



Installation Guide

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Guide Part Number 9329-66010-00 REV A 02/19

Safety Compliance

Safety Statement: (M/N: S6L16, S6L24(all), S6L32, Local 16, Stage 16, Stage 32 and Stage 64)

This equipment has been tested to comply with USA and Canadian safety certification in accordance with the specifications of UL Standards: UL 60065 7th Ed., 2013-07-24, CAN/CSA C22.2 No. 60065-03, 1st Ed, +A1:2006 +A2:2012, EN 60065:2002 +A1:2006 +A11:2008 +A2:2010 +A12:2011, IEC 60065:2001 +A1:2005 +A2:2010.

Avid Technology Inc., has been authorized to apply the appropriate NRTL mark on its compliant equipment.

Safety Statement: (M/N: E6L(all))

This equipment has been tested to comply with USA and Canadian safety certification in accordance with the specifications of UL Standards: UL 60950-1 2nd edition, CAN/CSA C22.2 No. 60950-1-07; 2nd edition, EN 60950-1:2006 /A12:2011, IEC 60950-1:2005 + A1:2009 2nd edition.

Avid Technology Inc., has been authorized to apply the appropriate NRTL mark on its compliant equipment.

Power Safety Input Rating

S6L16: AC~100-240V, 50-60Hz, 4.0A per inlet S6L24(all): AC~100-240V, 50-60Hz, 4.0A per inlet S6L32: AC~100-240V, 50-60Hz, 5.0A per inlet E6L(all): AC~100-240V, 50-60Hz, 5.0A per inlet Local 16: AC~100-240V, 50-60Hz, 0.6A per inlet Stage 16: AC~100-240V, 50-60Hz, 3.65A per inlet Stage 64: AC~100-240V, 50-60Hz, 3.65A per inlet

Warning



Important Safety Instructions for E6L

1) User should make sure that all the thumb screws are secured by a tool.

- 2) The E6L system can hold the following cards:
 - (3) AVB Cards
 - · (4) HDX Cards
 - (4) MADI-192 MADI Option Cards
 - (8) DIMMs of RAM.

User should not install additional cards.

Important Safety Instructions

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings

4) Follow all instructions.

5) Do not use this equipment near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other equipment (including amplifiers) that produce heat.

10) Protect power cords from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the equipment.

11) Only use attachments/accessories specified by the manufacturer.

12) For products that are not rack-mountable: Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the equipment. When a cart is used, use caution when moving the cart/equipment combination to avoid injury from tip-over.

13) Unplug this equipment during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the equipment has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the equipment, the equipment has been exposed to rain or moisture, does not operate normally, or has been dropped.

15) For products that are a Mains powered device:

The equipment shall not be exposed to dripping or splashing and no objects filled with liquids (such as vases) shall be placed on the equipment.

Warning! To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

16) For products containing a lithium battery:

Warning! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

17) For products with a power switch:

It should remain accessible after installation.

18) The equipment shall be used at a maximum ambient temperature of 40° C and maximum altitude of 2000m.

19) This unit may not ship with a power supply cord set. A qualified person must provide for use with this unit, an appropriate, approved power supply cord set which is in compliance with the end use country requirements and has a minimum cross-sectional area of 1.0mm².

20) For products with more than one power cord:

CAUTION: This unit has more than one power supply cord. Disconnect two power supply cords before servicing to avoid electrical shock.

ATTENTION: Cet appareil comporte plus d'un cordon d'alimentation. Afin de prévenir les chocs électriques, débrancher les deux cordons d'alimentation avant de faire le dépannage.

21) For products with an operator-accessible fuse:

CAUTION: For continued protection against risk of fire, replace only with same type and rating of fuse.

ATTENTION: Pour ne pas compromettre la protection contre les risques d'incendie, remplacer par un fusible de même type et de même caractéristiques nominales. 22) For products with Fiber optics:

1

Warning! Fiber optic equipment can emit laser or infrared light that can injure your eyes. Never look into an optical fiber or connector port. Always assume that fiber optic cables are connected to a light source.



Introduction

Welcome to the Avid VENUE | S6L digital live mixing system from Avid[®]. This guide shows how to install S6L hardware and software.

Before you can start using your VENUE | S6L system, you must install the most recent VENUE software on both your S6L control surface and your E6L engine. VENUE software, plug-ins for your system, and additional software are accessed from your Avid account after you have *activated* your purchase.

Read this Introduction section to learn about **System Requirements and Compatibility**, get suggestions for **How to Use this PDF Guide** and other VENUE S6L guides and documentation, and to become familiar with some of the **Resources** available at www.avid.com.

Then do the following as appropriate for your installation:

- If you are installing an S6L system for the first time, see Setting Up a VENUE S6L System for the First Time.
- If you are updating or upgrading a system that has already been installed and configured, see VENUE Software Installation Options.

System Requirements and Compatibility

Avid can only assure compatibility and provide support for hardware and software it has tested and approved. For complete system requirements and a list of qualified computers, operating systems, hard drives, cables, displays, other third-party devices, and versions of Pro Tools software, visit:

www.avid.com/S6Lsupport

How to Use this PDF Guide

These are some useful features of this PDF:

- The Bookmarks on the left serve as a continuously visible table of contents. Click on a subject heading to jump to that page.
 Click a + symbol to expand that heading to show subheadings. Click the symbol to collapse a subheading.
- The Table of Contents provides active links to their pages. Select the hand cursor, allow it to hover over the heading until it turns into a finger. Then click to locate to that subject and page.
- All cross references in **blue** are active links. Click to follow the reference.
- Select Find from the Edit menu to search for a subject.

Conventions Used in This Guide

All of our guides use the following conventions to indicate menu choices and key commands:

Convention	Action	
Options > System	In the VENUE software, click Options to display the Options tab, then click the System tab.	
File > Save	Choose Save from the File menu	
Control+N	Hold down the Control key and press the N key	
Control-click	Hold down the Control key and click the mouse button	
Right-click	Click with the right mouse button	

The names of Commands, Options, and Settings that appear on-screen are in a different font.

The following symbols are used to highlight important information:

igodor V User Tips are helpful hints for getting the most from your system.

Important Notices include information that could affect your data or the performance of your system.

Shortcuts show you useful keyboard or mouse shortcuts.

Cross References point to related sections in this guide and other VENUE guides.

Hardware Switches on Control Surfaces

The names of switches on the control surfaces are in bold (such as **Sel**). The Shift switch on the S6L is indicated by bold text, in all-caps (**SHIFT**) to distinguish it from references to the Shift key on your QWERTY keyboard.

Resources

The Avid website (**www.avid.com**) is your best online source for information to help you get the most out of your Avid system. The following are just a few of the services and features available.

Account Activation and Product Registration

Activate your product to access downloads in your Avid account (or quickly create an account if you don't have one). Register your purchase online, download software, updates, documentation, and other resources.

https://www.avid.com/account

Support and Downloads

Contact Avid Customer Success (technical support); download software updates and the latest online manuals; browse the Compatibility documents for system requirements; search the online Knowledge Base or join the worldwide Avid user community on the User Conference.

https://www.avid.com/products/venue-s6I-system/learn-and-support

Training and Education

Study on your own using courses available online, find out how you can learn in a classroom setting at an Avid-certified training center, or view a webinar. For example, check out the live sound webinars hosted by Robert Scovill:

http://www.avid.com/live-sound-webinars

Also check out our Live Sound blogs:

http://www.avidblogs.com/livesound/

Get started learning the ins and outs of S6L using the many Avid Live Sound videos on YouTube.

Products and Developers

Learn about Avid products; download demo software or learn about our Development Partners and their plug-ins, applications, and hardware.

https://www.avid.com/Products/index.html

Part I: First Time Setup

Setting Up a VENUE S6L System for the First Time

Setting up a system for the first time requires the following tasks:

- Review and identify What's Included, Optional Items, Operational Requirements, and Cabling Requirements
- Get started by Unpacking and Assembling Basic System Components
- Finish the initial steps by Activating S6L System Components (very important!)

If you are upgrading or updating a system that has already been installed and configured, see VENUE Software Installation Options

The screens and text displayed on your system may differ slightly from the images shown in this guide. ð.

What's Included

The following sections describe what is included in each S6L package.

With the S6L Control Surface

Each S6L control surface includes the following items:

- S6L control surface
- Two (2) IEC auto-locking AC power cords
- · Dust cover
- · Microfiber cloth (for cleaning touch screens)
- One (1) 2.5 mm hex ball-end screwdriver (fits the hex screws used on the S6L control surface)
- · Documentation, including a Welcome Letter, Warranty Card, Health and Safety Guide, and a VENUE Tech Support card (for obtaining tech support for your system)
- VENUE | S6L Control Surface Software & Plug-Ins Pack
- Pro Tools® | Software and the Live Sound Production Toolkit

VENUE | S6L Control Surface Software & Plug-Ins Pack

The S6L Control Surface Software and Plug-Ins pack includes the following:

S6L Control Surface Restore USB Drive Use this USB drive to initially install system software on your S6L control surface, and to store S6L Control Surface System Restore software. After initial installation, keep this drive with your S6L control surface at all times for S6L control surface maintenance and troubleshooting.

Do not use this drive for anything other than S6L Control Surface System Restore software. Do not use this drive to store VENUE Show files, audio files, or any other data or software, including VENUE software updates.

S6L Plug-Ins iLok Stores your S6L plug-in licenses. To run the plug-ins on your system, this iLok containing the licenses for the plug-ins must be connected to your S6L control surface.



For more information on the activation process for your VENUE system software, go to www.avid.com/activationcard and select S6L.

VENUE | S6L Activation Card Contains codes and instructions required to activate your S6L control surface. The activation process deposits the following licenses into your iLok account:

- S6L plug-in licenses
- · Live Sound Production Toolkit license



The activation process also deposits the following software downloads and documentation into your Avid account:

- S6L control surface and E6L Engine System Restore software (and Update software, when available)
- S6L plug-ins installer
- ECx Ethernet Control host software (for remote control of your S6L system)
- Documentation, including the main guide for your system, the VENUE | S6L System Guide
- VENUE S6L Standalone software

A separate USB flash drive (not provided) is required to store the plug-ins installer, other software, and documentation. Do not use the included VENUE System Restore USB Drive.

