adjusts the output gain for the corresponding band.
- 2 THRESHOLD**  
 Adjusts the level at which the compressor begins to apply for the corresponding band. The value will be also indicated by a red marker on the **10** INPUT meter.
- 3 RATIO**  
 Adjusts the compression ratio for the corresponding band.
- 4 ATTACK**  
 Adjusts the attack time at which the compressor begins to apply for the corresponding band.
- 5 RELEASE**  
 Adjusts the release time of the compressor for the corresponding band.

## ■ OpenDeck

OpenDeck emulates the tape compression created by two open reel tape recorders (a recording deck and a reproduction deck). You can change the sound quality by adjusting various elements, such as the deck type, tape quality, playback speed, etc.



- 6 REPRODUCE: DECK TYPE**  
Selects the reproduction deck type.
- 7 REPRODUCE: LEVEL knob**  
Adjusts the output level of the reproduction deck.
- 8 REPRODUCE: ADJUST HIGH knob**  
Adjusts the high range gain of the reproduction deck.
- 9 REPRODUCE: ADJUST LOW knob**  
Adjusts the low range gain of the reproduction deck.
- 10 VU ADJUST switch**  
When you turn this button on, the VU ADJUST knob, instead of the VU meter for Channel 2, appears in the meter section. If you turn this button off, the VU meter for Channel 2 appears.



### VU ADJUST knob

Specifies the level assigned to 0VU on the VU meter. This knob will appear only if the VU ADJUST button is turned on.

- 11 SPEED switch**  
Selects the tape speed.
- 12 TAPE KIND switch**  
Selects the tape type.
- 13 RECORD/REPRO switch**  
Enables you to select RECORD (input to the recording deck) or REPRO (output from the reproduction deck) as the signals to be monitored via the level and VU meters.
- 14 Level meter**  
Shows the effect level of the monitoring signals selected via the RECORD/REPRO switch.
- 15 VU meters**  
The VU meters of the deck selected via the RECORD/REPRO switch are displayed here. The number of VU meters varies depending on the status of the VU ADJUST button. If the VU ADJUST button is turned on, the meter for one channel will be displayed. If the VU ADJUST button is turned off, the meters for two channels will be displayed.

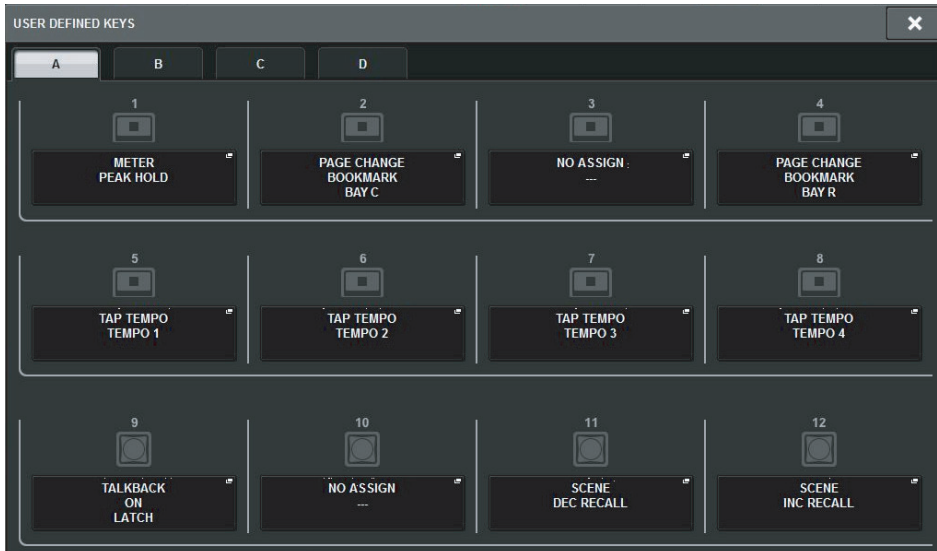
- 1 RECORD: DECK TYPE**  
Selects the recording deck type.
- 2 RECORD: LEVEL knob**  
Adjusts the input level of the recording deck. As you raise the level, tape compression is generated, which narrows the dynamic range and distorts the sound.
- 3 RECORD: ADJUST HIGH knob**  
Adjusts the high range gain of the recording deck.
- 4 RECORD: BIAS knob**  
Adjusts the bias of the recording deck.
- 5 AUTO MAKE UP switch**  
If you turn this switch on, when you adjust the level of the recording deck (by using the RECORD/REC LVL knob), the level of the reproduction deck (the REPRODUCE/REPR LVL knob) will also change, maintaining the relative output level. You can change the amount of distortion without changing the output level.

## Using the Tap Tempo function

“Tap tempo” is a function that lets you specify the delay time of a delay effect or the modulation speed of a modulation effect by striking a key at the desired interval.

To use the Tap function, you must first assign Tap Tempo to a USER DEFINED key, and then operate that USER DEFINED key ([page 366](#)).

1. Assign one of TAP TEMPO 1–4 to a USER DEFINED key.



2. Open the popup window for an effect you want to control.



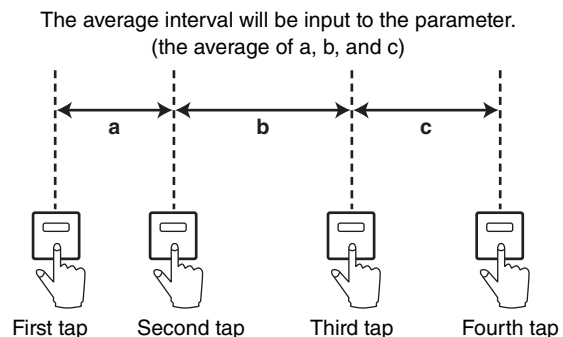
3. Set the SYNC parameter in the parameter field to ON.
4. Select one of TEMPO 1–4 on the left of the popup menu.

**NOTE**

If you select MIDI CLK, the BPM parameter value will change according to the tempo of the MIDI timing clock received from the MIDI port.

5. At the desired tempo, repeatedly press the USER DEFINED key to which you assigned the Tap Tempo function.

The average interval (BPM) at which you press the key will be calculated, and that value will be applied to the BPM parameter.



**NOTE**

If the average value is outside the range of 20–300 BPM, the tapping sequence will be ignored.

## Effects and tempo synchronization

Some effects can be synchronized with the tempo. There are two such types of effect: delay-type effects and modulation-type effects. For delay-type effects, the delay time will change according to the tempo. For modulation-type effects, the frequency of the modulation signal will change according to the tempo.

### Parameters related to tempo synchronization

The following five parameters are related to tempo synchronization.

- 1) SYNC 2) NOTE 3) TEMPO 4) DELAY 5) FREQ.

SYNC: .....This is the on/off switch for tempo synchronization.

NOTE and TEMPO: .....These are the basic parameters for tempo synchronization.

DELAY and FREQ.: .....DELAY is the delay time, and FREQ. is the frequency of the modulation signal. These parameters directly affect the way in which the effect sound will change. DELAY is relevant only for delay-type effects, and FREQ. is relevant only for modulation-type effects.

### How the parameters are related

Tempo synchronization calculates the DELAY (or FREQ.) value<sup>\*a</sup> from the TEMPO and NOTE parameter values.

Turn SYNC ON

Change NOTE → DELAY (or FREQ.) will be set

In this case, the DELAY (or FREQ.) value is calculated as follows.

$$\text{DELAY (or FREQ.)} = \text{NOTE} \times 4 \times (60/\text{TEMPO})$$

Change TEMPO → DELAY (or FREQ.) will be set

In this case, the DELAY (or FREQ.) value is calculated as follows.

$$\text{DELAY} = \text{NOTE} \times 4 \times (60/\text{TEMPO}) \text{ sec}$$

$$\text{FREQ.} = (\text{TEMPO}/60) / (\text{NOTE} \times 4) \text{ Hz}$$

### Example 1:

When SYNC=ON, DELAY=250 ms, TEMPO=120, you change NOTE from 8th note to quarter note

$$\text{DELAY} = \text{new NOTE} \times 4 \times (60/\text{TEMPO})$$

$$= (1/4) \times 4 \times (60/120)$$

$$= 0.5 \text{ (sec)}$$

$$= 500 \text{ ms}$$

Thus, the DELAY will change from 250 ms to 500 ms.

### Example 2:

When SYNC=ON, DELAY=250 ms, NOTE=8th note, you change TEMPO from 120 to 121

$$\text{DELAY} = \text{NOTE} \times 4 \times (60 / \text{new TEMPO})$$

$$= (1/8) \times 4 \times (60/121)$$

$$= 0.2479 \text{ (sec)}$$

$$= 247.9 \text{ (ms)}$$

Thus, the DELAY will change from 250 ms to 247.9 ms.

<sup>\*a</sup>: Approximate values are used for the calculation results.

### Special characteristics of the TEMPO parameter

The TEMPO parameter has the following characteristics that are unlike other parameters.

- The TEMPO parameter can be shared by multiple effects.
- You cannot store it to or recall it from the Plug-in Library. (You can store it to and recall it from a scene.)

This means that the TEMPO value may not necessarily be the same when an effect is recalled as when that effect was stored. Here is an example.

Store the effect: TEMPO=120 → Change TEMPO to 60: TEMPO=60 → Recall the effect: TEMPO=60

Normally when you change the TEMPO, the DELAY (or FREQ.) will be re-set accordingly. However if the DELAY (or FREQ.) were changed, the effect would sound differently when recalled than when it was stored. To prevent the effect from changing in this way between store and recall, the RIVAGE PM series does not update the DELAY (or FREQ.) value when an effect is recalled, even if the TEMPO is no longer the same as when that effect was stored.

\* The NOTE parameter is calculated based on the following values.

<b>Label</b>	1/32(3)	1/16(3)	1/16	1/8(3)	Dot 1/16	1/8	1/4(3)
<b>Value</b>	1/48	1/24	1/16	1/12	3/32	1/8	1/6
<b>Label</b>	Dot 1/8	1/4	Dot 1/4	1/2	Dot 1/2	Whole	2x Whole
<b>Value</b>	3/16	1/4	3/8	1/2	3/4	1/1	2/1

## Recording

This chapter explains the functionality and operations of the recorder.

## 2-track USB recorder

### About the USB memory recorder

The RIVAGE PM series features an easy-to-use 2-track USB recorder.

The 2-track USB recorder enables you to record output signals from the STEREO bus or a MIX bus to a connected USB flash drive. You can also use it to play background music or sound effects that are stored on a USB flash drive by assigning them to an input channel. Due to a built-in SRC (sampling rate converter), as well as the input and output from the 2-track USB recorder, you do not have to worry about differences in sampling rates between the system and the recording/playback files. If the system's sampling rate is the same as that of the recording/playback files, the SRC will automatically be bypassed.

The RIVAGE PM series supports WAV (uncompressed PCM) and MP3 (MPEG-1 Audio Layer-3) file formats for recording and playback.

#### ■ Supported recording format

##### WAV files

- Bit depth: 16-bit/24-bit
- Sampling rate: 44.1 kHz/48 kHz/88.2 kHz/96 kHz

##### MP3 file

- Bit rate: 192 kbps/256 kbps/320 kbps
- Sampling rate: 44.1 kHz/48 kHz

#### ■ Supported playback format

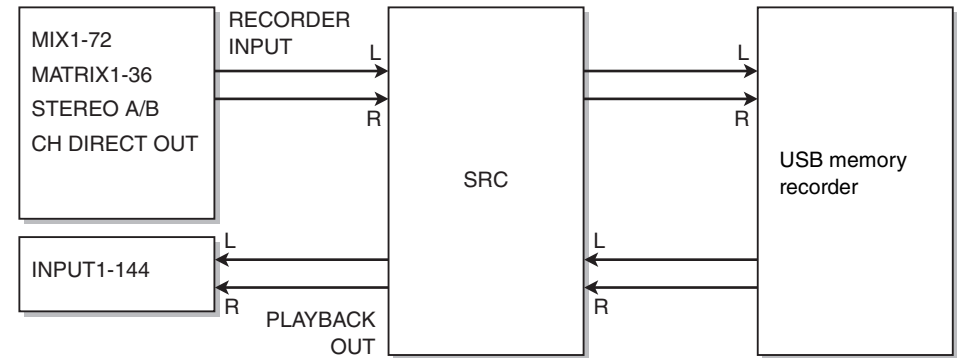
##### WAV files

- Bit depth: 16-bit/24-bit
- Sampling rate: 44.1 kHz/48 kHz/88.2 kHz/96 kHz

##### MP3 file

- Bit rate: No restriction
- Sampling rate: 44.1 kHz/48 kHz

#### ■ Signal flow for the USB memory recorder



#### NOTE

Recording and playback cannot be done simultaneously.

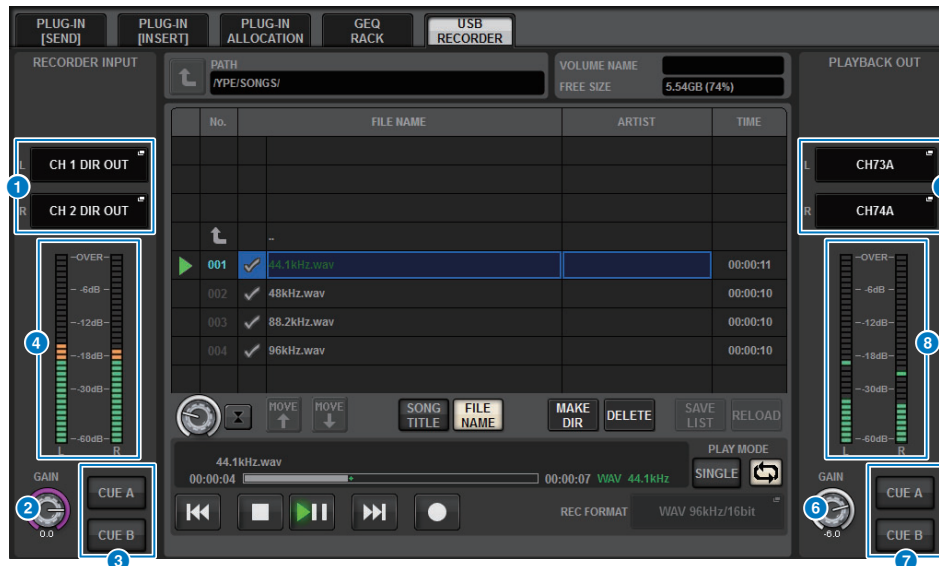
## Assigning channels to the input/output of the recorder

Follow the steps below to patch the desired channels to the input and output of the USB memory recorder. You can patch any output channel or the direct output of an input channel to the recorder's input. You can patch the recorder's output to any input channel.

1. Press the **RACK&REC** button on the menu bar to access the **RACK&REC** screen. This screen includes several pages, which you can switch between using the tabs located at the top of the screen.



2. Press the **USB RECORDER** tab. In this screen you can assign signals to the input and output of the USB memory recorder, and perform recording and playback operations.

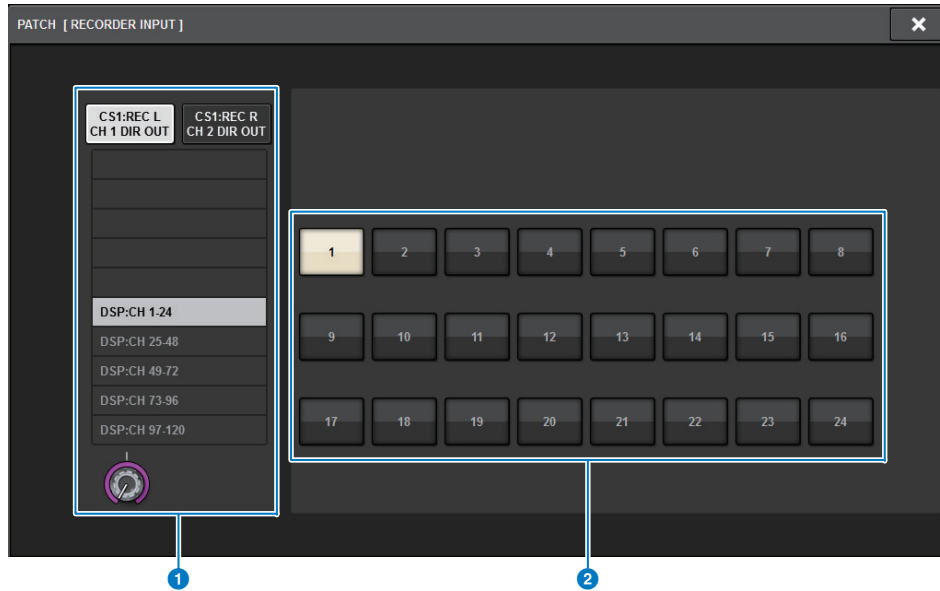


3. **RECORDER INPUT CUE buttons**  
If CUE A, or CUE B is on, you will be able to audition the signal input to the recorder.  
**NOTE**  
You cannot turn on any of these buttons and the **PLAYBACK OUT CUE** button simultaneously.
4. **RECORDER INPUT meter**  
Indicates the level of the signals input to the recorder.
5. **PLAYBACK OUT popup buttons (L/R)**  
Press these buttons to access the **OUTPUT PATCH** popup window, in which you can select signals that will be patched to the recorder's L/R output channels for playback.
6. **PLAYBACK OUT GAIN knob**  
Sets the level of the recorder playback output signal.
7. **PLAYBACK OUTPUT CUE button**  
If CUE A, or CUE B is on, you will be able to audition the playback signal output from the recorder.  
**NOTE**  
You cannot turn on any of these buttons and the **RECORDER INPUT CUE** button simultaneously.
8. **PLAYBACK OUT meter**  
Indicates the level of the recorder playback output signal.

1. **RECORDER INPUT popup buttons (L/R)**  
Press these buttons to access the **INPUT PATCH** popup window, in which you can select signals that will be patched to the recorder's L/R input channels.
2. **RECORDER INPUT GAIN knob**  
Sets the level of the signal input to the recorder.



3. To assign channels to the recorder's input, press the RECORDER INPUT popup button L or R to open the INPUT PATCH popup window.



- 1 **Category list**  
Enables you to select the channel category.
- 2 **Channel select buttons**  
Enable you to select the channel (that you want to patch to the USB memory recorder's input) from the channels selected in the category list.
4. Use the category list and the channel select buttons to select the channel that you want to patch to the USB memory recorder's input.  
If you select a channel to which a channel is already patched, a dialog box will ask you to confirm the patch change. Press the OK button in the dialog box.
5. When you finish assigning the channel, press the CLOSE button.  
The system will return to the RECORDER screen.
6. Assign a channel to the other input in the same way.

**NOTE**

The USB memory recorder always records and plays back in stereo. If you want to record in monaural, with the same signal for left and right, you must assign both of the recorder inputs to the same channel.

7. To assign channels to the recorder's playback output, press the PLAYBACK OUT popup button L or R to open the OUTPUT PATCH popup window.



- 1 **Category list**  
Enables you to select the channel category.
- 2 **Channel select buttons**  
Enable you to select the channel (that you want to patch to the USB memory recorder's output) from the channels selected in the category list.
8. Use the category list and the channel select buttons to select the channel that you want to patch to the USB memory recorder's output.  
If you select a channel to which another signal is already patched, a dialog box will ask you to confirm the patch change. Press the OK button in the dialog box.
- NOTE**  
The recorder's playback output can be patched to multiple channels.
9. When you finish assigning the channels, press the CLOSE button.  
The system will return to the RECORDER screen.
10. Assign a channel to the other output in the same way.

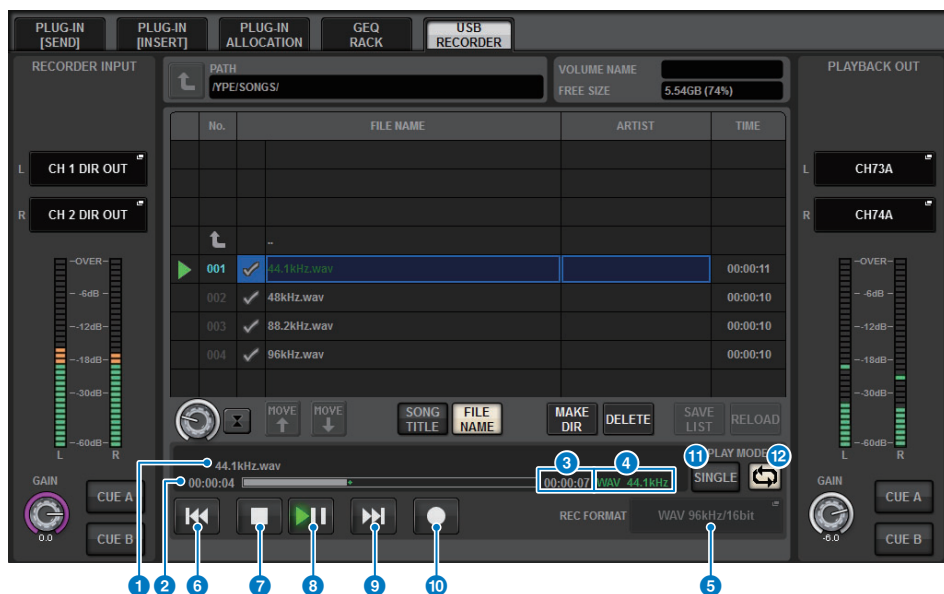
## Recording audio to a USB flash drive

You can record desired output channel signals, as an audio file (WAV or MP3), to the USB flash drive inserted in the RECORDING connector.

1. Press the RACK&REC button on the menu bar to access the RACK&REC screen. This screen includes several pages, which you can switch between using the tabs located at the top of the screen.



2. Press the USB RECORDER tab.



### TRANSPORT field

Enables you to control recording and playback of a song.

#### 1 Current song

Indicates the currently-selected song's track number, title and artist name. The following indicators will appear during playback or recording.

Playing



Recording



#### 2 Elapsed time display

Indicates the elapsed playback time of the current song during playback, and the elapsed recording time during recording.

#### 3 Remaining time display

Indicates the remaining playback time of the current song during playback.

#### 4 Current song format

Indicates the file format and bit rate of the current song (the file being played back).

#### 5 REC FORMAT/RATE popup button

Enables you to select the recording file format and recording rate.

#### 6 REW button

Moves the playback point to the beginning of the current song. If the playback point is already at the beginning, the point will move to the beginning of the preceding song that has been selected for playback.

If the playback point is not at the beginning of the current song, and if you press and hold down this button for two seconds or longer, the song will rewind.

If you operate this button during playback, playback will resume from the point at which the button is released.

#### 7 STOP button

The recorder will change from play/record/recording-standby mode to stop mode.

#### 8 PLAY/PAUSE button

Changes the recorder mode as follows.

- **Stop mode**..... Playback mode, and then playback will start from the beginning of the current song.
- **Playback mode**..... Playback-pause mode
- **Playback pause mode** ..... Playback mode, and then playback will resume from the paused point.
- **Recording standby mode**..... Recording mode

- **Recording mode** ..... Recording-pause mode
- **Recording-pause mode** ..... Recording mode, and then recording will resume from the paused point.

### 9 FF button

Moves the playback point to the beginning of the next song that is marked with a PLAY check symbol.

If you press and hold down this button for two seconds or longer, the song will fast-forward.

If you operate this button during playback, playback will resume from the point at which the button is released.

### 10 REC

Places the recorder in recording standby mode.

The pause indicator on the PLAY/PAUSE (▶ ||) button will light.

#### NOTE

You can also assign the function of each button to USER DEFINED keys (page 366).

## ■ PLAY MODE field

Enables you to specify how the recorder will behave when playback of the current song is complete.

### 11 SINGLE button

If this button is on, only the current song will play.

If this button is off, when the current song finishes playing, the recorder will play the next song in the list that is marked with a PLAY check symbol.

### 12 REPEAT button

If this button is on, playback will repeat. If the SINGLE button is on, only the current song will play repeatedly. If the SINGLE button is off, all songs in the list that are marked with a PLAY check symbol will repeatedly play in the order of the list.

If this is off, the song will play only once. If the SINGLE button is on, the current song will play only once, and then stop. If the SINGLE button is off, all songs in the list that are marked with a PLAY check symbol will play once in the order of the list, and then playback will stop.

## 3. Connect a USB flash drive with sufficient free capacity to the RECORDING connector.

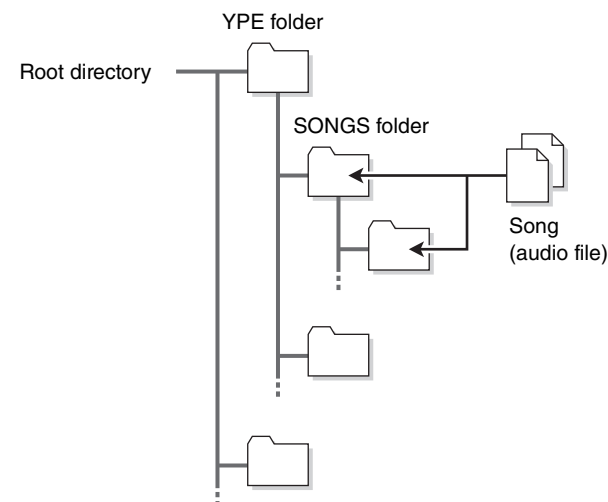
The FREE SIZE field indicates the amount of free capacity. When you connect a USB flash drive to the RECORDING connector, a YPE folder and a SONGS folder within that YPE folder will be created automatically in the root directory of the USB flash drive.

The files created by recording operations will be saved in the above SONGS folder, or in the currently-selected folder below that level.

## ■ Directory structure of a USB flash drive

When you connect a USB flash drive to the USB connector, a YPE folder and a SONGS folder within that YPE folder will be created automatically in the root directory of the USB flash drive.

The files created by recording operations will be saved in the above SONGS folder, or in the currently-selected folder below that level.



## 4. Assign desired channels to the input and output of the USB memory recorder (page 299).

## 5. To monitor the signal being recorded, raise the fader for the channel(s) that are patched to the input of the recorder.

The level of the input signal to the recorder is shown by the RECORDER INPUT field's level meter in the RECORDER screen. If necessary, use the GAIN knob in the RECORDER INPUT field to adjust the input level to the recorder.

#### NOTE

- The signal being recorded will not be output from the recorder's output jacks (PLAYBACK OUT).
- Operating the GAIN knob will not affect the level of the signal being output to other ports from the corresponding output channel.

## 6. Press the REC FORMAT/RATE field in the lower right of the screen, then select the file format and sampling rate for the audio file that will be recorded.

### ■ FORMAT (file format)

- WAV 16-bit
- WAV 24-bit
- MP3 192 kbps
- MP3 256 kbps
- MP3 320 kbps

### ■ Fs (sampling rate)

- 44.1 kHz
- 48 kHz
- 88.2 kHz (WAV only)
- 96 kHz (WAV only)



### 7. Press the REC (●) button.

The REC (●) button and the PAUSE (||) indicator of the PLAY/PAUSE (▶ ||) button will light. The current song indicator area will show “----RECORDING----.”

### 8. To start recording, press the PLAY/PAUSE (▶ ||) button.

During recording, the REC (●) button and the PLAY (▶) indicator of the PLAY/PAUSE (▶ ||) button will light. You can also see the elapsed recording time.

### 9. To stop recording, press the STOP (■) button.

The audio file will be saved to the USB flash drive.

#### NOTE

- In the default state, the recorded audio file will be saved in the SONGS folder within the YPE folder. You may also specify a folder of a level below the SONGS folder.
- The recorded file will be given a default title and file name. You can change these later.

### 10. To audition the recorded content, proceed as follows.

#### 10-1. Select a recorded audio file, and then press the PLAY/PAUSE (▶ ||) button.

The recorded content will be played back via the input channel you specified in step 4. You can also turn on the CUE button in the PLAYBACK OUT field to audition it.

#### 10-2. To stop playback, press the STOP (■) button.

## Playing back audio files from a USB flash drive

You can play back audio files that have been saved on a USB flash drive. In addition to files that were recorded on the RIVAGE PM series, you can also play files that were copied from your computer to the USB flash drive.

The RIVAGE PM series supports WAV (uncompressed PCM) and MP3 (MPEG-1 Audio Layer-3) file formats for playback.

### 1. Connect a USB flash drive that contains audio files to the RECORDING connector.

#### NOTE

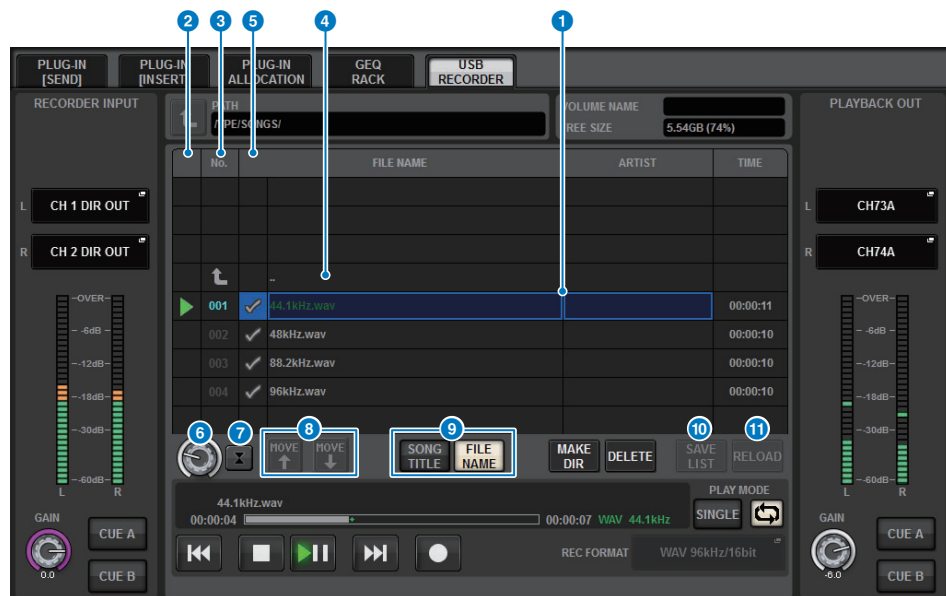
If you want to play back an audio file, you must save it in the SONGS folder within the YPE folder, or in a folder you have created below the SONGS folder. Files located in other folders and files of unsupported formats will not be recognized.

### 2. Press the RACK&REC button on the menu bar to access the RACK&REC screen.

This screen includes several pages, which you can switch between using the tabs located at the top of the screen.



### 3. Press the USB RECORDER tab.



#### 1 Title list

Indicates the playable audio files and the folders that are saved in the selected folder of the USB flash drive. The row with the blue background in the center of the list indicates the song file/folder that is selected for operations.

#### 2 Status indicator

A symbol indicating whether the file is playing or paused is shown at the left edge of the title list.

▶: Playing, ||: Paused

#### 3 Track number

Indicates the file number in the title list.

#### 4 Sub-directory

If there is a folder at a lower level, a folder icon is shown at the track number position. You can move to the lower level by pressing the folder icon.

#### 5 PLAY check symbol

Enables you to select multiple files that will be played back consecutively.

#### 6 SELECT knob

Use the screen encoder to switch the current song. (The title list will scroll up or down.)

#### 7 NOW PLAYING button

If this button is on, the currently-playing song will always be selected in the list (with the blue background).

#### 8 MOVE UP/MOVE DOWN buttons

Change the order of the selected song in the list.

#### 9 Display switch buttons

Toggles between the SONG TITLE display and the FILE NAME display in the list.

#### 10 SAVE LIST button

Saves the order of the current title list and PLAY check symbol settings as a playlist.

#### 11 RELOAD button

Loads the playlist that was saved most recently. Use this button to revert the current playlist you are editing back to the previous state.

### 4. You can use the change directory button on screen and the folder icon in the NO. column to view a content list of the folder that includes the desired file.

If the directory of the USB flash drive is displayed, you can navigate as follows:

- **Upper level** .....Press this button to move up to the directory that is one level higher than the current directory.



- **Subdirectory** .....Press this button to move to that sub-directory.



#### NOTE

- If you select a folder in this way, that folder will automatically be selected as the recording destination.
- The folders that can be selected are restricted to the SONGS folder inside the YPE folder, and folders located below the SONGS folder.
- The RIVAGE PM series can recognize a file name that is a maximum of 64 single-byte characters. If the file name is longer than this, the desired file may not play correctly.
- A maximum of 300 songs can be managed in a single directory. A maximum of 64 subdirectories can be managed.

- Use the screen encoder or the [TOUCH AND TURN] knob, or press the on-screen file name to select the desired file.
- Press a **PLAY MODE** button to select the playback mode.  
You can choose from the following four playback modes.

SINGLE button	REPEAT button	Mode
On	On	The currently-selected song will play repeatedly until you stop playback.
On	Off	The currently-selected song will play once and then stop.
Off	On	Starting with the currently-selected song on the title list, songs will play back consecutively until the last song. Then, playback will return to the first song and will continue until you stop playback.
Off	Off	Starting with the currently-selected song in the title list, songs will play back consecutively, and playback will stop at the last song in the list.

- If you have selected a consecutive playback mode in step 6, press the **PLAY** check symbol column for each song you want to play.  
When performing consecutive playback, files marked with a check symbol will be played.
- Press the **PLAY/PAUSE** (▶ ||) button.
- The song you selected in step 5 will begin playing.

**NOTE**

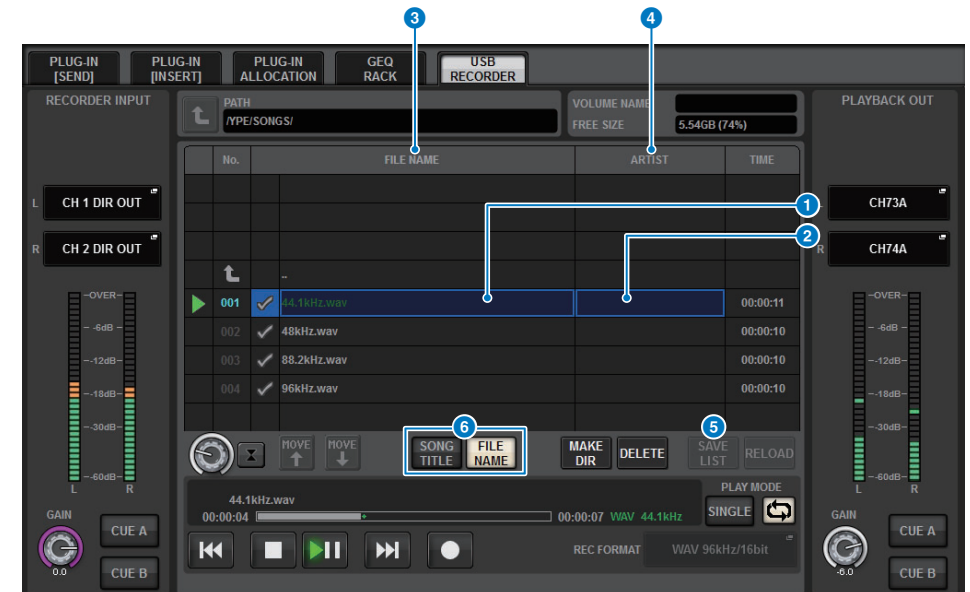
- Even if the sampling rate at which the RIVAGE PM series is operating differs from the sampling rate of the audio file being played, the SRC (Sampling Rate Converter) function will automatically convert the rate so that the file will play back correctly.
- If the **REPEAT** button is on, playback will continue until you stop playback.

- To stop playback, press the **STOP** (■) button.

## Editing the title list

Here is how you can change the order of the audio files shown in the title list, and edit the titles or artist names.

- Connect a USB flash drive containing audio files to the **RECORDING** connector.
- Press the **RACK&REC** button on the menu bar to access the **RACK&REC (USB RECORDER tab)** screen.



- SONG TITLE/FILE NAME EDIT button**  
Enables you to edit the title or file name of the song selected in the list.
- ARTIST EDIT button**  
Enables you to edit the artist name of the song selected in the list.
- SONG TITLE/FILE NAME SORT button**  
Sorts the list in numerical/alphabetical order by title or file name.
- ARTIST SORT button**  
Sorts the list in numerical/alphabetical order by artist name.



**5. SAVE LIST button**

Saves the order of the current title list and PLAY check symbol settings to a USB flash drive as a playlist.

**6. SONG TITLE/FILE NAME button**

Enables you to select either song title or file name to be displayed in the SONG TITLE/FILE NAME field.

**3. In the screen, you can use the folder icon in the NO. column and the change directory button to view the contents of the folder that includes the desired file.****4. If you want to edit a title in the title list, press the SONG TITLE/FILE NAME EDIT button. If you want to edit the artist name, press the ARTIST EDIT button.**

A popup window will appear, allowing you to edit the text.

**NOTE**

If the title or artist name contains characters that cannot be displayed, these characters will be converted into □ for display.

**5. Edit the title or artist name.**

A maximum of 128 single-byte characters (64 double-byte characters) can be input for both the title and for the artist name. If the text cannot be shown completely in the input field, the text will scroll horizontally.

**6. Press the OK button to close the popup window.****7. If necessary, use the SONG TITLE/FILE NAME SORT button, ARTIST SORT button, and MOVE UP/MOVE DOWN buttons on screen to change the order of the title list.**

Use the following buttons to change the order of the title list.

- **SONG TITLE/FILE NAME SORT button**

Press this button to sort the title list in numerical → alphabetical order by title/file name.

Pressing the button repeatedly will alternate between ascending and descending order.

- **ARTIST SORT button**

Press this button to sort the title list in numerical → alphabetical order by artist name.

Pressing the button repeatedly will alternate between ascending and descending order.

- **MOVE UP/MOVE DOWN buttons**

Press these buttons to move the track number of the file currently-selected in the title list upward or downward by one.

- **SAVE LIST button**

Press this button to store the title list order and playback selections (the PLAY check symbol setting) to a USB flash drive as a play list. Perform this operation if you want to save the state of the title list even after you disconnect the USB flash drive or turn off the power to the system.

Since these settings are stored for each folder, a confirmation dialog box will ask you whether you want to save them when you navigate through the directory.

## Multitrack recording/virtual sound check

### Multitrack recording

The RIVAGE PM series supports multitrack recording via a Dante network.

To perform multitrack recording, you must install an HY144-D card (maximum 144-in/144-out) in HY card slot 4 of the DSP engine (in the case of the CSD-R7, in HY card slot 3), and then record using DAW software on your Dante network-connected computer.

If your computer already has Dante Accelerator (AIC128-D) installed, you can perform up to 128-in/128-out (Fs=96 kHz), high-resolution recording.

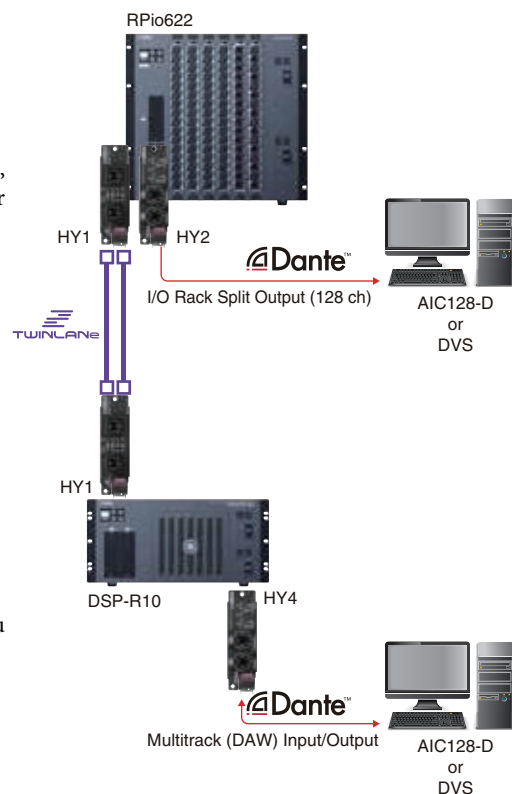
If you use Dante Virtual Soundcard (DVS), you can perform up to 64-in/64-out\* (FS=48 kHz) recording.

#### ■ Multitrack recording

HY card slot 4 on the DSP engine is used for multitrack recording exclusively. It features the Recording Patch function for recording and playback. Patch channels (into which you want to perform multitrack recording) to the ports of HY card slot 4. Also, you can use DAW playback for virtual sound checks.

#### ■ Split Out recording

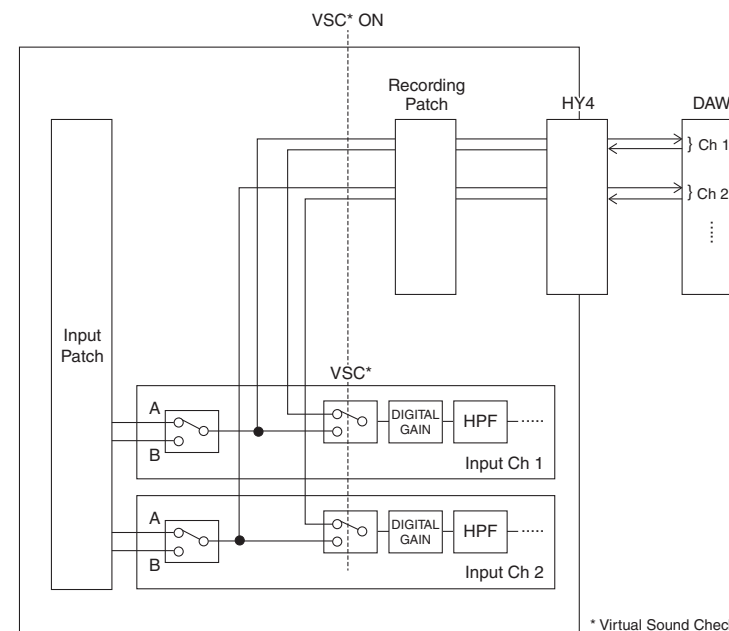
If you install an HY144-D card in HY card slot 2 on the I/O rack, the input signal can be directly sent from this slot to the Dante network (Split Out mode), and then recorded using the DAW software on your computer.



### Virtual sound check

Materials that were recorded by multitrack recording can be used for virtual sound check. For example, you can record a rehearsal session the day before the concert, and use that recording for sound check on the day of the concert. This “virtual sound check” will reduce the burden on both musicians and sound engineers, and will help them get ready efficiently. In addition, a special patching allows for a virtual sound check that mixes multitrack material from the recorder with actual stage inputs.

\* The number of channels available for recording varies depending on the specifications of the computer that has the DAW installed.



### About Dante

Dante is a network protocol developed by Audinate. It is designed to deliver multi-channel audio signals at various sampling and bit rates, as well as device control signals over a Giga-bit Ethernet (GbE) network.

Visit the Audinate website for more details on Dante.

<http://www.audinate.com/>

More information on Dante is also posted on the Yamaha Pro Audio website:

<http://www.yamaha.com/proaudio/>

## Patching for multitrack recording and virtual sound check

HY card slot 4 on the DSP engine (DSP-R10) is used for multitrack recording exclusively. HY card slot 4 features the Recording Patch function for recording and playback. Patch channels (into which you want to perform multitrack recording) to the ports of HY card slot 4.

### 1. Press the PATCH button on the menu bar to access the PATCH screen.

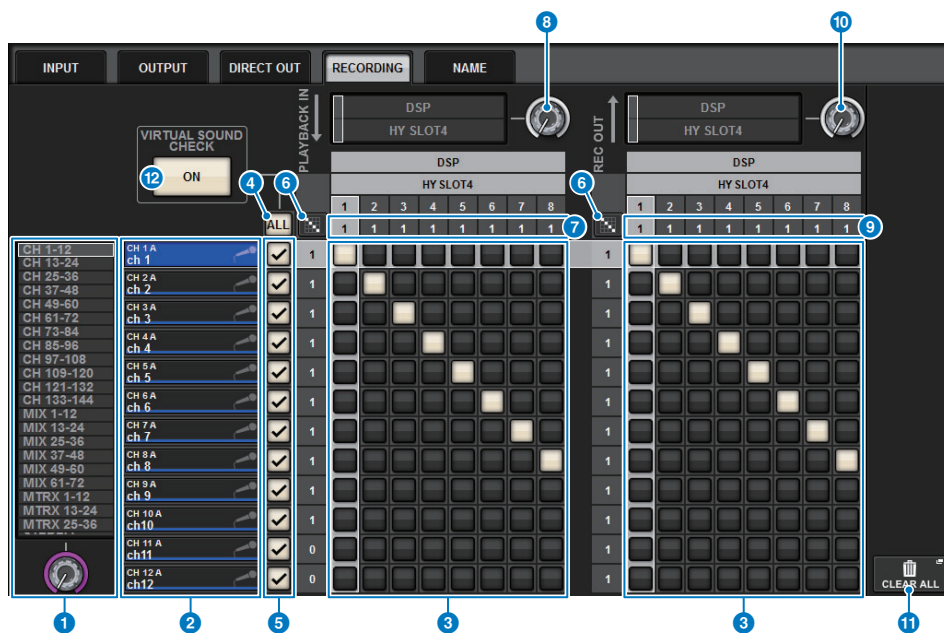
This screen includes several pages, which you can switch between using the tabs located at the top of the screen.



### 2. Press the RECORDING tab to open the RECORDING PATCH screen.

#### NOTE

To display the patch grid, you must specify HY144-D for HY card slot 4 in the DSP engine. (You can also do so off-line.)



### 1 Category select list (channel)

You can select the channel category using the knob. The categories correspond to the following channels.

- CH1-144
- MIX1-72
- MTRX 1-36
- STEREO AL-BR

### 2 Channel display

This area indicates channels that can be assigned to the RECORDING slot.

### 3 Grid

This grid lets you patch output jacks (horizontal lines) to channels (vertical columns). Currently-patched grids are indicated by white squares. Press or click a desired grid to set or disable the patch.

### 4 ALL button

All channels will be subject to or excluded from the virtual sound check simultaneously. If any one channel is turned off, this button will indicate "..."

### 5 Check buttons

Enable you to select channels that are subject to the virtual sound check.

### 6 Continuous Patch button

Press the continuous patch button, and then rotate the REC OUT select knob to patch the intersecting channels continuously.

If you press the continuous patch button, the button and the button will appear. Press the button again to confirm the selected continuous patches. Press the button to revert the continuous patches to the previous state.

### 7 PLAYBACK IN ASSIGN

This area indicates the number of PLAYBACK INs assigned to each channel.

### 8 REC OUT select knob

Enables you to select a channel used for REC OUTs.

### 9 REC OUT ASSIGN

This area indicates the number of REC OUTs assigned to each channel.