Pro Tools® | Software and the Live Sound Production Toolkit Pro Tools | Software is included with the S6L control surface, and is activated and downloaded separately from the S6L software and plug-ins. The Live Sound Production Toolkit is an iLok license that enables up to 128 channels of I/O between S6L and Pro Tools 2018.7 or earlier. Beginning with Pro Tools 2018.10, this license is not required for 64- and 128-channel AVB recording/playback when the E6L is assigned as the Pro Tools Playback Engine.

An iLok is also included to store your Pro Tools and Live Sound Production Toolkit licenses. Do not store S6L plug-in licenses and Pro Tools licenses on the same iLok. You can, however, use the same iLok account to manage all iLok licenses.

With the E6L Engine

Each E6L engine includes the following:

- E6L engine
- E6L bezel (front panel)
- Two (2) IEC auto-locking AC power cords
- Documentation, including a Warranty Card and Health and Safety Guide
- VENUE | E6L Engine Restore Software Pack (see next)

VENUE | E6L Engine Restore Software Pack

The E6L Engine Restore Software pack includes the following:

E6L Engine Restore Drive Use this USB drive to store E6L Engine System Restore software, and to initially install system software on your E6L. After initial installation, keep this drive with your E6L engine at all times for maintenance and troubleshooting.

Do not use this drive for anything other than E6L Engine System Restore software. Do not use this drive to store VENUE Show files, audio files, or any other data or software, including VENUE software updates.

VENUE | E6L Activation Card Contains codes and instructions required to activate your E6L engine.

With the Stage I/O Unit

VENUE | S6L Stage I/O units include Stage 64, Stage 32, and Stage 16 I/O.

Local 16 provides I/O at the mix position.

All S6L I/O units include the following additional items:

- Two (2) IEC auto-locking AC power cord
- · Documentation, including a Warranty claims card and Health and Safety Guide
- VENUE | Stage IO Activation Card (see next)

VENUE | Stage IO Activation Card Contains codes and instructions required to activate your Stage I/O Rack. Local 16 includes a Registration Card.

Additional Required Items

The following items are required for installation and/or operation:

- Four (4) or more shielded Cat 5e (350 MHz) or better Ethernet cables (one is included with the S6L control surface, the other three must be purchased separately)
- Free-standing HDMI or DVI-D compatible DVI-D compatible Full HD display with 1920 x 1080 minimum resolution (21.5-inch or greater touch display recommended), a DVI-D cable, and a USB cable (for enabling the monitor touch screen)

If you use a DVI-to-HDMI cable, make sure the DVI cable is DVI-D 24+1 spec.



A Use a qualified monitor with your S6L system. Visit **www.avid.com/S6Lsupport** for a list of supported monitors.

A If you are using a non-qualified monitor, do not use a USB-powered monitor with your S6L system. In addition, do not connect bus-powered USB hubs to the system.

- A VGA-compatible monitor (for installing VENUE software on the E6L engine via a System Restore)
- Windows-compatible USB keyboard and mouse
- USB 2.0 flash drive(s) for storing the S6L plug-ins installer and other required software installers
- · An active hard-wired Internet connection
- A separate computer running Windows XP or higher

A Do not use bus-powered USB hubs with your S6L system, if a USB hub is needed it should have a dedicated power supply.

Optional Items

The following items are optional, and must be purchased separately:

- Shielded Cat 5e (350 MHz) or better Ethernet cable for connections to Pro Tools
- Thunderbolt-to-Gigabit Ethernet adapter for connecting to the Thunderbolt port of a qualified Pro Tools computer
- · Standard Cat 5e or better Ethernet cable for ECx Ethernet Control connections
- Headphones with 1/4-inch connector
- 2x 3-pin XLR gooseneck LED lamps (for S6L-24C and S6L-16C only)
- Footswitch with 1/4-inch connector
- · BNC cables for word clock connections to/from external digital devices
- DB25 (25-pin) cable(s) for connecting to GPI devices
- · iOS devices for VENUE On-Stage and VENUE Function Pad apps

Expansion Options

S6L systems can be expanded to add analog or digital IO, plug-in processing capability, and connectivity. For an overview of available options, see the VENUE S6L System Guide.pdf.

When setting up a system for the first time, most users should complete the primary VENUE hardware and software installation as described in this guide before installing any Option cards into the E6L engine (such as MADI-192 MADI Option Cards, or a WSG-HD Waves SoundGrid Option Card) or into Stage 64 or Stage 32 (such as DNT-192 Dante Option Cards).

The only exception are system configurations that included an additional (but not pre-installed) AVB-192 Network Card, such as the S6L-24C 112 Stage 16.

 \bigtriangledown Some systems, such as the 24C-112-Stage 16, include a second AVB-192 Network Card (not pre-installed). Refer to the AVB-192 Network Card guide and follow its instructions to install the second AVB-192 card, then return to this guide.

Installation instructions for Option cards are included in their packages.

Operational Requirements

While operating your S6L system, be sure to follow these guidelines.

Temperature and Ventilation

S6L system devices should be operated away from heat sources and with adequate ventilation.

Y Hardware monitoring and automatic warnings are provided for temperature, power and other factors. For more information about the Hardware Monitoring Window, see the VENUE S6L System Guide.pdf.

Storage

S6L system devices should be stored and transported at temperatures not lower than 0 degrees F (-18 degrees C) and not exceeding 140 degrees F (60 degrees C).

Operation

S6L system devices should be operated at temperatures not lower than 40 degrees F (4 degrees C) and not exceeding 104 degrees F (40 degrees C).

During operation, the left and right end caps on the back of the S6L control surface, the front and back of the E6L engine, and the fans on the back of the Stage 64 should be exposed to ambient air. Do not block the ventilation holes on any S6L system component. Do not operate in direct sunlight or at extreme ambient temperatures.

Water and Moisture

S6L system devices should be operated away from sources of direct moisture and should be kept clear of liquids that might spill into the units. If condensation is present on the unit, leave the unit to dry in ambient air for at least one hour before powering the unit on.

Storage humidity range	5% to 95%, non-condensing
Operating humidity range	20% to 80%, non-condensing

Cleaning and Maintenance

• Use a dry cloth to clean the surfaces of the S6L components. Do not apply any cleaning solutions, spray cleaners, or abrasives to the surfaces of the components.

• Use a microfiber cloth (included with the S6L control surface) to clean the touch screens. Do not apply any cleaning solutions, spray cleaners, or abrasives.

Cabling Requirements

While operating your S6L system, be sure to follow these guidelines.

Power Connections

Power connections on all S6L system devices are auto voltage-selecting (100 to 240V nominal, 90-260V maximal, 50-60 Hz).

Make sure your power source is correctly rated for the number of units you are connecting. A surge-protected power source (not included) is highly recommended.

Audio Network Connections

This section describes the audio network cabling requirements for S6L system components. Audio network connections between S6L system components can be made using either copper or fiber-optic audio network cables. Cable types can be mixed within a system, but only one type of connection (copper or fiber) should be used per audio network connection.



Copper

Shielded Cat 5e (350 MHz) or better Ethernet cable with Neutrik etherCON connectors are required, supporting a distance of up to 100 meters per connection.

Fiber-Optic

S6L systems support single-mode fiber (SMF) or multi-mode fiber (MMF) cable to make audio network connections between components, as follows:

SMF Requires single-mode 9/125 OS1 or OS2 cables with duplex LC connectors and two qualified single-mode SFP transceivers per connection, supporting distances of up to 10 kilometers

MMF Requires multi-mode 50/125 OM2 or better cables with duplex LC connectors and two qualified multi-mode SFP transceiver modules per connection, supporting distances of up to 500 meters.

Visit www.avid.com/S6Lsupport for a list of qualified SFP transceivers for use with S6L systems.

Pro Tools Connections

Shielded Cat 5e (350 MHz) or better Ethernet cable with RJ-45 connectors is required for the AVB audio connections to Pro Tools. Some Pro Tools computers also require a Thunderbolt-to-Gigabit Ethernet adapter for connecting to the Thunderbolt port of a qualified Pro Tools computer.

ECx Ethernet Control Connections

Standard Cat 5e Ethernet cable with RJ-45 connectors are supported for ECx remote control connections to a client computer or wireless/wired router.

Option Card Connections

For connection requirements and guidelines for Option cards such as WSG-HD Waves SoundGrid Option Cards and MADI-192 MADI Option Cards, see their respective guides (included with the cards, and available for download from your Avid account).

Unpacking and Assembling Basic System Components

Follow the instructions in this section to unpack system components, and make basic connections (power, monitor, and keyboard). After completing this section, proceed to **Activating S6L System Components**.

Unpacking

When unpacking and assembling S6L system components, make sure at least two people are available at all times. Team lift all system components.

• Remove the S6L control surface from its shipping package, and place it on a table or other stable surface that leaves full access to its front and back panels.

• Remove the E6L engine from its shipping package and place it on a flat surface, leaving full access to its front and back panels.

 \overleftarrow{a} The E6L engine can be installed in a road case or similar enclosure.

- \bigvee The E6L engine bezel ships separately in the E6L shipping package. Attach it to the E6L engine chassis after you have installed the unit in an enclosure.
- Place any Stage I/O units on a flat surface.

You can install the Stage 64, Stage 32, Stage 16, or Local 16 in an enclosure such as a road case. Rack ears for that purpose are included in the Stage IO unit package. For installation instructions, see the S6L Stage IO Rack Supports.pdf.

• Keep cables and other included items organized, making sure to keep them with their associated component after unpacking.

Installing the E6L Bezel

After mounting the E6L in a rack or other enclosure you can install the E6L bezel.

To attach the E6L bezel:

- 1 Locate the E6L bezel in the E6L package.
- 2 Put the bezel into position and connect the 1/8-inch connector to the jack on the front panel of the E6L.



Connecting the 1/8-inch connector

3 Press the bezel into place and tighten the four captive screws to secure it to the E6L chassis.

Connecting Power

Make primary and, if desired, redundant power connections to all S6L system components.

To connect power to the S6L control surface:

- 1 Connect an included IEC power cable from AC power inlet **A** on the back panel of the S6L control surface to your power source.
- 2 For fully redundant power connections, connect the other included IEC power cable from AC power inlet **B** on the back panel of the S6L control surface to a secondary power source.

To connect power to the E6L engine:

- 1 Connect the included IEC power cable from AC power inlet **A** on the back panel of the E6L engine to your power source.
- 2 For fully redundant power connections, connect the other included IEC power cable from AC power inlet **B** on the back panel of the E6L engine to a secondary power source.

To connect power to the Stage IO unit:

- 1 Connect the included IEC power cable from an AC power inlet on the back of the Stage IO unit to your power source.
- 2 For fully redundant power connections, connect the other included IEC power cable from the other AC power inlet on the back of the Stage I/O unit to a secondary power source.

Disconnecting the Included IEC Power Cables

The IEC power cables included with S6L system devices lock when connected to the AC power inlets of S6L system devices, and must be released when disconnecting.

To release an included IEC cable from an AC power inlet on an S6L system device:

• Simultaneously slide the two tabs on either side of the connector back, then pull the cable out of the power inlet.

Connecting a Monitor



VGA monitors are not compatible with the S6L control surface. Only connect a VGA monitor to the VGA port on your E6L engine when restoring system software. Make sure the VGA monitor is not connected to the E6L when powering up your S6L system.

To connect a monitor:

1 Connect an HDMI or DVI-D-compatible monitor cable from the DVI port on the back panel of the S6L control surface to the DVI port on your monitor.

 $\overleftrightarrow{\nabla}$ If you use a DVI-to-HDMI cable, make sure the DVI cable is DVI-D 24+1 spec

2 If the monitor has a touchscreen function, enable it by connecting a USB cable from one of the USB ports on the back of the S6L control surface to the USB port on the monitor.

Connecting a USB Keyboard and Mouse

The S6L control surface provides four USB 2.0 ports (two on the front and two on the back) to connect a USB keyboard and mouse.

To connect a USB keyboard and mouse:

• Connect the keyboard and mouse/trackball to USB ports on the front or back of the S6L control surface.

A Never connect a bus-powered USB hub to your S6L system.

How to Proceed

After unpacking your system and making basic connections, proceed to Activating S6L System Components.

Activating S6L System Components

Activate each S6L system component using the Activation Card located in each component's package.

You must activate each S6L system component in order to access software and documentation included with your system, including VENUE System Restore software and plug-ins. Both an Avid account and an iLok account are required.

To obtain licenses and download links for your software:

1 Make sure you have your iLok account and software set up first:

- If you do not already have an iLok account, visit www.ilok.com to sign up for free.
- While at iLok.com, download the iLok License Manager and install it on your computer. This application allows you to manage all your iLok licenses and accounts without having to open a web browser. An Internet connection is required to transfer licenses to and from your iLok.com account.
- 2 Visit www.account.avid.com and create an Avid Master Account. If you already have an account, skip to the next step.
- 3 Visit www.avid.com/activation and log in to your Avid account using your registered email address.
- Y It is recommended that you use the same Avid account for all activations and downloads, and the same iLok account for all your iLok licenses.
- 4 Follow the link to Avid Software Activation and Download and follow the instructions on-screen to enter your code. After entering your Activation Code, new VENUE software will be deposited in your account (follow links to Products Not Yet Downloaded).
- 5 Repeat as necessary to activate each S6L component (control surface, engine, and Stage I/O unit(s)).

How to Proceed

After unpacking, making basic connections, and activating S6L system components, proceed to VENUE System Restore.



Activation Card

Part II: Software Installation

VENUE Software Installation Options

Before you can start using your VENUE | S6L system, you must install the most recent VENUE software on both your S6L control surface and your E6L engine. VENUE software, plug-ins for your system, and additional software are accessed from your Avid account after Activating S6L System Components.

If you are configuring your system for the first time It is required to perform a *System Restore* when configuring a system for the first time. For instructions, proceed to **VENUE System Restore**.

If you are upgrading an already configured system The most recent VENUE software can be installed as either a complete *System Restore*, or as a **VENUE Software Update**.

To determine if a software update is available, check the most recent version of the *What's New in VENUE Software.pdf* for details on what type of installers are available, and any requirements.

Y If you will be performing a full System Restore, you don't need to download the VENUE Updater (if available). If you are updating, we recommend downloading the System Restore files to be able to keep them with the system at all times.

VENUE System Restore

If you are configuring a system for the first time, or whenever no Software Update is available, you should install the most recent VENUE System Restore software on both your E6L engine and S6L control surface.

VENUE software, plug-ins for your system, and additional software are accessed from your Avid account after you have activated your purchase.

Follow the instructions in this section to perform a System Restore. If you are performing a System Restore on a system that has already been in use, be sure to follow the instructions in **Backing Up System Settings** before proceeding.

igodow The screens and text displayed on your system may differ slightly from the images shown on the following pages.

System Restore Software Installation Overview

After **Unpacking and Assembling Basic System Components**, and **Activating S6L System Components**, getting your system up and running with the latest software consists of the following general steps:

- Downloading VENUE System Restore software
- Creating two System Restore USB Drives (one for the E6L engine and one for the S6L control surface)
- Installing E6L engine System Restore software on the E6L Engine
- Installing S6L control surface System Restore software on the S6L control surface

To begin, proceed to Downloading VENUE System Restore Software.

Downloading VENUE System Restore Software

Once you have completed the activation process for all S6L system components, download links for all S6L system software and documentation are available from the My Products and Subscriptions section of your Avid account. These items remain in your account after you have downloaded them, in case you need to access them again.

To download your software:

- 1 Go to www.avid.com/account and log into the Avid account that you used to activate your S6L system components.
- 2 In the My Account page under My Products, click My Products and Subscriptions to access your software.
- 3 Click these links to download ZIP files of the most recent S6L Console and E6L Engine System Restore files to your computer:
 - VENUE 6.X.X.xxx_S6L_Console_Restore
 - VENUE 6.X.X.xxx_E6L_Engine_Restore
- 4 After download is complete, extract each ZIP file:
 - For the S6L Console Restore and E6L Console Restore, locate the resulting ISO files.
- 5 Make sure the files are accessible by a computer running Windows XP or higher (PCs and Macs running Windows virtual machines are supported), then proceed to Creating System Restore USB Drives.

Y If you ever downgrade an S6L system to VENUE software version 5.5.2 or lower using its System Restore, you will need to manually install the VENUE PACE Update. See the VENUE 5.5.3 Read Me.pdf for more information.

Creating System Restore USB Drives

Windows XP or Higher and the Included System Restore USB Drives Required

After downloading System Restore software, create System Restore USB drives using a free utility called Rufus. You must create one System Restore USB drive for the E6L engine using the E6L System Restore image, and another for the S6L control surface using the S6L System Restore image.

Use the USB drives included in your E6L and S6L software and plug-ins packs when creating the System Restore USB drives. We recommend using the included drives, which you should keep updated and with your system at all times. A separate computer running Windows XP or higher (virtual machines are also supported) with an Internet connection is required.

A Make sure to only use the included USB drives when creating the initial System Restore drives. You can use commercially available USB drives with a capacity of least 4 GB each to create backups or replacements in case the original is misplaced or lost.

Creating an E6L Engine System Restore USB Drive

To create an E6L Engine System Restore USB Drive:

- 1 In the extracted Engine Restore folder, locate the file called rufus-x.x.x.exe and make sure it is located on the same computer as the VENUE Engine Restore ISO file.
- **2** Double-click the file to launch it.
- 3 Insert a USB drive into an available USB port on your computer.
- 4 In Rufus, do the following:
 - Choose the USB drive from the Device pop-up menu.
 - Choose FAT32 from the File System pop-up menu.
 - (Optional) Enter a name for the USB drive in the Volume label field.
- **5** Under Format options, do the following:
 - · Choose Quick Format.
 - Choose Create a bootable disk using, and then from the pop-up choose ISO Image.
 - Click the disk icon, browse to the VENUE 6.X.X.xxx
 E6L_Engine_Restore.iso file, and click Open.
 VENUE 6.X.X.xxx E6L_Engine_Restore should appear at the bottom of the Rufus window.
- 6 Click Start, then click OK. Rufus begins to format the USB drive and progress is indicated on-screen.

igodow If the Autoplay window appears during formatting, close it.

7 When formatting is completed, remove the USB drive from the computer, and then label the drive "E6L Engine Restore."

Rufus 2	.9.934 —	×
Device		۶
VENUE (E:) [32GB]		~
Partition scheme and target system	n type	
MBR partition scheme for BIOS or	UEFI	~
File system		
FAT32 (Default)		~
Cluster size		
16 kilobytes (Default)		~
New volume label		
VENUE		
Format Options 🔽		
Check device for bad blocks	1 Pass	~
Quick format		
Create a bootable disk using	ISO Image	× 🍛
	nines	
REAL	DY	
About Log	Start	Close
Jsi:VENUE_6.1.0.192_E6L_Eng	ine_Restore.iso	#
s window		Disc Ic

Creating an S6L Control Surface System Restore USB Drive

To create an S6L Control Surface System Restore USB Drive:

- 1 Insert the other USB drive into the USB port of your computer.
- 2 Relaunch Rufus, if necessary, and do the following in Rufus:
 - Choose the USB drive from the Device pop-up menu.
 - Choose FAT32 from the File System pop-up menu.
 - (Optional) Enter a name for the USB drive in the Volume label field.
- **3** Under Format options, do the following:
 - · Choose Quick Format.
 - · Choose Create a bootable disk using, and then from the pop-up choose ISO Image.
 - Click the disk icon, browse to the VENUE 6.X.X.xxx_S6L_Console_Restore and click Open. VENUE 6.X.X.xxx_S6L_Console_Restore should appear at the bottom of the Rufus window.
- 4 Click Start, then click OK. Rufus begins to format the USB drive and progress is indicated on-screen.
- 5 When formatting is completed, click Close, remove the USB drive from the computer, and then label the drive "S6L Console Restore."
- 6 Proceed to Installing and Activating VENUE Software on the E6L Engine.