### 10 PLAYBACK IN select knob

Enables you to select channels used for PLAYBACK INs.

### 11 CLEAR ALL button

Press this button to clear all selections.

**12 VIRTUAL SOUND CHECK ON button**

If this button is on, the Virtual Sound Check function will be enabled, and the patches will be used for the virtual sound check. When the Virtual Sound Check function is enabled, each LED on both INPUT [A] and [B] keys light up.

3. Use the REC OUT select knob to display the port on the slot that will be used for REC OUT.
4. Use the knob in the category select list to display channels.
5. Press the grid cell that corresponds to the REC OUT to patch the channel.
6. Use the PLAYBACK IN select knob to display the port on the slot that will be used for PLAYBACK IN.
7. Use the knob in the category select list to display channels.
8. Press the grid cell that corresponds to the PLAYBACK IN to patch the channel.

## Recording or playing back using a DAW on the computer

---

Follow the steps below to record or play back using a DAW.

**• Setting up the RIVAGE PM series**

To perform a virtual sound check, configure the recording patches. Recording/playback signals should be transferred from and received at HY slot 4 on the DSP-R10.

If the RPi622 or RPi222 signal is split out, you do not need to configure the patches. The signals will be output to the Dante network directly from the HY144-D card inserted in HY slot 2 of the RPi622.

**• Configuring Dante Accelerator or Dante Virtual Soundcard**

Configure the Dante network and the computer.

**• Setting up Dante patches**

Use Dante Controller to configure Dante patches.

**• Setting up for a DAW**

Select Dante Virtual Soundcard, or AIC128-D ASIO driver.

**NOTE**

- You must have a license ID to use a Dante Virtual Soundcard. The DVS token that is required for obtaining the license ID is printed on a sheet (supplied in the HY144-D package).
- The latest information about the Dante Virtual Soundcard and the Dante Controller is available at the following website:  
<http://www.yamaha.com/proaudio/>

**■ Configuring Dante Accelerator**

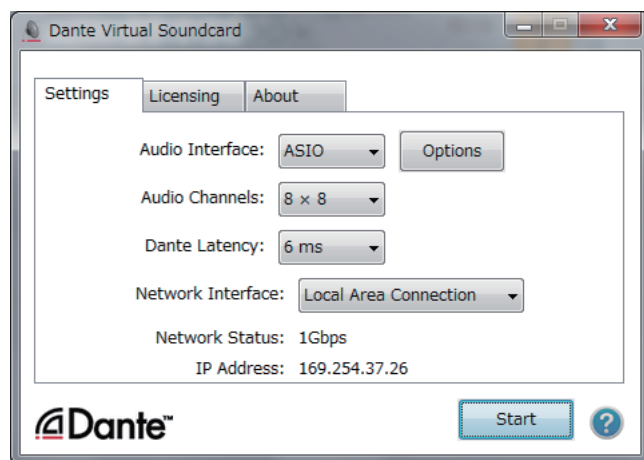
First, make sure that the Dante Accelerator card is installed in the PCIe slot of your computer. Then, install the Dante Accelerator driver. For information about installing the driver and about the control panel, refer to the Installation Guide supplied with the driver. To achieve a stable live recording, we recommend you use the maximum buffer size and latency. For more information on configuring Dante Accelerator, please refer to the Operation Manual for Dante Accelerator.

## ■ Configuring a Dante Virtual Soundcard

Install a Dante Virtual Soundcard (DVS) and Dante Controller on the computer that you will use for audio recording. And then, make the following settings before you turn on the DVS.

- Connect the GbE-compatible network port of the computer to a GbE-compatible network switch.
- Configure the computer to obtain an IP address automatically (this is the default setting).
- Specify the audio format (e.g., 96 kHz, 24-bit).
- Specify the Dante latency. (Choose a larger value for stable multi-channel recording/playback.)
- In the Advanced settings, select the number of channels to be used for recording and playback (the default is 8 x 8).

V3.7



### NOTE

Please refer to the Dante Virtual Soundcard User's Guide for more information on ASIO settings (Windows).

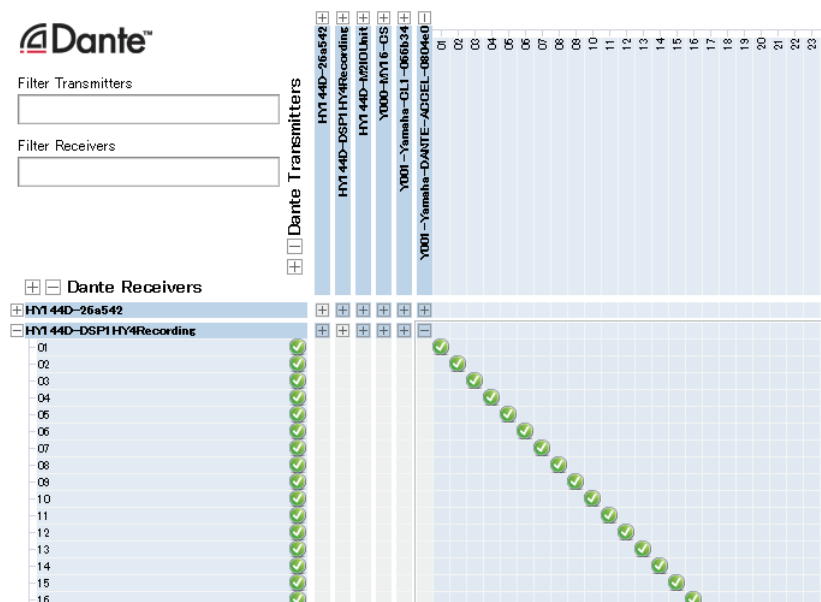
## ■ Configuring Dante Controller

Connect the network port of the computer to a GbE-compatible network switch. Configure the computer to obtain an IP address automatically (this is the default setting).

You must make the following settings for Dante Controller.

- For multitrack recording: Patch audio signals from the I/O rack to the DVS or Dante Accelerator card for multitrack recording.
- For virtual sound check: Patch audio signals in such a way that they will be output from the computer to the Dante audio network, then routed to the channels on the RIVAGE PM series (page 308).

The following example shows Dante Controller settings for when playback signals from Dante Accelerator are patched to HY144-D card for a virtual sound check.



During multitrack playback, you can switch these settings easily using the VIRTUAL SOUND CHECK ON button on the RECORDING PATCH screen.

### NOTE

Please refer to the Dante Controller manual for more information about operations and settings of the Dante Controller.

## ■ Setting up DAW software

You must make the appropriate driver settings in your DAW software. In the device setting window, select “Dante Virtual Soundcard Card — ASIO” (or “Dante” for Mac) or “Yamaha AIC128-D” as the sound card (or audio driver) used for input/output.

Some DAW software may require internal patching for the driver and the DAW software. For more information, refer to the DAW software manual.

## ■ Audio recording and playback

After you have made the driver settings in your DAW software, you can record and play back audio.

For multitrack recording, set the input ports for tracks in DAW software to the ports that receive audio signals from the I/O rack.

For a virtual sound check, you must route recorded audio signals to the input channels on the RIVAGE PM series. To do so, use Dante Controller to patch the signals so that the signals will be output from the DAW software to the RIVAGE PM series. Using the VIRTUAL SOUND CHECK ON button on the RECORDING PATCH screen, you can easily switch between two settings: one setting for routing audio signals from the I/O rack, and another setting for routing audio signals from DAW software. In addition, you will be able to patch a specific channel (such as a vocal) to the I/O rack to monitor during a virtual sound check using the RECORDING PATCH screen.



## Scene Memory

The SCENE MEMORY section enables you to store, update, and recall mix parameters as scene memories.

### About scene memories

Each scene contains the position of the top panel faders and [ON] key status, as well as the following parameters.

- Input/output port patching
- Bus settings
- Head amp settings
- EQ settings
- Dynamics 1 and 2 settings
- GEQ/PEQ and plug-In settings
- Pan/balance settings
- Insert/direct out settings
- On/off status and send level of signals sent to MIX buses
- On/off status and send level of signals sent to MATRIX buses
- DCA settings
- Mute group settings
- Channel pair settings

On the RIVAGE PM series, scene numbers consist of an integer portion and a decimal portion, and can be assigned as desired. One way of organizing scenes would be to create integer-numbered scenes for each song, and then use the decimal portion to manage detailed changes within the song.

#### • Main scene

A scene noted with a decimal portion of “00” (e.g., 1.00, 2.00 ... 999.00) is called a “main scene.”

#### • Sub scene

A scene noted with a decimal portion other than “00” (e.g., 1.10, 2.93 ... 3.51) is called a “sub scene.” You can create up to 99 sub scenes (x.01 to x.99) under one main scene.

You can also create sub scenes without the main scene. (For example, you can create sub scene 1.01 without main scene 1.00.)

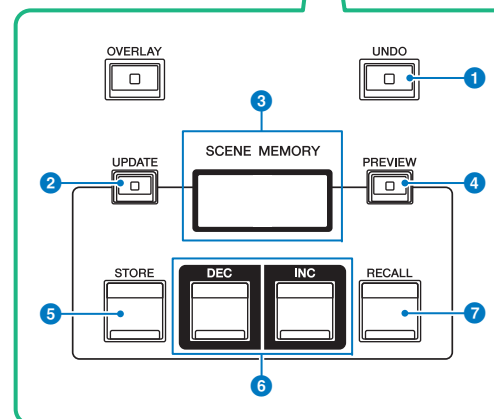
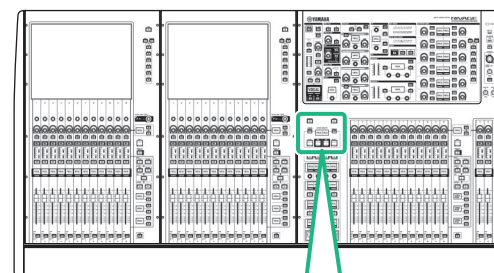
Up to 1,000 scenes (combining main and sub scenes) can be stored in one project.

For information on the parameters that are included in one scene, refer to Part 1 of the RIVAGE PM10 Operation Manual.

## Storing, updating, and recalling scenes

To store the current mix data as a scene in memory, and update and recall it later, you can use the keys in the SCENE MEMORY section on the top panel, or you can use the SCENE LIST screen.

### Using the keys in the SCENE MEMORY section



SCENE MEMORY section

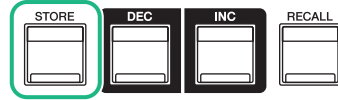
- [UNDO] key**  
Cancels the most recent operation of recalling or updating. After you cancel the operation by pressing the [UNDO] key, you can “redo” the canceled operation by pressing the [UNDO] key again.  
**NOTE**  
You cannot undo an operation to store a new scene.
- [UPDATE] key**  
Updates scene data by overwriting the current scene (that has been recalled or stored most recently) with the current mix data.
- Scene memory display**  
Indicates the selected scene memory.
- [PREVIEW] key**  
Turns Preview mode on or off.
- [STORE] key**  
Stores the current mix data to the selected scene memory.
- [INC]/[DEC] keys**  
Enable you to select the scene number of a scene that you want to store or recall.
- [RECALL] key**  
Enables you to recall a stored scene from scene memory.

## Storing a scene

The current mix data on the RIVAGE PM series can be saved as new scene data, or overwritten onto existing scene data to update it.

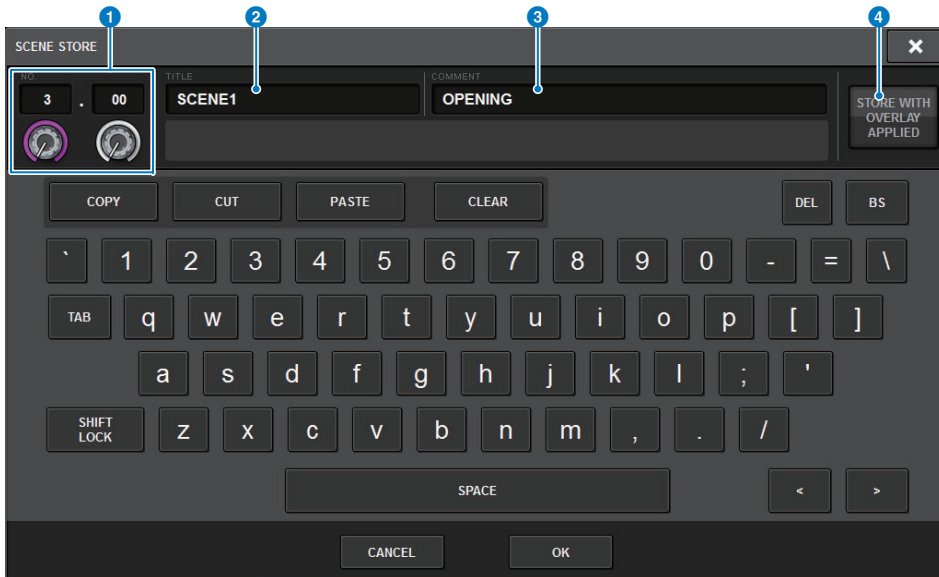
### 1. Press the SCENE MEMORY [STORE] key.

The SCENE STORE window will appear, enabling you to assign a title or comment to the scene.



#### NOTE

- When you press the SCENE MEMORY [STORE] key, the system automatically suggests a scene number and name (page 314).
- If you want to store the scene as a sub scene (page 312), press and hold down the [SHIFT] key, and press the SCENE MEMORY [STORE] key.



#### 1 Scene number

Rotate the knob beneath the number to enter a scene number. If you enter a number that already exists for another scene, that scene will be overwritten.

#### 2 SCENE TITLE field

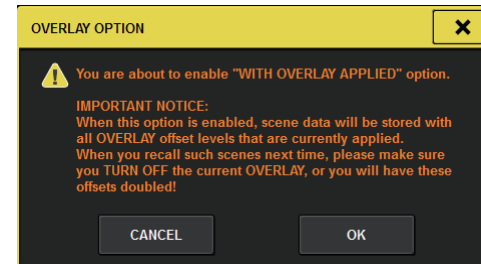
Press this field to select it, and enter a title for the scene (maximum 16 characters).

#### 3 COMMENT field

Press this field to select it, and enter a comment for the scene. You can use this as a memorandum for each scene (maximum 128 characters).

#### 4 STORE WITH OVERLAY APPLIED button

If you press this button while Overlay is enabled, a dialog box will appear, enabling you to store scene data including all currently-applied Overlay offset values.



#### Caution

While Overlay is enabled, if you recall a scene that was previously stored with added offset values, both the current offset values and the original offset values will be applied to the scene (thus doubling the offset value). An extremely high volume sound may be output as a result.

### 2. Enter a scene number as the store-destination.

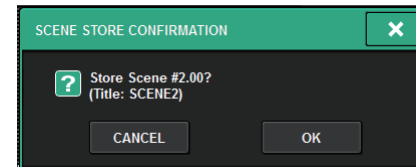
To enter an integer, use the CH1 screen encoder. To enter a decimal portion, use the CH2 screen encoder.

### 3. Assign a title or comment to the scene as desired.

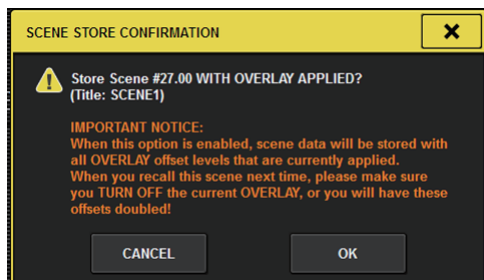
For details on entering text, refer to “Entering names” (page 90).

### 4. Press the SCENE MEMORY [STORE] key or the OK button on the touch screen.

A dialog box will ask you to confirm the store operation.



If Overlay is enabled and the STORE WITH OVERLAY APPLIED button is turned on, a dialog box will appear.



**5. To execute the store operation, press the OK button.**

The current mix data will be stored to the scene number you selected in step 2. If you decide to cancel the store operation, press the CANCEL button instead of the OK button.

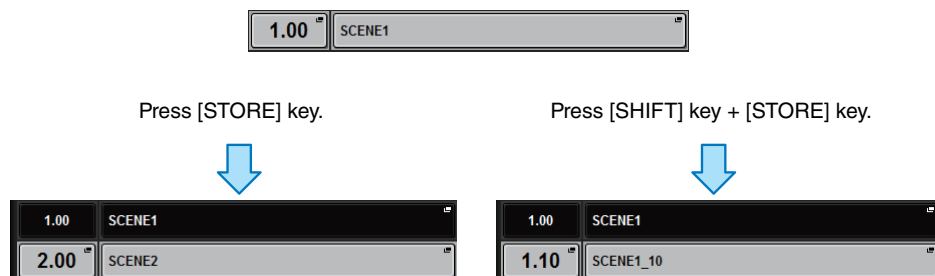
**NOTE**

You can make settings such that the store confirmation dialog box will not appear (page 356). In this case, pressing the SCENE MEMORY [STORE] key once will display the SCENE STORE window as usual, and pressing it once again will execute the store operation.

## Automatic suggestion of scene numbers and names

If you press the [STORE] key, the next unused integer higher than the current scene number will be suggested.

If you press the [SHIFT] key + [STORE] key, a number equivalent to the current sub scene number incremented by a decimal will be suggested. If there already exists a number with a decimal portion larger than the current scene number, then a number in-between the current scene number and the already-existing number will be suggested.



### Examples of automatically- suggested scene numbers

<b>Scene list</b>	1.00 (current scene)		1.00 (current scene) 1.10		1.00 (current scene) 1.05 1.10		1.00 (current scene) 1.50 2.00	
<b>Procedure</b>	Press [STORE] key.	Press [SHIFT] key + [STORE] key.	Press [STORE] key.	Press [SHIFT] key + [STORE] key.	Press [STORE] key.	Press [SHIFT] key + [STORE] key.	Press [STORE] key.	Press [SHIFT] key + [STORE] key.
<b>Automatically-suggested scene numbers</b>	2.00	1.10	2.00	1.05	2.00	1.02	3.00	1.25

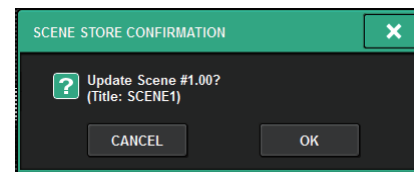
The same name as the current scene will be suggested.

## Updating a scene

You can update scene data by overwriting the last-recalled scene with the current mix data.

**1. Press the SCENE MEMORY [UPDATE] key.**

A dialog box will ask you to confirm the update operation.



**2. To execute the update operation, press the OK button.**

The current mix data will overwrite the last-recalled scene.

**NOTE**

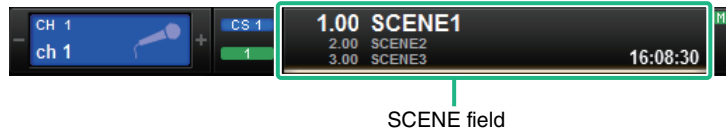
- You can make settings such that the Update Confirmation dialog box will not appear (page 356).
- During the update, the Overlay offset values (that are included in the current mix data) will not be added to the updated scene data. To add the offset values, you must overwrite and store the existing scene data.

# Recalling a scene

You can recall scene data into current memory. Scene data is recalled through three filters: Focus, Recall Safe, and Channel Isolate.

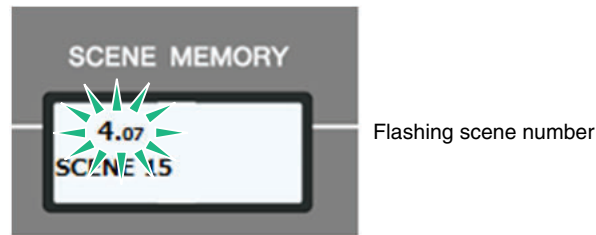
## 1. Use the SCENE MEMORY [INC]/[DEC] keys to select the scene number that you want to recall.

The scene number of the currently-selected scene appears in the SCENE field of the menu bar. If you recall any scene other than the last-recalled or stored scene (hereinafter called “current scene”), the scene number will flash.

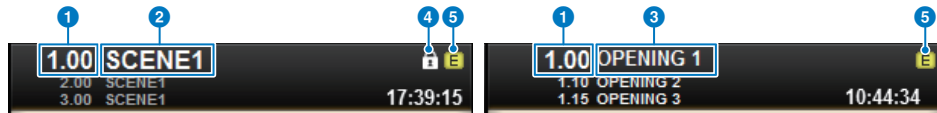


### NOTE

To view the comments, press and hold down the [SHIFT] key and press the SCENE field.



Flashing scene number



The SCENE field always displays general information about the scene. To switch between scene comment and scene title displays, hold down the [SHIFT] key and press the SCENE field. You can also press this field to access the SCENE LIST screen, in which you can view and edit more detailed settings for the scene.

### 1 Scene number

Indicates the number of the currently-selected scene.

### 2 Scene title

Indicates the title of the currently-selected scene.

### 3 Comment

Indicates the comments for the currently-selected scene.

### NOTE

In the bottom two rows, you can view the number, title and comments for two preceding scenes.

### 4 Protect symbol

Write-protected scenes are indicated by a protect symbol.

### 5 E symbol (EDIT symbol)

This symbol will appear when you edit the mix parameters for the currently-loaded scene. This symbol indicates that you must execute the store operation if you want to keep the changes you made.

### NOTE

- If you press and hold down either of the SCENE MEMORY [INC]/[DEC] keys, the scene number will count up or down continuously. If you press and hold down either of the SCENE MEMORY [INC]/[DEC] keys, the scene number will increment or decrement quickly.
- If you press the SCENE MEMORY [INC] and [DEC] keys simultaneously, the SCENE field indication will return to the number of the currently-loaded scene.
- You cannot store data to a protected scene number.

## 2. Press the SCENE MEMORY [RECALL] key.

A dialog box will ask you to confirm the recall operation.

## 3. To execute the recall operation, press the OK button.

The scene you selected in step 1 will be recalled. If you decide to cancel the recall operation, press the CANCEL button instead of the OK button.



### Caution

While Overlay is enabled, if you recall a scene that was stored or globally-pasted with added offset values, both the current offset values and the original offset values will be applied to the scene, thus, doubling the offset value. In this case, extremely high volume sound may be output. Confirm the status of a scene to recall, and the on/off status of Overlay, before recalling the scene.

### NOTE

You can make settings such that the recall confirmation dialog box will not appear ([page 356](#)).

## Using the SCENE LIST screen

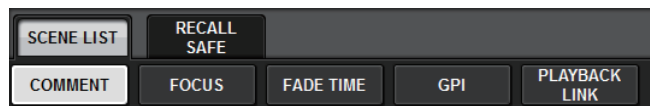
### ■ Storing a scene

1. Press the SCENE field on the menu bar.



SCENE field

This screen includes several pages, which you can switch between using the tabs located at the top of the screen.



2. Press the SCENE LIST tab to access the SCENE LIST screen.

The screen contains the following items.



- 1 **Scene list**

This area shows information about the scenes stored in memory.

- 2 **Sort buttons**

The list will be sorted as follows, according to the column header you pressed.

- **NO.**  
Sorts the list in order of scene number.
- **TITLE**  
Sorts the list in numerical/alphabetical order by title.
- **COMMENT**  
Sorts the list in numerical/alphabetical order by comments.
- **TIME STAMP**  
Sorts the list by date and time of creation.

**NOTE**

By pressing the same location again, you can change the direction (ascending or descending order) in which the list is sorted.

- 3 **Scene number**

Indicates the current scene number. The scene number in a larger font indicates the current scene.

- 4 **Scene title popup button**

Indicates the title assigned to the scene. Press this button to access the SCENE STORE popup window, in which you can edit the title.

- 5 **Protect (lock) symbol**

Indicates the write protect on/off status. Press this button to write-protect the scene, and the button will light. Press it again to cancel write protection.

- 6 **Selected scene**

The currently-selected scene is highlighted in white in the list. If you press another scene number in the list, the list will scroll and that scene will become the selected scene.

- 7 **SCENE SELECT knob**

Use the screen encoder to select a scene.

- 8 **MULTI SELECT button**

You can select consecutive multiple scenes by turning on this button and rotating the screen encoder.

- 9 **Current scene select button**

Press this button to select the scene that was recalled or stored most recently.

**10 STORE button**

Stores the current mix data. Press this button to access the SCENE STORE popup window, which will enable you to assign a name to a scene and store it.

**11 UPDATE button**

Updates scene data by overwriting the scene (that has been recalled or stored most recently) with the current mix data.

**12 RECALL button**

Press this button to recall the currently-selected scene.

**13 UPDATE UNDO button**

Undoes the store operation. This button is valid only immediately after you perform an overwrite-store operation.

**14 RECALL UNDO button**

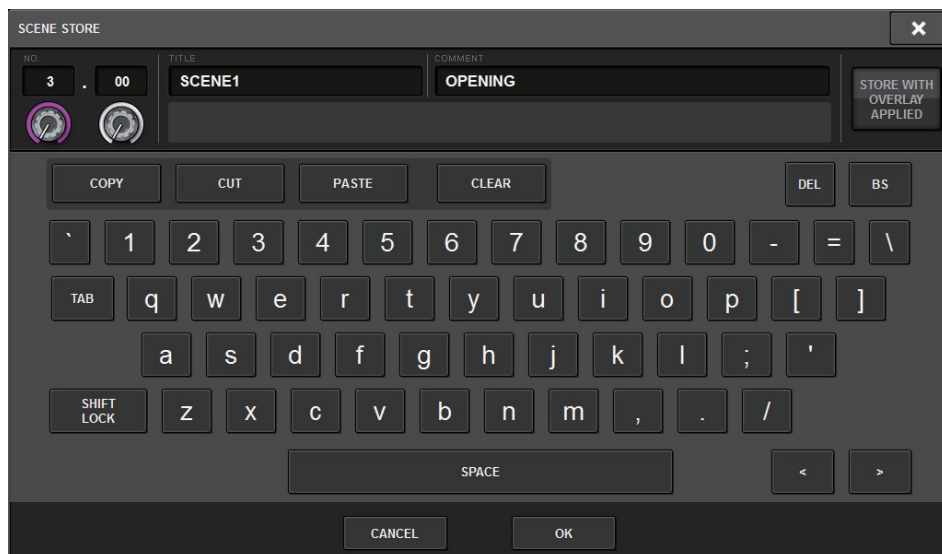
Undoes the recall operation. This button is valid only immediately after you perform a recall operation.

**15 Page switching tabs**

Switch the views for the right side of the SCENE LIST screen.

**3. Press the SCENE STORE button.**

The SCENE STORE window will appear, enabling you to assign a title or comment to the scene.

**4. Enter a scene number as the store-destination.**

To enter an integer, rotate the CH1 screen encoder. To enter a decimal portion, rotate the CH2 screen encoder.

**NOTE**

You can also use the SCENE MEMORY [INC]/[DEC] keys to select scene numbers. To select a decimal portion, hold down the [SHIFT] key and use the SCENE MEMORY [INC]/[DEC] keys.

A yellow scene number indicates that the scene number has already been used.

A red scene number indicates that the scene number has already been used and protected.

**5. Assign a title or comment to the scene as desired.****6. Press the OK button located at the bottom of the SCENE STORE window.**

A dialog box will ask you to confirm the store operation.

**7. To execute the store operation, press the OK button.**

The current mix data will be stored to the scene number you selected in step 4. If you decide to cancel the store operation, press the CANCEL button instead of the OK button.

**Caution**

While Overlay is enabled, if you recall a scene that was previously stored with added offset values, both the current offset values and the original offset values will be applied to the scene (thus doubling the offset value). An extremely high volume sound may be output as a result.

**8. If you want to cancel the overwrite-store operation that you just performed, press the UPDATE UNDO button.**

Immediately after overwrite-storing a scene, you can use the UPDATE UNDO button to undo (cancel) the scene store operation that was executed most recently. When you press the UPDATE UNDO button, a dialog box will ask you to confirm the undo operation. Press the OK button if you want to execute the undo operation.

**NOTE**

The UPDATE UNDO button is available only immediately after overwrite-storing.



## ■ Recalling a scene

1. Press the **SCENE** field on the menu bar.
2. Press the **SCENE LIST** tab to access the **SCENE LIST** screen.
3. Rotate the screen encoder to select the scene number of the scene you want to recall.
4. Press the **RECALL** button.  
A dialog box will ask you to confirm the recall operation.
5. To execute the recall operation, press the **OK** button.  
The scene you selected in step 3 will be recalled. If you decide to cancel the recall operation, press the **CANCEL** button instead of the **OK** button.



### Caution

While Overlay is enabled, if you recall a scene that was stored or globally-pasted with added offset values, both the current offset values and the original offset values will be applied to the scene, thus, doubling the offset value. In this case, extremely high volume sound may be output. Confirm the status of a scene to recall, and the on/off status of Overlay, before recalling the scene.

6. If you want to cancel the recall operation that you just performed, press the **RECALL UNDO** button.  
A dialog box will ask you to confirm the undo operation. Press the **OK** button if you want to execute the operation. After undoing the recall, you can press the **RECALL UNDO** button once again to Redo (re-execute).

### NOTE

You can also use MIDI messages (Program Changes) to recall scenes ([page 375](#)).

## Using USER DEFINED keys to recall a scene (Direct Recall function)

You can use the USER DEFINED keys to recall a selected scene with a single keystroke, or to step through the scenes. To do this, you must first assign a scene recall operation to a USER DEFINED key. The following recall operations can be assigned to a USER DEFINED key.

### • INC RECALL

Immediately recalls the scene of the number that follows the currently-loaded scene.

### • DEC RECALL

Immediately recalls the scene of the number that precedes the currently-loaded scene.

### • DIRECT RECALL

Directly recalls the scene number that you assigned to the USER DEFINED key. When you press a USER DEFINED key to which this function is assigned, the assigned scene will be recalled immediately.

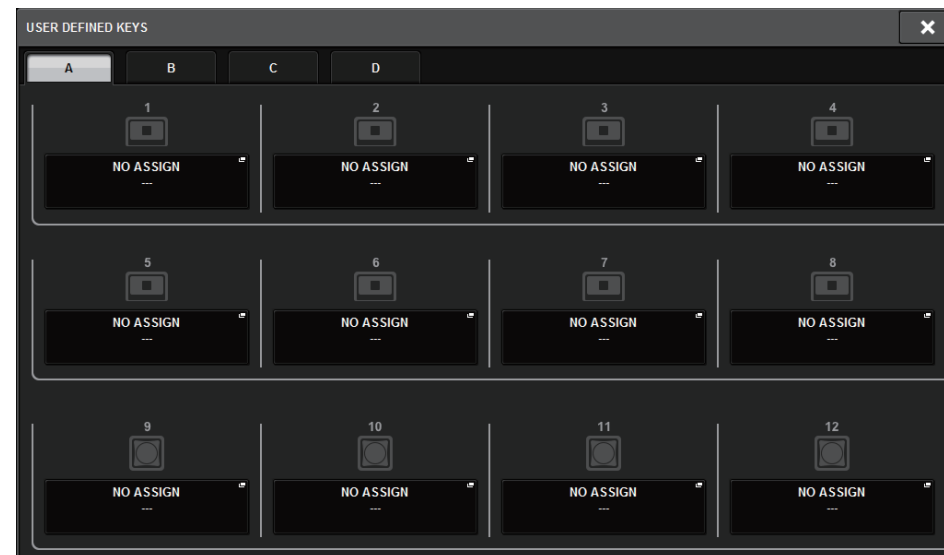
To assign one of these functions to a USER DEFINED key so that a scene can be recalled in a single keystroke, proceed as follows.

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.

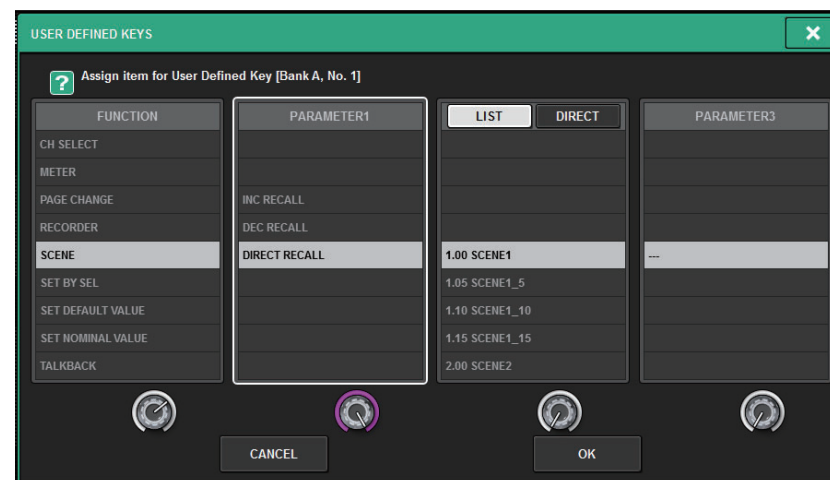


2. Press the **USER DEFINED KEYS** button to access the **USER DEFINED KEYS** popup window.

The **USER DEFINED KEYS** page enables you to assign functions to **USER DEFINED** keys [1]–[12].



3. Press the popup button for the **USER DEFINED** key (to which you want to assign a function) to open the popup window.



4. In the **FUNCTION** column, select **“SCENE.”**  
 Proceed as follows, depending on the function you want to assign.
  - **To assign INC RECALL or DEC RECALL**  
 Choose “INC RECALL” or “DEC RECALL” in the PARAMETER 1 column.
  - **To assign DIRECT RECALL**  
 Choose “DIRECT RECALL” in the PARAMETER 1 column, and choose “SCENE #xxx” (xxx is the scene number) in the PARAMETER 2 column.
5. When you finish making settings, press the **OK** button to close the popup window.  
 If desired, assign scene-recall functions to other USER DEFINED keys in the same way.
6. Press the **USER DEFINED** key to which you want to assign a recall function.  
 The corresponding scene will be recalled.



**Caution**

While Overlay is enabled, if you recall a scene that was stored or globally-pasted with added offset values, both the current offset values and the original offset values will be applied to the scene, thus, doubling the offset value. In this case, extremely high volume sound may be output. Confirm the status of a scene to recall, and the on/off status of Overlay, before recalling the scene.

## Editing scene memories

This section explains how to sort the scenes stored in scene memory, edit their titles, and duplicate or delete them.

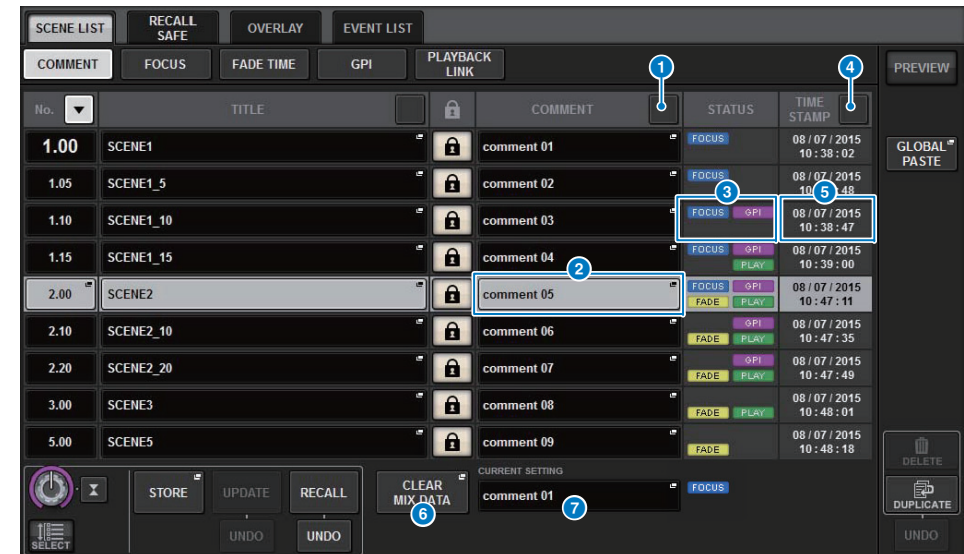
### Sorting scene memories

1. Press the **SCENE** field on the menu bar.  
 The SCENE LIST screen will appear, in which you can perform various scene-related operations. You can use the tabs located at the top of the SCENE LIST screen to select one of five different fields: COMMENT, FOCUS, FADE TIME, GPI OUT, or PLAYBACK LINK.



2. Press a desired tab at the top of the **SCENE LIST** screen.  
 The view of the right side of the SCENE LIST screen will change accordingly.

The following explanations are based on the window that appears if you select the COMMENT tab.



- 1 **COMMENT sort button**  
Sorts scenes in alphabetical order of the comments in the COMMENT field. Pressing the button repeatedly will alternate between ascending and descending order.
  - 2 **COMMENT field**  
Press this field to open the SCENE STORE window, in which you can enter a comment for the scene.
  - 3 **STATUS field**  
Indicators in this field indicate the settings of FOCUS, FADE (fade time), GPI (general-purpose interface), and PLAY (playback link, which starts playing a desired song a certain period of time after a scene is recalled).
  - 4 **TIME STAMP sort button**  
Sorts scenes in chronological order based on the date and time in the TIME STAMP field. Pressing the button repeatedly will alternate between ascending and descending order.
  - 5 **TIME STAMP field**  
Indicates the date and time when the scene was stored.  
For details on the TIME STAMP display format, refer to “[Setting the date and time of the internal clock](#)” (page 396).
  - 6 **CLEAR MIX DATA popup button**  
Press this button to access a popup window, in which you can confirm that you want to reset the current mix data to the default settings.
  - 7 **CURRENT SETTING field**  
Here you can specify the content that will be saved by the next scene store operation. You can edit the comment data for the current scene memory.
3. **To select a scene number, rotate the CH1 screen encoder or the [TOUCH AND TURN] knob on the top panel.**  
The highlighted line in the scene list indicates that the corresponding scene is currently selected for operations.

4. **To sort the list, press one of the column headers: “No.,” “TITLE,” “COMMENT,” or “TIME STAMP” at the top of the scene list and COMMENT field.**  
The list will be sorted as follows, according to the column header you pressed.



- 1 **No.**  
Sorts the list in order of scene number.
  - 2 **TITLE**  
Sorts the list in numerical/alphabetical order by title.
  - 3 **COMMENT**  
Sorts the list in numerical/alphabetical order by comments.
  - 4 **TIME STAMP**  
Sorts the list by date and time of creation.
- NOTE**  
By pressing the same location again, you can change the direction (ascending or descending order) in which the list is sorted.
5. **If you want to edit the title or comment field of a scene, press the TITLE field or COMMENT field of the scene to access the SCENE STORE window.**  
**NOTE**  
You cannot edit the title or comment of a protected scene.
  6. **To enable/disable the protect setting, press the protect symbol.**  
A protect symbol is displayed for write-protected scenes. These scenes cannot be overwritten.
  7. **Use the tool buttons to edit scene memory.**  
For more information, refer to “[About editing scene memories](#)” (page 322).

## About editing scene memories

The scenes stored in scene memory can be erased or duplicated into different scene numbers.

### 1. Press the SCENE field on the menu bar.

The SCENE LIST screen will appear, in which you can perform various scene-related operations. You can edit scene memories using the buttons located on the right side of the SCENE LIST screen.

Each button features the following function.

#### 1 DELETE button

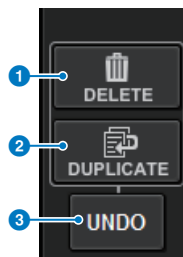
Press this button to erase the selected scene. You can select multiple scenes and erase them simultaneously.

#### 2 DUPLICATE button

Press this button to duplicate the selected scene to create a new scene.

#### 3 UNDO button

Press this button to undo an operation immediately after you delete a scene, or duplicate a scene and overwrite the existing scene. This function is valid only immediately after you perform these operations.



### 2. Perform the desired editing operation.

For more information about these operations, refer to the explanations below.

## Deleting a scene (DELETE)

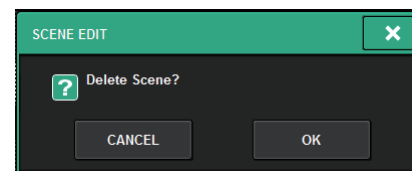
This section explains how to delete a scene.

### 1. Press the SCENE field on the menu bar.

The SCENE LIST screen will appear.

### 2. Rotate the CH1 screen encoder to select the scene you want to delete, and then press the DELETE button.

A dialog box will ask you to confirm the delete operation.



#### NOTE

- You can select multiple scenes to delete. To do so, press the MULTI SELECT button to turn it on, and then rotate the appropriate screen encoder.
- You can delete multiple main scenes and sub scenes all together. For example, you can delete scenes 1.00, 1.25, and 1.50 simultaneously.

### 3. To execute the delete operation, press the OK button.

The scene number(s) you selected in step 2 will be cleared. If you decide to cancel the delete operation, press the CANCEL button instead of the OK button.

#### NOTE

- You cannot delete protected scenes.
- To undo a scene deletion, press the UNDO button.
- If you select multiple scenes and delete them all at once, you will be unable to undo the delete operation.

## Duplicating a scene (DUPLICATE)

You can duplicate a scene to create a new scene.

1. Press the **SCENE** field on the menu bar.  
The SCENE LIST screen will appear.
2. Rotate the CH1 screen encoder to select the scene you want to duplicate, and then press the **DUPLICATE** button.  
The SCENE STORE window will appear, enabling you to assign a title or comment to the scene.



3. Assign a title or comment to the scene as desired.

### NOTE

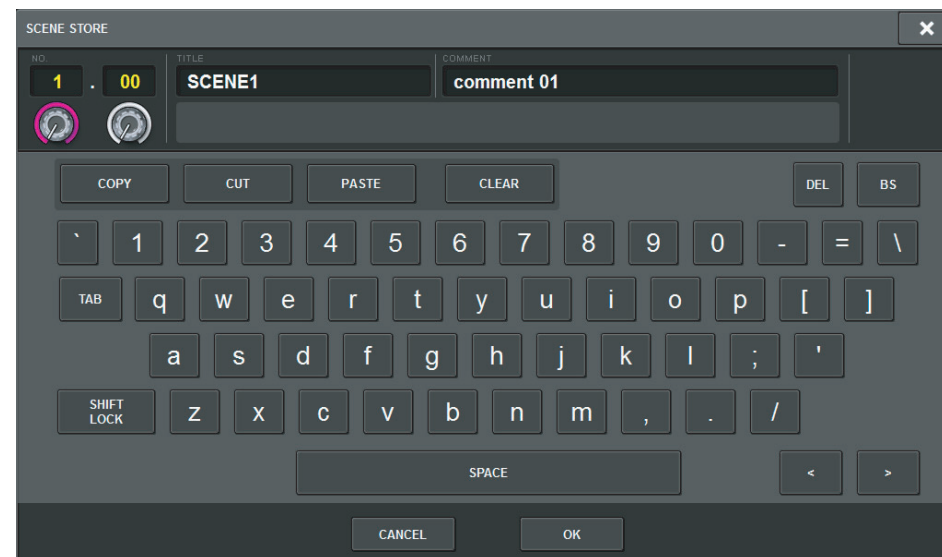
- You cannot select multiple scenes as a duplicate source.
- You can store duplicated scenes to any scene numbers.

4. To execute the duplicate operation, press the **OK** button.  
The source scene will be duplicated and saved to the scene numbers specified in step 3. If you decide to cancel the duplicate operation, press the **CANCEL** button instead of the **OK** button.

## Modifying the scene number and title (RENAME)

This section explains how to modify the scene number and title.

1. Press the **SCENE** field on the menu bar.  
The SCENE LIST screen will appear.
2. Rotate the CH1 screen encoder to select the scene for which you want to modify the number or title, and then press the scene title popup button.  
The SCENE STORE window will appear, enabling you to assign a title or comment to the scene.



3. Modify the scene number and/or rename the scene, as desired.

4. To execute the rename operation, press the **OK** button.  
The changes you made in step 3 will be applied to the selected scene.



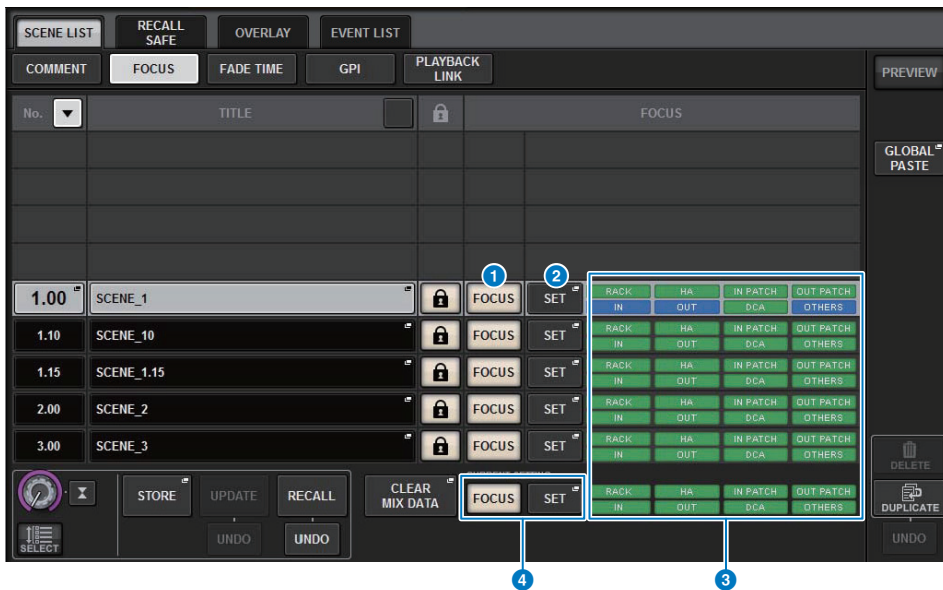
# Using the Focus function

“Focus” is a function that lets you specify the scene parameters that will be recalled (loaded) when you recall a scene. You can enable or disable this function for each scene individually. For example, it can be convenient to use this function if you want to recall only the input channel settings of a certain scene.

**NOTE**

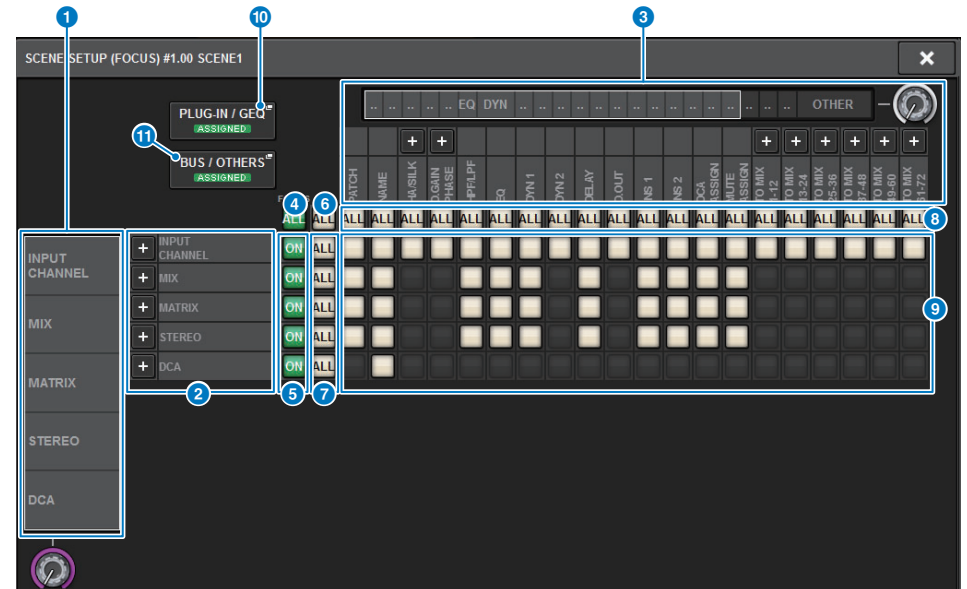
In contrast to Focus, the RIVAGE PM series also features a “Recall Safe” function that enables you to exclude specific channels and parameters from recall operations. However, while the Focus Recall function can be specified individually for each scene, the Recall Safe function settings are common to all scenes.

1. Press the **SCENE** field on the menu bar to access the **SCENE LIST** screen.
2. Press the **FOCUS** tab at the top of the **SCENE LIST** screen.  
The **FOCUS** field will appear in the right half of the **SCENE LIST** screen.



- 1 **FOCUS button**  
Enables or disables the Focus function for each scene.
- 2 **SET popup button**  
Press this button to access the **SCENE SETUP (FOCUS)** popup window, which enables you to select the parameters that you want to recall.

- 3 **Focus parameter display section**  
These indicators show the Focus settings that are specified for each scene (green: all parameters; blue: selected parameters).
  - 4 **CURRENT SETTING field**  
Enables you to specify the content that will be saved by the next scene store operation. When you recall a scene, the Focus setting of that scene will overwrite those of the current scene.
3. Press the **SET** popup button of the scene for which you want to make Focus settings. The **SCENE SETUP (FOCUS)** popup window will appear.  
The window contains the following items:

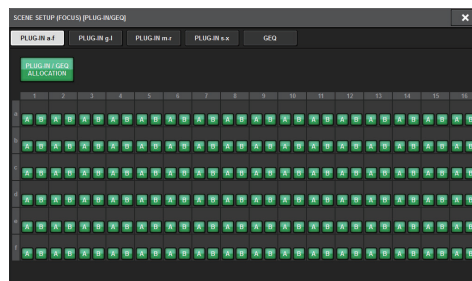


- 1 **Category select list (channel)**  
Enables you to select the channel category.
- 2 **Channel display**  
Indicates the channel name. You can press the + or – button located next to the channel name to expand or collapse the channel indication for each category.
- 3 **Category select list**  
Enables you to select the category of parameters to be displayed on screen. You can press the + or – button located below to expand or collapse the channel parameter indication for each category.

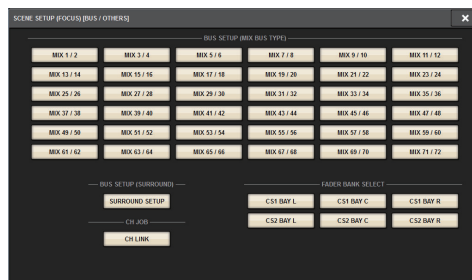
- 4 **ALL channel Focus ON button**  
Specifies whether you want to apply the Focus function to all channels.
- 5 **Channel Focus ON button**  
Turn Focus on or off for each channel.
- 6 **ALL ON button**  
Turns Focus on for all parameters on all channels.
- 7 **ALL parameter ON buttons**  
Turn Focus on for all parameters that belong to the corresponding channels.
- 8 **ALL channel ON buttons**  
Turn Focus on or off for all channels related to the selected parameter.
- 9 **Parameter ON buttons**  
Turn Focus on or off for parameters on each channel.
- 10 **PLUG-IN/GEQ popup button**  
Press one of these buttons to access the popup window, in which you can set the Focus function for each plug-in or GEQ.

**NOTE**

If Focus Recall is set to on, the parameters of the RACK with different GEQs / PEQs or effect plug-ins are not recalled when Focus Recall for the PLUG-IN / GEQ ALLOCATION is turned off. To recall with the mount status, turn on Focus Recall for the PLUG-IN / GEQ ALLOCATION.



- 11 **BUS/OTHERS popup button**  
Press this button to access a popup window where you can specify how the Focus function affects basic MIX bus settings, channel link, and fader layer position.



4. To select a channel that you want to set up, press the + button of the channel display 2 to expand the channel display, and then scroll through the category select list (channel) 1.
5. If you want to apply the Focus function only to specific parameters, use the parameter buttons 9 to select those parameters (multiple selections are allowed). If you want to apply the Focus function to all parameters, turn on the ALL ON button 6.
6. Turn on the channel Focus ON button 5 for the channels to which you want to apply the Focus function.  
If you want to apply the Focus function to all channels, turn on the ALL channel Focus ON button 4.
7. When you finish making settings, press the “x” symbol to close the window. The FOCUS PARAMETER indicator on the FOCUS tab of the SCENE LIST screen will show the Focus setting status of the scene for which the Focus function is configured.

8. Press the FOCUS button to enable the Focus function.  
You can turn the Focus function on or off individually for each scene.

**NOTE**

Scenes for which the FOCUS button is turned on are marked by a “FOCUS” indicator in the STATUS field of the SCENE LIST window (COMMENT tab).

9. Recall a scene for which you have made Focus settings.  
Only the channels/parameters selected in the SCENE SETUP (FOCUS) popup window will be recalled.

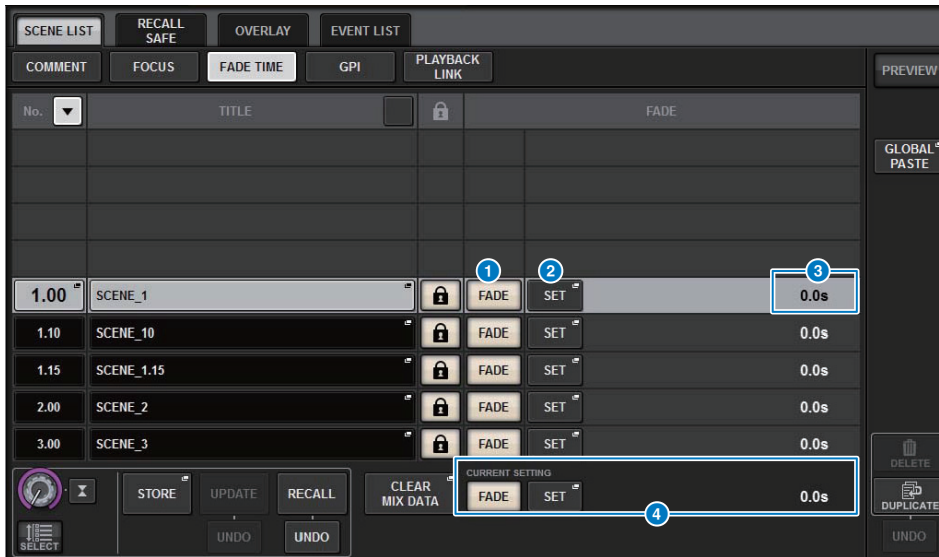
**NOTE**

You can use the Focus function in conjunction with the Recall Safe function. Channels or parameters that are excluded from Recall operations by either Focus or Recall Safe will not be recalled.

## Using the Fade function

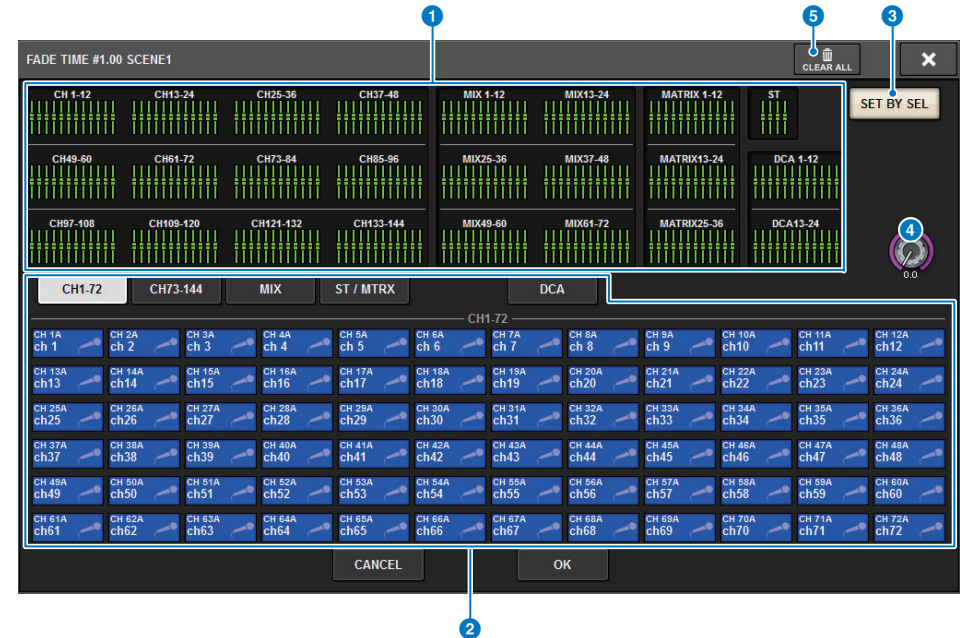
“Fade” is a function that smoothly changes the faders of specified channels/DCAs to their new values over a specified duration when you recall a scene. You can set the Fade function independently for each scene.

1. Press the **SCENE** field on the menu bar to access the **SCENE LIST** screen.
2. Press the **FADE TIME** tab at the top of the **SCENE LIST** screen.  
The **FADE TIME** field will appear in the right half of the **SCENE LIST** screen.



- 1 **FADER button**  
Enables or disables the Fade function for each scene.
- 2 **SET popup button**  
Press this button to access the **FADE TIME** setup window, in which you can select a channel for which you want to use the Fade function, and specify the fade time (the duration of time over which the fader will reach its new value).
- 3 **FADE TIME display**  
This area indicates the fade time specified for each scene.
- 4 **CURRENT SETTING field**  
Here you can specify the content that will be saved by the next scene store operation. When you recall a scene, the Fade settings of that scene will overwrite those of the current scene.

3. Press the **SET** popup button to access the **SCENE SETUP (FADE TIME)** popup window.  
In this popup window you can select the channels to which Fade will be applied, and adjust the fade time.



- 1 **Channel display field**  
In this field, the channels or DCAs to which Fade is applied (selected in the channel select field 2) are highlighted.
- 2 **Channel select field**  
Enables you to select the channels/DCAs to which Fade is applied.
- 3 **SET BY SEL button**  
If this button is on, you will be able to add a channel by using the corresponding [SEL] key.
- 4 **FADE TIME knob**  
Enables you to set the fade time. Use the corresponding screen encoder to adjust the value.
- 5 **CLEAR ALL button**  
Press this button to restore the default fade time setting.

**4. In the channel select field, select the channels to which the Fade effect will be applied (multiple selections are allowed).**

The [SEL] keys for the selected channels or DCAs will light, and those channels or DCAs will be highlighted green in the channel display field. You can cancel the selection by pressing the lit [SEL] key once again to turn it off.

**5. Use the screen encoder that corresponds to the FADE TIME knob, or use the [TOUCH AND TURN] knob to adjust the fade time.**

The range is 0.0 sec – 60.0 sec.

When you finish setting the fade time, press the OK button to close the FADE TIME setup window.

**NOTE**

The fade time you specify here is used for all channels/DCAs selected in step 4.

**6. Press the FADE button to enable the Fade function.**

You can turn the Fade function on or off individually for each scene.

**NOTE**

Scenes for which the Fade function is enabled are marked by a “FADE” indicator in the STATUS field of the SCENE LIST window (COMMENT tab).

**7. Recall a scene for which the Fade function is turned on.**

The faders will begin to move immediately after Recall occurs, and will reach the values of the recalled scene over the course of the specified fade time.

**NOTE**

- By touching a moving fader, you can stop the fade operation of the fader at that point.
- If you recall the same scene while faders are moving, the faders of all channels and DCAs will move immediately to their target positions.

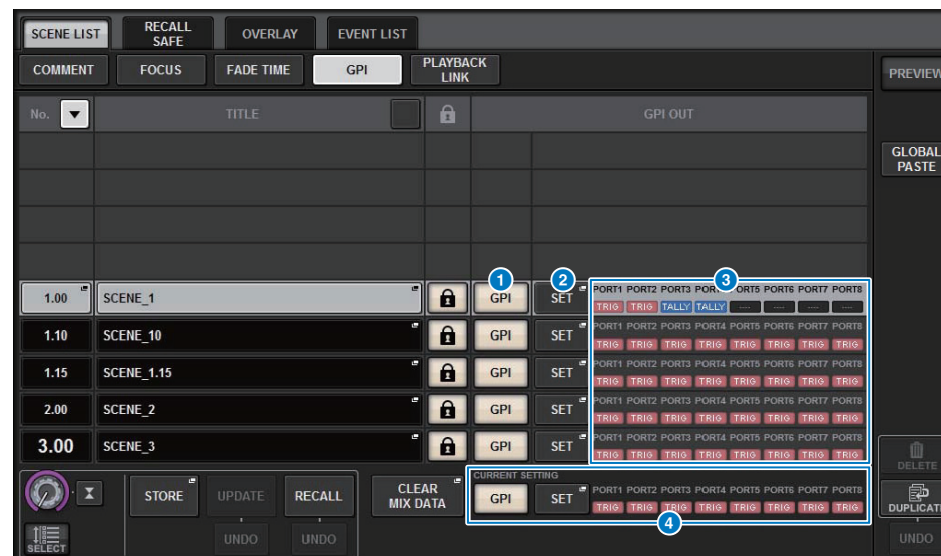
## Outputting a control signal to an external device in tandem with scene recall (GPI OUT)

A control signal can be output to an external device connected to the GPI connector of the RIVAGE PM series when you recall a specific scene. Proceed as follows.

**NOTE**

For more information about GPI OUT settings, refer to “Using GPI OUT” (page 383).

- 1. Press the SCENE field on the menu bar to access the SCENE LIST screen.**
- 2. Press the GPI tab at the top of the SCENE LIST screen.**  
The GPI field will appear in the right half of the SCENE LIST screen.



- 1 GPI button**  
If this button is on and the selected scene is recalled, a control signal will be output.
- 2 SET popup button**  
Press this button to access a popup window, in which you can specify the control signal output from each GPI OUT.
- 3 GPI PARAMETER display section**  
In this section, indicators show the status of the GPI settings specified for each scene.

**4 CURRENT SETTING field**

Enables you to specify the content that will be saved by the next scene store operation. When you recall a scene, the GPI settings of that scene will overwrite those of the current scene.

**3. Press the GPI SET popup button to access the SCENE SETUP (GPI) popup window.**



**4. For each scene, specify the control signal that you want to output to each GPI OUT port.**

Pressing a button repeatedly will switch between the following functions.

- ---- (OFF) .....Nothing will be output.
- TRIGGER .....A trigger will be output when the scene is recalled.
- TALLY .....A tally will be output when the scene is recalled.

**5. When you finish making settings, press the OK button.**

The setting will be finalized, and the popup window will close. If you press the CANCEL button instead of the OK button, your changes will be discarded and the popup window will close.

**NOTE**

Scenes for which the GPI settings are made are marked by a “TALLY” or “TRIG” indicator in the GPI PARAMETER display section of the SCENE LIST window (GPI tab).

**6. Press the GPI button to enable the GPI OUT function.**

You can turn the GPI OUT function on or off individually for each scene.

**NOTE**

Scenes for which the GPI button is turned on are marked by a “GPI” indicator in the STATUS field of the SCENE LIST window (COMMENT tab).

**7. Recall the scene for which you want to output GPI OUT signals.**

When you recall the scene, the control signals will be output to an external device connected to the GPI OUT connector.

## Playing back an audio file in tandem with scene recall (PLAYBACK LINK)

You can specify an audio file that will be played back from a USB flash drive when a specific scene is recalled. This can be convenient if you want a sound effect or background music to be played automatically for a specific scene.

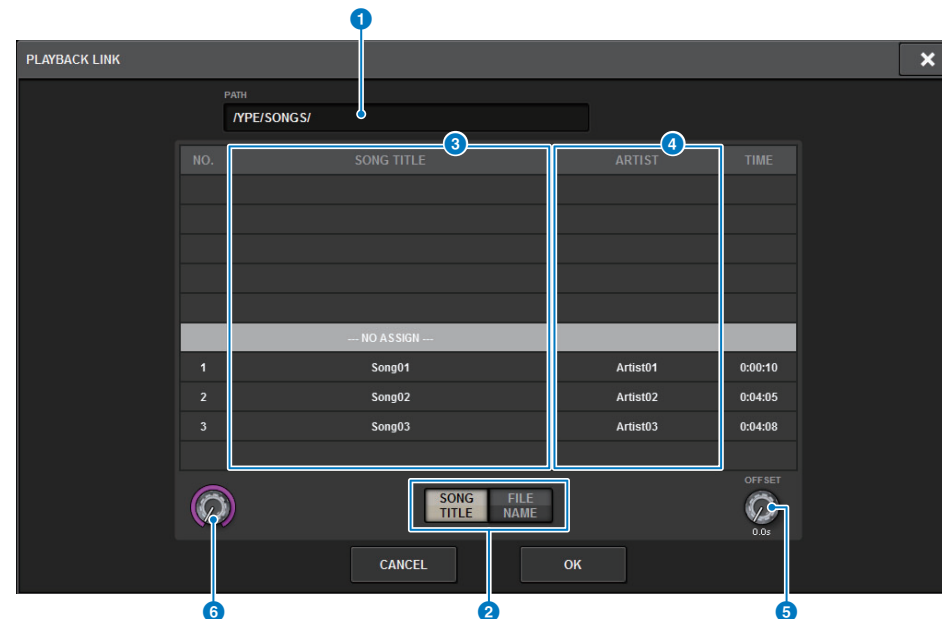
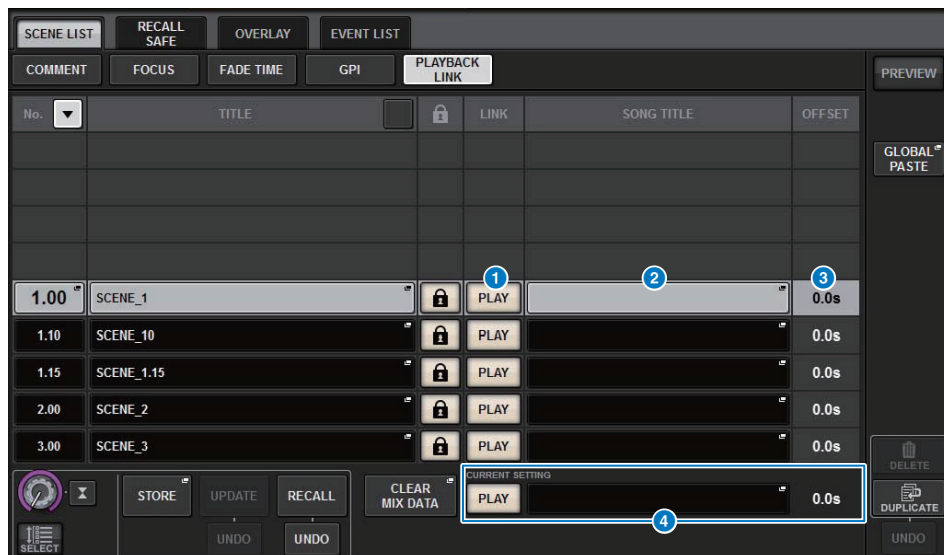
Follow the steps below to link a scene recall with audio file playback.

**NOTE**

- Audio files to be played should be saved in the SONGS folder inside the YPE folder. If you save them in the root directory or in other folders, you will be unable to specify them for playback. When an audio file is played, the path in the TITLE LIST screen will indicate \YPE\SONGS\.
- You cannot play audio files during recording or in recording standby mode.
- A specified audio file will be played back only once, regardless of the playback mode settings.
- A specified file is recognized by a file name with a maximum of 64 characters, plus three extension characters. If you change the file name after specifying the file for playback, or if you delete or copy the file repeatedly, the specified file may become unrecognizable in rare cases.
- You can only link audio files of the control surface whose CONSOLE ID=1.

- 1. Connect a USB flash drive that contains the audio files to the RECORDING connector.**
- 2. Press the SCENE field on the menu bar. The SCENE LIST window will appear, in which you can perform various scene-related operations.**
- 3. Press the PLAYBACK LINK tab located at the top of the SCENE LIST screen.**  
The PLAYBACK LINK field will appear in the right half of the SCENE LIST screen.





#### 1 PLAY button

Enables or disables the Playback Link function for each scene.

#### 2 Song select popup button

Press this button to access the PLAYBACK LINK popup window, in which you can select a song and set the offset time (time duration from scene recall until the start of playback). The title of the selected song will appear on the button.

#### 3 Offset time display

Indicates the time duration from scene recall until the start of playback of the specified audio file. You can set the offset time in the PLAYBACK LINK popup window.

#### 4 CURRENT SETTING field

Enables you to specify the content that will be saved by the next scene store operation. When you recall a scene, the PLAYBACK LINK settings will overwrite those of the current scene.

### 4. Press the song select popup button for a scene to which you want to link the audio file. The PLAYBACK LINK popup window will appear.

In this popup window, you can select an audio file that you want to link with the scene, and set the offset time.

#### 1 PATH indicator

This area indicates the current directory path.

#### 2 SONG TITLE/FILE NAME switch buttons

Switch between the song title list and the file name list.

#### 3 SONG TITLE/FILE NAME list

Displays the song title and file name of the audio files in the \YPE\SONGS\ folder. You can select an audio file by pressing the name in the list.

#### 4 ARTIST list

Displays the artist name of the audio files in the \YPE\SONG\ folder. You can select an audio file by pressing the name in the list.

#### 5 OFFSET knob

You can use the screen encoder to set the time interval from scene recall until the start of audio file playback.

#### 6 Scroll knob

You can scroll the list using the screen encoder.

### 5. Press the SONG TITLE list or use the screen encoder to select a file that you want to link to a scene.

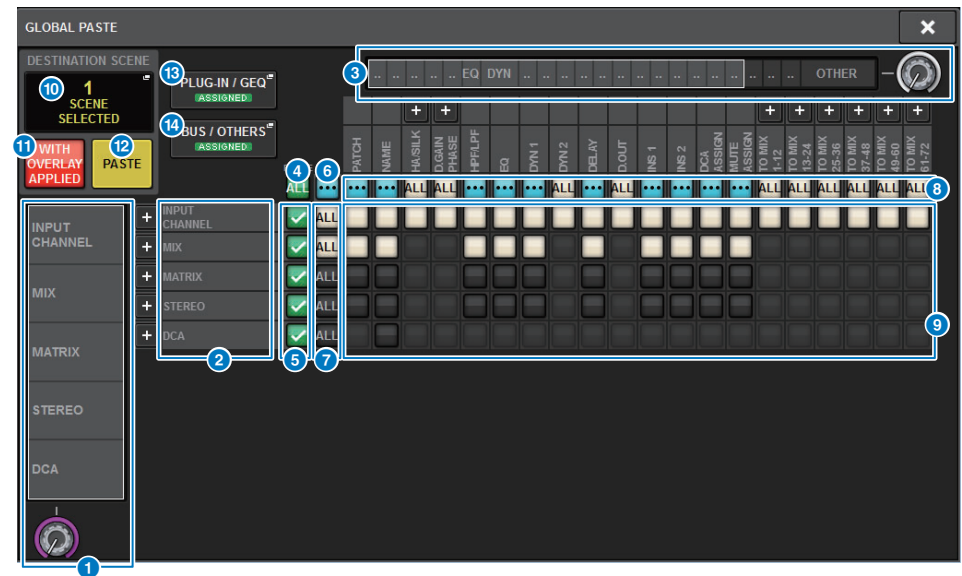


6. **If desired, use the corresponding screen encoder to set the offset (the time duration until the start of audio file playback).**  
The offset time can be adjusted in the range of 0.0 – 99.0 in 0.1 sec steps.
7. **Press the OK button.**  
The title of the selected song will appear in the middle of the song list.  
If you select the CANCEL button instead of the OK button, your settings will be discarded and the unit will return to the SCENE LIST window.
8. **Press the PLAY button to turn on the link to the audio file.**  
You can turn the Playback function for audio files on or off individually for each scene.  
**NOTE**  
Scenes for which the PLAY button is turned on are marked by a “PLAY” indicator in the STATUS field of the SCENE LIST window (COMMENT tab).
9. **Repeat steps 4–8 to link audio files to other scenes.**
10. **Recall a scene to which an audio file has been linked.**  
After the offset time duration has elapsed, the specified audio file will play once.  
**NOTE**  
If another song is playing during a scene recall, the song playback will stop when the scene is recalled, regardless of the offset time setting.

## Using the Global Paste function

“Global Paste” is a function that enables you to copy-and-paste the settings of a desired channel or parameter from the current mix data to scene data in memory (multiple selections are allowed). This is a convenient way in which changes to the current scene can be applied to multiple scenes that have already been stored.

1. **Press the SCENE field on the menu bar.**  
The SCENE LIST screen will appear.
2. **On the right side of the SCENE LIST screen, press the GLOBAL PASTE button to access the GLOBAL PASTE screen.**  
In this screen you can select the copy-source channels/parameters and specify the scene number(s) as the paste destination.



- 1 **Category select list (channel)**  
Enables you to select a channel category.
- 2 **Channel display**  
Indicates the channel name. You can press the + or – button located next to the channel name to expand or collapse the channel indication for each category.

**3 Category select list**

Enables you to select the category of parameters to be displayed on screen. You can press the + or – button located beneath the list to expand or collapse the channel parameter indication for each category.

**4 ALL channel global paste ON button**

Specifies whether the Global Paste function is applied to all channels.

**5 Channel global paste ON buttons**

Turn Global Paste on or off for each channel.

**6 ALL ON button**

Turns Global Paste on or off for all parameters on all channels.

**7 ALL parameter ON buttons**

Turn Global Paste on or off for all parameters on the selected channel(s).

**8 ALL channel ON buttons**

Turn Global Paste on or off for all channels related to the selected parameter.

**9 Parameter ON buttons**

Turn Global Paste on or off for each parameter on each channel.

**10 SCENE SELECT popup button**

Press this button to access the SCENE SELECT popup window, in which you can set the paste-destination scene(s). The button will indicate the number of selected scenes.

**11 WITH OVERLAY APPLIED button**

If this button is turned on, the currently-applied Overlay offset values will be added to the data to be pasted.

**12 PASTE button**

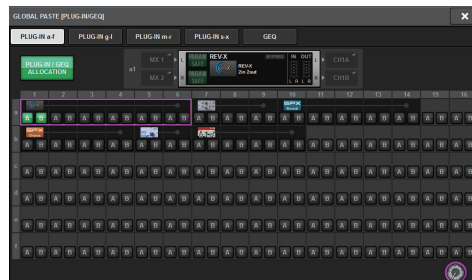
Press this button to paste the selected item(s) to the scenes in memory.

**13 PLUG-IN/GEQ popup button**

Press this button to access the popup window, in which you can set up global paste for each plug-in or GEQ.

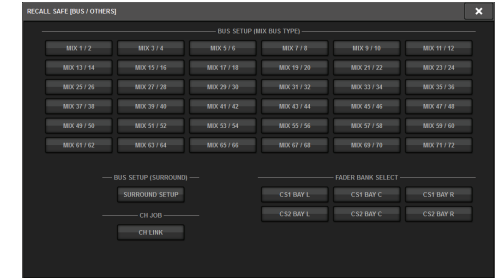
**NOTE**

If Global Paste is set to on, the parameters of the RACK with different GEQs / PEQs or effects plug-ins are not pasted when the PLUG-IN / GEQ ALLOCATION is not selected for Global Paste. To paste with the mount status, turn on Global Paste for the PLUG-IN / GEQ ALLOCATION.



**14 BUS/OTHERS popup button**

Press this button to access a popup window where you can specify how the Global Paste function affects the MIX bus type, surround settings, channel link, and fader layer position.



**3. To select a target channel, press the + button on the channel display 2 to expand the channel display, and then scroll through the category select list (channel) 1.**

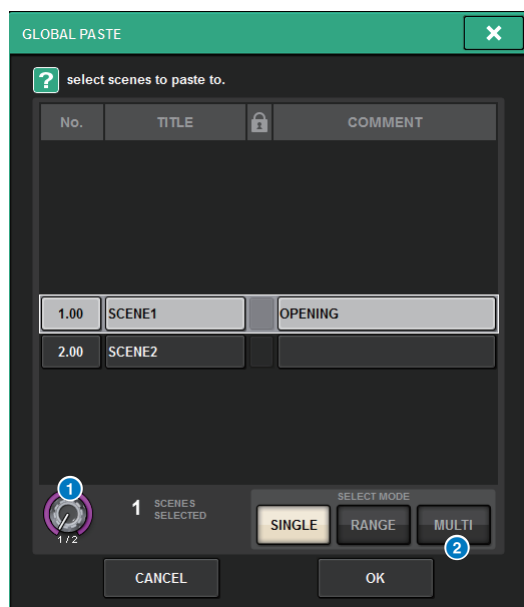
**4. Select the copy-source channels/parameters.**

If you want to apply the Global Paste function to only specific parameters, use the parameter buttons 9 to select those parameters (multiple selections are allowed).

If you want to apply the Global Paste function to all parameters, turn on the ALL ON button 6.

**5. Turn on the channel global paste ON button 5 for the channels to which you want to apply the Global Paste function. If you want to apply the Global Paste function to all channels, turn on the ALL channel global paste ON button 4.**

## 6. Press the SCENE SELECT button to access the SCENE SELECT popup window.



### 1 SCENE SELECT knob

Use the corresponding screen encoder or the [TOUCH AND TURN] knob to select a scene. The index number of the currently-selected scene(s) appears beneath the knob.

### 2 SELECT MODE buttons

Use these buttons to select how one or multiple scenes will be selected.

**SINGLE:** Enables you to select a single scene.

**RANGE:** Enables you to select consecutive scenes.

**MULTI:** Enables you to select multiple specified scenes.

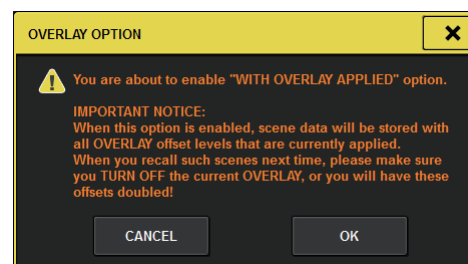
## 7. Use the SCENE SELECT knob and a SELECT MODE button to select one or multiple scenes to which to paste data.

## 8. When you finish making settings, press the OK button.

The system will return to the GLOBAL PASTE screen.

## 9. If necessary, press the WITH OVERLAY APPLIED button.

A dialog box will appear.



### Caution

While Overlay is enabled, if you recall a scene that was previously pasted with added offset values, both the current offset values and the original offset values will be applied to the scene, thus doubling the offset value. An extremely high volume sound may be output as a result.

## 10. Press the PASTE button.

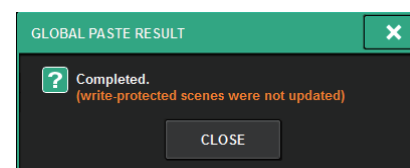
The selected item(s) in the current scene will be pasted to the specified scene(s) in memory.

A progress bar will appear during the paste operation.

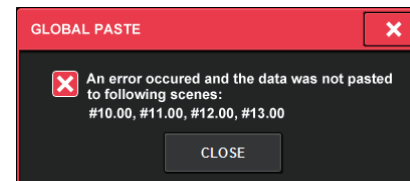
Also, during the paste operation, a STOP button will appear, which you can press to cancel the paste operation. In this case, data will be pasted up until you press the STOP button. The operation cannot be reverted.

### NOTE

- In any of the following cases, a dialog box will appear and data will not be pasted:
  - You attempted to paste data to a protected scene.



- The paste destination scene has been deleted by another operation (from PM Editor, etc.) just before the paste operation was executed.



- If pasting data to one of the paired channels causes the pairing setting to be canceled, the other channel from that pair will be set to MONO.

# Using the Recall Safe function

“Recall Safe” is a function that excludes only specific parameters/channels (DCAs) from Recall operations. Unlike the Focus function (page 324), which lets you make settings for individual scenes, the Recall Safe settings are globally applied to all scenes.

1. Press the **SCENE** field on the menu bar to access the **SCENE LIST** screen.
2. Press the **RECALL SAFE** tab to access the **RECALL SAFE** screen.  
In this screen you can make settings for the Recall Safe function. The screen contains the following items.

- 5 **Channel Recall Safe ON buttons**  
Turn Recall Safe on or off for each channel.
- 6 **ALL ON button**  
Turns Recall Safe on for all parameters on all channels.
- 7 **ALL parameter ON buttons**  
Turn Recall Safe on for all parameters that belong to the corresponding channels.
- 8 **ALL channel ON buttons**  
Turn Recall Safe on or off for all channels related to the selected parameter.
- 9 **Parameter ON buttons**  
Turn Recall Safe on or off for parameters on each channel.

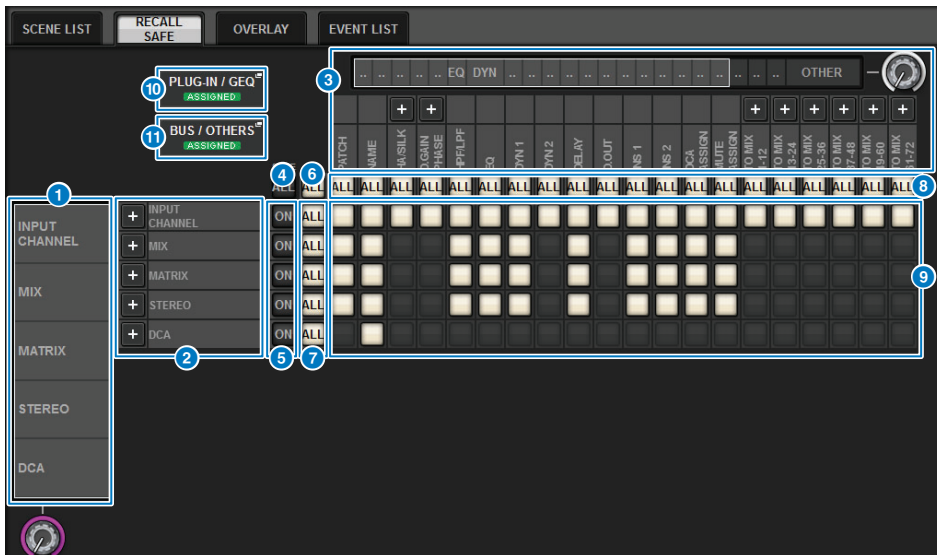
- 10 **PLUG-IN/GEQ popup button**  
Press this button to access the popup window, in which you can set up recall safe for each plug-in or GEQ.

**NOTE**

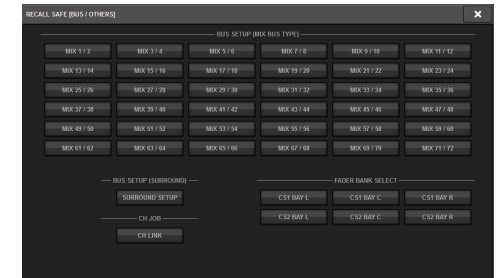
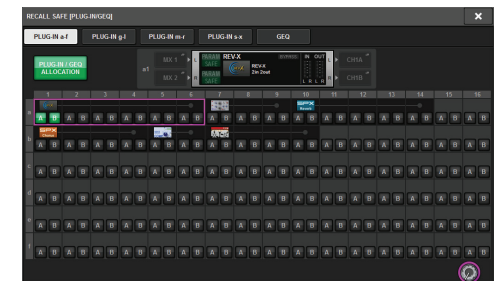
Even if Recall Safe is set to on, only individual parameters are the target. The mount status and insert patches are not subject to Recall Safe.

- 11 **BUS/OTHERS popup button**  
Press this button to access a popup window where you can specify how the Global Paste function affects the MIX bus type, surround settings, channel link, and fader layer position.

3. To select a channel that you want to set up, press the **+** button of the channel display 2 to expand the channel display, and then scroll through the category select list (channel) 1.
4. If you want to apply the Recall Safe function only to specific parameters, use the parameter buttons 9 to select those parameters (multiple selections are allowed). If you want to apply the Recall Safe function to all parameters, turn on the **ALL ON button** 6.



- 1 **Category select list (channel)**  
Enables you to select the channel category.
- 2 **Channel display**  
Indicates the channel name. You can press the **+** or **-** button located next to the channel name to expand or collapse the channel indication for each category.
- 3 **Category select list**  
Enables you to select the category of parameters to be displayed on screen. You can press the **+** or **-** button located below to expand or collapse the channel parameter indication for each category.
- 4 **ALL channel Recall Safe ON button**  
Specifies whether the Recall Safe function is applied to all channels.



5. Turn on the channel Recall Safe ON button 5 for the channels to which you want to apply the Recall Safe function.

If you want to apply the Recall Safe function to all channels, turn on the ALL channel Recall Safe ON button 4.

#### NOTE

You can use the Recall Safe function in conjunction with the Focus function. Channels or parameters that are excluded from recall operations by either Focus or Recall Safe will not be recalled.

## Using the Event List function

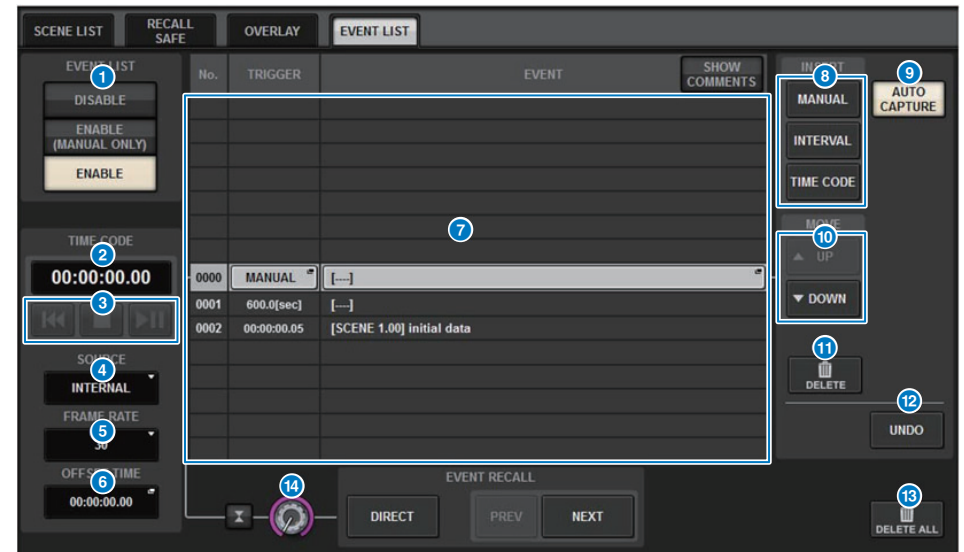
The Event List function lets you arrange scenes and library items in the order in which you will use them, so that they can be recalled automatically according to the time code or interval that you specify, or recalled manually.

#### NOTE

The event list can be controlled only from the control surface whose CONSOLE ID=1.

### ■ Creating an event list

1. Press the SCENE field on the menu bar.
2. Press the EVENT LIST tab to access the EVENT LIST screen.



#### 1 EVENTLIST button

Enables or disables an event list.

- **DISABLE button**  
Disables the event list.
- **ENABLE (MANUAL ONLY) button**  
Events registered in the event list are recalled only manually.
- **ENABLE button**  
Enables the event list.

If an event list is enabled, the SCENE field on the menu bar will display the number and title of the next event to be recalled.

## 2 Time code

Displays the current time code.

If SOURCE is set to INTERNAL, you can press this to access the TRIGGER SETTING popup window, where you can edit the current time code. If time code is enabled, it is shown in the SCENE field of the menu bar.

## 3 Time code controllers

- **Rewind button** .....Rewinds the time code to the start time
- **Stop button** .....Stops the time code
- **Play/pause button** .....Starts (resumes) or pauses the time code

## 4 Time code source

Selects the source of the time code that will be used.

- **OFF** .....Time code is not received.
- **INTERNAL**.....The time code internally generated by the control surface is used.
- **TIMECODE IN** .....The time code that is input from the TC IN connector of the DSP engine is used.
- **MTC CONSOLE**.....The MIDI time code that is input from the MIDI connector of the control surface is used.
- **MTC ENGINE** .....The MIDI time code that is input from the MIDI connector of the DSP engine is used.

## 5 Frame rate

Selects one of the following as the frame rate of the time code that is used.

- **30** .....30 frames/second (non-drop)
- **30D**.....30 frames/second (drop frame)
- **29.97** .....29.97 frames/second (non-drop)
- **29.97D** .....29.97 frames/second (drop frame)
- **25** .....25 frames/second
- **24**.....24 frames/second

## 6 Offset time / Start time

If INTERNAL is selected as the time code, this specifies the start time of the internal time code.

If any other time code source is selected, this specifies the offset value. The offset value is the interval by which time code received from an external source is adjusted forward or backward when recalling a scene.

## 7 List

This area displays the events added to the event list. The following items can be displayed in the list.

- **No.**.....This column displays event numbers.
- **TRIGGER** .....This column displays a type of trigger that executes an event.
- **EVENT** .....This column displays a description of an event to be executed.

You can use the SHOW COMMENTS button to specify whether you want to show comments for a scene.

## 8 INSERT field

Adds a new event to the event list.

- **MANUAL button** .....The event is recalled by using the DIRECT button or an assigned USER DEFINED key.
- **INTERVAL button** .....The event is recalled when the specified length of time elapses after the previous event was recalled.
- **TIMECODE button** .....The event is recalled when time code reaches the specified time.

## 9 AUTO CAPTURE button

This allows an event to be registered in real time according to the time code. When you turn this button on, time code starts, and when a scene or library item is recalled using the SCENE MEMORY section, the corresponding scene number and time code location are captured and added as a new event.

## 10 MOVE field

- **UP button**  
Moves the currently-selected event up step-by-step in the event list.
- **DOWN button**  
Moves the currently-selected event down step-by-step in the event list.

## 11 DELETE button

Deletes the currently-selected event.

## 12 UNDO button

Cancels the immediately preceding edit of the event list.

## 13 DELETE ALL button

Deletes all events in the list.

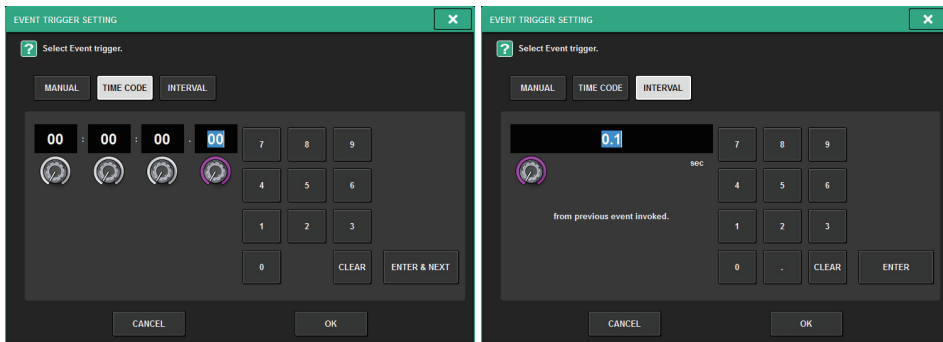
## 14 EVENT SELECT knob

Use the corresponding screen encoder or the [TOUCH AND TURN] knob to select an event.



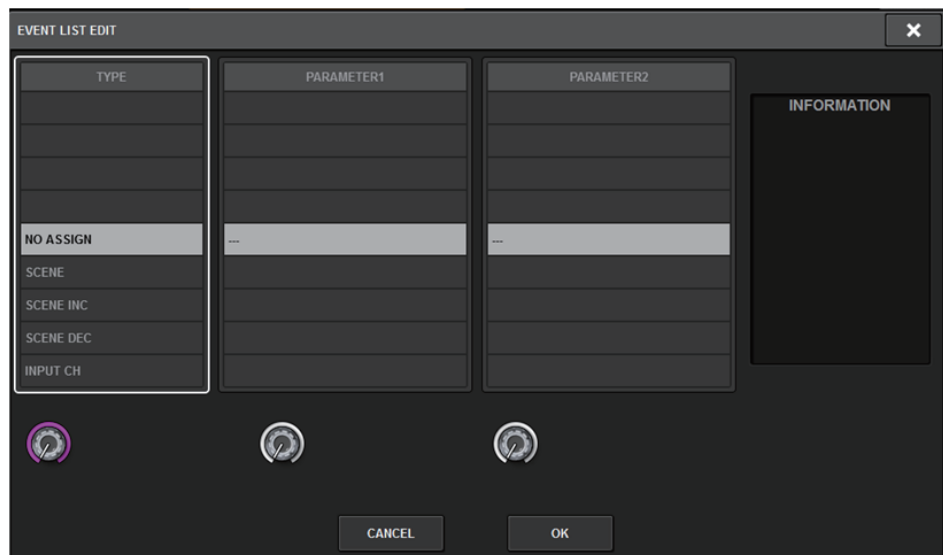
**3. Press a button in the INSERT field (MANUAL, INTERVAL, TIMECODE) to add an event.**

When you press the TRIGGER item for the selected event, the EVENT TRIGGER SETTING popup window appears, allowing you to edit the trigger settings.



Edit the settings as needed.

**4. Press the EVENT item of the selected event to access the EVENT LIST EDIT popup window.**



This screen contains the following items.