Installing and Activating VENUE Software on the E6L Engine

After creating System Restore USB drives, install and activate the software on your E6L engine. The following items are required to install and activate the software on your E6L engine:

- A VGA compatible monitor
- A USB keyboard and mouse
- A physical Internet connection via an Ethernet cable (Wi-Fi is not supported)
- The E6L Engine System Restore USB Drive

Installing VENUE Software on E6L

A Make sure your S6L system components are not connected while installing System Restore software, and that your E6L is powered OFF before starting this procedure.

To install VENUE software on the E6L engine:

1 Connect the following to your E6L engine:

- An included IEC power cable from AC power inlet **A** on the back panel of the E6L to your power source.
- A USB keyboard and mouse to any USB ports on the E6L. E6L provides two USB ports on the front panel, and two on the back panel.
- An Ethernet cable from your Internet source (router or modem) to the Ethernet (RJ-45) port on the back of the E6L.
- A VGA-compatible monitor to the VGA port on the back of the E6L, and power on the monitor.



Required connections for installing and activating VENUE System Restore software on the E6L Engine

2 Insert the E6L Engine System Restore USB drive into an available USB port on the E6L.

A Make sure to use the E6L Engine System Restore USB Drive, not the S6L Control Surface System Restore USB Drive

3 Power on your E6L using the back panel power switch to the on (1) position, and then repeatedly press **F10** on the keyboard until the "Welcome to Avid's VENUE System Restore USB Drive" dialog appears on the monitor.



E6L-192/144 engine power switch (E6L-112 has two power switches) and repeatedly pressing F10

 $\dot{\bigtriangledown}$ Some models of USB keyboards require repeated pressing of F10 (holding it down in between pressings) to register.

- 4 When prompted, press "r" (lower-case) on the keyboard.
- 5 When the Restore confirmation dialog appears, press Shift + R (upper-case) on your keyboard to proceed. Installation begins.
- 6 When prompted, press "A" (upper-case, Shift + A) on the keyboard, and repeatedly press F5 on the keyboard until the next screen (Windows/RTX Activation dialog) appears on your monitor.

Important: On some system configurations the E6L engine will perform an additional reboot which may not be immediately apparent. Because of this possibility, continue pressing F5 until the next screen appears on your VGA monitor.

- \tilde{Q} If you forget to press F5 (or start pressing too late), the next screen will not appear on the monitor. If this occurs, power cycle the E6L engine (power it off, wait until it completely shuts down, then power it back on again) and then press F5 repeatedly.
- 7 If the VENUE software installer displays a message telling you that you need to update the BIOS, see Updating the BIOS. Otherwise, proceed to Activating Windows and RTX on E6L.

Activating Windows and RTX on E6L

After installing VENUE software, activate the Windows operating system from Microsoft and the RTX64 real time processing engine from Interval Zero. Windows and RTX64 are part of the VENUE software installation on your E6L engine, and must be activated separately from VENUE software. To activate Windows and RTX64, the E6L engine must be physically connected to an Internet source (Ethernet cable required; Wi-Fi not supported).

A You must activate Windows and RTX64 immediately after installing the E6L System Restore software. The E6L engine will not connect to the S6L control surface until you activate Windows and RTX64.

Activating Windows on E6L

To activate Windows and RTX64 on your E6L engine:

- 1 When the E6L restarts after installing new software and pressing F5, click OK to close the Windows/RTX Activation dialog The system exits to the Desktop.
- 2 Click OK to dismiss the on-screen dialog stating "The RTX64 Runtime is not licensed, or the license has expired." The Windows Desktop appears.

 $interpret} V$ If the Desktop does not appear, press the WIN key (the key with the Windows logo), then click the Desktop tile to show the Desktop.

3 In the Networks panel, click No, do not share the network.

- 4 To activate Windows, do the following:
 - On the Desktop, double-click Activate Windows.
 - Follow the on-screen instructions to activate your copy of Windows.

Windows Activation is complete when "Product activated successfully. Press any key to continue..." appears in the activation window on-screen.



5 Proceed to Activating RTX64 on E6L.

Activating RTX64 on E6L

To activate RTX64:

1 On the front-panel of the E6L engine, locate the RTX Activation sticker and write down the alphanumeric code that appears on the label. Keep this information close by, as you are required to enter this code when activating RTX.

A If you installed the E6L bezel on the front of the E6L engine, you must remove it to access the RTX Activation Key. For instructions, see the E6L Engine Rack Supports Installation Guide.

- 2 On the Desktop, double-click Activate RTX.
- **3** In the RTX64 Activation and Configuration window, enter the alphanumeric code exactly as it appears on the RTX Activation Key label.
- 4 Click Activate.

RTX64 Activation is complete when "RTX64...Ultimate - Configured" appears in the window.

a	Activation and Configuration	? ×
RTX64 2014		IntervalZero
Enter your activation key		Configure Proxy
RTX64-X00X-X000X-X000X-X000X-X0X		
Activation succeeded		Activate Import License Configure
RTX64 2014 Subsystem Edition : UI	ie system: timate - Configured	

The RTX activation window showing a successful activation

- 5 Close the RTX64 Activation and Configuration window.
- 6 Double-click the Shut Down the System shortcut on-screen.
- 7 Wait until the front panel Status LED is unlit and the System LED is lit amber, then press the back panel power switch to the off (0) position. Wait for the engine to completely power-down.



- 8 Unplug the E6L Engine System Restore USB drive, VGA monitor, the USB keyboard and mouse, and the Ethernet cable from the E6L Engine, then proceed to Installing VENUE Software on the S6L Control Surface.
- V If your system includes one or more MADI-192 MADI Option Cards you might need to update firmware. Later, when you power up the complete system, if you see a message that you need to update MADI-192 firmware follow the instructions in Updating MADI Card Firmware.

Installing VENUE Software on the S6L Control Surface

After installing and activating VENUE software on your E6L engine, install and activate VENUE software on your S6L control surface, and then configure your system's touchscreens.

Installing VENUE Software on S6L

Use the S6L Control Surface System Restore USB Drive to install VENUE software on your S6L control surface.

Make sure your S6L system components are not connected while installing System Restore software, and that your S6L is powered off before starting this procedure.

To install VENUE software:

- 1 Connect the following to your S6L control surface:
 - An included IEC power cable from AC power inlet **A** on the back panel of the S6L to your power source.
 - A USB keyboard and mouse to the two USB ports on the S6L front panel (below the armrest).
 - The DVI monitor you are using with your S6L control surface to the DVI port on the back the S6L, and power on the monitor.
 - If the monitor has a touchscreen function, a USB cable from one of the USB ports on the back of the S6L control surface to the USB port on the monitor.



Required connections for installing and activating VENUE System Restore software on the S6L control surface

2 Insert the S6L Control Surface System Restore USB Drive into an available USB port on S6L.

Make sure to use the S6L Control Surface System Restore USB Drive, not the E6L Engine System Restore USB Drive.

3 Power on your S6L control surface using the back panel power switch, then repeatedly press **F10** on the keyboard until the "Welcome to Avid's VENUE System Restore USB Drive" dialog appears on the Master Touch Screen (MTS).



S6L control surface power switch (S6L-24D shown), and repeatedly pressing F10

 $\overleftarrow{\heartsuit}$ Some models of USB keyboards require repeated pressing of F10 (holding it down in between pressings) to register.

4 Touch Restore. If the MTS is not responding to touch, press the "r" key on your keyboard.



System Restore dialog

5 In the next screen, touch **Restore** again to proceed. If the MTS is not responding to touch, press the "s" key on your keyboard. Follow the on-screen instructions to complete the System Restore.

WARNING			
You are about to erase the entire contents of your system, and install a fresh copy of the VENUE software v5.0.0.465.			
This will delete everything in the console, including:			
- All your shows - All your presets - All your settings - All your Plug-Ins			
If possible, you may want to backup your data before proceeding.			
Choose <i>restore</i> to reset the console. Choose <i>exit</i> to return to the previous options.			
Re <u>s</u> tore <u>E</u> xit			

Restore dialog

- 6 Do either of the following as appropriate for your situation:
 - If you see any messages about needing to update Pace software, see Updating the BIOS.
 - Otherwise, proceed to Configuring S6L Master Touch Screen (MTS) and External Monitor

 \tilde{Q} A banner display may appear on the external screen saying you need to activate Windows on the S6L control surface. For now, ignore this message (you will activate Windows on the S6L control surface later in this guide).

Configuring S6L Master Touch Screen (MTS) and External Monitor

After installing the System Restore software on your S6L control surface, the touchscreen configuration wizard appears on the MTS. Use the monitor you plan on using for the external VENUE software screen when configuring. You do not need to manually configure Channel Touch Modules (CTMs).



MTS on an S6L-24D

To configure your screens:

- 1 Make sure your DVI monitor is connected to your S6L control surface and is powered-on.
- 2 Follow the on-screen prompts to configure your touchscreens. If prompted to press Enter, then press the **Enter** key on your keyboard.
- **3** Touch Accept to accept the Avid End User License Agreement for VENUE software. The Please Select Engine screen appears on the MTS.
- 4 Proceed to S6L Network Connections.

VENUE Software Update

Follow the instructions in this section to install a Software Update.

The most recent VENUE software can be installed as either a complete *System Restore*, or as a *Software Update*, depending on two primary factors:

- · The version of VENUE software already installed, and
- · Whether the new version is available as a Software Update

For example:

- If your system is running VENUE 5.6.x or lower you *must* perform a System Restore to the latest version (such as VENUE 6.0 or higher). For instructions, see **VENUE System Restore**.
- If your system is already running VENUE 5.7.x or higher you can perform a System Restore, or you can perform a VENUE
 Software Update if the current version supports doing so and a Software Update is available.
- If no Software Update is available for the latest version of VENUE software you must perform a full System Restore (see **VENUE System Restore**).

Not all versions of VENUE software can be installed as a Software Update. When one is available, it is provided for download in your Avid account.

To determine the currently installed version of VENUE software, launch the system and go to the Options > System screen. The currently installed version of VENUE software is shown in the lower-right corner.

To determine if a software update is available, check the most recent version of the *What's New in VENUE Software.pdf* for details on what type of installers are available, and any requirements.

If you will be performing a full System Restore, you don't need to download the VENUE Updater (if available). If you are updating, we recommend downloading the System Restore files to be able to keep them with the system at all times.