TYPE	PARAMETER1	PARAMETER2	INFORMATION
NO ASSIGN	–	–	–
SCENE	Scene number and title	–	Comment
SCENE INC	–	–	–
SCENE DEC	–	–	–
INPUT CH	Library number and title	Input	MONO /STEREO
OUTPUT CH	Library number and title	Mix, Matrix, Stereo	MONO /STEREO, MIX/MATRIX/STEREO
INPUT EQ	Library number and title	Input	EQ Type
OUTPUT EQ	Library number and title	Mix, Matrix, Stereo, Monitor, Cue, GEQ	EQ Type, OUT CH/MON CUE
DYNAMICS	Library number and title	Input, Mix, Matrix, Stereo	Dynamics Type
GEQ	Library number and title	GEQ	31GEQ / FLEX15
USER SETUP	Library number and title	–	–
<Plug-In> *	Library number and title	Plug-in rack that is mounted	–

\* Each plug-in

**5. Select from the list to add the event content that you need.**  
Repeat these steps to add the necessary events and create an event list.

## ■ Using MANUAL to recall scenes from an event list

In the case of MANUAL, you'll use the EVENT RECALL buttons to recall events.

In the case of INTERNAL or TIME CODE, select a time code source to recall events.

1. Press the SCENE field on the menu bar.
2. Press the EVENT LIST tab to access the EVENT LIST screen.



### 1 Automatic follow button

If you press this button, the selected event (shown as dark gray in the list) follows the event that is currently being executed (shown as light gray in the list).

### 2 EVENT RECALL buttons

- **NEXT button**  
Directly recalls the event that immediately follows the most-recently executed event.
- **PREV button**  
Directly recalls the event that immediately precedes the most-recently executed event.
- **DIRECT button**  
Immediately recalls the currently-selected event.

### NOTE

You can use the Direct Recall function to directly recall an event assigned to a USER DEFINED key, or to step through the events.

3. Rotate the screen encoder to select the event that you want to recall.
4. Press the EVENT RECALL button.



### Caution

While Overlay is enabled, if you recall a scene that was stored or globally-pasted with added Overlay offset values, both the current offset values and the original offset values will be applied to the scene, thus doubling the offset value. In this case, an extremely high volume sound may be output. Be sure to confirm the status of a scene to recall, and the on/off status of Overlay, before recalling the scene.

## Using Preview mode

Preview mode allows you to check and edit the scene settings that are stored in memory without affecting the signal processing of the current scene. When you recall a scene in this mode, the settings of the newly recalled scene are shown on the panel of the RIVAGE PM series unit, but the signal processing of the current scene continues as it had been prior to recall. Even if you edit the settings and store/overwrite them, the signal processing of the current scene continues as it had been prior to recall. This is convenient when you want to check the contents of the scene that you expect to recall next, or when you want to partially edit the settings and then store them.

### Using the keys in the SCENE MEMORY section

1. Press the [PREVIEW] key.  
When you enter Preview mode, the SCENE MEMORY display of the SCENE MEMORY section indicates [PREVIEW], and the [PREVIEW] key is lit. The SCENE field in the menu bar flashes red, and the PREVIEW button in the SCENE LIST screen is lit red.
2. Use the SCENE MEMORY [INC]/[DEC] keys to select the scene number that you want to recall.
3. Press the SCENE MEMORY [RECALL] key.
4. As necessary, use the controllers of the panel to edit the settings.
5. If you want to store the settings that you made in step 4, press the SCENE MEMORY [STORE] key. If you want to overwrite and update the edited content onto the scene that is recalled or stored, press the SCENE MEMORY [UPDATE] key.
6. When you have finished checking or editing the settings of the scene, press the [PREVIEW] key.

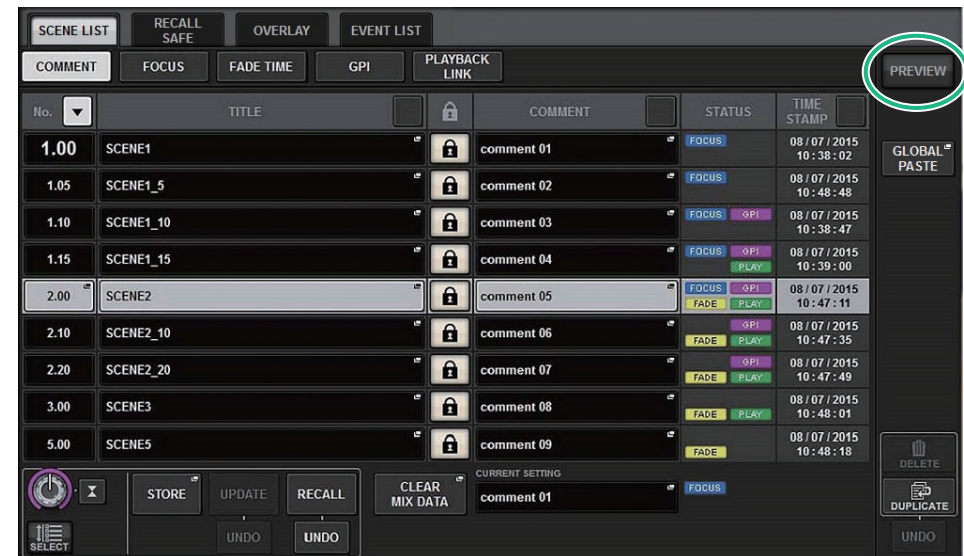
#### NOTE

- PREVIEW mode applies to all the parameters that are included in the scene memory.
- Settings not included in a scene memory (such as Port to port PATCH settings) are reflected by the current scene even during in Preview mode.
- Even in PREVIEW mode, the Recall Safe function, Focus function, and Isolate function are operative.



### Using the SCENE LIST screen

1. Press the SCENE field on the menu bar.
2. Press the SCENE LIST tab to access the SCENE LIST screen.
3. Press the PREVIEW button of the SCENE LIST screen to enter Preview mode.
4. Use the screen encoder to operate the SCENE SELECT knob of the SCENE LIST screen, and select the scene number that you want to recall.
5. Press the RECALL button in the SCENE LIST screen.
6. As necessary, use the controllers of the panel to edit the settings.
7. If you want to store the settings that you made in step 6, press the STORE button of the SCENE LIST screen. If you want to overwrite and update the edited content onto the scene that is recalled or stored, press the UPDATE button in the SCENE LIST screen.
8. When you have finished checking or editing the settings of the scene, press the PREVIEW button in the SCENE LIST screen.



## ■ About the functions in Preview mode

The current scene will change in response to operations in the following software or external devices.

- RIVAGE PM Editor
- StageMix
- MIDI Rx
- GPI IN

In the same way, communication is sent to the following software or external devices when you change the current scene.

- RIVAGE PM Editor
- StageMix
- MIDI Tx
- GPI OUT

The meters indicate the state of signal processing for the current scene.

The following functions do not operate in Preview mode.

- Synchronization of settings (except when synchronization occurs automatically)
- File save/load functions
- Cue changes
- USER DEFINED keys
- USER DEFINED knobs
- USER DEFINED keys and USER DEFINED knobs in CONTROLS
- Changes or display of monitor, cue, oscillator, talkback, PHONES, or RTA
- Changes or display of the USB recorder
- Changes to DANTE SETUP or DANTE PATCH
- Fade function
- MIDI CLOCK or tap tempo function of plug-ins
- Maintenance
- Cue changes for an insert or plug-in
- Cue or key-in changes for DynamicEQ, DynamicEQ4, or MBC4 plug-ins
- CSV import/export
- [HOME] key
- BOOKMARK operation (via GPI)
- VSC on/off switching
- Overlay function (the OVERLAY SETTING screen and operations of the [OVERLAY] key)

Additionally, it is not possible to enter Preview mode during the following operations.

- While pasting a scene or EQ
- While executing Global Paste
- While synchronizing settings data
- While saving/loading a file
- While executing CSV import/export
- While updating the firmware
- While initializing channel parameters

Other restrictions

- Undo is not possible for a recall operation that was executed while in Preview mode (however, this does not apply to a recall that was performed from outside).

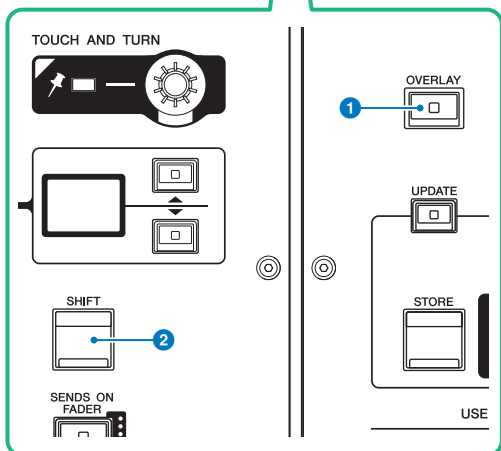
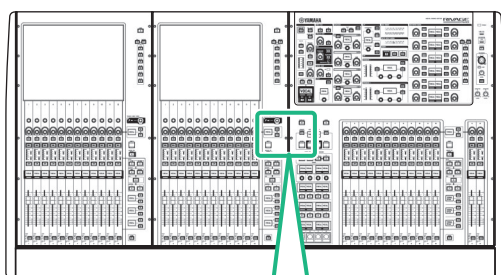
# OVERLAY

Overlay is a function that enables you to add or “overlay” a temporary offset (+/-) value to fader levels or Mix/Matrix send levels in a current mix.

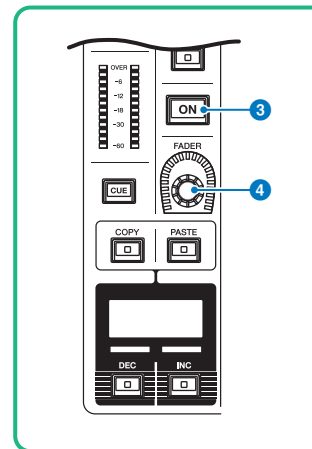
The “overlaid” value is something like a transparent filter applied to the level values. It enables you to temporarily adjust the relative levels without modifying existing scene data.

## Using the Overlay function

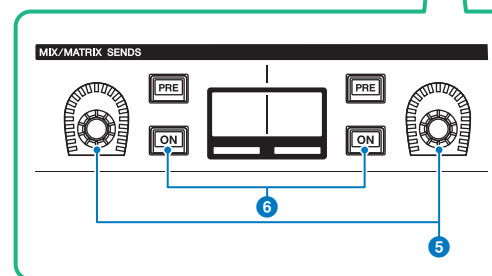
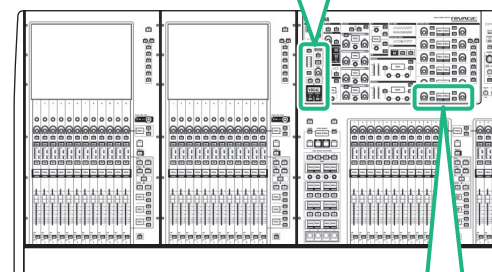
### ■ Controlling the function using the keys and knobs on the top panel

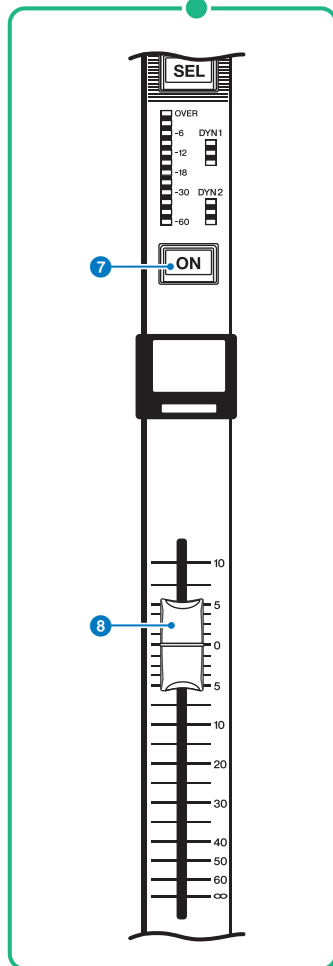
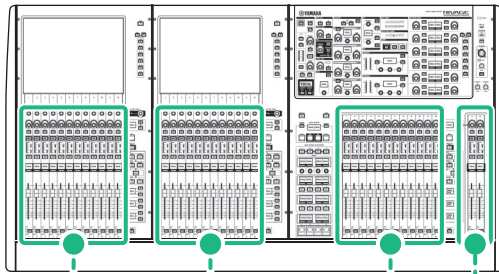


- 1 **[OVERLAY] key**  
Press this button to display the OVERLAY SETTING screen.  
While pressing and holding down the [SHIFT] key, press the [OVERLAY] key to switch Overlay on or off.  
While Overlay is turned on, press and hold down the [OVERLAY] key to enter Overlay edit mode.
- 2 **[SHIFT] key**  
Combine with another key to perform certain functions.



- 3 **[ON] key**  
Switches the channel on or off.
- 4 **[FADER] knob**  
Adjusts the channel fader level.
- 5 **MIX/MATRIX SENDS knobs**  
Adjust the send levels for the corresponding buses.
- 6 **MIX/MATRIX SENDS [ON] keys**  
Switch the send signal to the corresponding bus on or off.





- 7 [ON] key**  
Switches the channel on or off.
- 8 Fader**  
This is a touch-sensitive 100mm motorized fader.

- 1. While pressing and holding down the [SHIFT] key, press the [OVERLAY] key to switch Overlay on.**  
The [OVERLAY] key LED will light.
  - 2. Press and hold down the [OVERLAY] key to enter Overlay edit mode.**  
The indicators for editable channels and buses will flash.
- NOTE**  
You will be unable to edit the Overlay settings if Isolate mode is enabled; if the bus type of the send destination is set to "FIXED" (only for the send level); or if the EXCLUDE button has been pressed (see page 282).

- 3. Modify the offset values using the faders or knobs.**  
The following list shows the controllers and corresponding parameters.

- **Fader level**  
Fader in the Channel Strip section  
[FADER] knob in the Selected Channel section
- **Mix/Matrix Send level**  
MIX/MATRIX SENDS knob in the Selected Channel section

- NOTE**
- You can change the levels within the range from -20dB to +10dB using the faders or knobs.
  - You cannot change the value if the fader level is set to -∞.

The setting value will appear in the channel name display or MIX/MATRIX SENDS display. The channel or bus [ON] keys will light up on the channels or buses for which the offset values are programmed. If you turn these [ON] keys off, the values will be reset to 0dB.

- 4. Press and hold down the [OVERLAY] key to exit Overlay edit mode.**
- 5. After you finish, press and hold down the [SHIFT] key, and then press the [OVERLAY] key to switch Overlay off.**

- NOTE**  
The offset fader or send levels will be automatically modified so that the levels will fall within the range (-138.0dB to +10dB).  
For example, assuming that the fader level is -138dB and the offset value is -10dB, when Overlay is turned on, the limiter will kick in and the resultant fader level will be -128dB. When Overlay is turned off, this changed value will not revert.



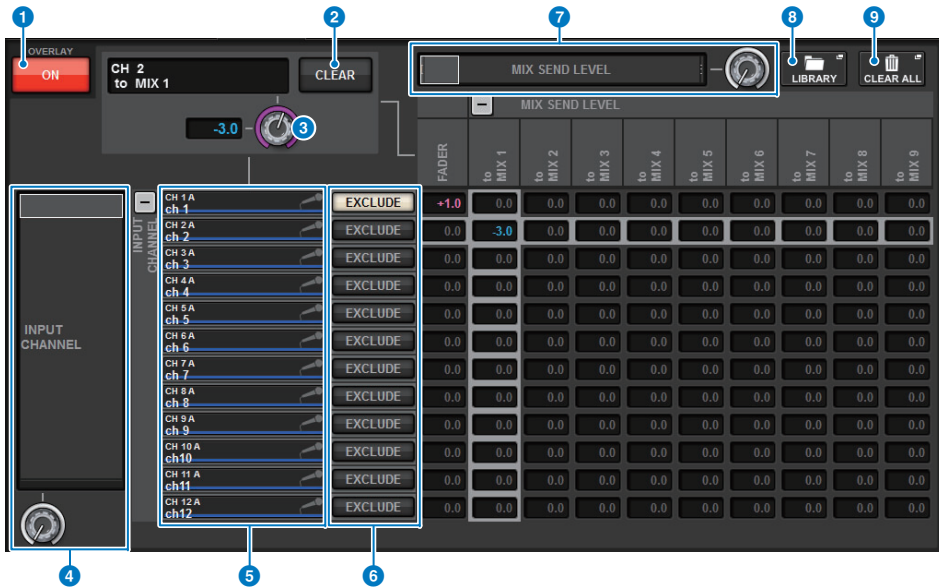
## ■ Controlling the function from the touch screen

### 1. Press the [OVERLAY] key.

The OVERLAY SETTING screen will appear.

(You can also access this screen by pressing the SCENE field on the menu bar, and then pressing the Overlay tab at the top of the SCENE LIST screen.)

This screen contains the following items.



#### 1 Overlay ON button

Turn this button on to enable the offset value.

#### 2 CLEAR button

Press this button to clear the selected parameter setting.

#### 3 Overlay parameter setting knob

While Overlay is turned on, you can set the value between -20.00dB and +10.00dB.

#### 4 Category select list (channel)

Enables you to select the channel category. The categories correspond to the following channels.

- CH1-144
- MIX1-72
- MTX1-36
- STEREO.....ST A L, ST A R, ST B L, ST B R
- DCA GROUPS.....DCA1-24

You can press the + or – button located to the right to expand or collapse the channel parameter indication for each category.

#### 5 Channel display

Indicates the channel name.

#### 6 EXCLUDE button

If the EXCLUDE button is turned on, the corresponding channel will be excluded from the Overlay target.

#### 7 Category select list (parameter)

Enables you to select the parameter category. The categories correspond to the following parameters.

- Fader
- Mix Send1 Level-Mix Send 72 Level
- Matrix Send1 Level-Matrix Send 36 Level

You can press the + or – button located beneath the list to expand or collapse the channel parameter indication for each category.

#### 8 LIBRARY button

Press this button to open the OVERLAY library window.

#### 9 CLEAR ALL button

Press this button to clear all specified parameters, other than the EXCLUDE parameter.

### 2. Press the Overlay ON button to enable Overlay.

### 3. Select a channel or DCA and parameter to set the Overlay offset value.

A selected field will be surrounded by a frame.

**4. Rotate the Overlay parameter setting knob to adjust the offset value.**

The value will appear in the field.

If the offset is a negative value, it will be indicated in light blue. If the offset is a positive value, it will be indicated in pink.

**NOTE**

- If the channel/parameter category indication is collapsed and if an offset value was set for the category, the parameter field for the corresponding channel will show “. . .”
- The fader levels and send levels (to which the offset values have been added) will be automatically modified so that the levels will fall within the range (-138.0dB to +10dB)

For example, assuming that the fader level is -138dB and the offset value is -10dB, when Overlay is turned on, the limiter will kick in and the resultant fader level will change to -128dB. When Overlay is turned off, this value will not change.

**5. Turn the EXCLUDE buttons on as needed.**

**NOTE**

The Overlay setting will be invalid if the EXCLUDE button has been pressed, if Isolate mode is enabled, or if the bus type of the send destination is set to “FIXED” (only for the send level).

**6. After you finish, press the SCENE field on the menu bar to return to the previous screen.**

**Example of panel and touch screen indication while Overlay is enabled**

When Overlay is enabled, the panel and touch screen will update its indication (pink or light blue) using the Overlay setting.

Panel	SELECTED CHANNEL VIEW screen		OVERVIEW screen
	<p>Fader strip field</p>	<p>MIX/MATRIX SENDS field</p>	<p>SEND field</p>

In addition to these examples, the parameters affected by the Overlay setting will update the level indication.

## File

### SAVE/LOAD

You can store and load all data of the RIVAGE PM series to and from a USB flash drive connected to the USB port on the control surface.

#### NOTE

- You cannot use the RECORDING connector (a USB port dedicated for recording) for save and load operations.
- The system will recognize only one USB flash drive that is connected to one of the USB ports. Do not connect multiple USB flash drives.
- The operation of USB 2.0 or 3.0 flash drives only is guaranteed.
- The operation of USB flash drives with capacities of up to 32GB has been verified. (However, this does not necessarily guarantee the operation of all USB flash drives.) The FAT16 and FAT32 formats are supported.

#### NOTICE

“ACCESS” will appear on the status indicator while data is being accessed (i.e., saved, loaded, or deleted). During this time, do not remove the USB flash drive or power-off the control surface. Doing so may damage the data on the storage media.

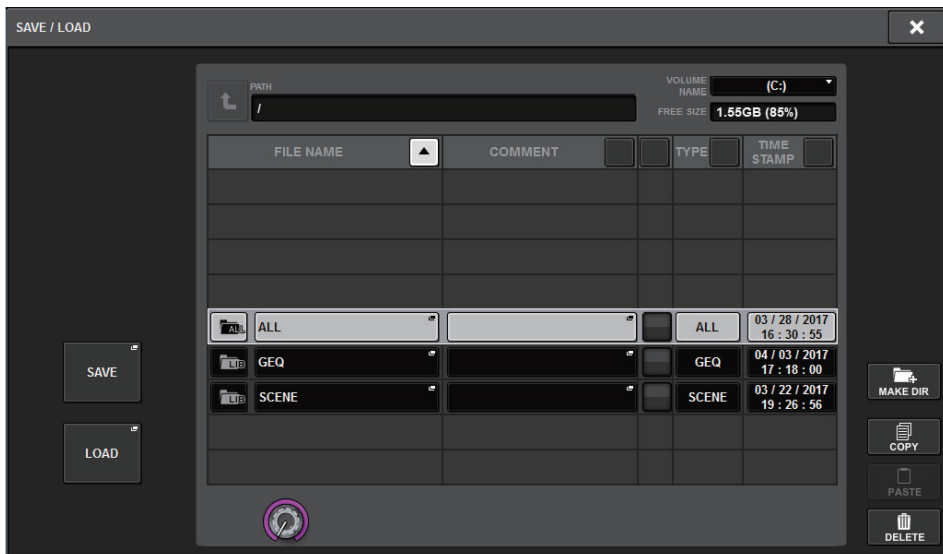
## Saving the RIVAGE PM series’s settings on a USB flash drive

All internal data of the RIVAGE PM series can be saved to the USB flash drive in a single operation as a settings file. If you save a file by selecting the ALL tab, the saved file will have an extension of “.PM10ALL” (in the case of the CSD-R7, this will be “.PM7ALL”). Otherwise, all other saved files will have an extension of “.PM10PART” (in the case of the CSD-R7, this will be “.PM7PART”).

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.

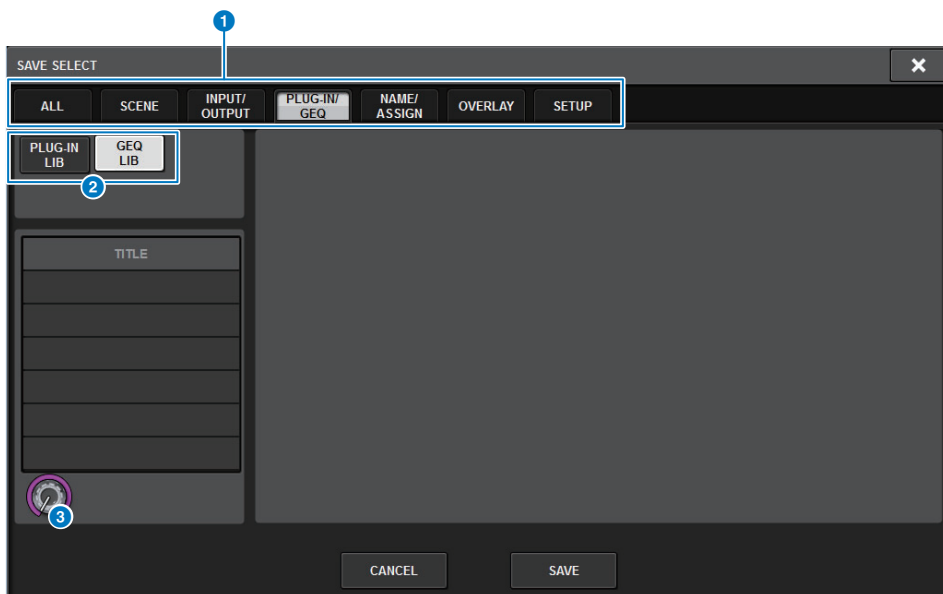


2. Press the **SAVE/LOAD** button to access the **SAVE/LOAD** popup window.



**3. Press the SAVE button in the SAVE/LOAD popup window.**

The SAVE SELECT screen will appear, in which you can select data to save.



**1 TYPE field**

Enables you to select a type of data to save. The displayed items on this screen vary depending on the selected tab.

- **ALL tab**  
All items are targeted. (Type: ALL)
- **SCENE tab**  
Scene memories are targeted. (Type: SCENE)
- **INPUT/OUTPUT tab**  
The following table lists the items you can select.

Button	Data	Type
<b>INPUT CH LIB</b>	Input channel libraries	IN CH
<b>OUTPUT CH LIB</b>	Output channel libraries	OUT CH
<b>INPUT EQ LIB</b>	Input EQ libraries	IN EQ
<b>OUTPUT EQ LIB</b>	Output EQ libraries	OUT EQ
<b>DYN LIB</b>	Dynamics libraries	DYNA

- **PLUG-IN/GEQ tab**

The following table lists the items you can select.

Button	Data	Type
<b>PLUG-IN</b>	Plug-in library	
	Portico5033 library	P5033
	Portico5043 library	P5043
	Portico5045 library	P5045
	U76 library	P U76
	Opt-2A library	P OP2
	EQ-1A library	P EQ1
	DynamicEQ library	P DEQ
	Buss Comp 369 library	P BCP
	MBC4 library	P MBC4
REV-X library	P REVX	
Reverb library	P REV	

Button	Data	Type
PLUG-IN	Stereo Reverb library	P STRV
	EarlyReflections library	P ER
	Gate Reverb library	P GTRV
	Mono Delay library	P MNDL
	Stereo Delay library	P STDL
	Mod.Delay library	P MDDL
	Delay LCR library	P DLCR
	Echo library	P ECHO
	Chorus library	P CHOR
	Flange library	P FLNG
	Symphonic library	P SYMP
	Dyna.Flange library	P DYFL
	Dyna.Phaser library	P DYPH
	Phaser library	P PHAS
	HQ.Pitch library	P HQPT
	Dual Pitch library	P DPT
	Tremolo library	P TRML
	Auto Pan library	P APAN
	Rotary library	P ROTR
	Ring Mod. library	P RMOD
	Mod.Filter library	P MFIL
	Dyna.Filter library	P DFIL
	Distortion library	P DIST
	Amp Simulate library	P ASIM
	Comp276 library	P 276
	Equalizer601 library	P 601
	OpenDeck library	P OPDK

Button	Data	Type
PLUG-IN	NonLin2 library	P NL2
	VSS4HD library	P VSS4
	Max100 library	P M100
	Dual Phaser library	P DUPH
	Vintage Phaser library	P VPHS
	RupertEQ773 library	P Q773
	RupertEQ810 library	P Q810
	RupertComp754 library	P C754
	RupertComp830 library	P C830
	Dynamic EQ4 library	P DEQ4
	Analog Delay library	P ADLY
	H3000 Live library	P H3KL
	GEQ LIB	GEQ library

- **OVERLAY tab**  
Overlay is targeted.

Button	Data	Type
OVERLAY LIB	Overlay library	OVRLAY

- **Name/Assign button**  
The following table lists the items you can select.

Button	Data	Type
INPUT NAMELIB	INPUT NAME library	IN NAM
MIX/ST NAMELIB	MIX/STEREO NAME library	MX NAM
MTRX NAMELIB	MATRIX NAME library	MT NAM
DCA ASGNLIB	DCA assign library	DCA NM
MUTE ASGNLIB	Mute Group Assign library	MUT NM

- **SETUP tab**

The following table lists the items you can select.

Button	Data	Type
USER SET LIB	User Setup library	U SET
MONITOR SETUP	Monitor settings	MONITOR
MIDI PGM	MIDI Program Changes	PGM
MIDI CTL	MIDI Control Changes	CTL

- 2 **Data field**

Indicates data of the selected type.

- 3 **Data select knob**

Use the corresponding screen encoder or the [TOUCH AND TURN] knob to select data.

4. **In the SAVE SELECT screen, select a type of data to save.**

**NOTE**

The SAVE button will become available if data to save exists.

5. **Press the SAVE button in the SAVE SELECT screen.**

A keyboard window will appear, allowing you to enter a file name and comment.

6. **Enter a file name or comment, and press the OK button.**

When the file has been saved, the PROCESSING popup window that shows the progress of the writing operation will close.

**NOTE**

- If you are going to overwrite a file or save a file with the same name in the same folder, a dialog will ask you to confirm the overwrite.
- You can enter a comment of up to 32 characters.
- You may enter a file name of up to 16 characters. However, the drive name, path name, and file name are limited to a total of 256 characters. If you exceed this limit, you may be unable to save the file, depending on the length of the file name. If this error indication appears at the bottom of the screen, shorten the file name and try saving the file again.

## Loading a file from a USB flash drive

Follow the steps below to load the RIVAGE PM series setting file from the USB flash drive into the console.

You can use the same procedure to load the following files other than the setting file.

Extension	Type	Contents of file
.PM10ALL .PM7ALL	ALL	All data including internal settings for the RIVAGE PM series
.PM10PART .PM7PART	*1	*1
.BMP	BMP	Image file for display in the CONSOLE LOCK screen (256 or more colors, uncompressed bitmap format)
.jpg	JPG	Image file for display in the CONSOLE LOCK screen (JPEG format)
.png	PNG	Image file for display in the CONSOLE LOCK screen (PNG format)

\*1 For more information about the type and file details, refer to the “TYPE field” (page 345) in the section entitled “Saving the RIVAGE PM series’s settings on a USB flash drive”.

**NOTICE**

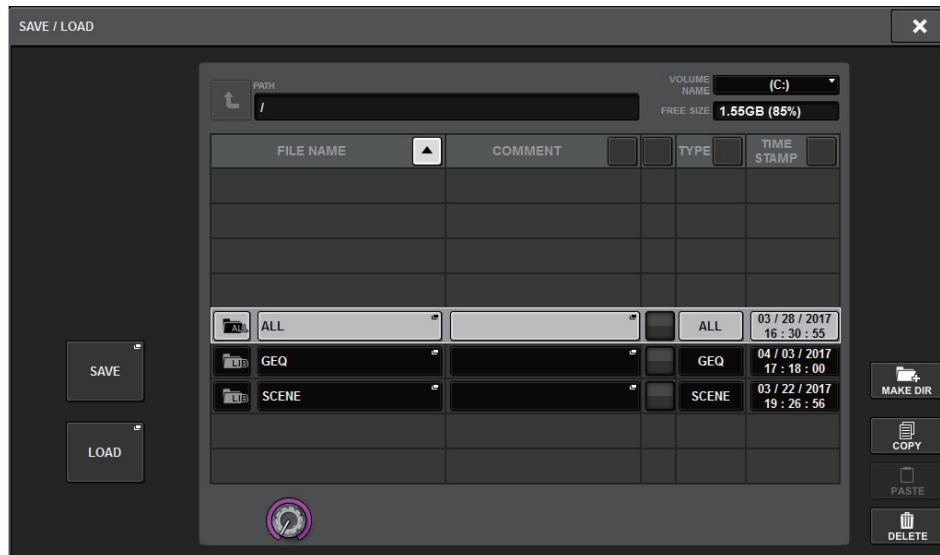
Some data may contain settings that will cause the console to output signals immediately after the data is loaded. Therefore, before loading data, turn off the power to the equipment connected to the control surface and/or lower the volume of such equipment so that there will not be a problem even if a signal is output from the control surface.



1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **SAVE/LOAD** button to access the **SAVE/LOAD** popup window.

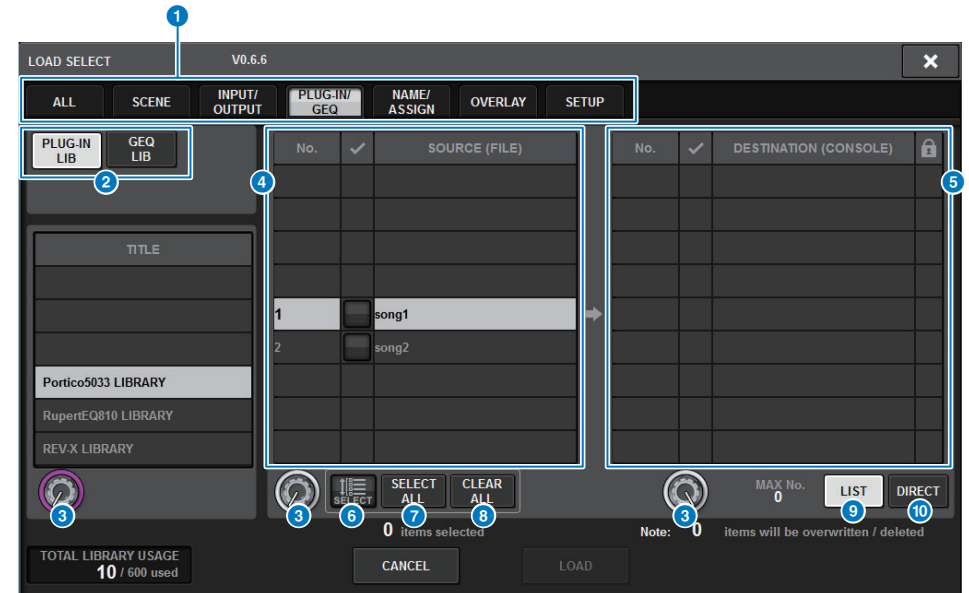


Select a file to load.

#### NOTE

The **LOAD** button will become available if you select loadable data.

3. Press the **LOAD** button in the **SAVE/LOAD** popup window. The **LOAD SELECT** screen will appear, in which you can select data to load.



- 1 **TYPE field**  
Enables you to select a type of data to load. The displayed items on this screen vary depending on the selected tab. (page 345)
- 2 **Data field**  
Indicates data of the selected type.
- 3 **Data select knob**  
Use the corresponding screen encoder or the [TOUCH AND TURN] knob to select data.
- 4 **SOURCE field**  
This area lists data that are saved on the USB flash drive.
- 5 **DESTINATION field**  
This area lists the destination to which the selected data will be loaded.
- 6 **MULTI SELECT button**  
Press this button to select multiple setting data items simultaneously.

- 7 SELECT ALL button**  
Press this button to select all items.
- 8 CLEAR ALL button**  
Press this button to clear all selections.
- 9 LIST button**  
Press this button so that you can select a load destination from the list.
- 10 DIRECT button**  
Press this field so that you will be able to specify the destination by entering the number directly into the field.

- 4 Number of data items to be deleted and to be updated**  
Shows the total number of data items that will be deleted and data items that will be updated (overwritten) after the load operation is executed.
- 5 Maximum number of data items**  
Indicates the maximum number of selected scenes and libraries.

**4. In the LOAD SELECT screen, select a type of data, data to load, and load destination.**

**NOTE**

If the SOURCE field and DESTINATION field are displayed, selecting data to load and the data destination in these fields will enable the LOAD button.

**5. Press the LOAD button. A confirmation dialog box will appear.**

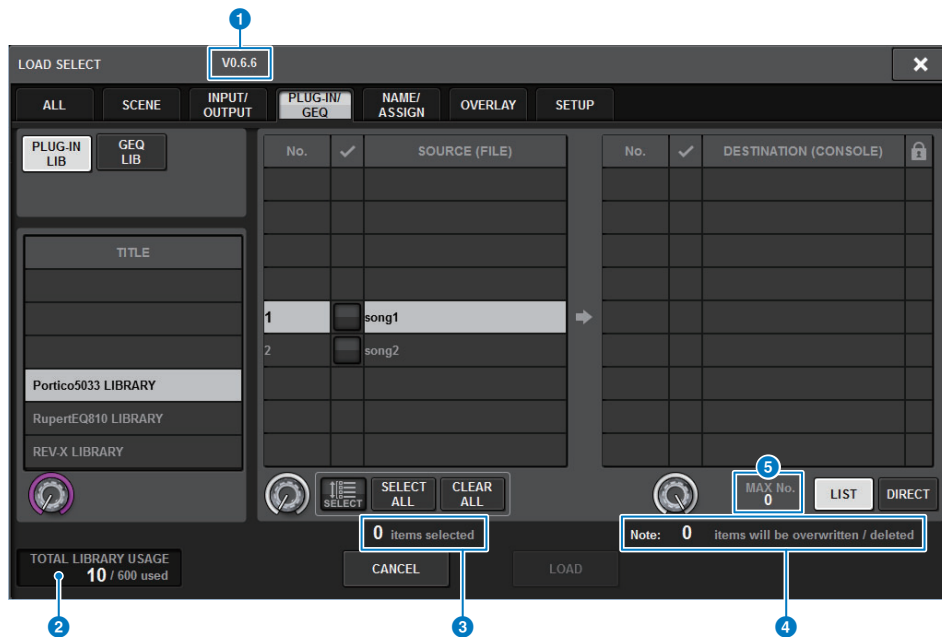
**6. Press the OK button to begin loading the data.**

When the file has finished loading, the PROCESSING popup window that shows the progress of the loading operation will close.

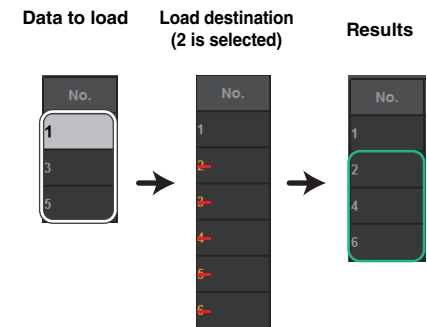
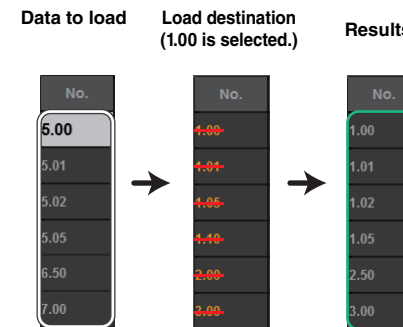
**About loading**

If you select as the load destination a scene memory number for which an associated scene already exists, the existing scene will be deleted first, and then the data will be loaded into that scene memory.

The same principle applies to the libraries. If the destination already contains data, it will be overwritten by loaded data.



- 1 Firmware version indication**  
Shows the version of firmware on which the data was created.
- 2 TOTAL LIBRARY USAGE indication**  
Shows the state of library usage.
- 3 Number of selected data items**  
Shows the number of items selected in the SOURCE field.

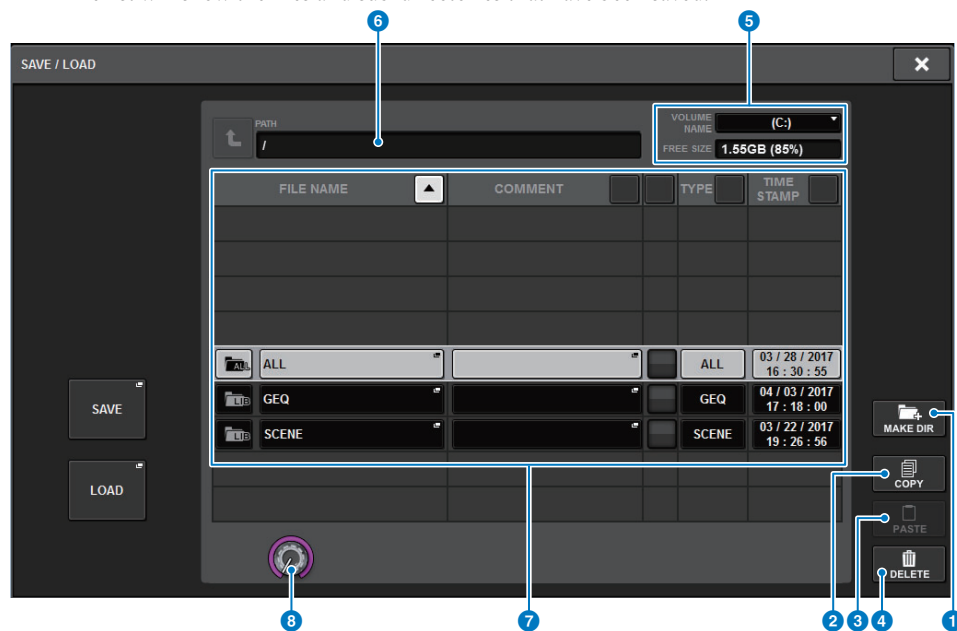


## Editing the files saved on the USB flash drive

This section explains how to perform editing operations, such as sorting the files and directories on the USB flash drive, editing the file names or comments, copying, and pasting.

### File editing

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.
2. Press the **SAVE/LOAD** button to access the **SAVE/LOAD** popup window.  
The list will show the files and sub-directories that have been saved.



4. **DELETE** button  
Deletes the currently-selected file.

#### NOTE

A directory cannot be deleted.

5. **VOLUME NAME/FREE SIZE**  
Indicates the volume name and the amount of free space on the USB flash drive.

6. **PATH**  
Indicates the name of the current directory. Press the arrow button to move to the next higher level. If the current directory is the top level, the arrow button is dimmed.

7. **File List**  
This area lists files that are saved on the USB flash drive.

- **FILE NAME**  
Indicates the file name, extension, and icon. If you press the file name, the **TITLE EDIT** popup window will appear, enabling you to edit the file name.

- **COMMENT**  
Indicates comments added to the RIVAGE PM series file.

#### NOTE

If the file extension is “PM10ALL”, “PM10PART”, “PM7ALL”, or “PM7PART”, press the comment. A popup window will appear, enabling you to edit the comment.

- **READ ONLY**  
A lock symbol is shown to indicate protected files. You can press this area to enable or disable the protect setting.

- **TYPE**  
Indicates the file type. “ALL” or “LIB” represents a file containing the RIVAGE PM series’s internal settings. “BMP” represents a bitmap image file, and [DIR] represents a directory. “???” indicates an MP3 file or WAV file, or a file that the RIVAGE PM series does not recognize.

- **TIME STAMP**  
Indicates the date and time when the file or directory was created or updated.

Press one of the column headings to sort the file names in the list by the order of the heading. Press the same column heading repeatedly to toggle between ascending order and descending order.

8. **Scroll knob**  
Scrolls up/down through the file list.

3. **Perform the desired editing operation.**  
For details, refer to the explanations that follow.

1. **MAKE DIR** button

Creates a new directory.

2. **COPY** button

Copies a file into a buffer memory (a temporary storage area).

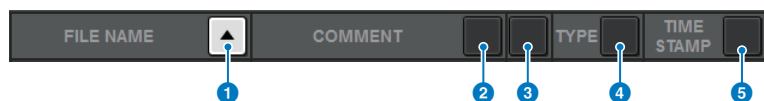
3. **PASTE** button

Pastes the file from the buffer memory.

## Sorting files and editing file names/comments

1. To sort the files, press one of the sort buttons located to the right of each column heading ("FILE NAME," "COMMENT," "READ ONLY," "TYPE," or "TIME STAMP") at the top of the file list.

The list will be sorted as follows, according to the column heading you pressed.



### 1 FILE NAME

Sorts the list in numerical/alphabetical order of the file names.

### 2 COMMENT

Sorts the list in numerical/alphabetical order of comments.

### 3 READ ONLY

Sorts the list by Write Protect on/off status.

### 4 TYPE

Sort the list by file type.

### 5 TIME STAMP

Sorts the list by date and time of update.

#### NOTE

By pressing the same location again, you can change the direction (ascending or descending order) in which the list is sorted.

2. If you want to edit the file name or comment, press the FILE NAME field or COMMENT field of each file to access the keyboard window.  
Enter a file name or comment, and press the RENAME button or SET button.
3. To turn the protect setting on or off, press the READ ONLY field for the file.  
A protect symbol is displayed for write-protected files. These files cannot be overwritten.

#### NOTE

You cannot edit the file name or comment field of a write-protected file.

## Copying and pasting a file

Follow the steps below to copy a file into buffer memory, and then paste it with a different file name.

1. Rotate the screen encoder to select the copy-source file, and press the COPY button.  
The highlighted line in the file list indicates that the file is selected.
2. If necessary, press the directory icon and change the directory.  
To move to the next higher level, press the arrow button in the PATH field.
3. Press the PASTE button.  
A keyboard window will appear, allowing you to enter the file name.
4. Enter the file name, and press the PASTE button.

#### NOTE

You cannot paste an existing file name onto a second file.

## Deleting a file

1. Rotate the screen encoder to select the file you want to delete, and press the DELETE button.  
A dialog box will ask you to confirm the Delete operation.
2. To execute the Delete operation, press the OK button.

#### NOTE

You cannot delete a protected file.

## Creating a directory

1. **If necessary, press the directory icon and change the directory.**  
To move to the next higher level, press the arrow button in the PATH field.
2. **Press the MAKE DIR button.**  
A keyboard window will appear, allowing you to enter a directory name.
3. **Enter the name of the directory you want to create, then press the MAKE button.**

### NOTE

You cannot create a directory using a directory name that already exists.

## Exporting a CSV file

The state of the channel names and patch connections of the RIVAGE PM series can be exported or imported as a CSV format file in order to edit the data or to exchange data between units.

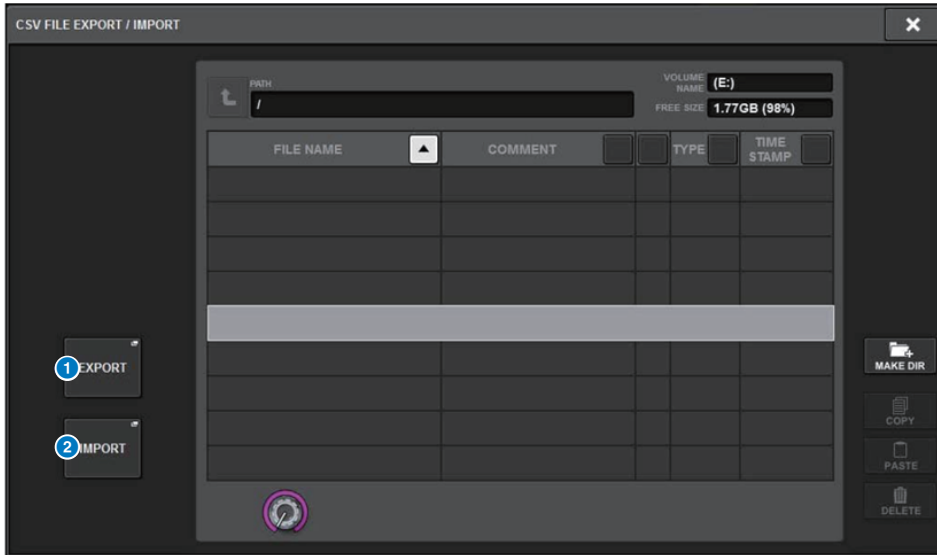
The applicable parameters and file names are as follows. For details, refer to the data list.