All systems should back up all console data before installing new VENUE software. If you perform a System Restore, make sure to re-install your plug-ins after installing new VENUE software. If you perform a VENUE Software Update, be sure to check for updated versions of your plug-ins.

To begin, proceed to Downloading VENUE Software.

Downloading VENUE Software

Download links for all S6L system software and documentation are available from the My Products and Subscriptions section of your Avid account. These items remain in your account after you have downloaded them, in case you need to access them again.

Y In the following instructions, version numbers shown might not match the version you are installing. Always use the most recent version of VENUE software installers and updaters.

To download your software:

- 1 Go to www.avid.com/account and log into the Avid account that you used to activate your S6L system components.
- 2 In the My Account page under My Products, click My Products and Subscriptions to access your software.
- 3 Click these links to download ZIP files of S6L Console and E6L Engine System Restore and VENUE Update files to your computer: For example:
 - VENUE 6_X_xx_S6L_Console_Restore.zip
 - VENUE 6_X_xx_E6L_Engine_Restore.zip
 - VENUE_Update_6_X_xx.zip

If you will be performing a full System Restore, you don't need to download the VENUE Updater. If you are installing a VENUE Software Update you do not need to use the System Restore files but we recommend downloading them to be able to keep them with the system at all times.

- 4 After download is complete, extract each ZIP file, and in their resulting folders locate the resulting folder (if any) and/or ISO files.
- 5 Make sure the files are accessible by a computer running Windows XP or higher (PCs and Macs running Windows virtual machines are supported), then proceed to Backing Up System Settings.

Backing Up System Settings

Whether you are performing an upgrade or a full system restore, you should back up your system's settings (such as Console settings, Show files and Presets) before installing VENUE software.

To back up current settings:

- 1 Go to the Filing page and click the Transfer tab.
- 2 Connect a portable storage device (such as a USB flash drive, formatted as FAT32) to the system.

The device appears above the right column of the Transfer tab. If it does not, click the External Drive selector and choose your storage device.

- **3** In the center column, select the type of data to transfer by doing one of the following:
 - To backup (transfer) all data, click Console so that it is highlighted.
- 4 For selections other than Console, in the left column select the items you want to transfer from your system to your portable storage device. The items that appear in the left column depend on the type of data selected in the center column.
- You can Shift-click to select multiple consecutive items or Control-click to select multiple non-consecutive items to transfer.
- 5 Click the lit Transfer>> button. Large transfers may take time. Transfer status is shown by a progress bar. A transfer may be canceled by clicking Cancel.

A Canceled transfers may result in partial folder contents on the storage device, which will have to be deleted manually.

6 Remove the portable storage device from the system.

 $\overleftarrow{0}$ USB flash drives do not have to be unmouted or ejected to be removed from VENUE systems.

Updating the BIOS

If the VENUE software installer displays a message telling you that you need to update the BIOS, see Updating the BIOS.

Otherwise, proceed to Installing a VENUE Software Update.





Installing a VENUE Software Update

VENUE Software Updates can be installed using either of the following methods:

- Unified Software Update lets you update both the S6L control surface and E6L engine in one procedure. This method requires that the units are connected and powered on.
- Manually Updating VENUE Software lets you update the S6L control surface and E6L engine separately. This method does not require that the units be connected, but does require a VGA monitor to connect to the E6L engine.

Unified Software Update

Windows XP or Higher, One USB Drive, USB Keyboard and Mouse Required

Beginning with VENUE software version 6.0, Software Updates can be performed entirely from the control surface.

Y In previous versions of VENUE software, Software Updates had to be installed on the control surface and E6L engine separately, and a USB keyboard and mouse and a VGA monitor had to be connected to the engine. These steps are no longer necessary but are still supported, letting you install an Update without having to connect the system.

To install a VENUE S6L Software Update:

- 1 Make sure the S6L system is connected (control surface, engine, and I/O units).
- 2 If two systems are connected for I/O Sharing, disconnect them from each other before continuing.
- 3 Make sure you have a USB drive formatted to FAT32, with enough space available for the current Software Update. You can use a Mac or a PC to download the Software Update, but your USB drive must formatted to FAT32.
- 4 Go to www.avid.com/account and log into the Avid account that you used to activate your S6L system components.
- 5 In the My Account page under My Products, click My Products and Subscriptions to access your software and download the VENUE_Update_6.x.x_.zip from your Avid account to your computer.
- 6 After download is complete, extract each ZIP file.

As a precaution, back up your S6L system settings (such as Console settings, Show files and Presets) before installing new VENUE software. For instructions, see the **Backing Up System Settings**.

- 7 Drag and drop the VENUE_Update folder (containing content.dat and VENUE Installer.bat files) to the root level of a USB drive. The folder structure should look similar to the inage shown at right:
- 8 Make sure you have connected a DVI monitor, keyboard and mouse directly to the S6L control surface, and that you have disconnected all speakers and headphones.



- 9 Power on your S6L system (E6L engine, then S6L control surface, then Stage I/O units).
- **10** Place the system into **Config** mode.
- 11 Insert the USB drive containing the VENUE Update folder into an available USB drive on the S6L control surface.
- 12 On the external screen, navigate to Options > System. (Or tap the Gear icon on the MTS.)
- 13 Press Update, press Next until the Install VENUE Update 6.x.x.x button appears, then press that button to begin the Update.
- 14 When finished, a Restart dialog appears. Press Restart.

After the control surface restarts, a dialog appears stating E6L Engine software version does not match the S6L Control Surface software version, with buttons along the bottom for SELECT ENGINE, SHUTDOWN, RETRY, and UPDATE ENGINE.

igodow Reminder: Make sure your system is connected (control surface, engine, and stage I/O units) and fully powered on.

15 Press UPDATE ENGINE, and when the confirmation dialog appears press UPDATE 6.x.x.xxx.

A progress bar appears while the E6L engine is being updated. When complete the E6L engine restarts.

- 16 Allow any firmware updates to complete.
- **17** Restart the entire S6L system.
- VENUE Software Update

Manually Updating VENUE Software

Windows XP or Higher, USB Drive, VGA Monitor and USB Keyboard and Mouse Required

Updating VENUE software on the E6L and S6L requires a single USB drive, formatted to FAT32.

To create a VENUE software updater USB drive:

- 1 Make sure you have already followed the instructions in **Backing Up System Settings**.
- 2 Make sure you have extracted the VENUE Software Update you downloaded earlier.
- **3** Drag and drop the VENUE_Update folder (containing content.dat and VENUE Installer.bat files) to the root level of a USB drive.

A Do not use the System Restore drives included with your system. After performing the system update you will want to update the images on those drives with the latest VENUE System Restore images that you have downloaded.

Updating the E6L Engine

To update VENUE software on the E6L Engine:

- 1 Power down the S6L system (E6L engine, S6L control surface, and all attached Stage 64s).
- 2 Connect a VGA monitor, keyboard and mouse directly to the E6L Engine. Be sure to connect the keyboard and mouse to USB ports on the front panel of the E6L Engine.
- 3 Power on your E6L, then press and hold F5 on the keyboard until the BIOS splash screen appears on the VGA monitor. Once the E6L Engine fully boots, an all-black screen with one command prompt window appears.
- 4 To update the E6L Engine, do the following:
 - Insert the USB drive containing the VENUE_Update folder into any available USB port on the back of the E6L Engine.
 - On the computer keyboard, press Ctrl+Shift+U.
 - When the Update dialog appears, choose to Update to 6.x.x.
 - When finished, a Restart dialog appears.
- **5** Do either of the following, as appropriate:
 - If your system does not include any MADI-192 MADI Option Cards, choose restart and immediately disconnect the mouse, keyboard, and VGA monitor, then proceed to Updating the S6L Control Surface.
- 6 Proceed to Updating the S6L Control Surface.

Updating the S6L Control Surface

To update VENUE software on the S6L Control Surface:

- 1 Connect a DVI monitor, keyboard and mouse directly to the S6L control surface.
- 2 Disconnect all speakers and headphones.
- 3 Power on the S6L control surface and wait for the Waiting for Engine dialog to appear.
- 4 On the computer keyboard, press Ctrl+Shift+U, then do the following:
- When the Update dialog appears, choose to Update to 6.x.x.
- When finished, a Restart dialog appears. Choose Restart.
- 5 Proceed to S6L Network Connections.

Part III: Network Connections

S6L Network Connections

Follow the instructions in this section to make S6L network connections. Before you begin, power down all components (S6L control surface, E6L engine, and all Stage I/O units).

S6L Network Connections Overview

The S6L system has two discrete networks, the AVB audio network and the ECx Ethernet Control network.

- The AVB audio network connects all S6L system components and Pro Tools.
- The ECx network connects a client computer or other device (directly or via network equipment) to S6L to enable remote control of your system.

AVB Audio Network Connections

Direct connections are required for all AVB audio network connections between S6L system components and between the S6L control surface and Pro Tools.

Do not connect network equipment such as routers, hubs or switches to any S6L system AVB Network ports.

S6L System Components Connect S6L system components together using either supported copper or fiber-optic network cables.

You can mix cable types within a system. For example, you can connect the S6L control surface to the local E6L engine using supported copper cables, then connect to a Stage 64, Stage 32, or Stage 16 I/O rack using fiber. However, only one cable type (copper or fiber-optic) can be used per audio network port. Each network port (**A** or **B**) has two connectors (one copper, and one fiber). Never have both copper and fiber connected to the same network port simultaneously.



Supported and unsupported cable type connections between S6L system components (example E6L engine shown)

The instructions and diagrams in this guide show copper Ethernet connections only between RJ-45 ports on components. For information on connecting via fiber, see **Making Fiber Connections**.

Pro Tools Recording/Playback Connections You can connect to a Pro Tools computer (or other DAW) from Network port **C** on the S6L control surface using supported copper audio network cables. Do this *after* configuring your S6L system.

Make sure to use the supported cables to make audio network connections between S6L system components and to Pro Tools. See Cabling Requirements for more information.

ECx Ethernet Control Connections

You can connect a network router, hub, switch, or a client computer directly to the ECx port on the S6L control surface to be able to control your S6L system remotely using a computer or tablet. ECx host and client software must be installed to enable ECx. For more information on installing and using ECx, see the *ECx Ethernet Control Guide.pdf*. To learn how to install and use VENUE On-Stage for iPad and iPhone, see the *VENUE On-Stage.pdf*.

Making S6L Network Connections

After connecting power and peripherals, make audio network connections between system components. Audio network connections must follow a small number of guidelines, described below and in the example configuration diagrams.

If you are setting up your S6L system for the first time, before connecting system components make sure to install the latest System Restore software on your S6L control surface and E6L engine as explained in VENUE System Restore.

1. Redundant Ring Network

In a redundant ring network, components are daisy-chained together in a "closed ring" using the Network ports on each device. All S6L systems must be connected in a redundant ring network as shown in this guide.

A Do not connect network equipment such as routers, hubs and switches to any S6L system Network ports.

2. "A' to "B" (Network Port Connections)

All S6L network connections go between an "A" port and a "B" port:

For example, in a base configuration single system, connect S6L Network port **A** to E6L port Master port **B**, E6L Master port **A** to Stage IO unit port **B**, and Stage IO unit(s) port **A** to S6L port **B**. (In Figure 1, the redundant ring is established by the connection from the Stage I/O unit port **A** back to the S6L control surface network port **B**.)



Figure 1. Network port connections (A to B) between S6L control surface (at left), E6L engine (middle), and Stage 64 (at right)

3. Multiple Stage I/O Units

S6L systems support multiple I/O units of different types, up to a maximum of 6 units and a maximum of 192 inputs. Stage I/O units include Stage 64, Stage 32, and Stage 16.







Figure 2. Stage 64, Stage 32, and Stage 16

4. AVB-192 Network Cards

Expanded I/O refers to configurations that include more than 2x Stage 64s, or any number of Stage 32s or Stage 16s. Expanded I/O configurations require 2x AVB-192 Network Cards in the E6L engine. 2x AVB-192 Network Cards are also required for 128-channel Pro Tools AVB, and to utilize I/O Sharing.

Some systems, such as S6L 24C-112-Stage 16 or similar, require that you install the included, additional AVB-192 Network Card in the E6L engine before proceeding. See the *AVB-192 Network Card Installation Guide* (included with the card) for instructions, then return here to install your system.



E6L with 2x AVB-192 Network Cards

5. Connection Guidelines for Multiple Stage I/O Units

Stage I/O units can be physically connected in any order. Later, when arranging connected units in the Options > Devices page of VENUE software, you will configure multiple Stage IO units by type. For example, in Options > Devices you will be shown how to configure all Stage 64s (if multiple) first in the CONNECTED column, followed by Stage 32s (if any), followed by Stage 16s (if any). For more information, see Virtual Soundcheck: Important Note.

6. Local 16 I/O

Local 16 I/O can be connected to provide I/O at the mix position when using S6L-16C, or additional mix position I/O with other S6L control surfaces. Local 16 requires 2x AVB-192 Network Cards in the E6L engine, and must be connected on the local (console-to-E6L) ring.

For an example configuration that includes Local 16, see **Example 6: Single System Expanded I/O (Mixed Stage I/O and Local 16)**.



7. I/O Sharing

The VENUE S6L system lets you share the Stage inputs and outputs of connected Stage I/O units between two E6L engines and two S6L control surfaces.

If you will be using I/O sharing, follow these guidelines:

- · Both systems must be running the same version of VENUE software.
- Make sure systems are not connected for I/O sharing while installing a Software Update or performing a System Restore.
- After verifying installation and confirming that each system is successfully running the same version of VENUE software, follow the instructions in **Example 7: Dual Systems for I/O Sharing**.
Example Configurations

The following pages provide are a few example configuration diagrams with step-by-step connection instructions.

To connect your system:

- 1 Make sure all devices (S6L control surface, E6L engine, and Stage I/O unit(s)) are powered off.
- 2 Use the table, below, to find an example configuration that best matches your system and follow those instructions to make S6L network connections between devices.

Supported Audio Network Configurations

Configurations (click for instructions)	Stage Inputs (max)	Stage Outputs (max)	AVB-192 Cards (required
Example 1: Basic Single System	64	32	1
Example 2: Single System with 2x Stage I/O units	96	64	1
Example 3: Single System Expanded I/O (Stage 64s)	192	96	2
Example 4: Single System Expanded I/O (Stage 16s)	48	36	2
Example 5: Single System Expanded I/O (Stage 32s and Stage 16s)	112	64	2
Example 6: Single System Expanded I/O (Mixed Stage I/O and Local 16)	112	64	2
Example 7: Dual Systems for I/O Sharing	192	96	2 (in both E6Ls)

For additional configuration diagrams, see Day to Day Powering Up and Down.

- 3 After making S6L network connections, proceed to Powering the System Up and Down.
- Ý If multiple Pro Tools systems are present, Avid recommends that you first connect, power on, and configure S6L system devices before making Optional Connections for Pro Tools and ECx Ethernet Control.

Example 1: Basic Single System

Up to 64 In/32 Out, 1 Stage 64 IO Rack and 1 AVB Network Card

This configuration includes one S6L control surface, one E6L Engine with a single AVB Network card, and one Stage 64 IO Rack. It supports a maximum of eight supported input cards and four supported output cards, providing a total of 64 inputs and 32 outputs.

 $\overset{\leftrightarrow}{O}$ Stage 64s ship with 6x SRI and 1x SRO, providing 48 in and 8 out. Additional I/O must be purchased separately.

To connect components in a base configuration single system:

- 1 Connect an Ethernet cable from Network port **A** on the back of the S6L control surface to Network port **B** on the E6L engine.
- 2 Connect an Ethernet cable from Network port A on the E6L engine to Network port B on the Stage 64.
- 3 Connect an Ethernet cable from Network port A on the Stage 64 to Network port B on the S6L control surface.



Figure 3. S6L system connections with one AVB-192 card and one Stage 64

4 Proceed to Powering the System Up and Down.

= Primary audio network connections

 = Redundant audio network connections (required)

Example 2: Single System with 2x Stage I/O units

Up to 96 In/64 Out, 2 Stage 64 IO Racks and 1 AVB Network Card

This configuration includes one S6L control surface, one E6L Engine with a single AVB Network card, and two Stage 64 IO Racks. It supports a maximum of six supported input cards and four supported output cards per Stage 64 IO Rack, providing a total of up to 96 inputs and up to 64 outputs.

To connect S6L components:

- 1 Connect an audio network cable from Network port A on the S6L control surface to Network port B on the E6L engine.
- 2 Connect an audio network cable from Network port A on the E6L engine to Network port B on the first Stage I/O.
- 3 Daisy-chain the first Stage I/O to the second Stage I/O by connecting an Ethernet cable from Network port A on the first Stage I/O to Network port B on the second Stage I/O (Stage 64s shown in the diagram, below).
- 4 Connect an Ethernet cable from Network port A on the last Stage I/O in the chain to Network port B on the S6L control surface.



Figure 4. S6L system connections with one AVB-192 card and two Stage 64s

5 Proceed to Powering the System Up and Down.

= Primary audio network connection

 = Redundant audio network connections (required)

Example 3: Single System Expanded I/O (Stage 64s)

Single System Expanded I/O with Up to 192 In/96 Out, 3 Stage 64 IO Racks and 2 AVB Network Cards

This configuration includes one S6L control surface, one E6L engine with two AVB Network cards, and up to three Stage 64s with maximum input and output cards. It supports a maximum of eight supported input cards and four supported output cards per Stage 64, providing a total of up to 192 inputs and up to 96 outputs.

To connect components:

1 Do both of the following to connect the S6L control surface to the E6L engine:

1.1 Connect an audio network cable from Network port **A** (use the RJ-45 port for copper, or the SFP port for fiber) on the back of the S6L control surface to Network port **B** on the top-most AVB Network Card of the E6L engine.

1.2 Connect an Ethernet cable from Network port **A** on the top-most AVB Network card of the E6L engine to Network port **B** on the S6L control surface.

- 2 Connect an audio network cable from Network port A on the Master 1 (lowest slot) AVB Network Card of the E6L engine to Network port B on the first Stage 64.
- 3 Daisy-chain the first Stage 64 to the second Stage 64 by connecting an Ethernet cable from Network port A on the first Stage 64 to Network port B on the second Stage 64. If using three Stage 64s, connect an Ethernet cable from Network port A on the second Stage 64 to Network port B on the third Stage 64.
- 4 Connect an Ethernet cable from Network port **A** on the last Stage 64 in the chain to Network port **B** on the Master 1 AVB-192 Network Card (AVB card in the lowest slot) on the E6L engine.



Figure 5. S6L system connections for two AVB-192 cards and three Stage 64s (fully expanded IO shown)

5 Proceed to Powering the System Up and Down.

Example 4: Single System Expanded I/O (Stage 16s)

Single System Expanded I/O with Up to 48 In/36 Out, 3 Stage 16 IO Racks and 2 AVB Network Cards

With S6L-24C 112-Stage 16 systems, three Stage 16s can be connected as shown below. Connections are identical to **Example 3:** Single System Expanded I/O (Stage 64s).



= Primary audio network connections

 = Redundant audio network connections (required)

Example 5: Single System Expanded I/O (Stage 32s and Stage 16s)

112 In/64 Out

When 2x AVB Network cards are installed in the E6L engine, Stage 32s and/or Stage 16s can also be connected to S6L systems. The diagram below shows a system with 2x AVB Network cards, 2x 24-in/8-out Stage 32s, and 4x Stage 16s.

Requirements

- To use Stage 32s or Stage 16s with S6L systems, two AVB-192 Network Cards must be installed in all E6L Engines.
- Stage 32s require VENUE software version 6.0 or later. Stage 16s require VENUE software version 5.5 or later.

Stage 32 Note

Each Stage 32 provides up to 32 input or 32 output channels, or any combination of inputs and outputs up to 32 channels.

Stage 16 Notes

Firmware Note When moving a Stage 16 from S3L to S6L or vice versa, a firmware update will occur automatically.

Gain Compensation and Virtual Soundcheck Note When connected to an S6L system, Stage 16 gain is compensated to match Stage 64 values and displays. For example, when switching to Virtual Soundcheck, the digital trim will show -10 dB if the Stage 16 is at its lowest setting (+10), and shows negative values up until the stage gain reaches +20.