	Parameter	File name
Channel name / channel color / icon	INPUT	InName.csv
	MIX	MixName.csv
	MATRIX	MtxName.csv
	STEREO	StName.csv
	MUTE/DCA	MuteDCAName.csv
Patch connection status	INPUT IN	InPatch.csv
	INPUT INSERT I/O	InInsPatch.csv
	OUTPUT INSERT I/O	OutInsPatch.csv
	PORTRACK	PortRackPatch.csv
	RECORDING	RecordingPatch.csv

1. Press the **SETUP** button to access the **SYSTEM SETUP** screen.



2. Press the CSV EXPORT/IMPORT button to access the CSV FILE EXPORT/IMPORT popup window.



- 1 **EXPORT button**  
When you press this button, a CSV file is exported to the current directory.
  - 2 **EXPORT button**  
When you press this button, a CSV file is imported from the current directory.
3. Press the EXPORT button if you want to export a CSV file, or press the IMPORT button if you want to import a CSV file.  
A dialog box will ask you to confirm the operation.
4. To execute, press the OK button.



# User Setup

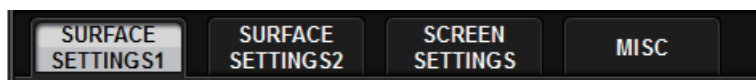
## PREFERENCES

You can make various settings for the RIVAGE PM10's operating environment, such as how popup windows appear, and whether [SEL] key on/off operations will be linked.

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.

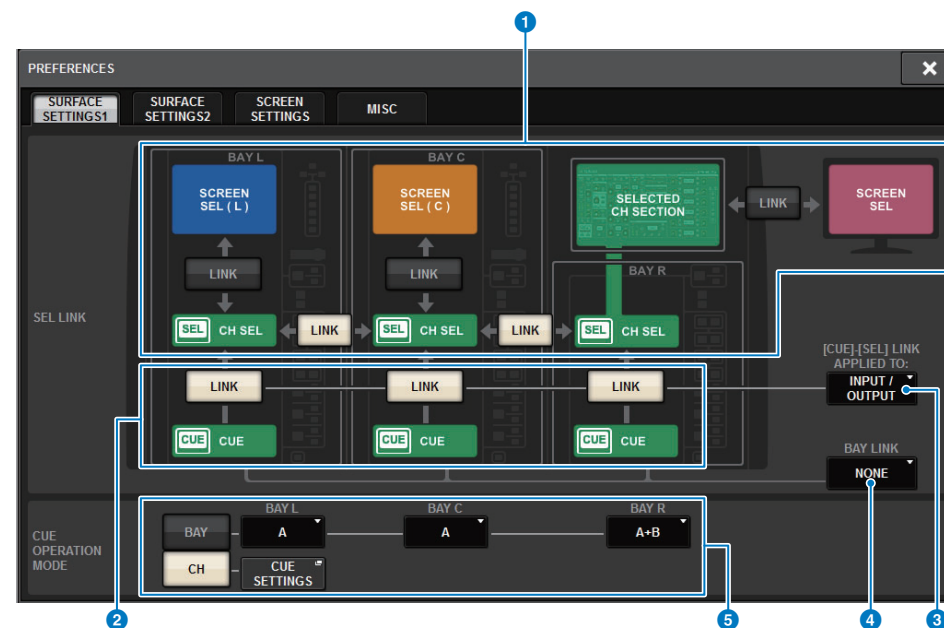


2. Press the **PREFERENCES** button to access the **PREFERENCES** popup window. This window includes several pages, which you can switch between using the tabs located at the top of the window.



3. Use the buttons on screen to make Preference settings.
4. When you finish making settings, press the **CLOSE** button.

## SURFACE SETTINGS1



- 1 **SEL LINK**  
This section enables you to set up the link between the selected channel/parameter on the screen and the [SEL] keys, and the link between bays and the [SEL] keys. Linked elements will be indicated in the same color. Any unlinked elements will be indicated in gray.
- 2 **[CUE]-[SEL] LINK**  
Specifies whether channel selection will be linked with cue operations. If this button is on, pressing any channel [CUE] key to turn it on will simultaneously select that channel and light up its [SEL] key.
- 3 **[CUE]-[SEL] LINK APPLIED TO:**  
Enables you to specify to what extent the CUE SEL LINK setting applies. Options include INPUT, OUTPUT, and INPUT/OUTPUT.
- 4 **BAY LINK**  
Specifies whether the layers selected from multiple bays will be linked. You can select L+R, L+C, C+R, or L+C+R.

**5 CUE OPERATION MODE field**

Switches between CUE BAY mode and CH mode (page 171). In BAY mode, you can select CUE A, CUE B, or CUE A+B for each bay. In CH mode, you can select CUE A, CUE B, or CUE A+B for each channel.

• **CUE SETTINGS popup button**

Press this button to display the window, in which you can configure the Cue for each channel in CH mode (page 174).

**4 [FADER BANK] > [SEL] LINK**

Specifies whether channel selection will be linked with fader bank selection.

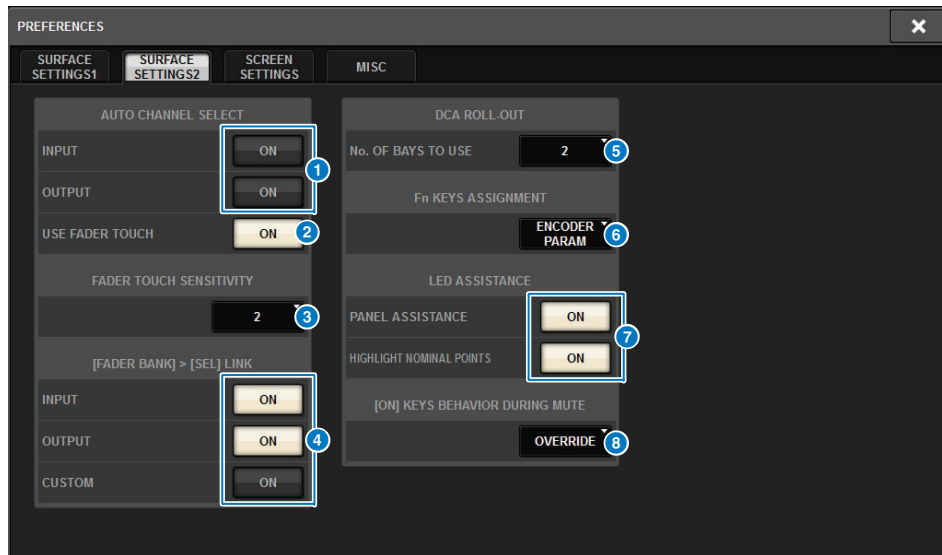
You can set this parameter separately for INPUT (input channels), OUTPUT (output channels), and CUSTOM (Custom fader bank).

If this ON button is lit, and you select the corresponding fader bank, the channel in that bank that was selected most recently will be selected, and its [SEL] key will light.

**NOTE**

Changing the Bay Link setting will clear the position of the selected channel stored in each layer.

**SURFACE SETTINGS2**



**1 AUTO CHANNEL SELECT field**

Specifies whether the corresponding channel will be selected when you operate the [ON] key or fader for the channel. This can be turned on/off separately for input channels and output channels.

**2 USE FADER TOUCH**

If this ON button is turned on, touching a fader will automatically select the corresponding channel via the Touch Sense function built into the channel fader.

**3 FADER TOUCH SENSITIVITY**

Touch sensitivity can be adjusted in five steps. Higher values provide greater touch sensitivity.

**5 DCA ROLL OUT**

**No. OF BAYS TO USE**

Enables you to select whether the DCA will be rolled out to one bay or two.

**6 Fn KEYS ASSIGNMENT**

Enables you to select one of the following functions to be assigned to each [Fn] key.

- **NONE** .....No function will be assigned.
- **INPUT A/B** .....Switches between INPUT A and B.
- **ISOLATE** .....Channel Isolate ON/OFF
- **ALTERNATE CUE** .....If the CUE button is set to CUE A, B will be cued. If the CUE button is set to CUE B, A will be cued. Nothing will happen if CUE button is set to A+B.
- **ENCODER PARAM** .....On/Off for parameters related to the channel strip encoders
- **SURROUND CUE** .....Surround Cue ON/OFF

**7 LED ASSISTANCE**

**PANEL ASSISTANCE**

If the PANEL parameter in the BRIGHTNESS field is set to less than 50%, turn on this button to softly light all LED indicators on the panel.

**HIGHLIGHT NOMINAL POINTS**

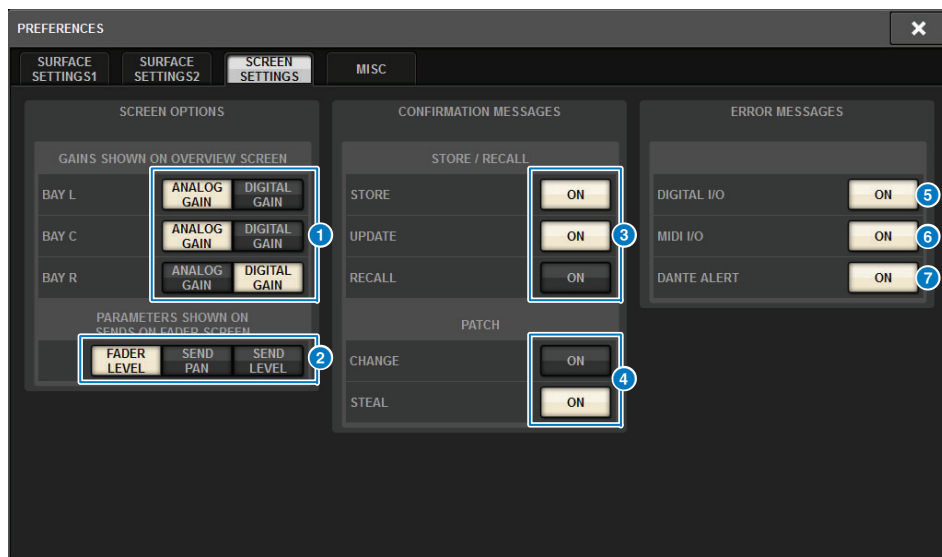
If this ON button is lit, the nominal value indication on the panel will be highlighted by the LEDs.

**8 [ON] KEYS BEHAVIOR DURING MUTE**

Selects the operation of the [ON] keys while muted.

- **OVERRIDE** .....Disabled
- **CHANNEL OFF** .....Enabled

## SCREEN SETTINGS



## ■ SCREEN OPTIONS

## 1 GAINS SHOWN ON OVERVIEW SCREEN

Enables you to select analog gain or digital gain for each bay that will be displayed on the OVERVIEW screen.

## 2 PARAMETERS SHOWN ON SoF SCREEN

Enables you to select the parameter displayed on the SENDS ON FADER popup window from FADER LEVEL, SEND PAN, and SEND LEVEL.

## ■ CONFIRMATION MESSAGES field

## 3 SCENE MEMORY

Enables you to turn on or off options related to scene store/update/recall operations. If these ON buttons are lit, a confirmation message will appear when you perform a Store, Update, or Recall operation respectively.

## 4 PATCH

Enables you to turn on or off options related to patch operations.

## • CHANGE

If this ON button is lit, a confirmation message will appear when you edit an input patch or output patch.

## • STEAL

If this ON button is lit, a confirmation message will appear when you edit an input or output patch item that is already patched to a port.

## ■ ERROR MESSAGES field

## 5 DIGITAL I/O

If this button is on and a digital audio I/O error occurs, an error message will be displayed. (Digital audio I/O errors could involve AES/EBU input/output of the control surface, or digital input/output of the RY slot or MY slot).

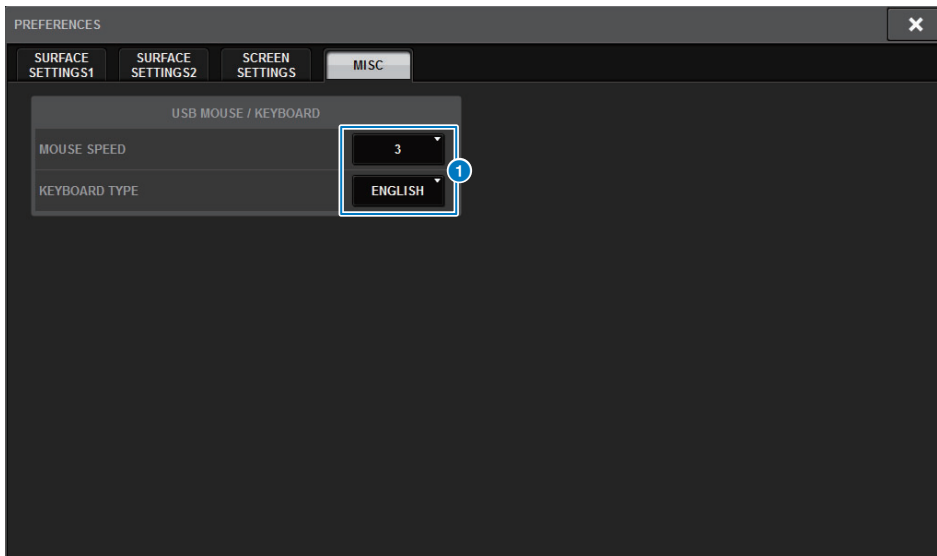
## 6 MIDI I/O

If this ON button is lit, an error message will appear when a MIDI transmission/reception error occurs.

## 7 DANTE ALERT

If this ON button is lit, an error message will appear when Dante error occurs.

## MISC



## 1 USB MOUSE/KEYBOARD

## • MOUSE SPEED

Specifies the speed of cursor movement controlled via the USB mouse. The pull-down menu provides five speed options. The higher the value, the faster the speed.

## • USB KEYBOARD TYPE

Enables you to select the USB keyboard type. Options include English, Japanese, German, French, Italian, and Spanish.

## CUSTOM FADER

## Custom fader banks and master faders

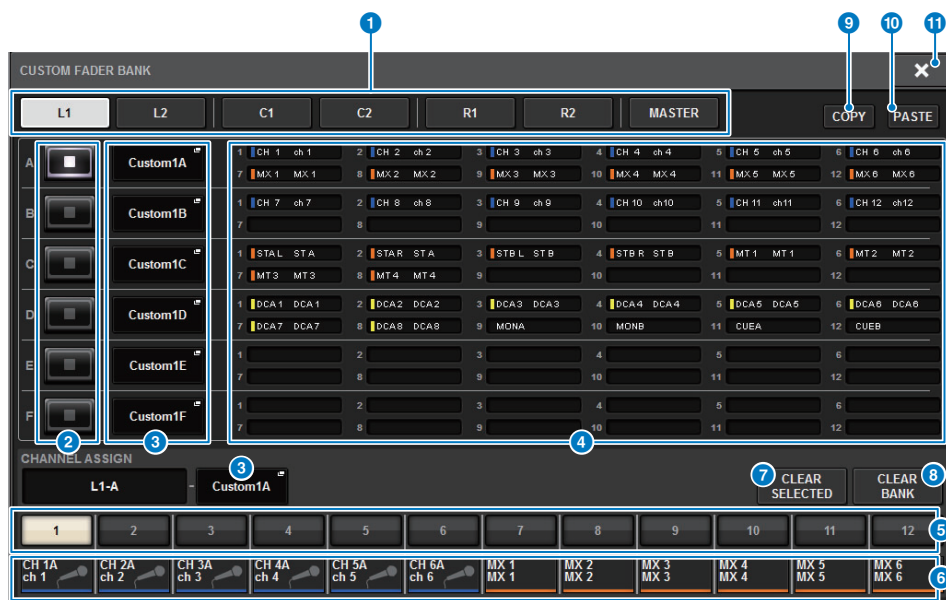
A set of channels assigned to the top-panel faders is called a “fader bank.”

There are input and output channel banks, as well as custom fader banks. Custom fader banks enable you to select various combinations of channels, regardless of channel types. You can also change the setting of the channels that will be controlled by the two master faders.

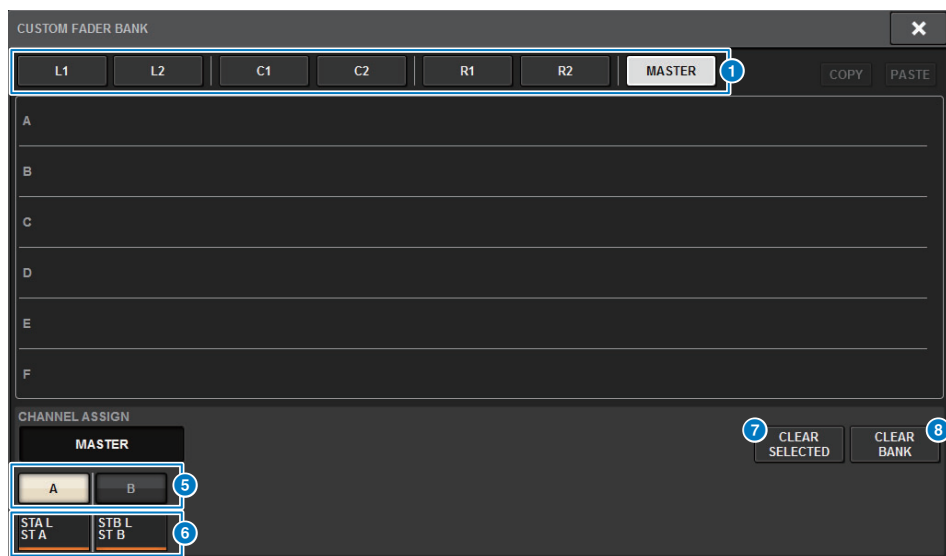
1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.2. Press the **CUSTOM FADER** popup button to access the **CUSTOM FADER BANK** popup window.**NOTE**

You can also press any custom fader bank key while holding down and pressing the [SHIFT] key to open the corresponding CUSTOM FADER BANK popup window.

### CUSTOM FADER BANK popup window (when a bay is selected)



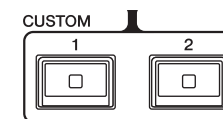
### CUSTOM FADER BANK popup window (when MASTER is selected)



#### 1 Bay select buttons

Enable you to select a bay or master faders to which you want to assign a combination of channels.

- L1.....CUSTOM1 of bay L
- L2.....CUSTOM2 of bay L
- C1.....CUSTOM1 of bay C
- C2.....CUSTOM2 of bay C
- R1.....CUSTOM1 of bay R
- R2.....CUSTOM2 of bay R
- MASTER.....Master fader



#### 2 Bank select buttons

Enables you to select a block you want to set up. The selected bank name will appear in the CHANNEL ASSIGN field.

#### 3 NAME popup buttons

Press one of these buttons to access the NAME popup window, in which you can name the blocks.

#### 4 Fader assign indicators

Indicate the channels assigned to the corresponding blocks.

#### 5 Fader select button

Enables you to elect the target fader. Press this button to select it, then press [SEL] keys on the top panel to add the corresponding channels to the selected fader bank.

#### 6 Channel select popup button

Press this button to access the channel select popup window, in which you can select channels on the touch screen.

#### 7 CLEAR SELECTED button

Clears the current fader assignment.

#### 8 CLEAR BANK button

Clears the current fader bank assignment. Pressing this button will open a confirmation dialog box. Press OK to clear the assignment. Otherwise, press CANCEL to return to the previous screen without changing the setting.

#### 9 COPY button

Copies the selected bank setting.

#### 10 PASTE button

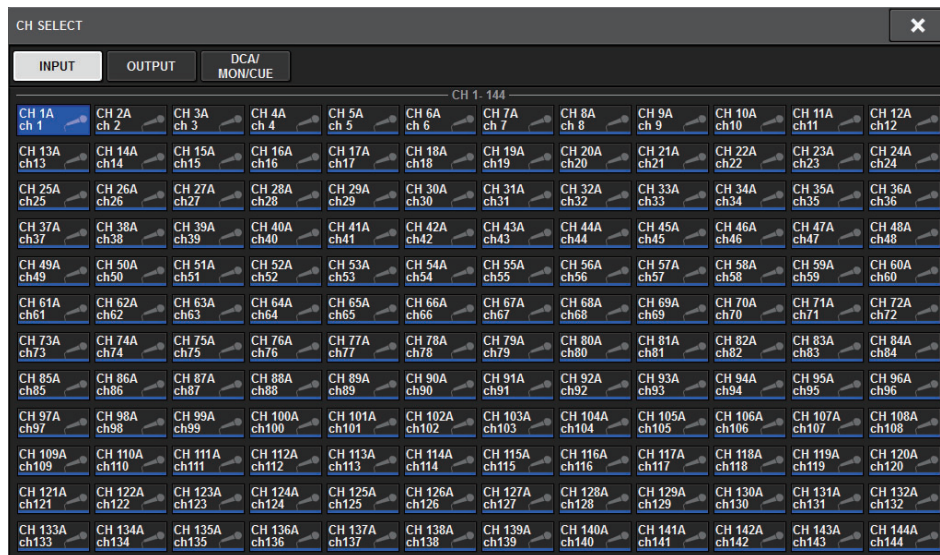
Paste the copied setting to the selected bank.

#### 11 CLOSE button

Press this button to close the popup window and return to the previous screen.

3. Select the target bay or master fader, and the target bank.
4. Press the fader select button for the fader you want to set up.
5. On the top panel, press the [SEL] key of the channel that you want to assign to that fader.  
The name of the selected channel will appear on the channel select popup button.
6. To assign channels to other faders, repeat steps 4 and 5.
7. If necessary, select channels by pressing the channel select popup buttons.

### CH SELECT popup window

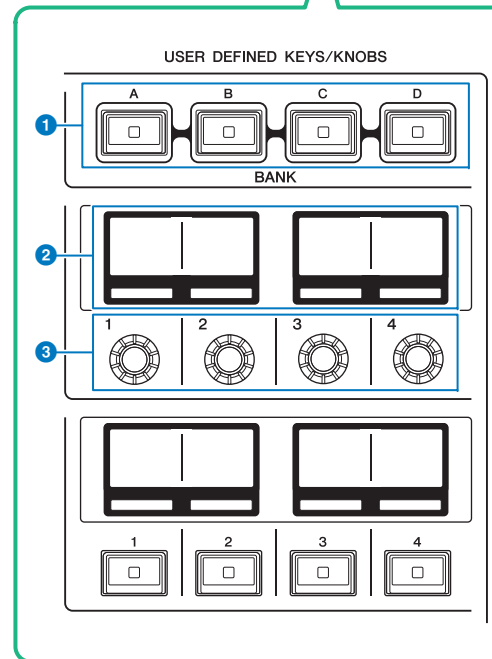
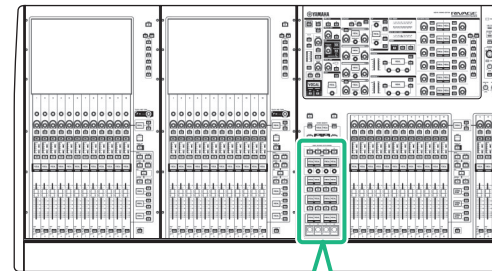


8. From the list, select desired channels.
9. When you finish selecting the channels, press the CLOSE button.

## USER DEFINED KNOBS

This section explains how to assign the desired functions to the USER DEFINED knobs in the USER DEFINED KNOBS section on the top panel, and press these knobs to execute the defined function.

### Using the USER DEFINED KNOBS section



- 1 **USER DEFINED [A]/[B]/[C]/[D] BANK keys**  
Select the bank ([A], [B], [C], or [D]) for the USER DEFINED knobs or USER DEFINED keys.
- 2 **USER DEFINED KNOBS displays**  
Indicate the function assigned to the USER DEFINED knobs.
- 3 **USER DEFINED KNOBS [1]/[2]/[3]/[4]**  
Control the functions as assigned by the user.



## Assigning a function to a USER DEFINED knob

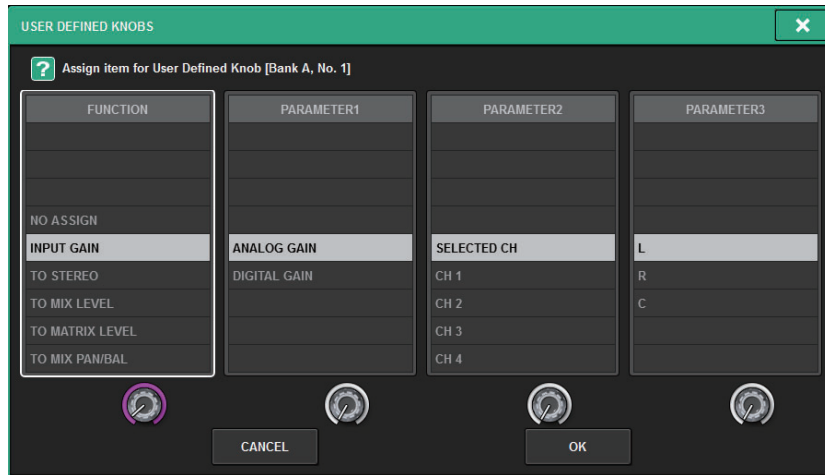
1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **USER DEFINED KNOBS** button to open the **USER DEFINED KNOBS** popup window.



1. **BANKA–D tabs**  
Enable you to select the bank ([A], [B], [C], or [D]) for the USER DEFINED knobs.
2. **USER DEFINED KNOBS [1]–[4]**  
Link to USER DEFINED knobs [1]–[4] on the panel. Press one of these buttons to access the USER DEFINED KNOBS SETUP popup window, in which you can assign a function to the selected button.  
If nothing is assigned to the button, an indication of “NO ASSIGN” is shown.
3. **Press the button corresponding to the USER DEFINED knob to which you want to assign a function.**  
The system displays a popup window, in which you can assign a function to the USER DEFINED knob.



4. Make sure that the FUNCTION field is enclosed by a frame, and then use the screen encoder on the panel to select the function that you want to assign. For details on the assignable functions and their parameters, refer to the data list.
5. If the selected function features parameters, specify the type of parameter you want to assign by selecting in the following order: PARAMETER1 field → PARAMETER2 field → PARAMETER3 field.
6. Press the OK button to close the popup window.
7. Assign the desired functions to other USER DEFINED knobs in the same way.

■ Functions that can be assigned to USER DEFINED knobs

FUNCTION	PARAMETER 1	PARAMETER 2	PARAMETER 3
NO ASSIGN	—	—	—
INPUT GAIN	ANALOG GAIN	SELECTED CH	BAY L, BAY R, BAY C
		CH 1-144	—
	DIGITAL GAIN	SELECTED CH	BAY L, BAY R, BAY C
		CH 1-144	—
TO STEREO	PAN/BAL	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72	—
	CSR	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72	—
TO MIX LEVEL	MIX 1-72	SELECTED CH	BAY L, BAY R, BAY C
		CH 1-144	—
TO MATRIX LEVEL	MATRIX 1-36	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72	—
TO MIX PAN/BAL	MIX 1-72	SELECTED CH	BAY L, BAY R, BAY C
		CH 1-144	—
TO MATRIX PAN/BAL	MATRIX 1-36	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72	—
DYNAMICS 1	THRESHOLD	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	RANGE	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	RATIO	SELECTED CH	BAY L, BAY R, BAY C
CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR		—	
FREQUENCY	SELECTED CH	BAY L, BAY R, BAY C	
	CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—	
ATTACK	SELECTED CH	BAY L, BAY R, BAY C	
	CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—	

FUNCTION	PARAMETER 1	PARAMETER 2	PARAMETER 3
DYNAMICS 1	HOLD	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	DECAY	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	RELEASE	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	OUTGAIN	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	KNEE	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	TYPE	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
Q	SELECTED CH	BAY L, BAY R, BAY C	
	CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—	
DYNAMICS 2	THRESHOLD	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144	—
	RANGE	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144	—
	RATIO	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144	—
	FREQUENCY	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144	—
	ATTACK	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144	—
	HOLD	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144	—
DECAY	SELECTED CH	BAY L, BAY R, BAY C	
	CH1-144	—	

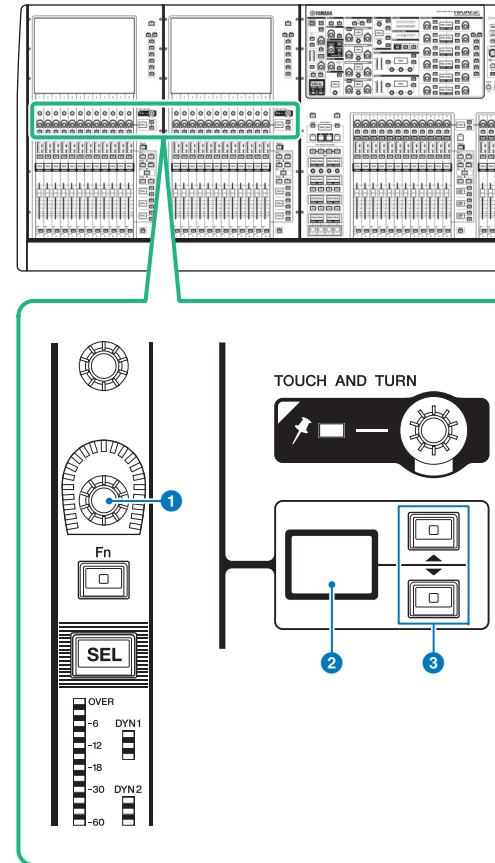
FUNCTION	PARAMETER 1	PARAMETER 2	PARAMETER 3
DYNAMICS 2	RELEASE	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144	—
	OUTGAIN	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144	—
	KNEE	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144	—
TYPE	SELECTED CH	BAY L, BAY R, BAY C	
	CH1-144	—	
Q	SELECTED CH	BAY L, BAY R, BAY C	
	CH1-144	—	
DELAY	DELAY TIME	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
EQ	BAND1-4 Q	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	BAND5-8 Q	SELECTED CH	BAY L, BAY R, BAY C
		MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	BAND1-4 FREQUENCY	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	BAND5-8 FREQUENCY	SELECTED CH	BAY L, BAY R, BAY C
		MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	BAND1-4 GAIN	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	BAND5-8 GAIN	SELECTED CH	BAY L, BAY R, BAY C
		MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—

FUNCTION	PARAMETER 1	PARAMETER 2	PARAMETER 3
FILTER	HPF FREQ	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
	LPF FREQ	SELECTED CH	BAY L, BAY R, BAY C
		CH1-144, MIX 1-72, MATRIX 1-36, STEREO AL, STEREO AR, STEREO BL, STEREO BR	—
BRIGHTNESS*	LAMP		—
	PANEL		—
	SCREEN		—
	CH COLOR		—
	NAME		—
CUE	CUE A	INPUT PFL TRIM	—
		DCA TRIM	—
		OUTPUT PFL TRIM	—
		CUE LEVEL	—
	CUE B	INPUT PFL TRIM	—
		DCA TRIM	—
		OUTPUT PFL TRIM	—
		CUE LEVEL	—
MONITOR	COMMON	DIMMER LEVEL	—
		TALKBACK DIMMER LEVEL	—
	MONITOR A	DELAY	—
		FADER	—
	MONITOR B	DELAY	—
		FADER	—
	SURROUND MONITOR	DIMMER LEVEL	—
		TALKBACK DIMMER LEVEL	—
OSCILLATOR	LEVEL		—
	SINE2 LEVEL		—
	SINE1 FREQUENCY		—
	SINE2 FREQUENCY		—
AUTOMIXER	WEIGHT	AUTOMIXER CH1-64	—

\* This function cannot be assigned to USER DEFINED knobs in PM Editor.

## Using a channel strip encoder

You can assign up to five functions to the channel strip encoder of each channel strip, and switch the functions to control.



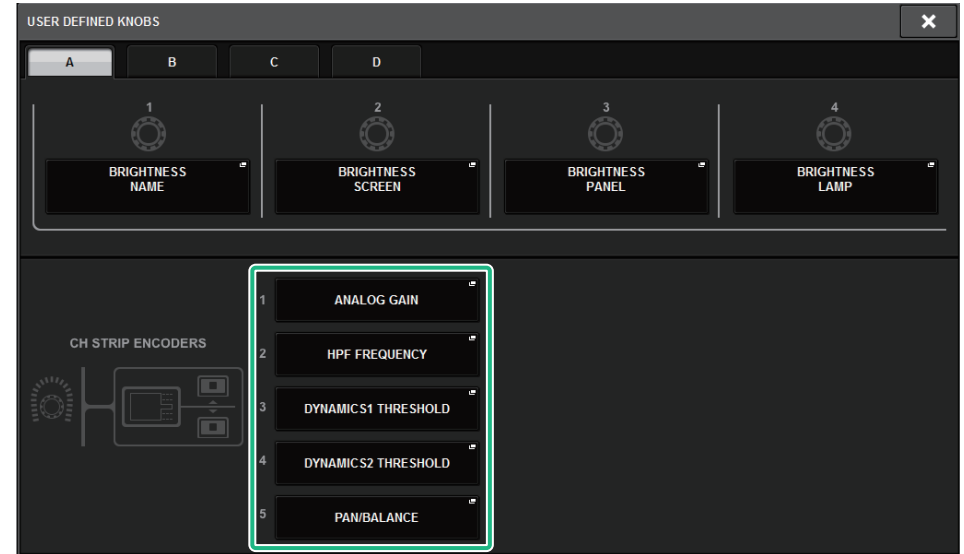
- 1 Channel strip encoder**
- 2 Channel strip encoder display**  
Indicates the function that has been assigned to the channel strip encoder.
- 3 UP [▲]/DOWN [▼] keys**  
Enable you to select the function that you want to control using the channel strip encoder.

## Assigning a function to a channel strip encoder

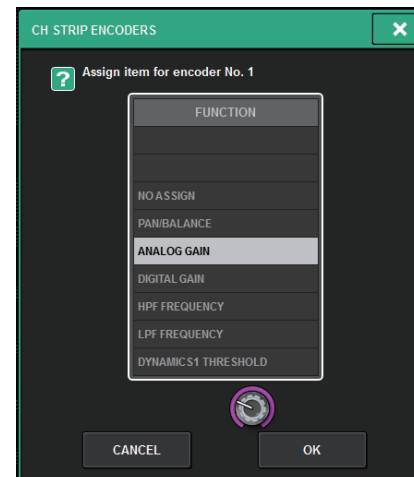
1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **USER DEFINED KNOBS** button to open the **USER DEFINED KNOBS** popup window.



3. Press a button in the **CH STRIP ENCODERS** field to open the **CH STRIP ENCODERS** popup window.



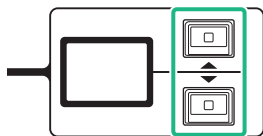
#### 4. Use the screen encoder to select the function that you want to assign.

You can assign the following functions:

- PAN/BALANCE
- ANALOG GAIN
- DIGITAL GAIN
- SELECTED SEND
- MIX 1-72 SEND
- MATRIX 1-36 SEND
- HPF FREQUENCY
- LPF FREQUENCY
- DYNAMICS1 THRESHOLD
- DYNAMICS2 THRESHOLD
- DELAY
- SILK TEXTURE
- SURROUND L-R PAN
- SURROUND F-R PAN
- SURROUND DIV
- SURROUND LFE

#### 5. Press the OK button to close the CH STRIP ENCODERS popup window.

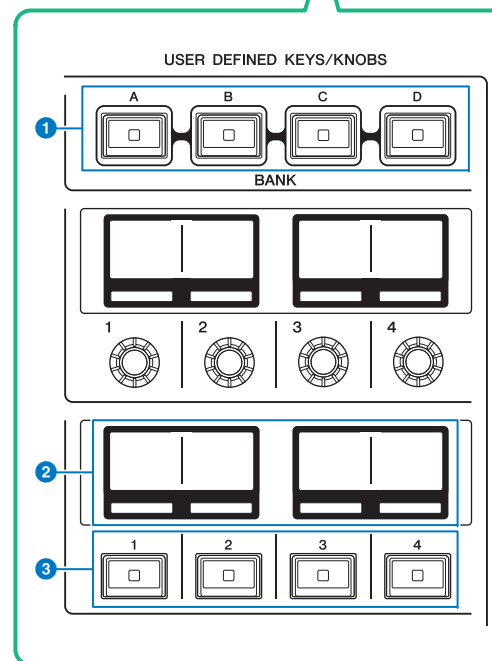
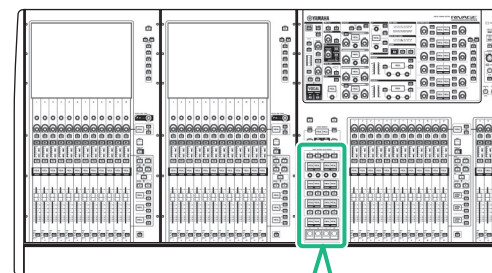
#### 6. Use the UP [▲]/DOWN [▼] keys on the top panel to select the function.



## USER DEFINED KEYS

This section explains how to assign the desired functions to the USER DEFINED keys in the USER DEFINED KEYS section on the top panel, and press these keys to execute the defined function.

### Using the USER DEFINED KEYS section



- 1 **USER DEFINED [A]/[B]/[C]/[D] BANK keys**  
Select the bank ([A], [B], [C], or [D]) for the USER DEFINED knobs or USER DEFINED keys.
- 2 **USER DEFINED KEYS displays**  
Indicate the functions assigned to the USER DEFINED keys.
- 3 **USER DEFINED KEYS [1]-[12]**  
Control the functions as assigned by the user.

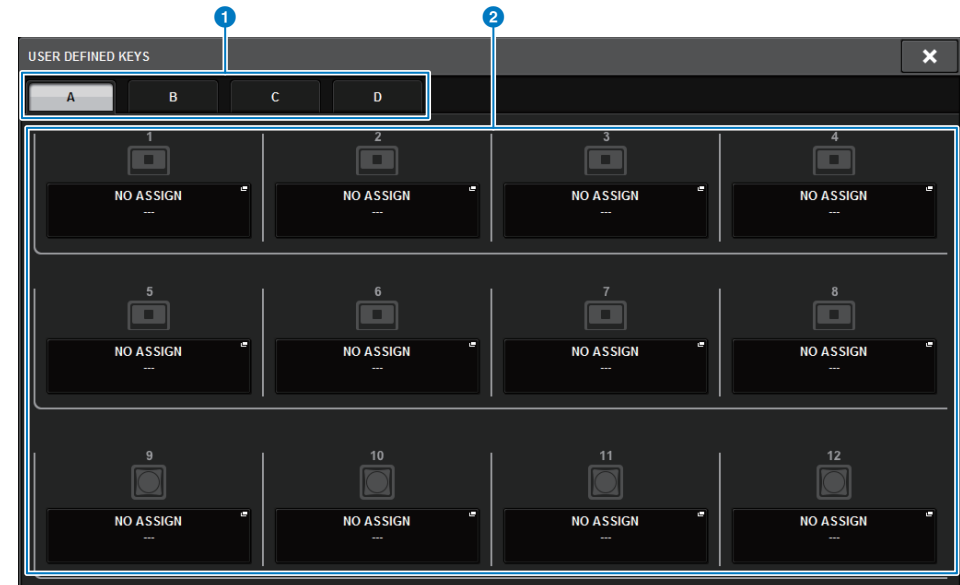


## Assigning a function to a USER DEFINED key

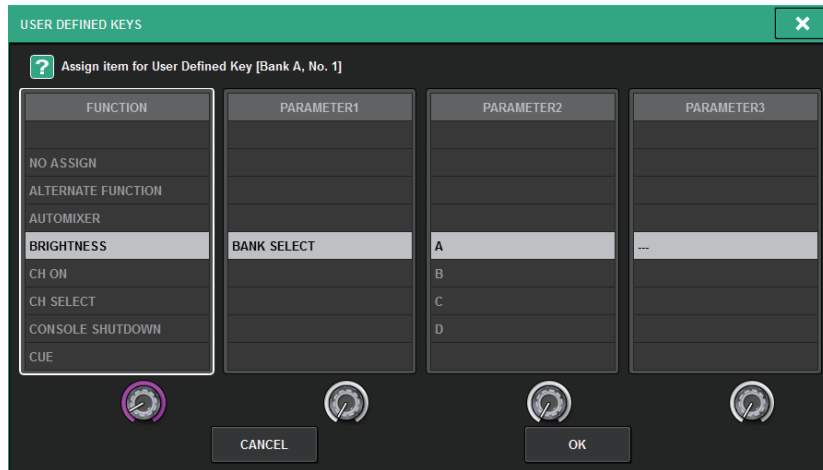
1. Press the SETUP button on the menu bar to access the SETUP screen.



2. Press the USER DEFINED KEYS button to open the USER DEFINED KEYS popup window.



- 1 **BANK A–D tabs**  
Enable you to select the bank ([A], [B], [C], or [D]) for the USER DEFINED knobs.
- 2 **USER DEFINED KEYS 1–12**  
Link to USER DEFINED keys [1]–[12] on the panel. Press one of these buttons to access the popup window, in which you can assign a function to the selected button. If nothing is assigned to the button, an indication of “NO ASSIGN” is shown.
3. **Press the button corresponding to the USER DEFINED key to which you want to assign a function.**  
The system displays a popup window, in which you can assign a function to the USER DEFINED key.



4. Make sure that the FUNCTION field is enclosed by a frame, and then use the screen encoder on the panel to select the function you want to assign. For details on the assignable functions and their parameters, refer to the data list.
5. If the selected function features parameters, specify the type of parameter you want to assign by selecting in the following order: PARAMETER1 field → PARAMETER2 field → PARAMETER3 field.
6. Press the OK button to close the USER DEFINED KEYS SETUP popup window.
7. Assign the desired functions to other USER DEFINED keys in the same way.

### ■ Functions that can be assigned to USER DEFINED keys

#### NOTE

Available options in the GPI SETUP popup window (page 382) are the same as for GPI IN. However, the ability to assign functions to GPI is unavailable in PM Editor.

Function	PARAMETER 1	PARAMETER 2	PARAMETER 3	Description
NO ASSIGN	—	—	—	No assignment
ALTERNATE FUNCTION *1	LATCH			Each press of the key toggles Alternate function on/off.
	UNLATCH			Pressing and holding down the key switches to Alternate function.
AUTOMIXER	group A,B,C,D,E OVERRIDE ON			Switches the corresponding group's OVERRIDE on/off.
	group A,B,C,D,E PRESET ON			Switches the corresponding group's PRESET on/off.
BRIGHTNESS *1	BANK SELECT	A		Selects the bank subject to the BRIGHTNESS setting.
		B		
		C		
		D		
CH ON	SPECIFIC CH	CH	1-144	Switches the channel on/off.
		MIX	1-72	
		MATRIX	1-36	
		STEREO	A, B	
		DCA	1-24	
CH SELECT	INC			Selects the next channel to operate in the Selected Channel section.
		DEC		
CH SELECT	SPECIFIC CH		CH	1-144
		MIX	1-72	
		MATRIX	1-36	
		STEREO A	L, R	
		STEREO B	L, R	
CONSOLE SHUTDOWN *1				Shuts down the control surface. <b>NOTE</b> You can shut down the control surface by pressing and holding down a USER DEFINED key to which the Console Shutdown function has been assigned.

Function	PARAMETER 1	PARAMETER 2	PARAMETER 3	Description	
CUE	OUTPUT	A		Switches CUE A on/off.	
		B		Switches CUE B on/off.	
	CLEAR CUE	CUE A		Clears CUE A.	
		CUE B		Clears CUE B.	
		CUE A+B		Clears CUE A+B.	
	SPECIFIC CH	CH	1-144		Switches Cue Out on/off.
		MIX	1-72		
		MATRIX	1-36		
		STEREO	A, B		
		DCA	1-24		
	CUE MODE	A, B		Switches Cue mode.	
	CUE INTERRUPTION	A, B		Switches Cue Interruption function on/off.	
	INPUT CUE POINT	A, B		Switches the input channel's cue point.	
DCA CUE POINT	A, B		Switches the DCA's cue point.		
OUTPUT CUE POINT	A, B		Switches the output channel's cue point.		
DSP MIRRORING *2	DSP SELECT A		Switches the active DSP engine between A and B.		
	DSP SELECT B				
EVENT LIST	NEXT			Directly recalls the event associated with the next event number.	
	PREV			Directly recalls the event associated with the previous event number.	
	DIRECT RECALL	(event list number)		Directly recalls the selected event.	
	ENABLE (MANUAL)			Enables or disables an event list.	
	ENABLE				
FADER BANK SNAPSHOT	BAY L, BAY R, BAY C, BAY ALL			Bookmarks the current fader layer and positions on each bay. (Press and hold down the key for two or more seconds.) Alternatively, reverts to the fader layer or positions that were bookmarked most recently. (Press the key and release it within two seconds.)	
GAIN KNOB FUNCTION	LATCH	BAY L, BAY R, BAY C		Enables you to select analog gain or digital gain for each bay that will be displayed on the OVERVIEW screen.	
	UNLATCH	BAY L, BAY R, BAY C		Enables you to select gain for each bay that will be displayed on the OVERVIEW screen. Press this key to display analog gain, and release the key to display digital gain.	

Function	PARAMETER 1	PARAMETER 2	PARAMETER 3	Description
GEQ FREQ BANK	INC	BAY L, BAY R, BAY C		Selects the group of bands (in the GEQ EDIT screen) that will be controlled by the faders in the Channel Strip section.
	DEC	BAY L, BAY R, BAY C		
GPI OUT *1	1-8	LATCH		Switches the GPI OUT function on/off.
		UNLATCH		Turns the GPI OUT function on only while the key is held down.
HOME	SELECTED CH VIEW	L, R, C		Displays the SELECTED CHANNEL VIEW screen on the corresponding bay.
	OVERVIEW	L, R, C		Displays the OVERVIEW screen on the corresponding bay.
	TOGGLE	L, R, C		Toggles between the SELECTED CHANNEL VIEW screen and the OVERVIEW screen on the corresponding bay.
METER	PEAK HOLD			Turns the meter's peak hold function on/off.
MIDI[CS] *1	PROGRAM CHANGE	PGM 1-128		Transmits a program change message of the corresponding number to an external device.
	CONTROL CHANGE	CC 1-31, 33-95, 102-119		Transmits a control change of the corresponding number to an external device.
	NOTE ON	NOTE ON C-2(0)-G8(127)		Transmits the corresponding MIDI message to an external device.