When no Stage 64s are present, up to two Stage 32s and up to four Stage 16s can be connected as shown in the example diagram below. Step-by-step instructions are the same as in Example 3: Single System Expanded I/O (Stage 64s), the only difference being the Stage I/O units being connected and daisy-chained in step 3.



Figure 6. Expanded I/O system with Stage 32s and Stage 16s

- 6 Proceed to Powering the System Up and Down.
- S6L Network Connections

- = Primary audio network connections
- Redundant audio network connections (required)

Example 6: Single System Expanded I/O (Mixed Stage I/O and Local 16)

112 In/64 Out

When 2x AVB Network cards are installed in the E6L engine, Local 16 I/O can be installed on the console/engine ring. **Figure 7** shows a Local 16 in a system with an S6L-16C, E6L engine with 2x AVB Network cards, 2x Stage 32s, and 4x Stage 16s.

Requirements

- To use any number of Local 16s with S6L systems, two AVB-192 Network Cards must be installed in all E6L Engines.
- Local 16 requires VENUE software version 6.1 or later.
- Up to two Local 16s can be used with S6L-16C. Other S6L control surfaces support a single Local 16.

To connect components:

- 1 Connect S6L control surface Network port A to Network port B on the top-most AVB Network Card of the E6L engine.
- 2 Connect Network port A on the top-most AVB Network card of the E6L engine to Network port B on the Local 16.
- 3 Connect Network port A on the Local 16 to Network port B on the S6L control surface.
- 4 Do the following to connect Stage I/O:
 - Connect Network port A on the E6L Master 1 (lowest slot) AVB Network Card to Network port B on the first Stage 64.
 - Daisy-chain the first Stage I/O to the second Stage I/O by connecting Network port A on the first Stage I/O to Network port B on the second Stage I/O. Repeat for any additional Stage I/O units (connect A to B).
- **5** Connect an Ethernet cable from Network port **A** on the last Stage I/O unit in the chain to Network port **B** on the Master **1** AVB Network Card (AVB card in the lowest slot) on the E6L engine.



Figure 7. Expanded S6L-16 system, mixed I/O with Local 16

⁶ Proceed to Powering the System Up and Down.

Example 7: Dual Systems for I/O Sharing

The VENUE S6L system lets you share the Stage inputs and outputs of connected State I/O units between two E6L engines and two S6L control surfaces.

Each S6L system has independent control of channel parameters including input and output levels, EQ and Dynamics settings, channel names, and plug-in parameters, as well as independent snapshots and Show files. In addition, with automatic Gain Tracking each S6L system has independent control of input gain levels for the shared stage inputs. All parameters, including input gain levels, can be stored to and recalled from Show files and snapshots independently on each S6L.

Each S6L system can record to and playback from its own dedicated Pro Tools system, letting each user on the network perform their own discrete Virtual Soundcheck without affecting any other user on the network. (Not all configurations support multiple Pro Tools systems. For compatibility information and system requirements, see System Requirements for Pro Tools with S6L.)

This section shows how to make Required Connections for Stage I/O Sharing with up to two S6L systems. Later, you will designate ownership of Stage I/O unit inputs, and of individual output slots, as explained in Assigning Stage I/O Units.

Required Connections for Stage I/O Sharing

Figure 8 and the following procedure show how to connect two S6L control surfaces, two E6L engines and up to three Stage 64s in an enhanced ring network to enable Stage I/O sharing. All connections are made from an A port to a B port. Connections will be the same when connecting Stage 32s or Stage 16s.



A Use Cat 5e (350 MHZ) or better Ethernet cable for all audio network connections. Maximum drive distances per connection are 100m for copper cable. Drive distances can be increased using fiber cables-consult the manufacturer's specifications for details.

A Do not connect network equipment such as routers, hubs and switches to any S6L system AVB Network ports.

To connect S6L components:

A Stage I/O Sharing requires all systems to be running the same version of VENUE software. Install the latest VENUE software on each system BEFORE connecting multiple systems to each other.

1 Do the following to connect each S6L control surface to an E6L engine:

1.1 Connect an Ethernet cable from Network port A on each S6L control surface to Network port B on the top-most AVB Network card on its corresponding E6L engine. For example, on an E6L with two AVB Network cards, connect the S6L control surface to the top-most AVB Network card on its corresponding E6L engine.

1.2 On each pair of E6L engine and S6L control surface connected in step 1.1, connect an Ethernet cable from Network port A on the top-most AVB Network card of the E6L engine to Network port **B** on the S6L control surface.

- 2 Daisy-chain the E6L engines together by doing the following:
 - Connect one end of an Ethernet cable to Network port A on the Master 1 (lowest slot) AVB Network card on the second E6L engine, and connect the other end to Network port B on the Master 1 (lowest slot) AVB Network card on the first E6L engine.

A If multiple supported Pro Tools systems are present in a shared input configuration, it is highly recommended that you pair each Pro Tools system to its corresponding E6L before creating a shared input system. Do not make the connections between E6L engines until each Pro Tools computer has been paired to the desired E6L.

- 3 Connect an Ethernet cable from Network port A on the Master (lowest slot) AVB Network Card of the first E6L Engine to Network port **B** on the first Stage 64.
- 4 Daisy-chain Stage 64s together by doing the following:
 - Connect an Ethernet cable between Network port **A** on the first Stage 64 to Network port **B** on the second Stage 64.
 - If your system includes three Stage 64s, connect another Ethernet cable from Network port A on the second Stage 64 to Network port **B** on the third Stage 64.
- 5 Connect an Ethernet cable from Network port A on the last Stage 64 in the chain to Network port B on the Master 1 (lowest slot) AVB Network Card of the second E6L engine.

About Synchronization in Shared I/O Configurations

E6Ls in shared I/O configurations can send and receive Word Clock. However, only one E6L engine should ever be connected to an external word clock device.

I/O sharing configurations should be thought of as a single "system" in terms of clock. When you connect two E6L engines together (where two S6L systems are sharing one or more Stage Racks in a shared I/O configuration), only one of the E6L engines should ever be connected to an external word clock device. This E6L engine then becomes the Master clock for the entire dual-system configuration and distributes clock to all other S6L devices. If no external word clock device is connected, the E6L that comes online first becomes the Master clock for the entire system.



Configurations that include MADI connections to external MADI devices have additional clock requirements. For more information, see the *VENUE S6L Guide.pdf*.



= Primary audio network connections

Figure 8. An S6L system with Stage I/O sharing (expanded IO shown)

6 Proceed to Powering the System Up and Down.

If multiple Pro Tools systems are present, Avid recommends that you first connect, power on, and configure S6L system devices before making Optional Connections for Pro Tools and ECx Ethernet Control.

Part IV: Completing the Installation

Powering Up and Configuring the System

After installing software and making S6L network connections, follow the instructions in this section to learn how to power the system up (and down), and to configure your S6L system.

Powering the System Up and Down

After connecting your system components for the first time, power up your system by following the steps in this section. Make sure you have installed the S6L System Restore software and the E6L System Restore software on the respective devices.

If you have not installed the System Restore software on your S6L control surface, on initial power-up S6L prompts you to install software or shut down your system. For System Restore instructions, see **VENUE System Restore**.

For day to day operation of the system, or after performing a System Update, you can follow the instructions in **Day to Day Pow**ering Up and Down.

First Time Power Up

Power up the system in the following sequence:

Make sure no VGA monitor, mouse, keyboard, or internet is connected to the E6L engine before powering up your S6L system.

- 1 Power on the control surface video monitor (referred to in this and other S6L guides as the external screen).
- 2 Power on the E6L engine by pressing the power switch on the back to the on (1) position. On the front panel of the E6L engine, the LEDs light as follows:
 - Status LED lights green.
 - The System LED begins to flash amber while the E6L is waiting to connect to the S6L control surface, then turns green when connection is complete.
- **3** Power on the S6L control surface by pressing the power switch on the back panel to the on (1) position.

The LEDs on each of the S6L's PSUs light green, and Avid logos appear on the Master Touch Screen (MTS), the Channel Touch Modules (CTMs), and/or the external screen while the system initializes.

If you are powering up the system for the first time after performing a System Restore, or the S6L control surface is connected to a different E6L engine than it was previously connected to, the Please Select Engine screen appears on the MTS (or external screen with S6L-16C) when initialization is complete.



Avid logo on-screen



Please Select Engine Screen on the MTS

igodow If an alert is shown telling you to Activate Windows, ignore it for now (you will activate Windows later, after powering up.

Powering Up and Configuring the System

4 If the Please Select Engine dialog appears, complete the rest of these power up instructions and then proceed to **Confirming System Components**.

 $\dot{\nabla}$ If the E6L engine has not fully initialized by the time the S6L control surface has initialized, "Waiting for the E6L Engine to start..." appears in the MTS until the E6L finishes initializing.

5 Power on the first Stage I/O unit by pressing the power switch to the On position for the PSU that is plugged into an AC power source. If both PSUs are connected for redundancy, power-on both PSUs.

The power switch(es) lights green and the following occurs on the front panel of the Stage I/O unit:

- The Status LED lights green.
- The AVID logo appears while the device initializes.
- (Stage 64 only) When initialization is complete, the Controller Menu HOME page is shown.

HOME		
<stage 64=""> 96k</stage>		
Net OK	Mon On	
HW OK	MADI On	

Controller Menu HOME page

- 6 Power on any other Stage I/O racks in the system.
- 7 Proceed to Confirming System Components.

For day to day startup and shut down, follow the instructions in Day to Day Powering Up and Down.

Confirming System Components

After connecting and powering up system components, you can confirm and configure system components on the Options > Devices page of the VENUE software screen.

To confirm system components:

1 On the external screen, select the Options button, then select the Devices tab.

All connected and powered on system components appear on the Devices page. The Devices page lets you connect and troubleshoot system components, view their status, and edit hardware settings.

If you are configuring a system for the first time, the **Connected Devices** column will only show the currently connected S6L control surface. You will "connect" Stage I/O units later after you first pair the E6L and S6L.