Function	PARAMETER 1	PARAMETER 2	PARAMETER 3	Description
MONITOR	COMMON	DIMMER ON		Switches DIMMER on/off.
	MONITOR A	OUTPUT		Switches MONITOR A on/off.
		SEL CH ASSIGN *1	DEFINE 1-8	Press this key to select a DEFINE. While holding down this key, press a [SEL] key to switch the assignment on/off. During this time, the [SEL] LED will be lit if the assignment is ON, or dark if OFF. While this key is held down, the assignment setting is stored. Press this key again to recall the assignment setting. You can store the settings to multiple keys and switch among them.
	MONITOR B	OUTPUT		Switches MONITOR B on/off.
		SEL CH ASSIGN *1	DEFINE 1-8	Press this key to select a DEFINE. While holding down this key, press a [SEL] key to switch the assignment on/off. During this time, the [SEL] LED will be lit if the assignment is ON, or dark if OFF.
	SURROUND MONITOR	OUTPUT		Turns the surround monitor output on or off.
		SOURCE	SURROUND A, SURROUND B, DOWNMIX A, DOWNMIX B, EXT 5.1-1-4, EXT ST-1-4	Switches the surround monitor source
DIMMER ON		Switches the Dimmer function on/off.		
MUTE MASTER	MASTER 1-12	ON	Switches MUTE GROUP MASTER on/off.	
	ALL MUTE	ON	Switches all MUTE GROUP MASTER settings on/off at once.	

Function	PARAMETER 1	PARAMETER 2	PARAMETER 3	Description	
OSCILLATOR	ON			Switches the oscillator on/off.	
	DIRECT ASSIGN	SEL CH ASSIGN *1			While holding down this key, press a [SEL] key to switch the assignment on/off. During this time, the [SEL] LED will be lit if the assignment is ON, or dark if OFF. While this key is held down, the assignment setting is stored. Press this key again to recall the assignment setting. You can store the settings to multiple keys and switch among them.
			CH 1-144	Assigns the oscillator to the selected channel.	
			MIX 1-72		
			MATRIX 1-36		
			STEREO AL		
			STEREO AR		
			STEREO BL		
			STEREO BR		
			MONITOR AL		
			MONITOR AR		
			MONITOR AC		
			MONITOR BL		
			MONITOR BR		
MONITOR BC					
PAGE CHANGE	BOOKMARK	BAY L, BAY R, BAY C		Bookmarks the currently-displayed window on each bay. (Press and hold down the key for two or more seconds.) Alternatively, displays the window that was bookmarked most recently. (Press the key and release it within two seconds.)	
	BOOKMARK with "SEL"	BAY L, BAY R, BAY C		Bookmarks the currently-displayed window and the status of the Selected Channel on each bay. (Press and hold down the key for two or more seconds.) Alternatively, displays the window that was bookmarked most recently, and reverts to the previous Selected Channel status. (Press the key and release it within two seconds.)	

Function	PARAMETER 1	PARAMETER 2	PARAMETER 3	Description
RECORDER *1	TRANSPORT	PLAY		Recorder transport functions
		PAUSE		
		STOP		
		FF		
		NEXT		
		REW		
		PREVIOUS		
		REC		
		AUTO REC		Shortcut function for STOP → REC → PLAY. Recording will be initiated in a single action. If this function is executed during recording, the file being recorded will first be closed, and then recording will continue with a new file.
		REC & START		Starts recording immediately without entering record-ready mode.
DIRECT PLAY	NO ASSIGN		Plays the specified audio file from the beginning. Audio files to be played have been saved in the SONGS folder inside the YPE folder.	
	(TITLE)			
SCENE	INC RECALL			Recalls the scene associated with the next scene number.
	DEC RECALL			Recalls the scene associated with the previous scene number.
	DIRECT RECALL	(SCENE)		Hold down this key and press the [SEL] key to switch it on/off.

Function	PARAMETER 1	PARAMETER 2	PARAMETER 3	Description
SENDS ON FADER *1	MIX 1–72	NORMAL	BAY L, BAY R, BAY C	Switches between the normal function on/off (NORMAL), and between the function with cue on/off. (WITH CUE). With WITH CUE, cue will be enabled when engaging or exiting SENDS ON FADER mode. Also, with WITH CUE, exiting SENDS ON FADER mode will cancel cue on all output channels.
		WITH CUE	BAY L, BAY R, BAY C	
	MATRIX 1–36	NORMAL	BAY L, BAY R, BAY C	
		WITH CUE	BAY L, BAY R, BAY C	
	MIX ON FADER	NORMAL	BAY L, BAY R, BAY C	
		WITH CUE	BAY L, BAY R, BAY C	
	MATRIX ON FADER	NORMAL	BAY L, BAY R, BAY C	
		WITH CUE	BAY L, BAY R, BAY C	
	SENDS ON FADER	NORMAL	BAY L, BAY R, BAY C	
		WITH CUE	BAY L, BAY R, BAY C	
SET BY SEL *1	SET [+48V]			Hold down this key and press the [SEL] key to switch it on/off. During this time, the [SEL] LED will be lit if on, or dark if off.
	SET [PHASE]			
	SET [INSERT1 ON]			
	SET [INSERT2 ON]			
	SET [DIRECT OUT ON]			
	SET [PRE SEND]			
	SET [TO STEREO A]			
	SET [TO STEREO B]			
	SET [TO LCR]			
SET [GAIN COMPENSATION ON]				
SET DEFAULT VALUE *1				While holding down this key, press a knob of the Selected Channel to reset it to the default value.
SET NOMINAL VALUE *1				While holding down this key, press a [SEL] key to set the fader of that channel to nominal level. Press a parameter knob that is set to nominal to set the corresponding parameter to nominal.

Function	PARAMETER 1	PARAMETER 2	PARAMETER 3	Description
SURROUND PAN	L ON	SELECTED CH	BAY L, BAY R, BAY C	Switches assignment on/off of the selected channel to the surround bus.
		CH1-144		
	R ON	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		
	C ON	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		
	LFE ON	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		
	Ls ON	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		
	Rs ON	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		

Function	PARAMETER 1	PARAMETER 2	PARAMETER 3	Description
SURROUND PAN	PANNING L	SELECTED CH	BAY L, BAY R, BAY C	Specifies the surround position of the selected channel.
		CH1-144		
	PANNING R	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		
	PANNING FRONT	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		
	PANNING Ls	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		
	PANNING Rs	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		
	PANNING BACK	SELECTED CH	BAY L, BAY R, BAY C	
		CH1-144		
PANNING SIDE L	SELECTED CH	BAY L, BAY R, BAY C		
	CH1-144			
PANNING SIDE R	SELECTED CH	BAY L, BAY R, BAY C		
	CH1-144			
PANNING CENTER	SELECTED CH	BAY L, BAY R, BAY C		
	CH1-144			
PANNING TOGGLE	SELECTED CH	BAY L, BAY R, BAY C		
	CH1-144			
TALKBACK	ON	LATCH	CURRENT GROUP, GROUP 1-8	Switches TALKBACK on/off.
		UNLATCH	CURRENT GROUP, GROUP 1-8	Turns TALKBACK on while this key is pressed.
	TALK GROUP *1	1-8		Press this key to select the specified group. While holding down this key, press an output channel [SEL] key to switch the assignment on/off.
TAP TEMPO	TEMPO 1-4			Sets the tap tempo.

\*1 This function cannot be assigned to USER DEFINED keys in PM Editor.

\*2 Invalid for the CSD-R7



## ■ Using the Alternate function

If you assign the Alternate function (ALTERNATE FUNCTION) to a USER DEFINED key, turning on and off that key will toggle between parameter settings that are usually controlled via channel strip encoders (such as between ANALOG GAIN and DIGITAL GAIN).

Alternate mode is engaged when you turn on the USER DEFINED key to which the Alternate function has been assigned.

You can select LATCH or UNLATCH for the Alternate function.

- **UNLATCH**.....Alternate mode is engaged only when you press and hold down the USER DEFINED key.
- **LATCH**.....Pressing the USER DEFINED key repeatedly will switch Alternate mode on and off. In this way, you do not need to press and hold down the USER DEFINED key to use the function.

## MIDI/GPI

This chapter explains how to transmit MIDI messages from an external device to the RIVAGE PM series to control its parameters, and how to send out MIDI messages from the RIVAGE PM series as you operate the unit.

### About MIDI

The RIVAGE PM series can use MIDI to perform the following operations.

#### ■ Program Change transmission and reception

When you recall a specific scene on the RIVAGE PM series, a Program Change message of the corresponding number can be transmitted to an external device.

Conversely, the corresponding scene can be recalled when the corresponding Program Change message is received from an external device.

#### ■ Control Change transmission and reception

When you execute a specific fader, knob, or key operation on the RIVAGE PM series, the corresponding Control Change message can be transmitted to an external device. Conversely, the corresponding fader, knob, or key operation can be executed when Control Change messages are received from an external device. This allows you to record fader and key operations on a MIDI sequencer or other external device, and play them back later.

#### ■ Receiving MMC

An MMC (MIDI Machine Control) can be received on the system. This can be used to control the 2-track USB recorder on a control surface that is set as the receiving port.

#### ■ Receiving MIDI clock

MIDI clock can be used to set the delay time for the plug-in.

## Basic MIDI Settings

You can select the type of MIDI messages the RIVAGE PM series will transmit and receive. You can also select the MIDI port that will be used.

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **MIDI/GPI [CS]** button to open the **MIDI/GPI [CS]** popup window.

#### NOTE

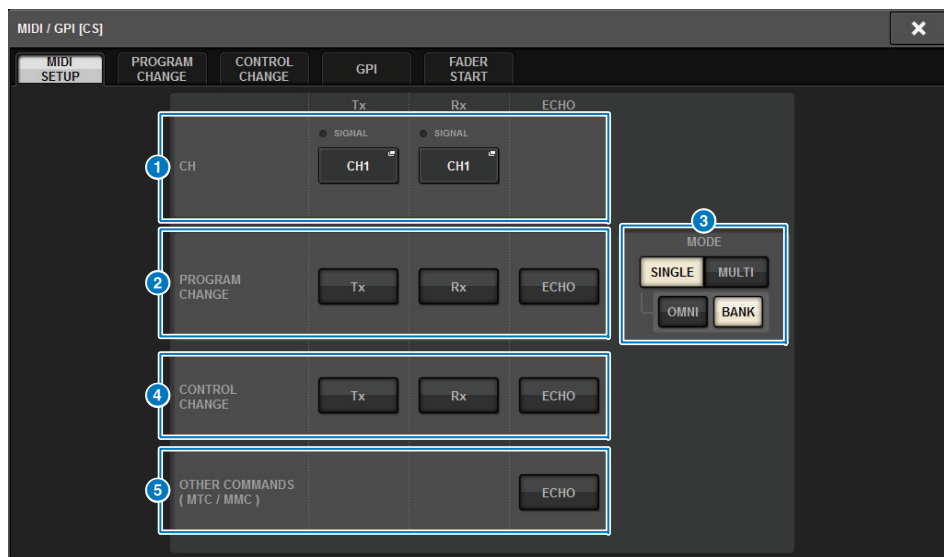
If using the DSP engine, press the MIDI/GPI [DSP] button to access the MIDI/GPI [DSP] popup window. The subsequent explanation is for when using the control surface.

This window includes several pages, which you can switch between using the tabs located at the top of the window.



3. Press the **MIDI SETUP** tab.  
The screen contains the following items.

### MIDI/GP window (MIDI SETUP page)



#### 1 PORT/CH field

Enables you to specify the settings for the channel that transmit/receive MIDI messages.

- **Tx CH**.....Press this button to access a popup window, in which you can select a MIDI channel that will transmit MIDI messages.
- **Rx CH**.....Press this button to access a popup window, in which you can select a MIDI channel that will receive MIDI messages.

#### NOTE

The MIDI port setting is fixed to CONSOLE.

#### 2 PROGRAM CHANGE field

Enables you to switch MIDI Program Change message transmission and reception on or off.

- **Tx** .....Switches Program Change transmission on or off.
- **Rx** .....Switches Program Change reception on or off.
- **ECHO** .....Switches on or off echo output of Program Change messages. (If this function is on, Program Change messages received from an external device will be retransmitted without modification.)

#### 3 PROGRAM CHANGE MODE field

Enables you to select the Program Change transmit/receive mode.

- **SINGLE**.....If this button is on, Program Changes will be transmitted and received on a single MIDI channel (Single mode).

- **MULTI**.....If this button is on, Program Changes will be transmitted/received on multiple MIDI channels (Multi mode).
- **OMNI** .....If this button is on, Program Changes on all MIDI channels will be received in Single mode. Multi mode transmission/reception and Single mode transmission are disabled.
- **BANK** .....If this button is on, Bank Select messages can be transmitted and received in Single mode. (Bank Select messages switch the group of Program Change messages to be used.)

#### 4 CONTROL CHANGE field

Enables you to switch MIDI Control Change message transmission and reception on or off.

- **Tx** .....Switches Control Change transmission on or off.
- **Rx** .....Switches Control Change reception on or off.
- **ECHO** .....Switches on or off echo output of Control Change messages. (If this function is on, Control Change messages received from an external device will be retransmitted without modification.)

#### 5 OTHER COMMANDS (MTC/MMC) field

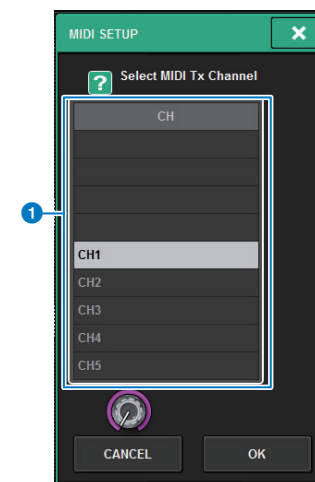
Switches on or off echo output of other MIDI messages. (If this function is on, other MIDI messages received from an external device will be retransmitted without modification.)

### 4. To specify the channel on which MIDI messages will be transmitted or received, press the channel select popup button.

The MIDI SETUP popup window for selecting the channel will appear. Operations in this window are the same for both transmission (Tx) and reception (Rx). This window includes the following items.

#### 1 CH field

Enables you to select the channel from CH1-CH16 that will transmit or receive MIDI messages.



**5. Select the channel.**

To select an item, use the [TOUCH AND TURN] knob. Press the OK button to confirm the selected channel and close the MIDI SETUP popup window.

**NOTE**

Alternatively, you can select the desired channel by pressing the channel entry in the field or by turning the corresponding screen encoder.

**6. Turn transmission/reception on or off for each MIDI message.****NOTE**

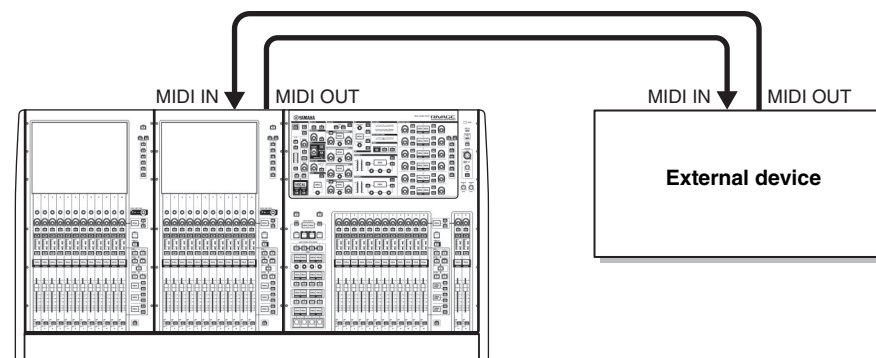
- For details on using Program Changes, refer to “[Using Program Changes to recall scenes](#)” below.
- For details on using Control Changes, refer to “[Using Control Changes to control parameters](#)” (page 378).

## Using Program Changes to recall scenes

The RIVAGE PM series enables you assign a specific scene to be recalled to each Program Change number, so that when a scene is recalled on the RIVAGE PM series, a Program Change message of the corresponding number will be transmitted to an external device. Conversely, the corresponding scene can be recalled when a Program Change message is received from an external device.

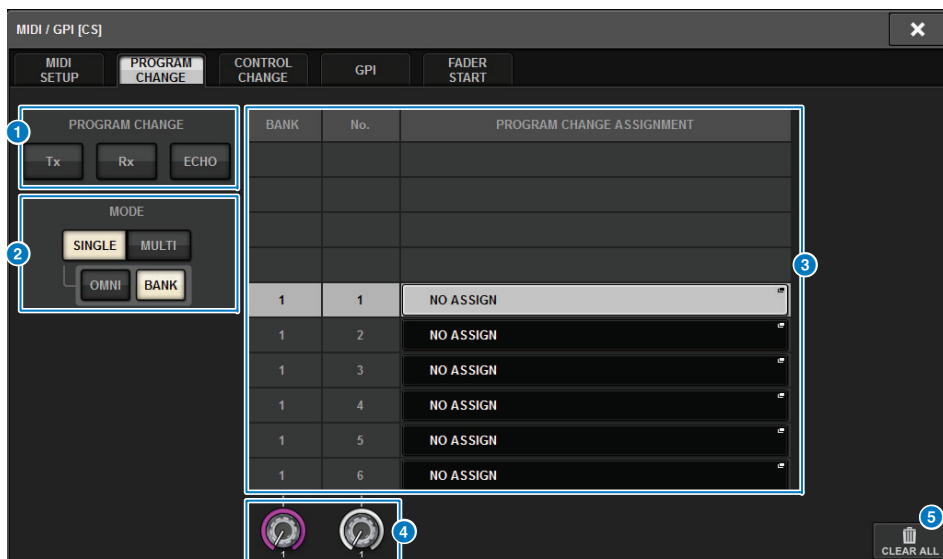
**1. Connect the control surface to an external device.****NOTE**

If using the DSP engine, connect the DSP engine with the external devices. The subsequent explanation is for when using the control surface.

**2. As described in “[Basic MIDI Settings](#)” (page 373), select the MIDI channels that will be used to transmit/receive Program Changes.****3. Press the PROGRAM CHANGE tab.**

The screen contains the following items.

## MIDI/GPI window (PROGRAM CHANGE page)



### 1 PROGRAM CHANGE field

Switches Program Change transmission and reception on or off. This setting is linked with the PROGRAM CHANGE field of the MIDI page.

- **Tx** ..... Turn this button on to transmit the corresponding Program Change message when a scene is recalled.
- **Rx** ..... Turn this button on to recall the corresponding scene when a Program Change message is received.
- **ECHO** ..... Turn this button on to transmit Program Change messages (that are received from an external device) without modification.

### 2 PROGRAM CHANGE MODE field

Here you can select the Program Change transmit/receive mode. This setting is linked with the PROGRAM CHANGE MODE field of the MIDI page.

### 3 List

Shows the scene recall operation assigned to each MIDI channel and MIDI Program Change number. The list shows the following items.

- **CH/BANK** ..... If “CH” appears as the column heading instead of “BANK,” the column indicates the MIDI channel (1–16) on which Program Changes are transmitted/received. If Program Change transmission and reception is in Single mode and the BANK button is on, this will be labeled “BANK,” and the numerical value in this column will correspond to the bank number.

- **NO** ..... Indicates the program number 1–128.
- **PROGRAM CHANGE ASSIGNMENT** ..... Indicates the scene number and scene name assigned to each channel (bank number) or program number. Press an individual assignment display area to open the MIDI PROGRAM CHANGE popup window, in which you can select the content that you want to assign.

### 4 Scroll knob

Press this knob to scroll the list upward or downward using the screen encoder.

### 5 CLEAR ALL button

Press this button to clear all scene recall assignments in the list.

## 4. Use the buttons in the PROGRAM CHANGE MODE field to select the Program Change transmission/reception mode.

You can select one of the following two Program Change transmission/reception modes.

### • Multi mode (when the MULTI button is on):

Program changes of all MIDI channels will be transmitted and received. (The transmit/receive channel specified in the MIDI page will be ignored.)

When a Program Change is received, the scene assigned to the corresponding MIDI channel and program number in the list will be recalled.

When you recall a specified scene on the RIVAGE PM series, the Program Change of the corresponding MIDI channel and program number in the list will be transmitted.

### • Single mode (when the SINGLE button is on):

Only Program Changes of the transmit (Tx) and receive (Rx) channels specified in the MIDI page will be transmitted and received.

When a Program Change on the Rx channel is received, the scene assigned to that program number of the corresponding channel in the list will be recalled.

When you recall a specified scene on the RIVAGE PM series, the Program Change of the corresponding program number will be transmitted on the Tx channel shown in the list. (If an event is assigned to more than one program number on the same channel, the lowest-numbered program number will be transmitted.)

If you turn on the OMNI button or BANK button in Single mode, operation will change as follows.

- **When the OMNI button is on:**  
Program changes of all MIDI channels will be received. However, regardless of the MIDI channel that is received, the scene assigned to the corresponding program number of the Rx channel will be recalled. Turning on the OMNI button will not change the operation for Program Change transmission.
- **When the BANK button is on:**  
The CH indication in the list will change to BANK (bank number), and Bank Select (Control Change #0, #32) and Program Change messages can be transmitted and received. This can be convenient if you want to control more than 128 scenes on a single MIDI channel.  
When Bank Select and then Program Change messages (in that order) are received on the Rx channel, the scene assigned to that bank number and program number in the list will be recalled.  
When you recall a specific scene on the RIVAGE PM series, Bank Select and Program Change messages for the bank number and program number assigned to that scene will be transmitted on the Tx channel. (If the same scene is assigned more than once in the list, the lowest-numbered bank number and program number will be transmitted.)

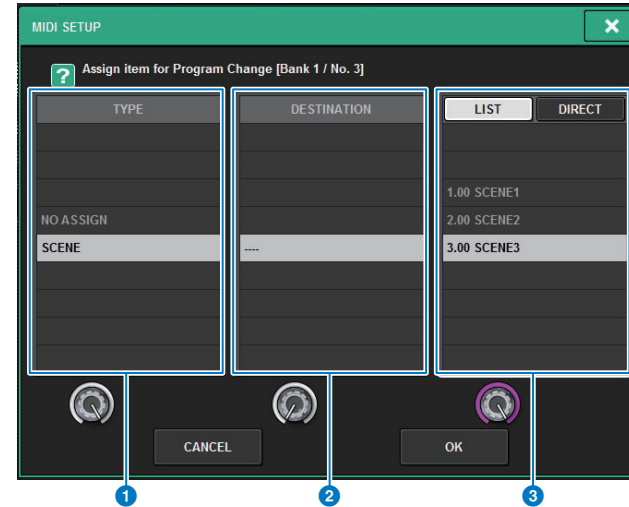
**NOTE**

- The settings of the OMNI and BANK buttons are ignored in Multi mode.
- If the BANK button is on and only a Program Change on an applicable MIDI channel is received, the last-selected bank number will be used.
- If the BANK button is on, the OMNI button can also be turned on at the same time. In this case, Bank Select and Program Change messages of all MIDI channels will be received.

**5. Use the buttons in the PROGRAM CHANGE field to turn transmission and reception on or off, and make settings for echo output.**

**6. To assign a scene to each program number, press the desired cell in the PROGRAM CHANGE ASSIGNMENT column on the list.**

The MIDI PROGRAM CHANGE popup window will appear. In this window, you can specify the scene (to be recalled) that you want to assign to each program number. This popup window includes the following items.



**1 TYPE field**

Enables you to select the type of event.  
The following table lists the events you can select.

<b>NO ASSIGN</b>	No assignment
<b>SCENE</b>	Scene memory recall operations

**2 DESTINATION field**

This field will be supported in the future versions. If SCENE is selected, this will indicate - - -. You do not need to select any item for this field.

**3 LIST/DIRECT field**

Enables you to select the scene you want to recall.

- **LIST** ..... Press this field so that you will be able to select a scene number from the list.
- **DIRECT** ..... Press this field so that you will be able to select a scene by entering the scene number directly into the field.





## 7. Select SCENE in the TYPE field, and then use the LIST/DIRECT field to select a desired scene number for recall operations.

To select an item, use the [TOUCH AND TURN] knob. Press the OK button to confirm the change and close the MIDI PROGRAM CHANGE popup window.

### NOTE

Alternatively, you can select a scene number by pressing the desired number in the field or by turning the corresponding screen encoder.

## 8. Assign scenes to other program numbers in the same way.

With these settings, recalling a specified scene on the RIVAGE PM series will cause the corresponding Program Change (or Bank Select and Program Change) messages to be transmitted to an external device.

When an external device receives Program Change (or Bank Select plus Program Change) messages on the appropriate MIDI channel, the scene assigned to that program number of the corresponding MIDI channel (or bank number) will be recalled.

### NOTE

- You can use the CLEAR ALL button to erase all assignments to program numbers.
- Assignments to program numbers are maintained as settings for the entire system, rather than for individual scenes.
- In Single mode, if the same scene is assigned to more than one program number on a Tx channel, only the lowest program number will be transmitted. (If the BANK button is on, only the program number of the lowest bank number will be transmitted.)
- In Multi mode, if the same scene is assigned to more than one MIDI channel and more than one program number, only the lowest program number on each MIDI channel will be transmitted.

# Using Control Changes to control parameters

You can use MIDI Control Change messages to control specified fader/knob operations, [ON] key on/off operations, etc. on the RIVAGE PM series. This capability can be used to record fader and key operations on a MIDI sequencer or other external device, and play back the data later.

## Using Control Changes

This method uses typical Control Changes (control numbers 1–31, 33–95, 102–119). You can freely assign an operation to each control number.

### 1. Connect the control surface to an external device.

#### NOTE

If using the DSP engine, connect the DSP engine with the external devices. The subsequent explanation is for when using the control surface.

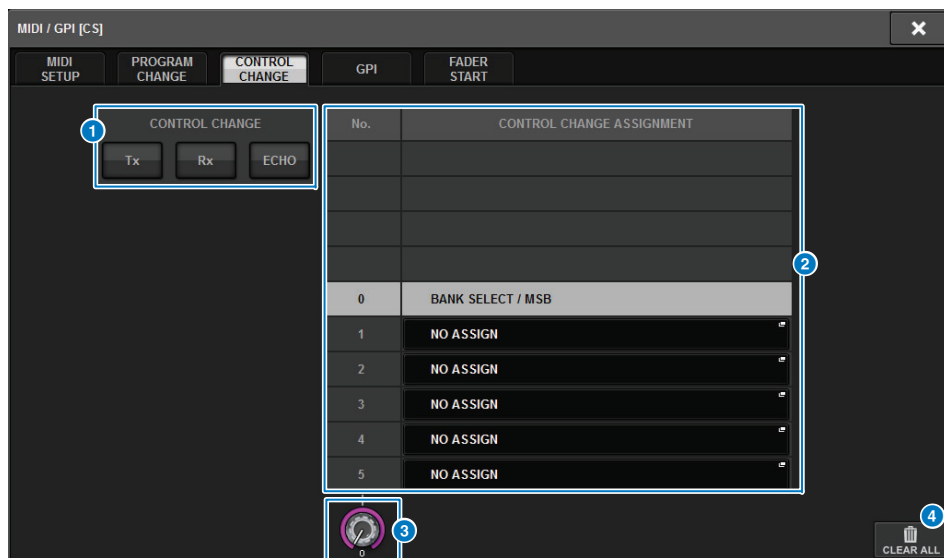
### 2. As described in “Basic MIDI Settings” (page 373), select MIDI channels that will be used to transmit/receive Control Changes.

### 3. Press the PROGRAM CHANGE tab.



The screen contains the following items.

### MIDI/GPI window (CONTROL CHANGE page)



**1 CONTROL CHANGE field**

Enables you to switch Control Change transmission/reception on or off, and specify whether Control Changes will be echoed out. This setting is linked with the CONTROL CHANGE field on the MIDI page.

**2 List**

Shows the fader/knob operation or [ON] key on/off operation that are assigned to each control number.

- **NO**.....Indicates the Control number. You can use control numbers 1–31, 33–95, and 102–119.
- **CONTROL CHANGE ASSIGNMENT** .....Enables you to view and select the type of parameter assigned to each control number. When you press a parameter, the MIDI CONTROL CHANGE popup window will appear, enabling you to change the control number assignment.

**3 Scroll knob**

Press this knob to scroll the list upward or downward using the screen encoder.

**4 CLEAR ALL button**

Press this button to clear all parameter assignments on the list.

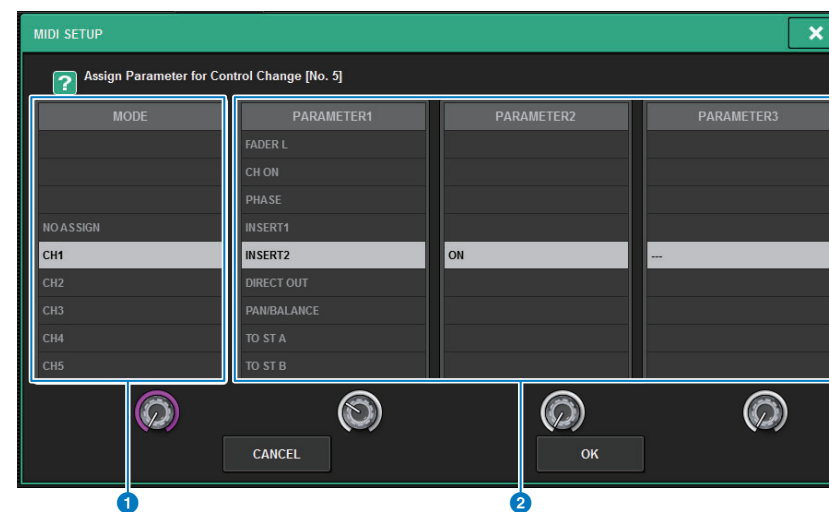
**4. Use the buttons in the CONTROL CHANGE field to turn transmission and reception on or off, and make settings for echo output.**

Each button has the following function.

- **Tx button** .....Switches Control Change transmission on or off.
- **Rx button** .....Switches Control Change reception on or off.
- **ECHO button**.....Selects whether incoming Control Changes will be echoed out from the MIDI transmit port.

**5. To change the operation assignment for each control number, press the corresponding parameter.**

The MIDI CONTROL CHANGE popup window will appear. In this window, you can specify the parameter assigned to each control number. The screen contains the following items.



**1 MODE field**

Enables you to select an operation target that will be controlled via a Control Change message, from input channels, output channels, DCAs, and Mute Master.

**2 PARAMETER 1/2/3 fields**

In conjunction with the MODE field, this field specifies the type of operation parameter.

**NOTE**

For details on the operations that can be assigned to Control Changes, refer to the data list.

**6. In the order of the MODE field → PARAMETER1 field → PARAMETER2 field → PARAMETER3 field, specify the type of parameter you want to assign.**

To select an item, use the [TOUCH AND TURN] knob. Press the OK button to confirm the change and close the MIDI CONTROL CHANGE popup window.

**NOTE**

- You can also press the desired parameter in the field to select it.
- You can press a field to highlight the item you want to select, and then turn one of the screen encoders to select a parameter.

**7. Assign parameters to other control numbers in the same way.**

When you operate a specified parameter on the RIVAGE PM series with these settings, the corresponding Control Change message will be transmitted to external devices. Similarly, if the corresponding Control Change messages are received from an external device on the appropriate channel, the parameters assigned to those control numbers will change.

**NOTE**

- You can use the CLEAR ALL button to erase all assignments to control numbers.
- Assignments to control numbers are maintained as settings for the entire system, rather than for individual scenes.

## About GPI

The GPI connector located on the rear panel can be used as a GPI (General Purpose Interface) input/output connector. This connector provides eight GPI IN ports and eight GPI OUT ports. For example you can use an external switch to control internal parameters of the RIVAGE PM series or to switch scenes. Conversely, operations or scene changes performed on the RIVAGE PM series can send control signals to an external device.

For details on how to send control signals to an external device when you switch scenes, refer to “[Outputting a control signal to an external device in tandem with scene recall \(GPI OUT\)](#)” (page 327).

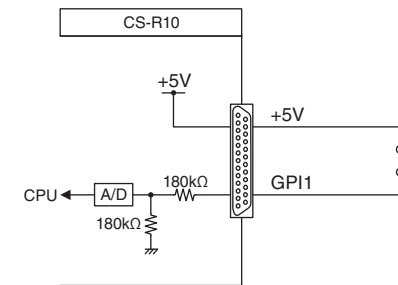
The following diagram is an example of an external circuit that can operate GPI via the GPI connector. (For details on the specifications of the GPI connector pins, refer to the data list.)

[OUT]-1-7 ports are open-drain outputs, and are switched to open or ground. Applicable voltage is up to +12V for the [OUT]-1-7 ports, and acceptable current is up to 75 mA per port. [OUT]-8 port supports up to +30V voltage input.

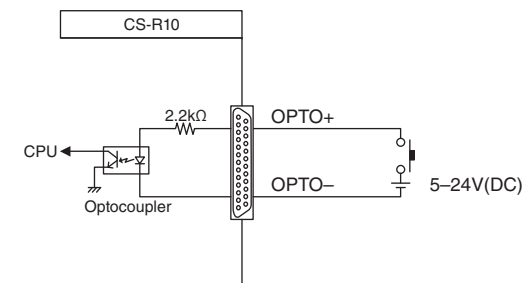
**NOTE**

- Only [IN]-8 port features photo coupler input of up to +24V.
- Only [OUT]-8 port features relay output of 24V (DC) (rated) and 1A.

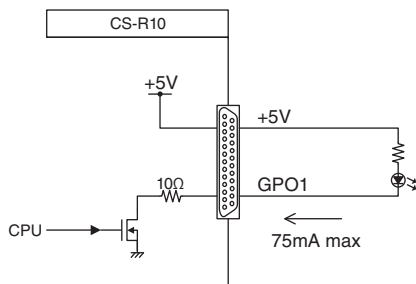
**1 Using a switch connected to GPI IN1**



**2 Using a switch connected to GPI IN8**



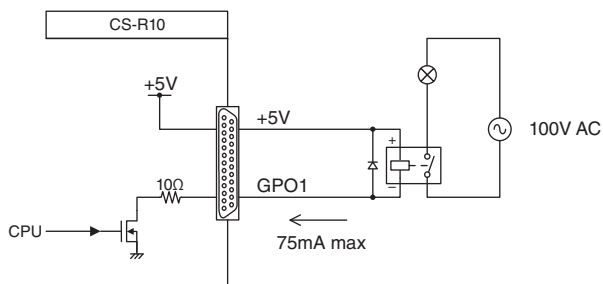
3 Lighting external LED indicators via GPI OUT1



**Caution**

Be careful not to exceed a current of 75 mA at the OUT ports.

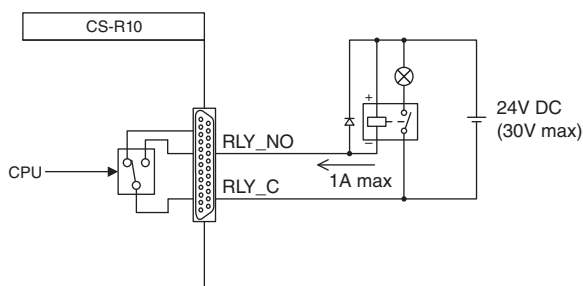
4 Lighting a lamp (100V AC) by switching the relay on an external device via GPI OUT1



**Caution**

Be careful not to exceed a current of 75 mA at the OUT ports.

5 Lighting a lamp (24V DC) by switching the relay on an external device via GPI OUT8



## Using GPI IN

You can use the GPI IN ports of the GPI connector to control the parameters of the RIVAGE PM series from an external device. For example, you could use an external switch to turn the RIVAGE PM series's Talkback on/off, operate the Tap Tempo function, or switch scenes.

1. Connect an external device to the GPI connector of the control surface.

**NOTE**

If using the DSP engine, connect the DSP engine with the external devices. The subsequent explanation is for when using the control surface.

2. Press the SETUP button on the menu bar to access the SETUP screen.



3. Press the MIDI/GPI [CS] button to open the MIDI/GPI [CS] popup window.

**NOTE**

If using the DSP engine, connect the DSP engine with the external devices.

This window includes several pages, which you can switch between using the tabs located at the top of the window.



#### 4. Press the GPI tab to access the GPI page.



##### 1 GPI IN status indicator

Indicates the status of the voltage being input to the GPI IN port.

##### 2 Switch property select buttons

Pressing each button repeatedly will toggle between LATCH and UNLATCH indicators.

**LATCH** ..... In general, select this mode if you connect an alternate switch (that toggles between on and off if you press the switch repeatedly).

**UNLATCH** ..... This mode is useful if you connect a momentary-type switch (that is turned on only while you are pressing and holding it down, and turned off when you release it).

##### 3 POLARITY MODE select button

This button selects the polarity of the GPI IN port.

**Low active** ..... (Low active) Active when the input signal is low level.

**High active** ..... (High active) Active when the input signal is high level.

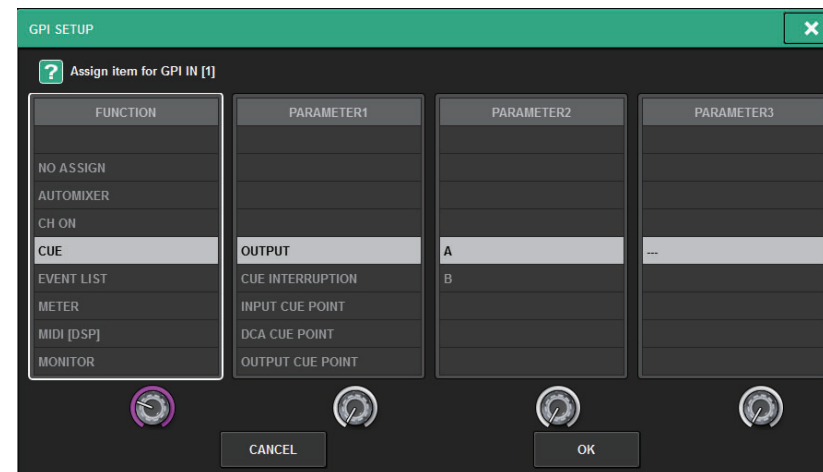
##### 4 GPI SETUP popup button

Press this button to access the GPI SETUP popup window.

The button shows the name of the currently-selected function or parameter.

#### 5. Specify the input type and POLARITY MODE based on the specifications of the external device you are using.

#### 6. To assign the function or parameter that you want to control, press the GPI SETUP popup button to open the GPI SETUP popup window.



#### NOTE

Available options in the GPI SETUP popup window are the same as for the USER DEFINED keys (page 367).

However, some functions (BRIGHTNESS, CH SELECT, CONSOLE SHUTDOWN, DSP MIRRORING, PAGE CHANGE, RECORDER, SET BY SEL, SET DEFAULT VALUE, SET NOMINAL VALUE) are available only for the control surface.

#### 7. In each field, select the desired function or parameter.

#### 8. When you finish making settings, press the OK button.

The system will return to the GPI screen.

#### 9. Repeat steps 5 through 8 to specify functions and parameters for other ports.

#### NOTE

Settings in the GPI screen are common to all scenes. They can be saved as SETUP data.

# Using GPI OUT

The GPI OUT ports of the GPI OUT connector enable you to control an external device by performing operations on the RIVAGE PM series.

1. Connect an external device to the GPI connector of the control surface or the DSP engine.

**NOTE**

If using the DSP engine, connect the DSP engine with the external devices. The subsequent explanation is for when using the control surface.

2. Press the SETUP button on the menu bar to access the SETUP screen.
3. Press the MIDI/GPI [CS] button to open the MIDI/GPI [CS] popup window.

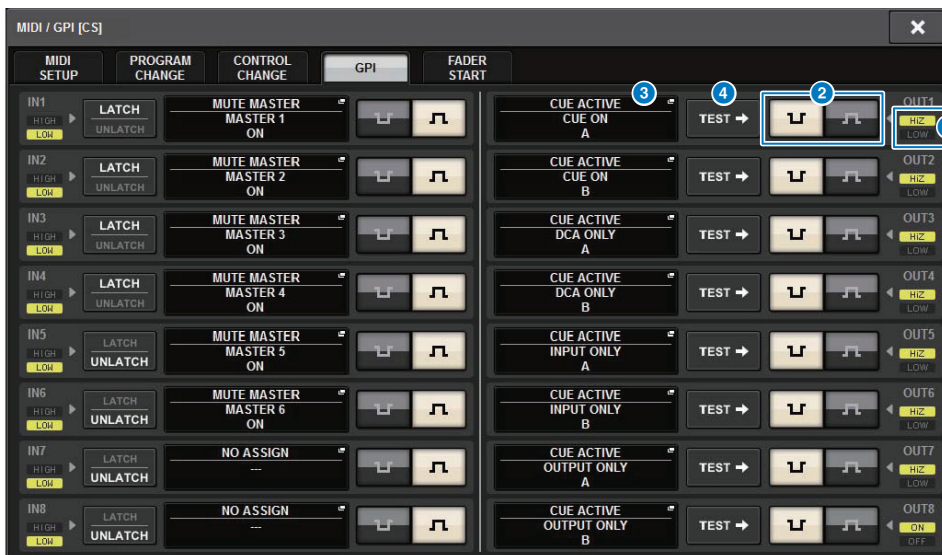
**NOTE**

If using the DSP engine, press the MIDI/GPI [DSP] button to access the MIDI/GPI [DSP] popup window.

This window includes several pages, which you can switch between using the tabs located at the top of the window.

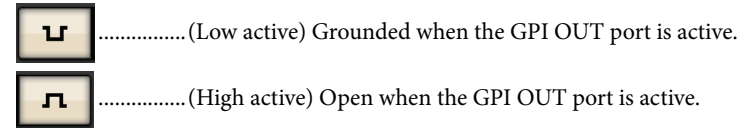


4. Press the GPI tab to access the GPI page.



- 1 **GPI OUT status indicator**  
Indicates the status of the voltage that is being output from each GPI OUT port.

- 2 **POLARITY MODE select button**  
Enables you to select the polarity of the GPI OUT port.

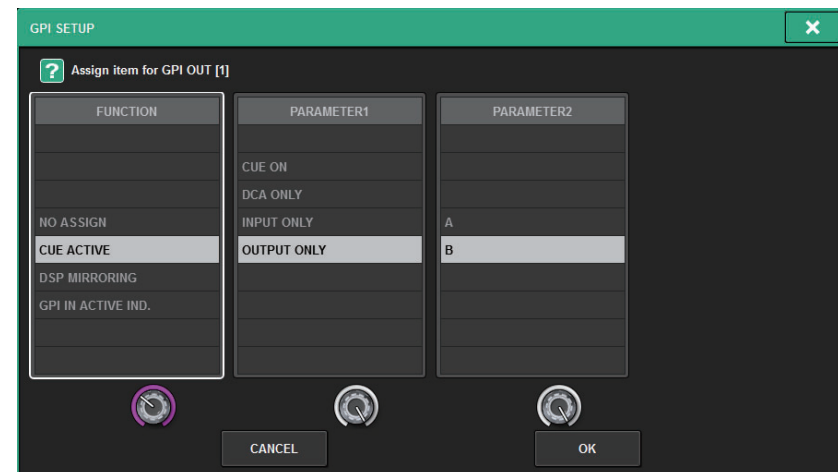


- 3 **GPI OUT SETUP popup button**  
Press this button to access the GPI OUT SETUP popup window. The button shows the name of the currently-selected function or parameter.

- 4 **TEST button**  
While this button is on, the corresponding GPI OUT port will become active and output a control signal.

5. Specify the POLARITY MODE based on the specifications of the external device you are using.

6. To assign the function or parameter that you want to control, press the GPI OUT SETUP popup button.





You can assign the following functions.

Function	PARAMETER 1	PARAMETER 2	Description
NO ASSIGN	---	----	No assignment
CUE ACTIVE	CUE ON	A	Turns on the [CUE] key of the selected channel for CUE A/CUE B.
		B	
	DCA ONLY	A	Turns on the [CUE] key of the DCA for CUE A/CUE B.
		B	
	INPUT ONLY	A	Turns on the [CUE] key of the input channel for CUE A/CUE B.
		B	
	OUTPUT ONLY	A	Turns on the [CUE] key of the output channel for CUE A/CUE B.
		B	
DSP MIRRORING *1	DSP CHANGEOVER	----	Switches the DSP engine when using DSP MIRRORING
	DSP A ACTIVE	----	DSP A operates as the active engine
	DSP B ACTIVE	----	DSP B operates as the active engine
GPI IN ACTIVE IND.	SPECIFIC PORT	PORT 1 – PORT 8	The function assigned to GPI IN port 1–8 becomes active.
USER DEF. KEY ACTIVE IND. *2	SPECIFIC NUMBER	USER DEFINED KEY 1 – USER DEFINED KEY 12	The function assigned to the USER DEFINED key becomes active

\*1 Not available for the CSD-R7

\*2 Available only for the control surface

- In each field, select the desired function or parameter.
- When you finish making settings, press the OK button.
- Repeat steps 5 through 8 to specify functions and parameters for other ports.

## Using FADER START

Make FADER START settings if you want a device connected to a GPI OUT port to operate in tandem with fader operations.

- Connect an external device to the GPI connector of the control surface or the DSP engine.

### NOTE

If using the DSP engine, connect the DSP engine with the external devices. The subsequent explanation is for when using the control surface.

- Press the SETUP button on the menu bar to access the SETUP screen.

- Press the MIDI/GPI [CS] button to open the MIDI/GPI [CS] popup window.

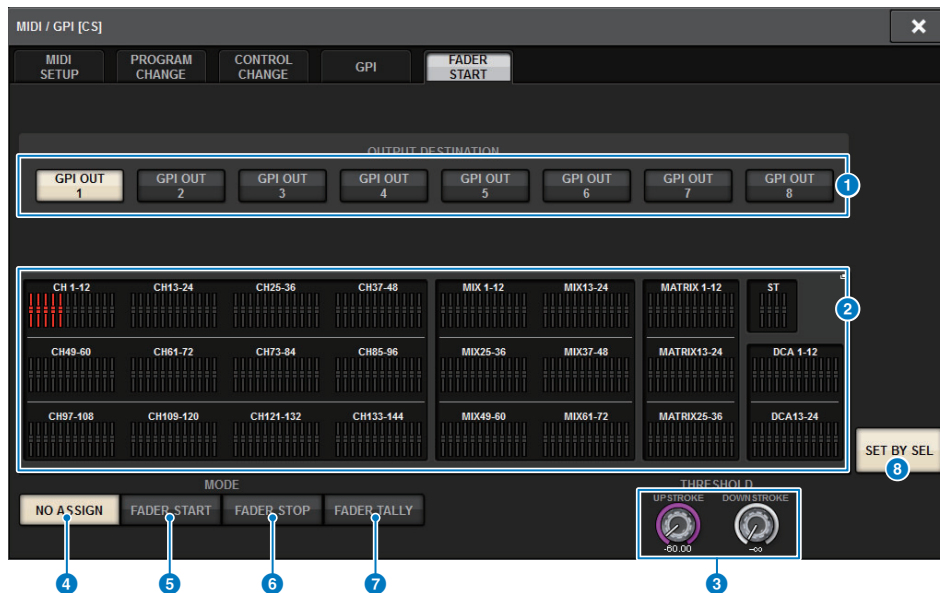
### NOTE

If using the DSP engine, press the MIDI/GPI [DSP] button to access the MIDI/GPI [DSP] popup window.

This window includes several pages, which you can switch between using the tabs located at the top of the window.



#### 4. Press the FADER START tab to access the FADER START page.



#### ■ OUTPUT DESTINATION field

##### 1 GPI OUT1 – GPI OUT8 buttons

Select the GPI OUT port for which you want to make settings.

##### 2 Fader indicator

Indicates the selected fader. Use the [SEL] keys on the panel to select a fader.

#### ■ THRESHOLD field

##### 3 UPSTROKE/DOWNSTROKE knobs

These knobs specify the level that will be the threshold at which to output a trigger signal. A trigger signal will be output when the fader exceeds the UPSTROKE level, or when the fader falls below the DOWNSTROKE level.

Alternatively, you can use the [TOUCH AND TURN] knob.

#### NOTE

- The THRESHOLD values specified by the UPSTROKE/DOWNSTROKE knobs are common to all GPI OUT ports. However, you can individually choose the channel (fader) for each GPI OUT port.
- Only the UPSTROKE value will be valid if MODE is set to FADER START, and only the DOWNSTROKE value will be valid if MODE is set to FADER STOP. If MODE is set to FADER TALLY, both the UPSTROKE and DOWNSTROKE values will be valid.

#### ■ MODE field

Here you can select the mode of fader operation that will be the trigger for signal output from the GPI OUT port. You can choose from the following fader modes.

##### 4 NO ASSIGN

Operating the fader of the selected channel will not cause a signal to be output.

##### 5 FADER START



A trigger signal of 250 msec duration will be output if the fader of the selected channel is raised from below the specified UPSTROKE level (between  $-138.0$  dB and  $10.0$  dB) to beyond that level.

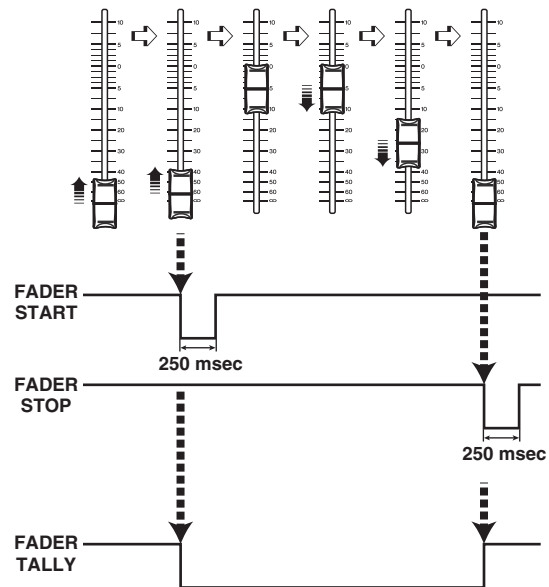
##### 6 FADER STOP

A trigger signal of 250 msec duration will be output when the fader of the selected channel reaches the specified DOWNSTROKE level (between  $-\infty$  dB and  $9.95$  dB).

##### 7 FADER TALLY

A trigger signal will be output if the fader of the selected channel is raised from below the specified UPSTROKE level (between  $-138.0$  dB and  $10.0$  dB) to beyond that level. This signal will be held until the fader reaches the specified DOWNSTROKE level (between  $-\infty$  and  $9.95$  dB), or until that GPI OUT port receives a different trigger.

The following illustration shows how the output signal from the GPI OUT port will change when a fader is operated in each fader mode. In this example, the THRESHOLD field is set to  $-60.00$  for UPSTROKE, and to  $-\infty$  for DOWNSTROKE. (In this illustration,  is selected as the POLARITY of the GPI OUT port. If  POLARITY is selected, the output signal polarity will be reversed.)

**NOTE**

At the high level, the output signal of the port will be open. If the receiving device requires high level, take it from the +5V power supply pin. However in this case, there is a limit on the amount of current that can be provided. For details, refer to the “Control input/output specifications” section in the data list.

**8 SET BY SEL button**

If this button is on, you will be able to add a channel by using the corresponding [SEL] key.

- 5.** For each GPI OUT port, specify the channel that will cause the external device to operate, and also specify the type of operation.

# Maintenance

## Firmware version

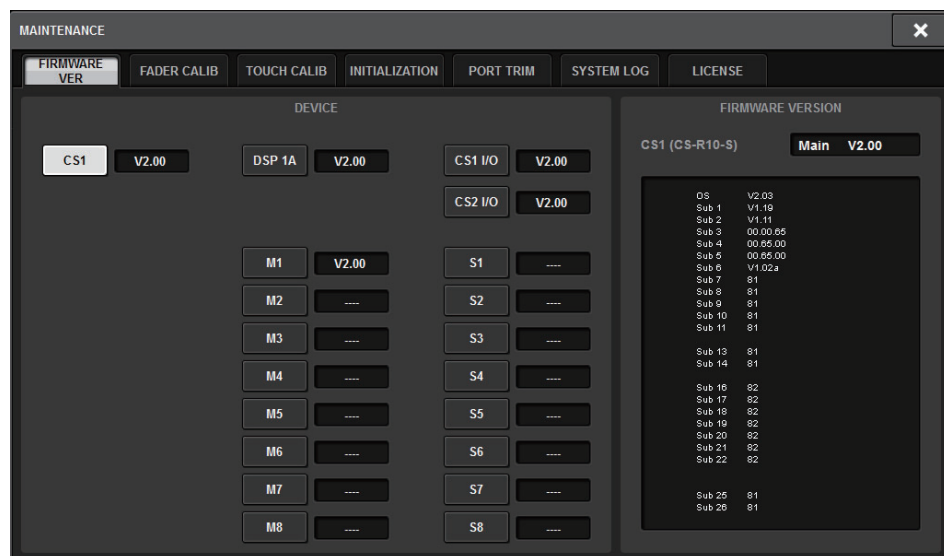
You can view a list of the current firmware version number of each component.

### NOTE

If there is a combination of firmware that is wrong for the operation of the overall system, the applicable component is displayed in yellow.

In this case, refer to the appropriate update guide, and perform the update.

### Screen example



## Firmware updates

You can update the unit firmware to improve operations, add functions, and correct possible malfunctions.

Details on updating the firmware are available on the following Yamaha Pro Audio website:

<http://www.yamaha.com/proaudio/>

For information on updating and setting up the unit, please refer to the firmware update guide available on the website.

## Adjusting the faders

Depending on the environment in which you use the system, discrepancies may occur in the motion of the motorized faders. You can use the Calibration function to correct these discrepancies. The RIVAGE PM series features two types of fader calibration.

<b>Motor Drive Calibration</b>	Automatically optimizes the motorized fader movement.
<b>Positioning Calibration</b>	Calibrates the motorized fader movement so that the fader knob positions and the level values stored in the console (parameter) will match.

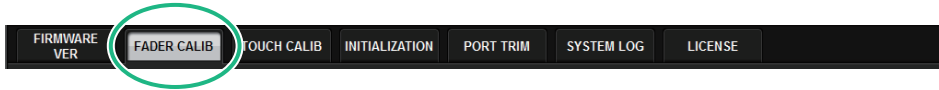
### NOTE

An alarm message will appear if a problem is detected in the fader settings while the RIVAGE PM series is starting up.

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **MAINTENANCE** button to access the **MAINTENANCE** popup window. This window includes several pages, which you can switch between using the tabs located at the top of the window.

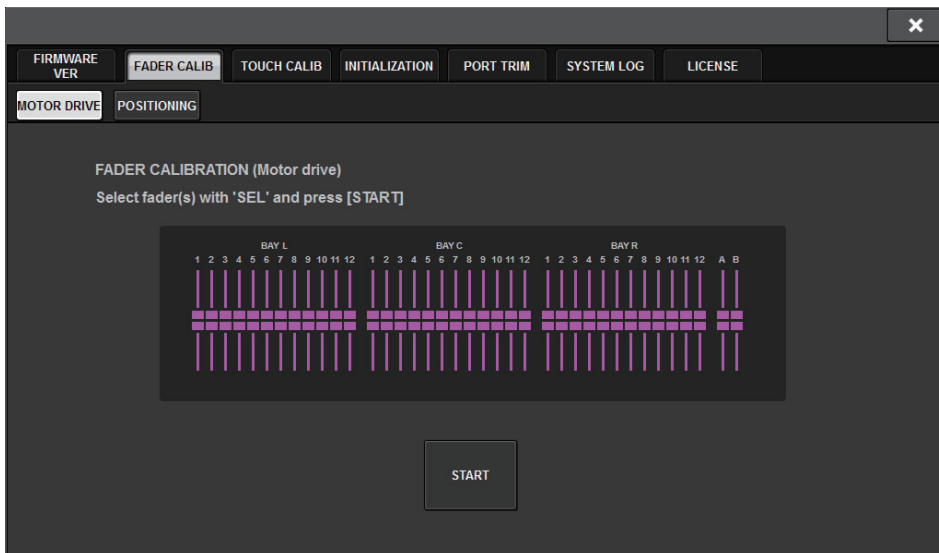


3. Press the **FADER CALIB** tab. The **FADER CALIBRATION** screen will appear, which will enable you to adjust the faders.
4. Select the tab for the desired fader calibration operation.



#### If the **MOTOR DRIVE** calibration tab is selected:

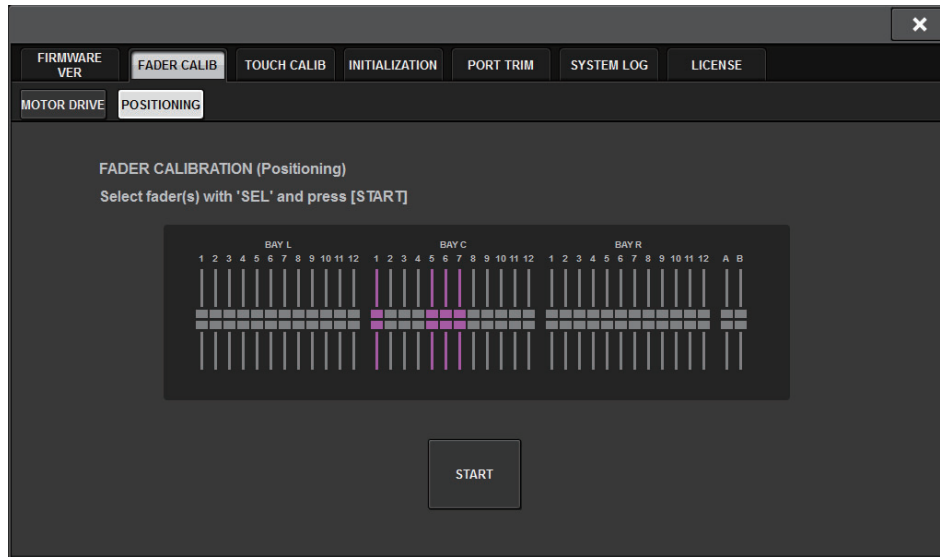
For the specified faders in the Channel Strip section and Master section, the motorized fader movement will be automatically calibrated.



5. Press the **[SEL]** key for each fader that you want to calibrate. Faders for which a problem was detected in the fader settings at start-up will already be selected.
6. Press the **START** button. The system starts optimizing the movement of the motorized faders. The corresponding **[SEL]** keys will flash during calibration. To cancel in the middle of calibration, press the **STOP** button. When optimization of the motorized fader movement is complete, the **[SEL]** keys will go dark.
7. When calibration is complete, press the **FINISH** button. The calibration values will be saved in internal memory. If the **[SEL]** key lights and the color bar becomes red, calibration has failed. Press the **START** button to perform calibration again.

**If POSITIONING calibration tab is selected:**

For the specified faders in the Channel Strip section and Master section, the fader position will be calibrated.



- 5. Press the [SEL] key for each fader that you want to calibrate.**  
Faders for which a problem was detected in the fader settings at start-up will already be selected.
- 6. Press the START button.**
- 7. Each of the specified faders will move to the target positions in the following sequence.**  
Manually move the faders to the correct positions.
  - ①  $-\infty$  dB (all the way down)
  - ②  $-20$  dB
  - ③  $0$  dB
  - ④  $+10$  dB (all the way up)
- 8. After you adjust the fader position, press the [NEXT] button.**  
The process will proceed to the next fader position.

- 9. Repeat steps 7 and 8 to adjust the faders for positions ① through ④.**
- 10. When calibration is complete, press the FINISH button.**  
The calibration values will be saved in internal memory. If the [SEL] key lights and the color bar becomes red, calibration has failed. Press the START button to perform calibration again.



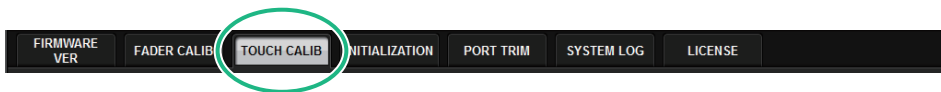
## Adjusting the detection point of the touch screen panels

Follow the steps below to correctly align the positions of the LCD display and the touch screen panels.

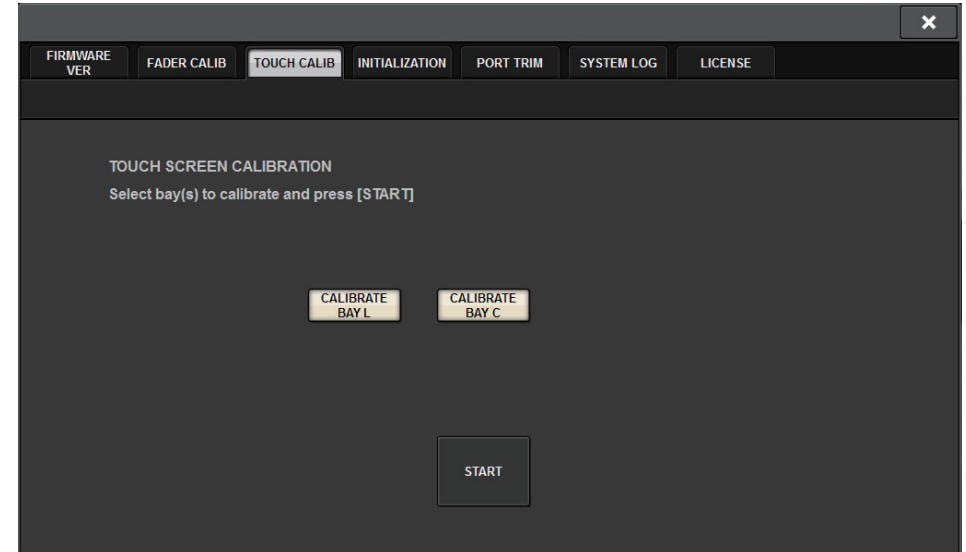
1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **MAINTENANCE** button to access the **MAINTENANCE** popup window. This window includes several pages, which you can switch between using the tabs located at the top of the window.



3. Press the **TOUCH CALIB** tab. The **TOUCH SCREEN CALIBRATION** screen will appear, enabling you to calibrate the touch screen panels.



4. Press the **LEFT PANEL** button to calibrate the left touch screen panel. Press the **RIGHT PANEL** button to calibrate the right touch screen panel. You can also select and calibrate both left and right panels simultaneously.
5. Press the **START** button. A cross-shaped cursor will appear in the screen a total of four times. Press each location at which it appears.
 

**NOTE**  
To set the detection points accurately, press the cross-shaped cursor from the position and posture in which you normally operate the unit.
6. Press the **FINISH** button. The calibration values will be saved in internal memory.

## Initializing the unit to factory default settings

If an error occurs in the unit's internal memory, or if you forget the password and cannot operate the unit, you can use the following procedure to initialize the internal memory.

### NOTICE

When you initialize the internal memory, all content that had been saved in memory will be lost.

Use caution when performing the following steps.

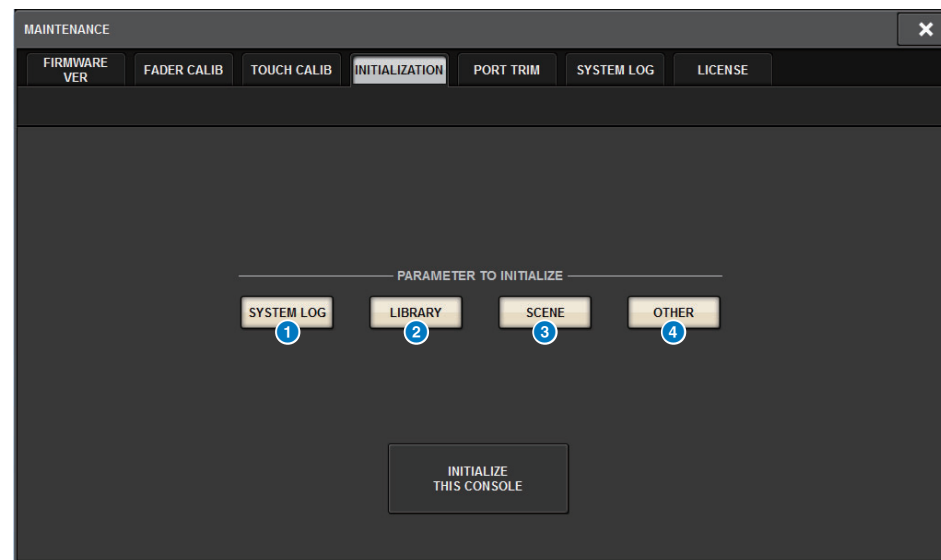
1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **MAINTENANCE** button to access the **MAINTENANCE** popup window. This window includes several pages, which you can switch between using the tabs located at the top of the window.



3. Press the **INITIALIZATION** tab. The **INITIALIZATION** page appears, enabling you to initialize the internal memory.



1. **SYSTEM LOG** button  
Press this button to initialize the system log.
2. **LIBRARY** button  
Press this button to initialize the libraries.
3. **SCENE** button  
Press this button to initialize the scene memory.
4. **OTHER** button  
Press this button to initialize settings such as the current data or setup data.
4. You can select multiple items to be initialized as required by the desired initialization method.
5. Press the **INITIALIZE THIS CONSOLE** button. A dialog box will ask you to confirm the Initialization operation.

- Press the **OK** button in the confirmation dialog box.  
The Initialization operation starts.

**NOTE**

The control surface will restart at the time of initialization.

## Adjusting the input/output gain

If necessary, you can make fine adjustments to the input and output gain.

- Press the **SETUP** button on the menu bar to access the **SETUP** screen.



- Press the **MAINTENANCE** button to access the **MAINTENANCE** popup window.  
This window includes several pages, which you can switch between using the tabs located at the top of the window.



### 3. Press the PORT TRIM tab to access the PORT TRIM page.



#### 1. Component select buttons

Enables you to select a component.

#### 2. Port select buttons

Enables you to select a port.

#### 3. PORT TRIM knobs

Adjust the gain.

- **INPUT PORT (Fine adjustment of the analog input gain)**  
This makes fine adjustments in 0.1 dB steps to the gain of the specified analog input port.
- **OUTPUT PORT (Fine adjustment of the output ports)**  
This makes fine adjustments in 0.01 dB steps to the output port gain of the specified slot.

### 4. Select a component and port for which you want to adjust the input/output gain.

### 5. Press an on-screen knob to select it, and then use the corresponding screen encoder to adjust the value.

### 6. Press the CLOSE button.

## System log

The system log enables you to identify and read about problems that occurred during operation of the RIVAGE PM series, and related information. You can also store system log data to a USB flash drive as text data. System log data is useful for analysis and troubleshooting of problems and malfunctions.

#### NOTE

You can store up to about 800 items of log data in the internal memory, including up to about 400 items related to the control surface, plus another 400 items. If you try to store more data, the system will delete the oldest data to accommodate newer data.

### 1. Press the SETUP button on the menu bar to access the SETUP screen.



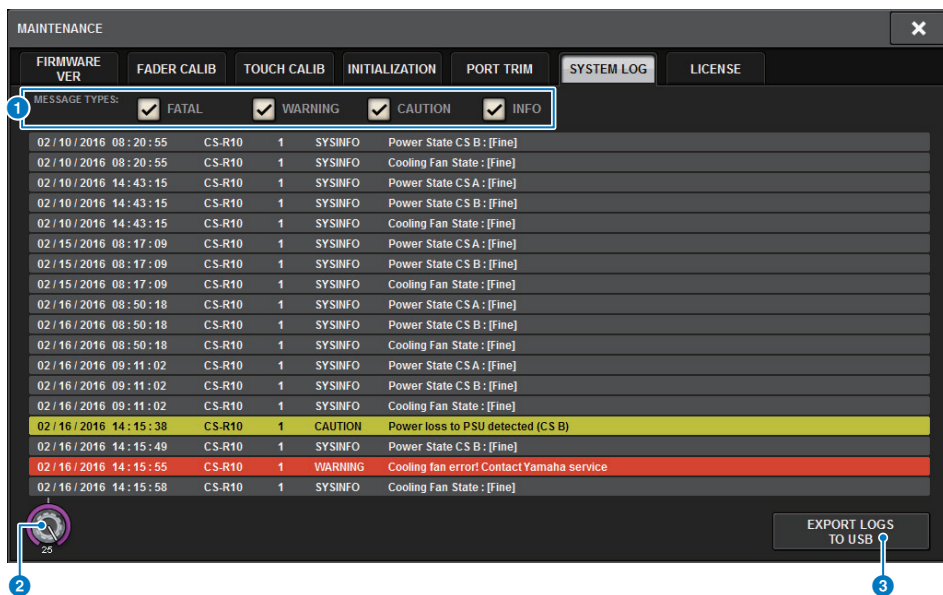
### 2. Press the MAINTENANCE button to access the MAINTENANCE popup window.

This window includes several pages, which you can switch between using the tabs located at the top of the window.



### 3. Press the SYSTEM LOG tab to access the SYSTEM LOG page.

This popup window includes the following items.



### 3 EXPORT LOGS TO USB button

This button becomes active when a USB flash drive is connected to the USB port. Press this button to store the current system log file to the USB flash drive.

### 4. If desired, select the message types you want to display.

### 5. To export the log file, connect your flash drive to the USB port, and then press the EXPORT LOGS TO USB button.

The following files will be stored in the root directory of the USB flash drive.

rivage_systemlog_user.txt	System log file
rivage_systemlog_dvlp.txt	Support service file
rivage_systemlog_panl.txt	

#### NOTE

If you want to store the files using RIVAGE PM Editor, they will be stored in the storage location specified on the SAVE/LOAD screen. If the specified storage location is not valid, the EXPORT LOGS TO STORAGE button will be disabled. If you do not have an Administrator account for a computer running PM Editor, you will be unable to store files in the root directory on the C drive.

### 1 MESSAGE TYPE buttons

Enable you to select message types to display or hide on the SYSTEM LOG page. The following message types are included.

<b>FATAL</b>	Information regarding errors, such as malfunctions
<b>WARNING</b>	Information regarding problems that could lead to the unit's malfunction or intermittent audio, which might interrupt operation
<b>CAUTION</b>	Information regarding circumstances that require attention but do not necessarily interrupt operation
<b>INFO</b>	Reference information (such as power-on information) that will not lead to problems

#### NOTE

Message type selection is stored after the power is turned off.

### 2 Scroll knob

You can scroll the list using the screen encoder.

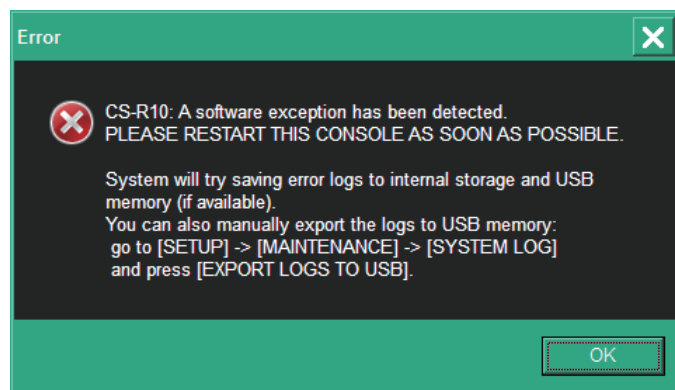
## System dump

If the RIVAGE PM series experiences a software problem during operation, it will dump (store) the system status at that point in the internal memory of the control surface.

If the problem is related to software, an error message (something like the one below) will appear.

### NOTICE

If you see this error message, restart the control surface as soon as possible.



Press the OK button. The SAVE/LOAD screen will be displayed and the following files will be stored in the internal memory.

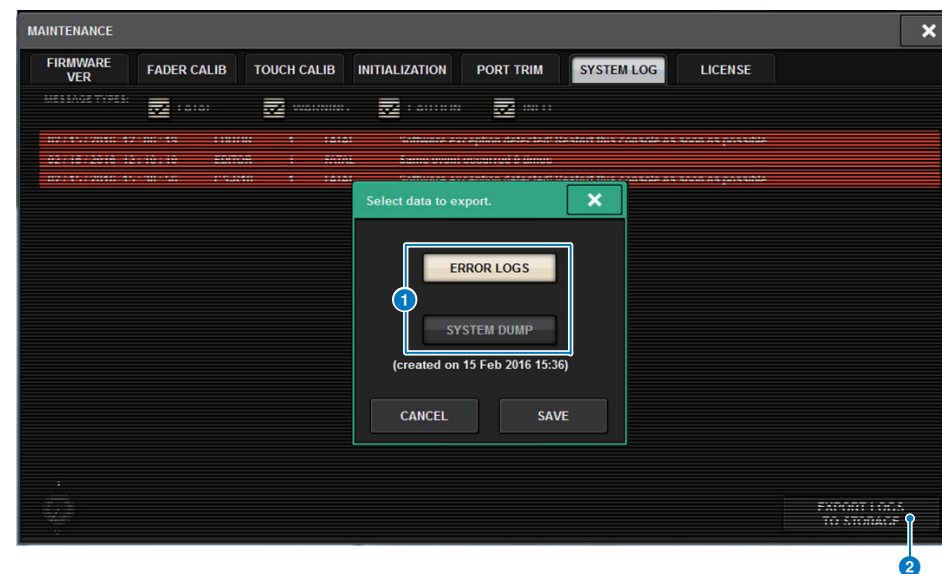
	CS-R10, CS-R10-S	CSD-R7
System dump file	SystemDump_PM10.dmp	SystemDump_PM7.dmp
Screen shot at the time of the incident	SystemDump_PM10.png	SystemDump_PM7.png
Project file that stores the system status at the time of the incident	SystemDump_PM10.PM10ALL	SystemDump_PM7.PM7ALL

### NOTE

If a USB flash drive is connected to the USB port and an error message (described above) is displayed, the project file will be stored automatically in the USB flash drive as well as in the internal memory.

After the error message appears, if you wish to connect a USB memory device to store the system dump data, follow the steps below.

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.
2. Press the **MAINTENANCE** button to access the **MAINTENANCE** popup window.
3. Press the **SYSTEM LOG** tab to access the **SYSTEM LOG** page.



### 1 Data select buttons

Select data to store.

**ERROR LOGS** : Current system log file

**SYSTEM DUMP** : System dump file, and screen shot and project file created at the time of the problem

### 2 EXPORT button

Press this button to store the file created at the time of the incident to the USB flash drive.

## 4. Select **SYSTEM DUMP**, and then press the **EXPORT** button.

To cancel, press the **CANCEL** button.

The system dump data will be stored in the USB flash drive. Storing the data may take some time.

### NOTE

Stored data is useful for analysis and troubleshooting of problems and malfunctions. If you consult your Yamaha dealer, please be sure to provide the stored data along with information regarding the trouble or malfunction.



# Console Status

## Setting the date and time of the internal clock

This section explains how to set the date and time of the clock built into the CL unit, and how to select a date and time display format.

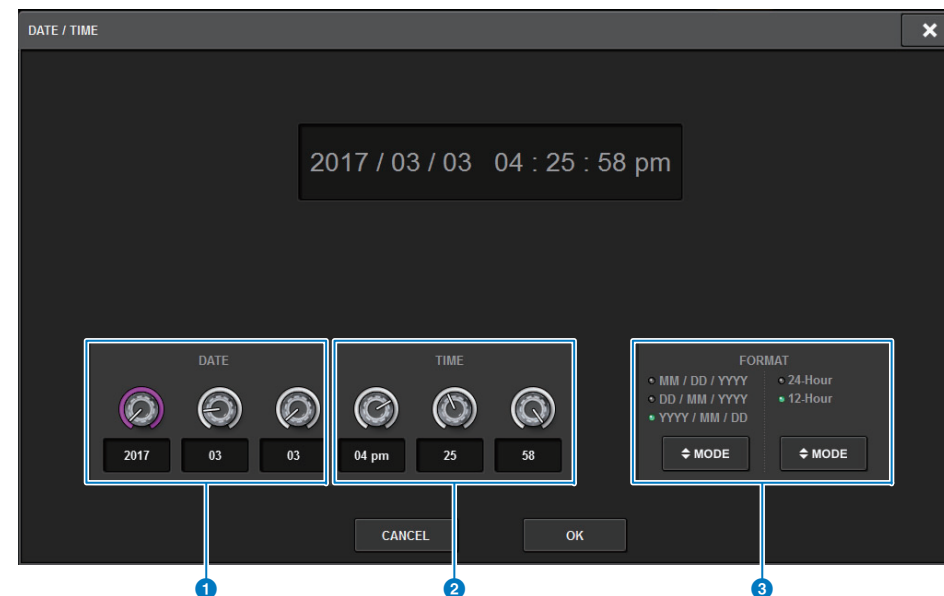
The date and time you specify here will affect the time stamp used when saving or loading a scene.

When connected to RIVAGE PM Editor, the internal clock automatically synchronizes to the computer's time.

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **DATE/TIME** button to access the **DATE/TIME** popup window. This popup window includes the following items.



1. **DATE**  
Specifies the date of the internal clock.
  2. **TIME**  
Specifies the time of the internal clock.
  3. **FORMAT field (display format)**  
This field specifies the format in which the date and time of the internal clock are displayed.
3. In the **FORMAT** field, press the **MODE** buttons several times to select the desired format for date and time display. You can select from the following display formats.
    - **Date**  
MM/DD/YYYY (Month/Day/Year)  
DD/MM/YYYY (Day/Month/Year)  
YYYY/MM/DD (Year/Month/Day)
    - **Time**  
24-Hour (hours shown in the range of 0–23)  
12-Hour (hours shown in the range of AM0–AM11 and PM0–PM11)

**4. Use the screen encoders on the top panel to specify the current date and time.**

**5. When you finish making settings, press the OK button.**

The date, time, and display format you specified will be finalized, and the popup window will close. If you press the CANCEL button or the “x” symbol instead of the OK button, your changes will be discarded and the popup window will close.

## Panel Settings

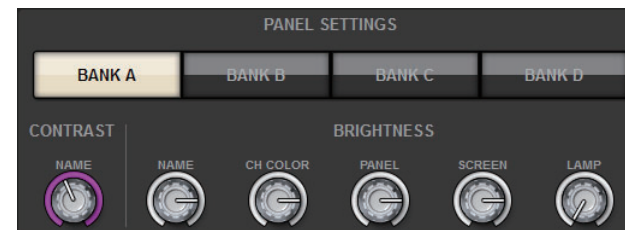
### Specifying the brightness of the touch screens, LEDs, channel name displays, and lamps

This section explains how to specify the brightness and contrast of individual touch screens, top panel LEDs and channel name displays, and lamps connected to the rear panel LAMP connectors of the control surface. You can save four different settings in banks A–D, and select one of them.

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. In the field located on the bottom row of the **SETUP** screen, press one of the **BANK A–D** buttons. You can save four different brightness settings in banks A–D, and switch among them rapidly if desired.



3. Use the screen encoders to set the following parameters.
  - **BANK A–D**.....Enable you to select the target bank (A–D).

#### CONTRAST field

- **NAME**.....Adjusts the contrast of the characters in the channel name display on the top panel.

#### BRIGHTNESS field

- **NAME**.....Adjusts the brightness of the channel name displays on the top panel. This will also change the CH COLOR brightness. If you want to adjust the CH COLOR brightness after setting the name display brightness, use the CH COLOR knob.
- **CH COLOR**.....Adjusts the brightness of the channel colors on the top panel. This lets you apply a relative adjustment to only the channel color brightness without changing the channel name display brightness.
- **PANEL**.....Adjusts the brightness of the top panel LEDs.
- **SCREEN**.....Adjusts the brightness of the touch screens. If you have set the brightness to lower than level 2, the system will start up next time with a brightness setting of 2 so that you will be able to see the screen.
- **LAMP** .....Adjusts the brightness of the lamps connected to the rear panel LAMP jacks.

4. If desired, switch among banks A–D, and make settings for the other bank in a similar manner.

Now you can switch among the BANK A–D buttons to change the brightness of the touch screens, LCDs, channel name displays, and lamps in a single operation. You can also assign this parameter to a USER DEFINED key, and press that key to switch among banks A–D.

## Console Lock

You can temporarily prohibit console operations in order to prevent unwanted operation. This setting completely disables operations of the panel and touch screen, so that controllers cannot be operated by an accidental touch or by an unauthorized third party while the operator is taking a break.

### NOTE

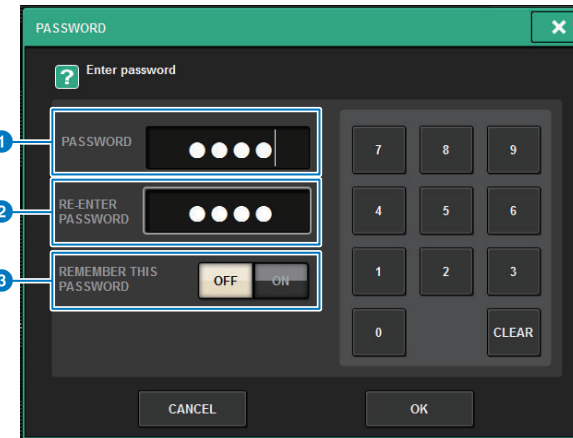
- If you forget the password and cannot defeat Console Lock, press the [RESET] switch on the rear panel. Alternatively, turn the power to the console off and then on to unlock it.
- Even while the console is locked, control from an external device via MIDI will still operate as usual.

## Locking the console

1. Press the **SETUP** button on the menu bar to access the **SETUP** screen.



2. Press the **CONSOLE LOCK** button to access the **PASSWORD** popup window.



1. **PASSWORD field**
2. **RE-ENTER PASSWORD field**  
Enter the password once again.
3. **REMEMBER THIS PASSWORD button**  
If this button is on, you will need to use the same password next time.
3. **If you do not set the password, press the OK button.**  
If you set the password, proceed to step 4.
4. **Enter the password in the PASSWORD field, then enter the same password in the RE-ENTER PASSWORD field for verification, and finally press the OK button.**  
The **CONSOLE LOCK** screen will appear, the Console Lock function will be enabled, and all controllers (excluding the **MONITOR A/B** knobs, **TALKBACK LEVEL** knob, **PHONES A/B LEVEL** knobs, and brightness control knob) will become inoperable.

## Unlocking the console

---

### 1. Press the **CONSOLE LOCK** screen.

If no password has been set, Console Lock will be defeated.

If a password has been set, the **PASSWORD** popup window will appear, enabling you to enter the password.

### 2. Enter the password and press the **OK** button.

The console will be unlocked, the system will display the **SETUP** screen, and the controllers will be operable once again.

## Specifying the **CONSOLE LOCK** screen image

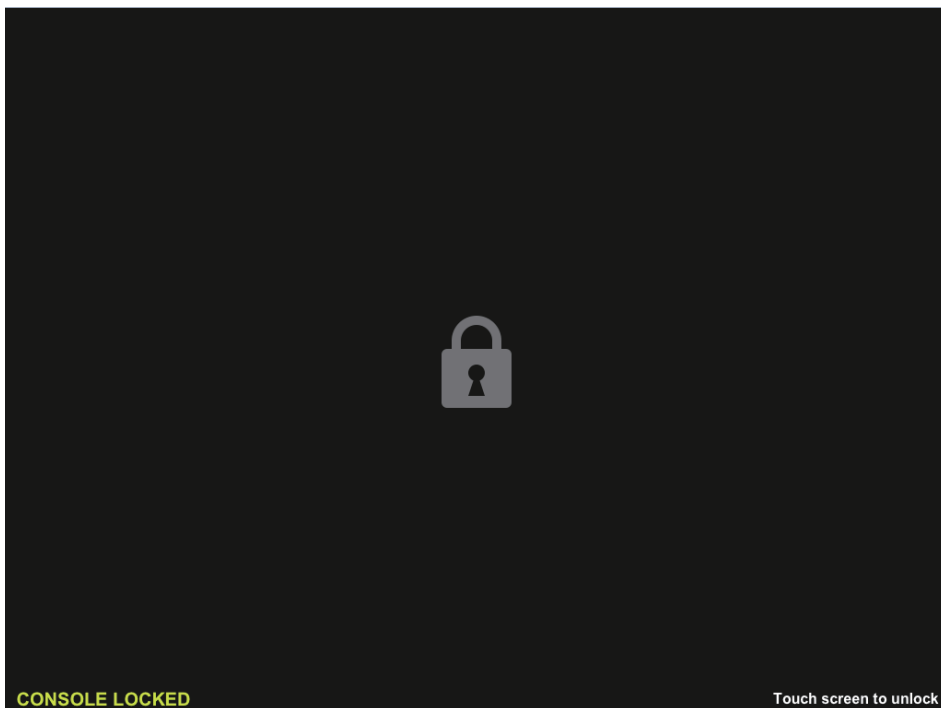
---

You can display an image file on the **CONSOLE LOCK** screen.

In the **SAVE/LOAD** popup window, specify the image file that you want to display, and then load it from the USB flash drive. For a procedure on loading a file from a USB flash drive, refer to “[Loading a file from a USB flash drive](#)” (page 347).

### **NOTE**

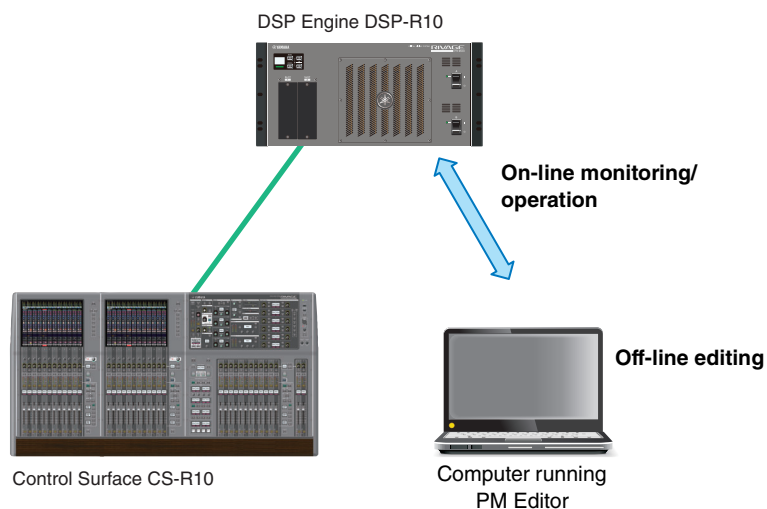
Only BMP, JPEG, or PNG image files can be loaded.



# Setting up RIVAGE PM Editor and RIVAGE PM StageMix

## About the RIVAGE PM Editor

The RIVAGE PM Editor (called “PM Editor” in this book) is application software that enables you to use your computer to perform off-line editing by preparing the RIVAGE PM series settings in advance, and also to monitor and adjust the RIVAGE PM series (on-line monitoring/operation).



### NOTE

- Operations in PM Editor and operations on the control surface are almost identical.
- Parts of this application software are based on open-source software. For information regarding software licenses, please see the LICENSE screen.

## On-line monitoring/operation

1. Connect a computer (that has PM Editor installed) to the DSP engine (or to the control surface) using an Ethernet cable.

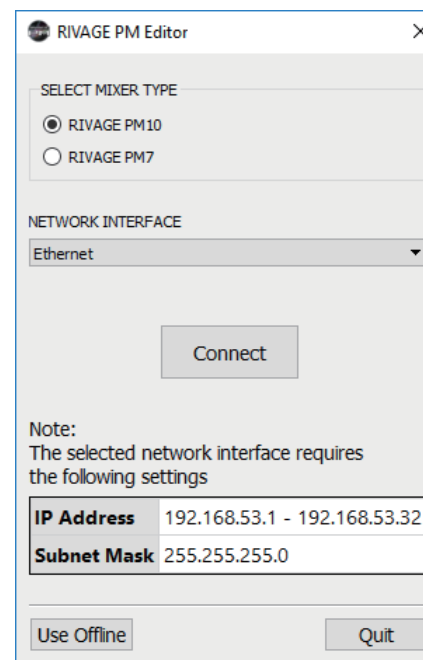
For more information on configuring the network, please refer to the “RIVAGE PM Editor Installation Guide.”

### NOTE

Up to two instances of PM Editor can be connected. If you want to connect two instances of PROGRAM Editor to the DSP engine (or the control surface), use a network hub to make connections. Alternatively, you can connect one instance of PM Editor to the DSP engine and another instance to the control surface.

2. Start PM Editor.

The following screen appears at start-up.



3. In SELECT MIXER TYPE, select the RIVAGE PM series unit; in NETWORK INTERFACE, select the network that you will use.

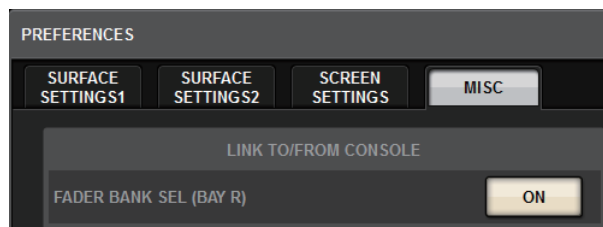
If an IP address that can be connected to the selected network is specified, the Connect button can be pressed.



- Click the **Connect** button so that the RIVAGE PM series will be linked to PM Editor.

**NOTE**

If you plan to link channel block selection in PM Editor with that on bay R, press [SETUP] → [PREFERENCES] → MISC tab to access the LINK TO/FROM CONSOLE field, and then set FADER BANK SEL (BAY R) to On.



Once the DSP engine detects PM Editor on-line, the DEVICE SYNC screen appears.



When connecting PM Editor, you must specify the data sync direction for the DSP engine.

- Select "EDITOR ↔ DSP."
- Press the **SYNC** button.  
Parameter settings on the RIVAGE PM series will be copied to PM Editor. Once data synchronization is completed, the line indicating synchronization is displayed in green.
- Edit the mixing data.

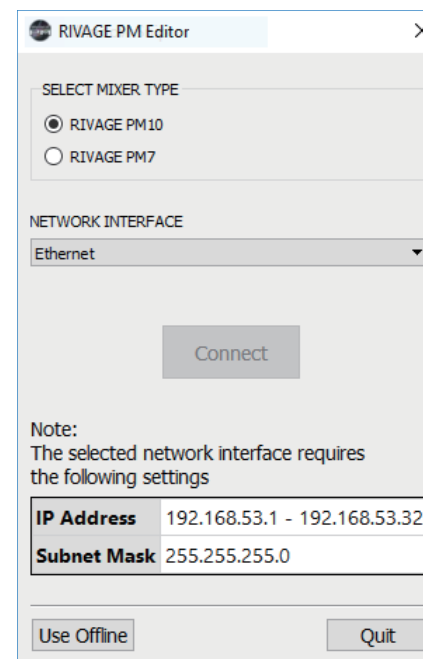
## Off-line editing/synchronization

You can edit mixing data off-line.

### Off-line editing

- Start PM Editor.

The following screen appears at start-up.

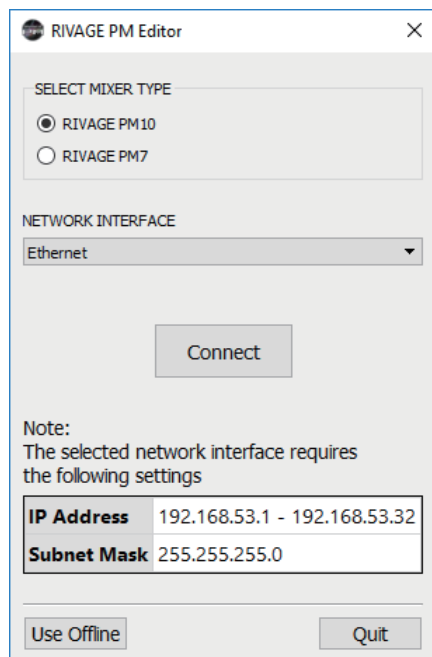


- Press the **Use Offline** button.
- Edit the mixing data.
- When you finish editing the data, save the setting file using the **SAVE/LOAD** screen.
- Exit the application.

## Synchronizing the edited mixing data

### 1. Start PM Editor.

The following screen appears at start-up.



### 2. In SELECT MIXER TYPE, select the RIVAGE PM series unit; in NETWORK INTERFACE, select the network that you will use.

If an IP address that can be connected to the selected network is specified, the Connect button can be pressed.

### 3. Click the Connect button.

Once the DSP engine detects PM Editor on-line, the DEVICE SYNC screen appears.

### 4. Select "EDITOR ➔ DSP."

### 5. Press the SYNC button.

Parameter settings in PM Editor will be copied to the RIVAGE PM series. Once data synchronization is completed, the line indicating synchronization will be displayed in green.

#### NOTE

- If the DSP engine is connected on-line with the control surface, the EDITOR→DSP synchronization is disabled.
- Edited mixing data can be saved to a USB flash drive, and loaded directly to the control surface.

## On-screen operation

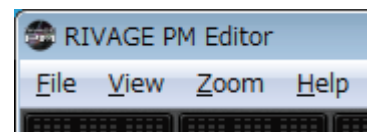
### Using the mouse wheel

You can use the mouse wheel as if you were operating the [TOUCH AND TURN] knob on the unit.

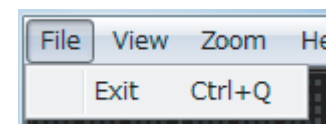
### Using the PC keyboard

You can use the PC keyboard to enter text as if you were operating the keyboard screen on the unit.

## Menu bar



### ■ File menu

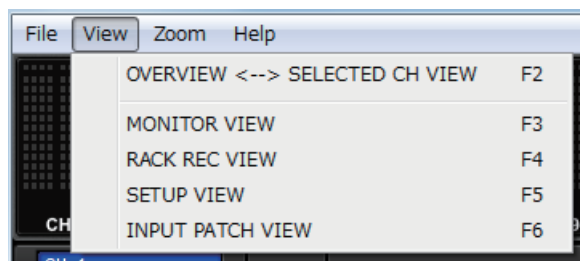


This is a menu for file operations.

#### Exit

Exits PM Editor.

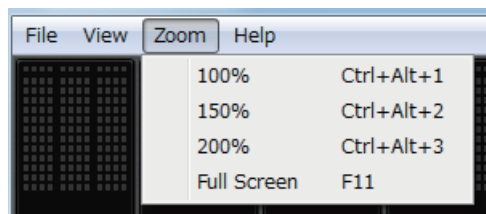
### ■ View menu



Selects a screen to view.

### ■ Zoom menu

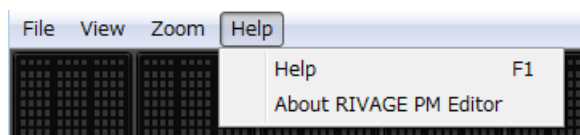
Specifies a zoom percentage for the screen.



### Full Screen

PM Editor is displayed full screen.

### ■ Help menu



### Help

Opens a Web browser to display the manual library.

### About RIVAGE PM Editor

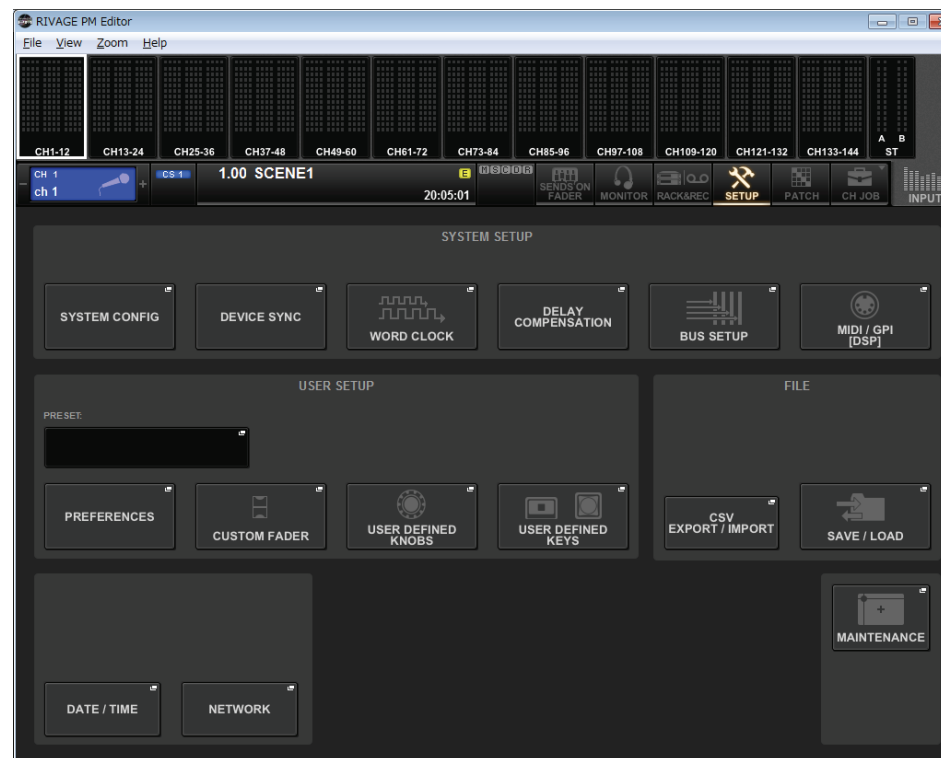
Opens the “About RIVAGE PM Editor” screen, which displays the version number of PM Editor.

### NOTE

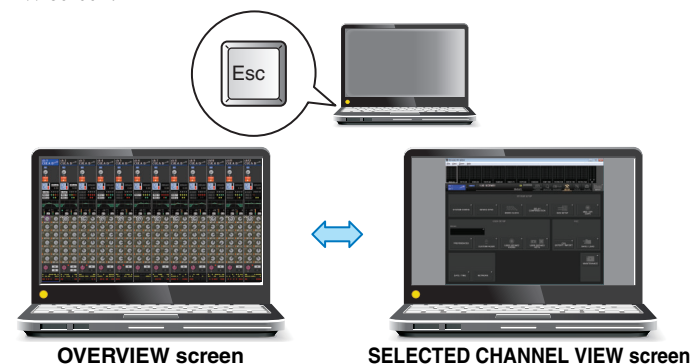
You must connect to the Internet to view the manual library.

## About the screens

The screens of PM Editor are identical to those on the control surface. However, parts that you cannot control in PM Editor are hidden, as shown below.



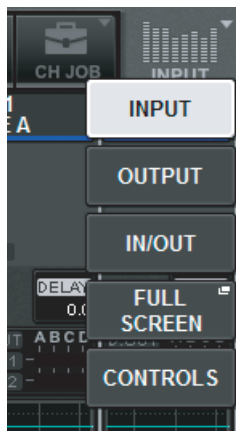
Press the [ESC] key repeatedly to toggle between the OVERVIEW screen and the SELECTED CHANNEL VIEW screen.



## CONTROLS

You can perform panel operation of the control surface from PM Editor.

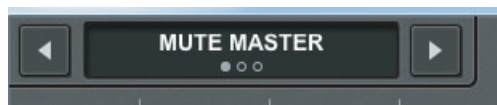
Press the METER button to display a pull-down menu, and then select CONTROLS to display one of the CONTROLS screens.



### NOTE

If you have selected Full Screen (F11) from the Zoom menu, each CONTROLS screen will be displayed in the meter section.

### Switching CONTROLS screens



Use the left and right arrow buttons in the upper-left corner to select the desired CONTROLS screen.

### MUTE MASTER screen



You can switch MUTE MASTER on or off.

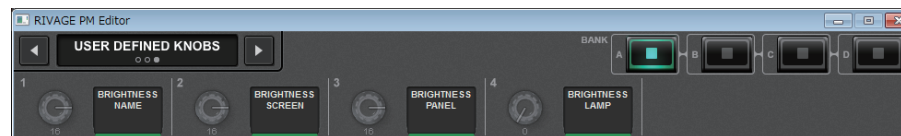
## USER DEFINED KEYS screen



You can switch the functions assigned in the USER DEFINED KEYS screen on or off.

Buttons for the functions that you cannot control in PM Editor will be grayed out.

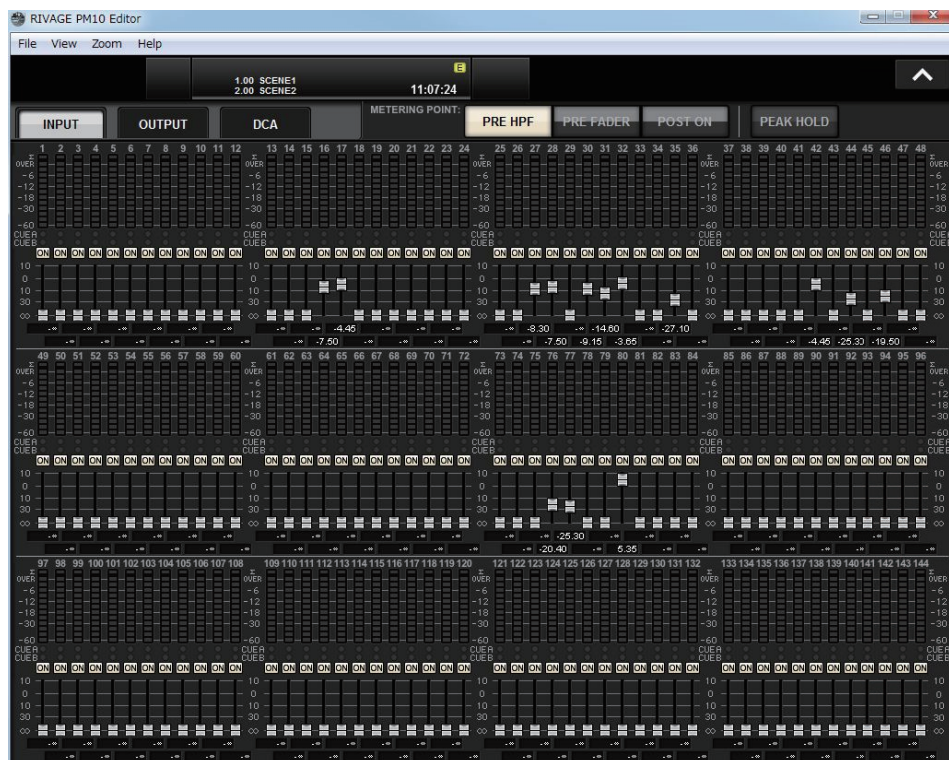
## USER DEFINED KNOBS screen



You can switch the function assigned in the USER DEFINED KNOBS screen on or off.

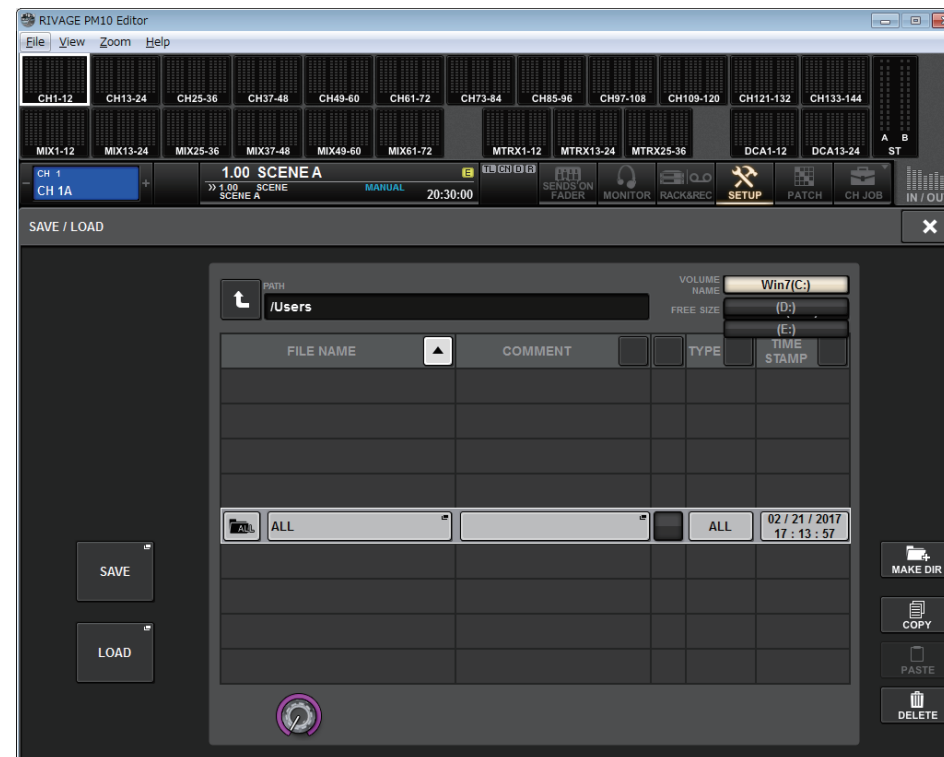
Buttons for the functions that you cannot control in PM Editor will be grayed out.

## Operating the faders in the METER screen (Full Screen)



PM Editor enables you to control the faders or channel on/off using the mouse in the METER screen (Full Screen).

## Saving and loading a file



In PM Editor, you can specify a directory to/from which to save or load a file.

The file format that PM Editor supports is expressed with the extension .PM10ALL, .PM10PART, .PM7ALL or .PM7PART. Internal setting files of the RIVAGE PM series will be saved.

### NOTE

- You can save .PM10ALL files (created in PM Editor) in a USB storage device connected to the computer, and then load the files directly to the control surface via the USB port. Similarly, if you save .PM10ALL files from the control surface to a USB storage device, you can load them into PM Editor.
- If you do not have an Administrator account for the computer that has PM Editor installed, you will be unable to store files in the root directory on the C drive.

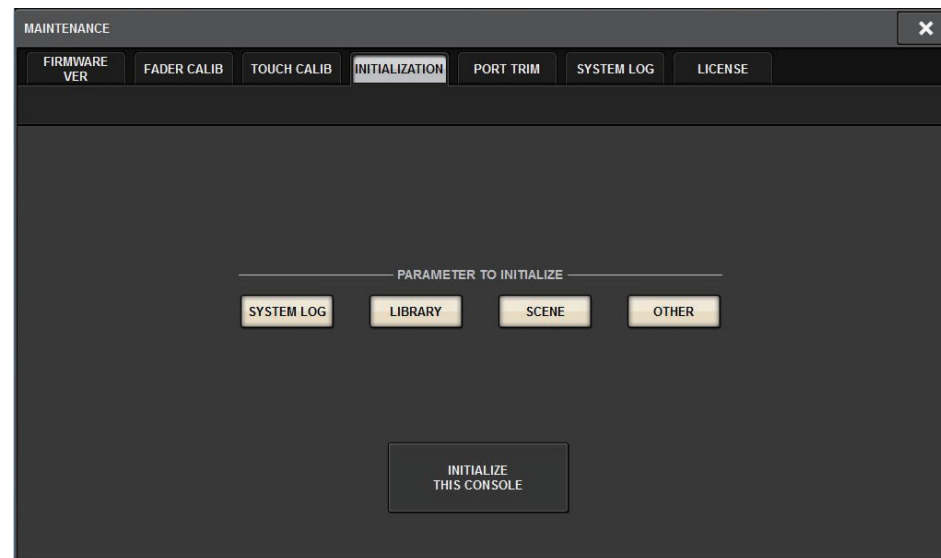
## PM Editor shortcut keys

Procedure		Key operation
Exiting the application (Exit)		Ctrl + Q (Alt + F4)
Copying text inside an edit box		Ctrl + C
Pasting text into an edit box		Ctrl + V
Cutting text inside an edit box		Ctrl + X
Parameter value increment		Page Up (normal operation) Right arrow (fine adjustment) Upward arrow (fine adjustment) Wheel up
Parameter value decrement		Page Down (normal operation) Left arrow (fine adjustment) Down arrow (fine adjustment) Wheel down
Minimizing the parameter value		Home
Maximizing the parameter value		End
Setting the parameter value to nominal (No response if nominal value does not exist)		Ctrl + Shift + left click
Setting the parameter value to default		Ctrl + left click
Opening Help		F1
Opening Selected Channel View (If Overview is open) Opening Overview (If any screen other than Overview is open)		F2 (Esc)
Opening MONITOR VIEW		F3
Opening RACK REC VIEW		F4
Opening SETUP VIEW		F5
Opening INPUT PATCH VIEW		F6
Zoom	100%	Ctrl + Alt + 1
	150%	Ctrl + Alt + 2
	200%	Ctrl + Alt + 3
	Full Screen	F11
Selecting a Custom Fader Bank		Ctrl + [1, 2] + [A, B, C, D, E, F]

\* In the case of the Mac version, use Command instead of Ctrl.

## Initializing PM Editor

1. Press [SETUP] → [MAINTENANCE] → [INITIALIZATION] tabs to access the INITIALIZATION page.



2. You can select multiple items to be initialized as required by the desired initialization method.
3. Press the INITIALIZE THIS CONSOLE button.  
A dialog will request that you confirm the initialization operation.
4. Press the OK button in the confirmation dialog box.  
The initialization operation starts.

### NOTE

Once PM Editor is initialized, the application will restart automatically.



## About RIVAGE PM StageMix

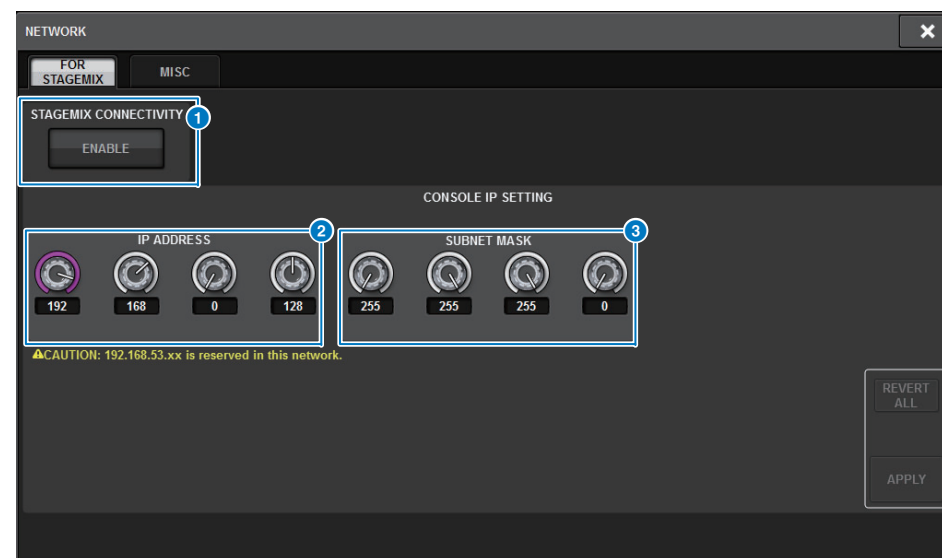
RIVAGE PM StageMix (subsequently called PM StageMix) is software for remotely operating this unit from an iPad that is connected via Wi-Fi. This allows you to mix remotely while hearing the sound in a listening position such as the audience seating or in front of the monitor speakers. Up to two instances can be connected to one control surface unit.

### Network settings for the control surface

1. Press the **SETUP** button to access the **SETUP** screen.



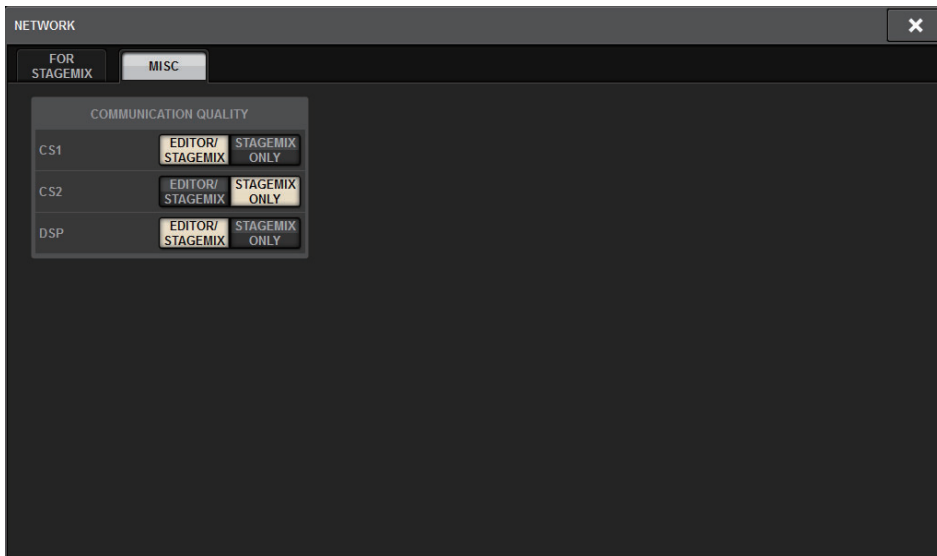
2. Press the **NETWORK** popup button to access the **NETWORK** popup window.



1. **STAGEMIX CONNECTIVITY button**  
When you press this to enable it, the control surface can be detected from PM StageMix.
2. **IP ADDRESS**  
Specifies the IP address of the control surface.
3. **SUBNET MASK**  
Of the IP addresses used in the network, this defines the bits used for the network address that identifies the network.
3. Press the **FOR STAGEMIX** tab to access the IP address setting screen for PM StageMix.
4. Turn on the **STAGEMIX CONNECTIVITY** button.
5. Specify the IP address and subnet mask, and press the **APPLY** button.  
Unusable values are shown in red.

#### NOTE

If the IP address setting fails, such as when a device of the same IP address is connected to the network, the message "IP Address for StageMix is not available!" is displayed. Specify separate addresses.

**6. Press the MISC tab to access the COMMUNICATION QUALITY screen.****7. Specify the COMMUNICATION QUALITY setting for the NETWORK connector to which PM StageMix will be connected.**

If you are using this in conjunction with PM Editor on the same NETWORK connector, select the EDITOR/STAGEMIX button. If you are using only StageMix, selecting the STAGEMIX ONLY button will lower the communication load.

## Network settings on the iPad

---

- 1. On the iPad, tap Settings > Wi-Fi to access the Wi-Fi network screen.**
- 2. Turn Wi-Fi “on.”**
- 3. In the displayed list of networks, tap the network to which the RIVAGE PM series is connected.**

If a password is required, enter it before connecting.

# Messages

Message	Meaning
[xx] connected	Device xx is connected.
[xx] disconnected!	Device xx is disconnected.
[ 'LOCATION' ] : Multiple Word Clock Masters found! Please check the connection status of each DSP Engine, the Engine ID via the LCD Display of each DSP Engine and the Word Clock Setup view.	[ Location ]: Multiple word clock masters were found. Check each DSP engine's connection status, Unit ID, LCD screen, and word clock setting.
[ 'LOCATION' ] : Word Clock Master not found! Please assign a Word Clock Master	[ Location ]: No word clock master was found. Assign a word clock master.
BAY LINK released.	A Bay Link was released. This message appears if a bay link is released due to changes in the SEL LINK settings.
Bay x does not exist.	You attempted to operate a non-existing bay (only for CS-R10-S).
Cannot add event! (event list full)	The maximum number of events (2000) allowed on the list has been reached. You cannot add more events.
Cannot bookmark this popup	This popup window cannot be bookmarked.
Cannot close this page	This page cannot be closed.
Cannot edit overlay!	You cannot change the Overlay offset to a value outside the specified range.
Cannot edit scene! (extracting scene data)	One of these messages will be displayed if you attempt to perform an invalid operation during extraction of scene data, or if you try to use the Global Paste function only on the standalone control surface or only in PM Editor.
Cannot load file (extracting scene data)	
Cannot recall! (extracting scene data)	
Cannot save file (extracting scene data)	
Cannot shutdown (extracting scene data)	
Cannot store! (extracting scene data)	
Cannot undo! (extracting scene data)	
Cannot update! (extracting scene data)	
Cannot mount!	
Cannot load partial data now! (data in console corrupt; only ALL file can be loaded)	
Cannot mount the plug-in. No DSP resources available.	Additional plug-ins cannot be mounted due to insufficient DSP resources.
Cannot mount! (plug-in too large for selected location)	Plug-in failed to mount due to insufficient size of the slot.

Message	Meaning
Cannot open the bookmarked page	The bookmarked page failed to open.
Cannot paste!	The character string in the copy buffer is too long to be pasted.
Cannot perform this action! (scene data is now being extracted)	One of these messages will be displayed if you attempt to perform an invalid operation during extraction of scene data or during the Global Paste operation.
Cannot perform this action! (global paste in progress)	
Cannot recall! (Internal error)	The scene cannot be recalled due to an internal error.
Cannot save now! (mixing data corrupt)	Control surface data is corrupt and cannot be saved. To recover the data, access the DEVICE SYNC screen, and then re-sync data in the DSP → CS sync direction. Alternatively, access the SAVE/LOAD screen and load the control surface setting file. Otherwise, initialize the control surface.
Cannot Select for GLOBAL PASTE! (too many scenes; max. 100)	You cannot select more than 100 scenes for the Global Paste operation.
Cannot store! (too many scenes; max. 1000)	The scene cannot be stored because the maximum number (1,000) of scenes that can be stored has already been reached.
Cannot sync in this direction! (DSP is already online)	If the control surface or PM Editor is connected with the DSP engine online, you will be unable to sync to transfer data to the DSP engine.
Cannot sync in this direction! (mixing data corrupt)	Data is corrupt. Syncing in this direction is not available. If the control surface data is corrupt, syncing in the CS → DSP direction is not available. If the DSP engine data is corrupt, syncing in the DSP → CS direction is not available.
Cannot trigger event! (event not found)	You cannot trigger any events from a device other than the console, or non-existing events.
Cannot trigger event! (Event List can only be operated from main console)	
Cannot trigger event! (event list disabled)	If an event list is disabled, you cannot recall events.
Cannot undo! (Internal error)	The Undo operation failed due to an internal error.
Cannot update scene!	The scene failed to be stored due to an internal error.
Channel pair made	The channels are paired.
Channel pair made. (plug-ins and GEQ's have been unmounted)	The channels are paired. Inserted plug-ins and GEQ are now unmounted.
Channel pair released	The channel pair was canceled.
Channel pair released. (plug-ins and GEQ's have been unmounted)	The channel pair was canceled. Inserted plug-ins and GEQ are now unmounted.
Channel set to default	Channel data is reset to its default value.
Console initialization [XX] completed	The console initialization is complete.

Message	Meaning
<b>Console local I/O model type conflict!</b>	An internal error occurred on the console. Connections inside the operating panel may be faulty. Please contact your Yamaha dealer.
<b>Console local I/O not responding! Try updating console firmware.</b>	The system cannot communicate with the console's built-in Local I/O section. Refer to the PM10 Firmware Update Guide (separate document) to use PM10 FIRMWARE UPDATER for a recovery operation.
<b>Console Network: ring connection open! Check cable connection.</b>	The system detected that the ring connection of the console network is disconnected. Check the cable integrity and connection.
<b>Cooling fan error! (XXX) Contact Yamaha service</b>	The system detected faulty cooling fans on the console. Please contact your Yamaha dealer.
<b>Couldn't access the file</b>	The specified directory or file does not exist.
<b>Couldn't delete file</b>	The system failed to delete the file.
<b>Couldn't rename file</b>	The system failed to rename the file.
<b>Couldn't write file!</b>	The system tried to save the file, but failed to write it to the USB storage device.
<b>CUE turned off (Keyin)</b>	The Keyin's CUE was automatically turned off.
<b>CUE turned off (Plug-in)</b>	The plug-in's CUE was automatically turned off.
<b>CUE turned off (USB playback out)</b>	The CUE of the USB recorder output was automatically turned off.
<b>CUE turned off (USB recorder in)</b>	The CUE of the USB recorder input was automatically turned off.
<b>CUE turned off (USB recorder in/out)</b>	The CUE of the USB recorder input/output was automatically turned off.
<b>DANTE audio resource overflow.</b>	There are insufficient audio resources on the Dante audio network.
<b>DANTE Connection Error!</b>	In a daisy-chain connection, the primary and secondary connections are wrong.
<b>DANTE is not working by GIGA bit.</b>	Gigabit is not enabled on the Dante audio network.
<b>DANTE is working at Secondary.</b>	The Dante audio network is operating on the secondary port.
<b>DANTE setting mismatch.</b>	The DIP switch settings of the Dante device differ from the actual settings.
<b>DANTE module Error!</b>	The Dante module has malfunctioned.
<b>DANTE port does not have connection.</b>	Not connected to the Dante network.
<b>DCA ROLL-OUT : DCA members scrolling.</b>	DCA members' fader assignment is scrolling in DCA ROLL-OUT mode.
<b>Directory not empty!</b>	The directory in the USB storage device cannot be deleted because the directory is not empty.

Message	Meaning
<b>DSP Engine xx (Active): Disconnected.</b>	Engine xx (active) was disconnected.
<b>DSP Engine xx (Standby): Disconnected.</b>	Engine xx (standby) was disconnected.
<b>DSP Mirroring : 3 or more Engines found on the Console Network. Please remove unused Engines from the Network.</b>	Three or more engines were found on the console network. Remove the unused engine from the network.
<b>DSP Mirroring : Active Engine Switched to xx.</b>	The active engine has switched to xx.
<b>DSP Mirroring : Engines are not synchronized. Please check system configuration.</b>	Synchronization between engines is not occurring. Reconsider the configuration.
<b>DSP Mirroring : Failed to switch Engine to xx. Error : reason.</b>	Failed to switch to engine xx.
<b>DSP Mirroring : No Active Engine. Select which Engine to set to Active.</b>	There is no active engine. Select the engine that you want to make active.
<b>DSP Mirroring : Switching can not be done now.</b>	Switching is not currently possible.
<b>DSP Mirroring : There are currently multiple Active Engines. Select which Engine to keep Active. The other Engine will be set to Standby.</b>	There are multiple active engines. Select the engine that you want to keep active. The other engine will be set to standby.
<b>DSP Mirroring : Unit ID combination of DSP Engines may be incorrect. Please ensure one Engine is set as #A and the other as #B.</b>	The combination of unit IDs of the DSP engines might be incorrect. Make sure that one engine is set to #A and the other engine is set to #B.
<b>Duplicate Console ID!</b>	The CONSOLE ID is conflicting.
<b>Editor initialization [XX] completed</b>	The Editor initialization is complete.
<b>Error occurred at Secondary Port.</b>	When using redundant settings, the network cable of the secondary port was disconnected.
<b>Fader bank snapshot is done.</b>	Fader bank snapshot has been taken.
<b>File access busy!</b>	The system did not complete the operation because it is currently processing internal data. Try it again later.
<b>File already exists!</b>	A file with the same name as the one you are about to save already exists.
<b>Finished loading file</b>	File loading is complete.
<b>Finished saving file</b>	The file save operation is complete.
<b>GPI 5V output error! Disconnect GPI and check connection.</b>	The system detected an abnormality at the GPI +5V output connector. Excessive current may exist due to a short-circuit to ground. Check the cable connection.
<b>Home bookmarked</b>	The status of the control panel and screens are bookmarked via the HOME key.

Message	Meaning
<b>HY SLOTx:Primary is not working by GIGA bit.</b>	The primary connection of HY SLOTx is active, and is not linked via gigabit.
<b>HY SLOTx:Secondary is not working by GIGA bit.</b>	The secondary connection of HY SLOTx is active, and is not linked via gigabit.
<b>HY SLOTx:Dante switched to secondary port.</b>	Although HY SLOTx is using a redundant connection, only the secondary port is being used.
<b>HY SLOTx:No Response from I/O DEVICE.</b>	There is no response from the I/O device at HY SLOTx.
<b>Illegal DIP Switch Setting.</b>	The DIP switch settings of the R-series unit are invalid.
<b>Illegal MAC Address!</b>	Operating with an invalid MAC address.
<b>Image file for Console Lock screen successfully loaded.</b>	The image file for the Console Lock screen was loaded successfully.
<b>Image file too large!</b>	The system failed to load the image file for the Console Lock screen because the size is too large (exceeds 3072 x 768 pixels).
<b>Inappropriate scene number (#XX)</b>	An inappropriate scene number was assigned during the scene renumbering operation.
<b>Internal error! (BUFFER_FULL)</b>	An internal error occurred on the console. If this error persists, please contact your Yamaha dealer.
<b>Internal error! (PANELxx_COMMUNICATION_ERR)</b>	An internal error occurred in the console. Communications inside the operation panel may be faulty. Please contact your Yamaha dealer.
<b>Internal error! (PANELxx_DISCONNECTED)</b>	An internal error occurred in the console. Connections inside the operating panel may be faulty. Please contact your Yamaha dealer.
<b>Internal memory corrupt! Try initializing console and restart.</b>	Internal memory is corrupt. Initialize the console, and then restart it.
<b>Internal memory corrupt! Try initializing editor and restart.</b>	Internal memory is corrupt. Initialize the console, and then restart it.
<b>Interval from Previous Event is too short!</b>	The event execution interval in the event list is too short.
<b>IP Address for StageMix is not available!</b>	Failed to set the IP address for StageMix.
<b>Loading aborted</b>	File loading was interrupted.
<b>Low Battery! (DSP Engine)</b>	The internal battery capacity of the DSP engine is low. The internal clock may not keep the correct time. Please contact your Yamaha dealer for information regarding battery replacement.
<b>Max. HY slot channel count exceeded! (256)</b>	The number of output channels in the DSP engine assigned to TWINLANe exceeds the maximum number (256) of channels allowed. Limit the number to 256 or less.
<b>Max. TWINLANe channel count exceeded! (400)</b>	The number of output channels in the entire system assigned to TWINLANe exceeds the maximum number (400) of channels allowed. Limit the number to 400 or less.

Message	Meaning
<b>Memory Error.</b>	The backup memory of the R-series unit is damaged.
<b>MIDI: Data framing error!</b>	MIDI data Rx framing error occurred.
<b>MIDI: Data overrun error!</b>	MIDI data Rx overrun error occurred.
<b>MIDI: Rx buffer full!</b>	MIDI Rx buffer is full.
<b>MIDI: Tx buffer full!</b>	MIDI Tx buffer is full.
<b>Mismatch of currently installed firmware. For correct system operation, please ensure matching firmware is installed in all system elements.</b>	A mismatch in firmware versions was detected. Update the firmware, and check again.
<b>Mixing data corrupt on Control Surface! To recover:-</b> - Go to <b>DEVICE SYNC</b> screen and re-sync data (DSP --> CS), OR - Go to <b>SAVE/LOAD</b> screen and load a complete settings file, OR - Initialize this control surface	The internal data of the control surface is corrupt. To recover the data, access the DEVICE SYNC screen, and then re-sync data in the DSP → CS sync direction. Alternatively, access the SAVE/LOAD screen and load the setting file. Otherwise, initialize the control surface.
<b>Mixing data corrupt on DSP Engine! To recover, go to DEVICE SYNC screen and re-sync data (CS --&gt; DSP).</b>	The internal data of the DSP engine is corrupt. To recover the data, access the DEVICE SYNC screen, and then re-sync data in the CS → DSP sync direction.
<b>Mixing data corrupt on Editor! To recover:-</b> - Go to <b>DEVICE SYNC</b> screen and re-sync data (DSP--> EDITOR), OR - Go to <b>SAVE/LOAD</b> screen and load a complete settings file, OR - Initialize this editor	The internal data of Editor is corrupt. To recover the data, access the DEVICE SYNC screen, and then re-sync data in the DSP → EDITOR sync direction. Alternatively, access the SAVE/LOAD screen and load the setting file. Otherwise, initialize the control surface
<b>Mixing data corrupt on Editor! To recover, go to DEVICE SYNC screen and re-sync data (EDITOR --&gt; DSP).</b>	The internal data of Editor is corrupt. To recover the data, access the DEVICE SYNC screen, and then re-sync data in the EDITOR → DSP sync direction.
<b>Multiple word clock masters found!</b>	Multiple DSP engines that are assigned as the word clock master have been detected. Assign the word clock master to only one unit in the system.
<b>No Battery! (Console)</b>	The internal battery of the console is exhausted. The internal clock cannot keep the correct time. Please contact your Yamaha dealer for information regarding battery replacement.
<b>No Battery! (DSP Engine)</b>	The DSP engine's internal battery is exhausted. The internal clock cannot keep the correct time. Please contact your Yamaha dealer for information regarding battery replacement.
<b>No scene to update. Store scene first.</b>	The Update function is not available because there is no scene. Store a scene first.
<b>Offset values can be edited only when OVERLAY is ON</b>	You can set the Overlay offset values only when Overlay is turned on.

Message	Meaning
<b>Only one DCA can be rolled out at one time.</b>	You cannot roll-out DCA members on multiple bays simultaneously.
<b>Operating as the word clock master.</b>	This unit is the clock master.
<b>Overlay turned off.</b>	Overlay has been turned off.
<b>Overlay turned on.</b>	Overlay has been turned on.
<b>Page bookmarked</b>	The page is bookmarked.
<b>Power loss to PSU detected (CS X)</b>	One of the two power supply units failed to supply power. "X" represents the power supply unit (A or B) for which power failure was detected.
<b>PREVIEW Mode : Cannot Use This Function.</b>	This function cannot be used in Preview mode, and was ignored.
<b>PREVIEW Mode : Disabled</b>	Preview mode was disabled.
<b>PREVIEW Mode : Enabled</b>	Preview mode was enabled.
<b>Same page is already open</b>	The page cannot be displayed because the same page is already open on another screen.
<b>Saving aborted</b>	The file save operation was interrupted.
<b>Scene #XX already exists</b>	The scene renumbering operation cannot be completed because a scene number that already exists was specified.
<b>Scene #XX is empty!</b>	A scene you tried to recall does not exist.
<b>Scene #XX is protected!</b>	The scene is protected, and your operation (for example, delete) cannot be completed.
<b>Scene delete undone</b>	The scene delete operation was undone.
<b>Scene duplicate undone</b>	The scene copy operation was undone.
<b>Scene recall undone</b>	The scene recall operation was undone.
<b>Scene store undone</b>	The scene store operation was undone.
<b>Screen captured</b>	A screen has been captured.
<b>Software control for this card is disabled. Check the card's DIP SW setting.</b>	This card is not working properly. Check the card's DIP switch setting.
<b>Software exception detected! Restart this console as soon as possible.</b>	An abnormality occurred in software. Restart this control surface immediately.
<b>Software exception detected! Restart this editor as soon as possible.</b>	An abnormality occurred in software. Restart Editor immediately.
<b>Song file not found!</b>	The song file to play cannot be found.
<b>Switch Active Engine from xx to yy?</b>	OK to switch the active engine from xx to yy?

Message	Meaning
<b>Sync error! [XX]</b>	The digital input signal at the [XX] connector is not syncing with the master clock. Make sure that the input signal is syncing with the master clock. Otherwise, noise may be heard.
<b>System Config can only be viewed and edited using the Active DSP Engine.</b>	System Config can be displayed and edited only for the active engine.
<b>Temporary channel link released</b>	A temporary channel link was released.
<b>This device is currently online and cannot be changed.</b>	This device is currently on-line. You cannot change the device type.
<b>This device is not found.</b>	This device is not found.
<b>This feature is not available in editor software</b>	This feature is not available in Editor.
<b>This feature will be supported in a future software release.</b>	This feature will be supported in a future software update.
<b>This item is read only!</b>	You cannot modify this item. This message appears if you attempt to change a Factory preset title.
<b>Too many Monitor Sources! Max. 8 sources can be assigned.</b>	Too many sources have been selected for monitor input. (Up to eight sources can be assigned.)
<b>Total MY slot power capability exceeded! Remove cards from unit XX</b>	Normal operation is not possible because the power at the MY slots exceeds the maximum power allowed. Remove the MY cards from unit XX. For information on the maximum number of MY cards that can be used, please visit the Yamaha Pro Audio website at: <a href="http://www.yamaha.com/proaudio/">http://www.yamaha.com/proaudio/</a>
<b>TWINLANE total cable length too long (HY SLOT X)</b>	The total length of cables on the TWINLANE network (HY slot X) is too long.
<b>TWINLANE clock master not found!</b>	The TWINLANE clock master cannot be found. One DSP engine in the system must be assigned as the word clock master.
<b>TWINLANE optical receiver input power margin low [XXX]</b>	The power of the optical receiver for communication on the TWINLANE network is getting low. Check the cable integrity and connection, and clean the connection.
<b>TWINLANE: ring connection open! [XXX] Check cable connection.</b>	The system detected disconnection of the ring connection on the TWINLANE network. Check the cable integrity and connection.
<b>TWINLANE: wrong cable connection!</b>	The system detected an incorrect TWINLANE cable connection. Make sure that the ring connection is proper by connecting the cables in the order of IN-OUT-IN-OUT.
<b>Unassigned encoder</b>	You operated an encoder for which no function is assigned.
<b>Under a synchronization.</b>	Currently synchronizing.
<b>Unit Fan has Malfunctioned!</b>	The fan of the R-series unit has malfunctioned.
<b>Unit ID Duplicated!</b>	There are duplicate UNIT IDs on the Dante audio network.



Message	Meaning
<b>Unsupported file format!</b>	An unsupported file format was detected and the file failed to load.
<b>Unsupported USB storage format!</b>	The USB storage format is incorrect or unsupported.
<b>USB over-current error! Disconnect USB device.</b>	An excessive current was detected at the USB port. Remove the USB device connected to the USB port, and check the port for abnormalities.
<b>USB recorder busy! Operation aborted</b>	The two-track USB recorder is currently processing data. The latest operation was aborted.
<b>USB recorder: Cannot edit comment. No ID3 tag in the file.</b>	No ID3 tag exists in the file, and the system failed to edit the comment.
<b>USB recorder: Max. number of audio files exceeded!</b>	The maximum number of song files allowed has been exceeded.
<b>USB recorder: Metadata edit failed</b>	Metadata for the song file failed to be edited.
<b>USB recorder: Metadata successfully changed</b>	Metadata for the song file was edited.
<b>USB recorder: Playback stopped due to slow memory access!</b>	Playback was interrupted due to insufficient access speed to the USB storage device.
<b>USB recorder: Recording stopped due to slow memory access!</b>	Recording was interrupted due to insufficient access speed to the USB storage device.
<b>USB recorder: Recording stopped due to wrong word clock!</b>	Recording on the USB recorder was stopped due to an inappropriate system word clock.
<b>USB recorder: Storage full!</b>	There is insufficient capacity in the USB storage device.
<b>USB recorder: Storage mounted</b>	The USB storage device is mounted.
<b>USB recorder: Storage protected!</b>	The USB storage device is protected.
<b>USB recorder: This is the root folder for song files</b>	You cannot browse the hierarchy above the root directory for the song files.
<b>Word Clock Master changed.</b> [ 'LOCATION' ] : 'DSP xx'	The word clock master was switched. [Location]: The Unit ID of the DSP engine that became the word clock master (If a DSP engine outside the console network became the word clock master, the DSP engine's Unit ID is displayed as OTHER DEVICE.)
<b>Version mismatch.</b>	There is an incompatibility between the versions of the R-series unit and of the Dante-enabled HY card.
<b>Wrong password!</b>	You have entered an incorrect password to unlock the console.
<b>Wrong word clock!</b>	The system word clock is inappropriate. Supply an appropriate word clock.
<b>XX parameters set to default</b>	XX parameters are reset to their default values. ("XX" represents the type, such as "EQ," or "Dynamics1.")

# Index

## Numerics

31BandGEQ .....	251
8BandPEQ .....	254

## A

Audio file (scene recall) .....	328
Automixer .....	256

## B

Bay Link .....	81
Brightness of the lamps .....	398

## C

Calibration .....	387, 390
Changing the name .....	158
Channel link .....	238
Channel strip encoder .....	363
CONFIRMATION .....	356
Console Lock .....	399
Control Changes .....	378
Copying channels .....	241
CUE .....	170
Cue mode .....	170
CUE OPERATION MODE .....	171, 355
Custom fader banks .....	357

## D

Dante	
Dante Accelerator .....	309
Dante Controller .....	310
DANTE INPUT PATCH .....	137
DANTE OUTPUT PATCH .....	138
DANTE SETUP .....	131
Dante Virtual Soundcard .....	310

NETWORK .....	131
DAW .....	309
DCA .....	230
DCA Roll-out .....	234
Delay .....	214
Delay scale .....	217
Delay Compensation .....	127
Delay insert point .....	215
Direct out .....	211
DIRECT OUT point .....	211, 212
DYNAMICS .....	201
Dynamics parameter .....	204

## E

Effects and tempo synchronization .....	297
Event List .....	334

## F

Fade function .....	326
FADE TIME .....	326
FADER START .....	384
Firmware version .....	387
FIXED .....	141
Flex15GEQ .....	253
Fn key .....	355
Focus function .....	324
Function Tree .....	62

## G

Gain	
Analog gain .....	100, 105, 194
Digital gain .....	106, 194
Gain reduction .....	103, 202, 203
GANG .....	100, 101
GEQ .....	246
GPI .....	380
TALLY .....	328
TRIGGER .....	328
Graphic EQ .....	246

## H

Head amp .....	65, 105, 193
HPF .....	102
HPF indicator .....	100

## I

Icon .....	159
INITIALIZATION .....	391
Initializing .....	391
Initializing channels .....	244
Input patching .....	156
INSERT .....	103
INSERT ON/OFF indicator .....	106
Insert point	
Signal source point .....	209
Status .....	229
Internal clock .....	396
ISOLATE .....	99

## K

KEY IN .....	203
--------------	-----

## L

LED ASSISTANCE .....	355
Libraries .....	93
Loading .....	347

## M

M/S decoder .....	118, 119, 123
Master faders .....	357
Metering point .....	192
MIDI .....	373
Monitor .....	162
Moving channels .....	242
MP3 .....	298
Mute groups .....	235

## O

OFFSET .....	329
Oscillator .....	177
OVERLAY .....	56, 340
OVERVIEW screen .....	105

## P

Pairing .....	96
Patching .....	156
PEQ .....	246
PHONES .....	185
Plug-ins .....	261
Port-to-port .....	160
PREFERENCES .....	354
PREVIEW .....	338
Program Changes .....	375

## R

Real Time Analyzer .....	187
Recall Safe function .....	333
RTA .....	187

## S

Save .....	344
Scene memory .....	312
Editing .....	320
SEL LINK .....	354
SELECTED CHANNEL VIEW screen .....	99
Selecting channels on screen .....	79
SETUP screen .....	108
Signal flow .....	228
SILK .....	193
Solo function .....	175
Solo mode .....	170
Status indicator .....	88
SURROUND .....	148

**T**

Talkback.....	180
Tap Tempo .....	296
TOUCH AND TURN.....	71
Touch Sense .....	355
TWINLANe network.....	111, 112

**U**

USB flash drive.....	344
USB flash drive format.....	67
USB keyboard .....	357
USB mouse .....	357
USER DEFINED KEYS .....	365
USER DEFINED KNOBS.....	359

**V**

VARI .....	141
Virtual sound check .....	307

**W**

WAV .....	298
Word clock .....	128

Yamaha Pro Audio global website  
<http://www.yamaha.com/proaudio/>  
Yamaha Downloads  
<http://download.yamaha.com/>

Manual Development Group  
© 2015 Yamaha Corporation

Published 01/2018 IP-E0