Options > Devices tab

 \bigvee If any components do not appear, check all network connections between components, and make sure all components are powered on. For more information see the Troubleshooting section of the VENUE S6L System Guide.pdf

2 Proceed to Pairing the E6L and S6L.

Pairing the E6L and S6L

By default, an E6L engine automatically connects to its previously assigned S6L control surface. When assigned to an E6L, the S6L controls the parameters associated with that E6L. After the initial pairing, an E6L will automatically attempt to reconnect to the most recently assigned S6L. However, you can assign any E6L to any S6L on the network.

- If you are configuring a system for the first time or after performing a *System Restore*, or the S6L control surface is connected to a different E6L engine than it was previously connected to, the Please Select Engine screen appears on the MTS when initialization is complete. If so, follow the instructions in Please Select Engine.
- If your S6L control surface was already paired with an E6L engine, and that E6L engine is detected on the network, the system will startup as usual and automatically connect. If so, proceed to **Assigning Stage I/O Units**. If your configuration has not changed and components were already paired prior to performing a *Software Update*, you should not need to pair them again; if this is the case, proceed to **Setting the System Clock**.
- If you ever need to re-assign components, see Appendix D, "Managing Stage I/O Unit Connections".

Please Select Engine

Please Select Engine:				
	E6L-192 VENUE E6L-192	MAC Address: 00:15:b2:a7:35:a4 VENUE 5.0.0.688		
SHUT DOW	N	CONNECT		

Please Select Engine Screen on the MTS

 \bigvee If the E6L engine has not fully initialized by the time the S6L control surface has initialized, "Waiting for the E6L Engine to start..." appears in the MTS until the E6L finishes initializing.

To pair your E6L engine to your S6L control surface, in the Engine Selection screen on the MTS do the following:

1 If you have not already done so, power on the E6L engine by pressing the power switch on the back to the on (1) position. On the front panel of the E6L engine, the front-panel Status LED lights green and the System LED flashes amber while the E6L engine initializes.

On the MTS, the Please Select Engine screen appears.



A selected E6L engine.

If multiple E6L engines are detected, all are listed.

Please Sele	ct Engine:	
	E6L-144	
	E6L Engine	IP Address: 169.254.8.93 VENUE 5.2.0.79
	E6L-192	MAC Address: 00:15:b2:a8:54:d6
	E6L Engine	

Selecting an E6L from the list of available engines (E6L-192 shown selected)

2 In the Please Select Engine screen on the MTS, select a connected E6L engine so it is highlighted in blue.

3 Select CONNECT.

CONNECT

Connect button

The MTS (or external screen with S6L-16C) indicates that the S6L control surface is waiting for the E6L engine to start. When the devices connect, the Universe view appears on the MTS, and the Inputs page appears on the external screen.

If you have incorrectly assigned E6Ls, they must first be unassigned from the S6Ls to which they are currently assigned. See
Appendix D, "Managing Stage I/O Unit Connections."

Firmware and software updates begin on various devices in the system, as follows:

- Surface modules (the Channel Fader Modules and the Channel Knob Modules), and status is indicated on the MTS.
- S6L control surface and E6L engine Network cards, and status is indicated on the Options > Devices page of the external screen.
- Any Channel Touch Modules (CTMs), and status is indicated on the CTMs.

4 On the external VENUE software screen, in the Console Network Card alert dialog, click Review to monitor the progress of firmware updates.

During the E6L engine update, alerts are shown indicating that connection between the S6L control surface and the E6L engine has been lost, and plug-in racks need reset. These alerts can be ignored, as they are a normal part of the update process.

5 Proceed to Activating Windows on S6L.

Activating Windows on S6L

After powering up your system for the first time after performing a System Restore, an alert is displayed telling you that you must activate Windows on your S6L control surface. Windows is part of the VENUE software installation on your S6L control surface, and must be activated separately from VENUE software, and separately from the Windows activation on the E6L engine.



Activate Windows after you have connected and powered on your system. You have 30 days from the date of installation to activate Windows on your S6L control surface.

To activate Windows on your S6L control surface:

1 Connect an Ethernet cable from your Internet source (router or modem) to the ECx port on the back of your S6L control surface.



ECx port on the back of the S6L control surface

A On some systems the CTMs (if any) might indicate that you must power-cycle your system to complete software installation. Do not power-cycle your system at this time. Wait until the instructions in this guide tell you to power-cycle the system.

2 In the on-screen dialog prompting you to authorize Windows, tap Activate.



Windows activation dialog

3 Follow the on-screen instructions to activate Windows.

Windows Activation is complete when "Product activated successfully. Press any key to continue..." appears in the activation window on-screen.

 $\overleftrightarrow{\nabla}$ If the activation fails, confirm your Internet connection and attempt to activate when the Activation dialog reappears.

- 4 Disconnect the Ethernet cable from the ECx port.
- 5 Proceed to Enabling Config Mode.

Enabling Config Mode

After confirming system components, enable Config mode.

S6L systems have two basic operating modes, Config mode and Show mode.

- Use Config mode to accomplish tasks such as setting up your system (assigning Stage I/O), configuring options, loading Show files, and installing software such as plug-ins and system updates.
- Use Show mode when mixing performances.

To enable Config mode, do one of the following:

1 Press **Config** on the S6L control surface. The **Config** switch lights, and **Config** is indicated in the Mode box in the on-screen Status Bar.



Config switch on the S6L control surface (left) and the Mode box showing Config

• Or, On-screen, double-tap the Mode box in the Status Bar, located in lower-right hand corner of the screen, so that Config is shown. The **Config** switch also lights.



Mode box showing Show mode enabled (left) and Config mode enabled (right)

2 Proceed to Assigning Stage I/O Units.

Assigning Stage I/O Units

When you initially configure a system, or after performing a System Restore, you must assign Stage 64, Stage 32, and/or Stage 16 I/O units to available Stage slots in the Options > Devices tab. Each Stage slot corresponds to a Stage hardware tab 1–6 in the VENUE Patchbay.

A banner alert is displayed whenever the system detects one or more I/O units that are unassigned.

If your configuration includes one or more Local 16s you must also assign them in Options > Devices. Unlike Stage I/O, however, Local 16 is assigned to S6L AVB network Ring 2. Assign Stage I/O first, as explained in the following steps, before assigning Local 16.

To assign Stage I/O units (refer to Figure 1):

- 1 Make sure the system is in Config Mode (see **Enabling Config Mode**).
- 2 Navigate the external screen to Options > Devices.
- **3** If your configuration includes Stage 32 or Stage 16, configure Stage slots in the CONNECTED column by clicking to select the slot and then choosing the appropriate device from the selector.
- 4 In the AVAILABLE column, select the first Stage I/O device so it is highlighted (to identify units when multiple devices are present, see Identifying Stage I/O Units).

 $\ddot{\heartsuit}$ If any connected Stage I/O units do not appear in the Unassigned section, check network and power connections.

- 5 Click CONNECT.
- 6 Click to select a flashing Stage slot and assign the selected I/O unit to that slot.
- 7 Repeat for any additional Stage I/O units.

A On initial power-on after performing a System Restore, firmware updates of the Stage units begin just after assigning them.



Figure 1. Assigning Stage I/O units in Options > Devices

When using more than one type of Stage IO unit, group units by type and connect them in series in the CONNECTED DEVICES column, such as all Stage 64(s), then all Stage 32s, then all Stage 16s. The order of Stage I/O devices in the Connected Devices column does not need to match the order of physical network connections.



Unassigned Stage I/O alert

Virtual Soundcheck: Important Note Slot designation (1–6) determines where I/O appears in the Patchbay I/O tabs 1–6, which also determines Virtual Soundcheck channel order. For example, each Stage 16 slot occupies 16 channels of Virtual Soundcheck. However, switching any slot from Stage 64 to Stage 16 creates four available Stage 16 slots. Even if only one Stage 16 I/O unit is physically connected and the remaining three Stage 16 slots are empty, if a Stage 64 was assigned and connected to slot 5 the Pro Tools inputs corresponding to that Stage 64 will begin at channel 65. To avoid this, it is recommended to assign Stage 64s (if any) to the lowest numbered slots 1–3 whenever possible, followed by any Stage 32s, followed by any Stage 16s.

8 Once firmware updates are complete, dismiss all alerts and dialogs by selecting OK in each one.

You can reassign Stage I/O units at any time after initial software installation, and after all necessary firmware updates are completed. If you are replacing Stage units with one of a different type, simply select and Disconnect the unwanted Stage I/O unit in the Connected Devices list, re-assign the corresponding Stage slot if necessary, then assign the desired Stage I/O units. See Appendix D, "Managing Stage I/O Unit Connections" for additional information.

9 If desired, give each Stage I/O unit a unique name by doing the following:

- Make sure the system is in Config mode (see Enabling Config Mode).
- In the Options > Devices tab of the external screen, select the appropriate Stage I/O graphic so it is outlined in blue.
- In the Information pane, select the DEVICE tab.
- Touch-and-hold (double-click) the field next to Name, enter a unique name using the keyboard, then press Enter.

Stage unit names will appear in the corresponding tab of the Patchbay. Device names are not saved as part of Show files, they are stored in the hardware unit. In addition, you cannot rename devices in the Standalone software.

10 Shut down your system by doing the following:

- Make sure the system is in Config mode.
- On the external VENUE software screen, go to the Options > System tab.
- Select Shut Down, then select Shut Down again to confirm.
- 11 Power down all connected components by pressing their back panel power switches to the off (0) positions, and leave all components powered-off for at least 30 seconds.

A complete power-cycle is required before using your S6L system.

12 Power the components back on in the following order:

- E6L engine
- S6L control surface
- Any connected Stage I/O units

13 Wait for the CTMs (if any) to complete their final software update, then proceed to Setting the System Clock.

I/O Sharing

Always configure individual S6L systems separately before connecting them for I/O sharing. Complete the instructions on the following pages, then see the *VENUE S6L System Guide.pdf* for additional configuration steps to assign I/O ownership and manage gain shared systems.

For now, proceed to **Assigning Local 16** if your system includes one or more Local 16s. Otherwise, proceed to **Setting the System Clock**.

Identifying Stage I/O Units

It can be helpful to identify each Stage I/O unit in the Available Devices list before assignment.

To identify Stage I/O units:

- 1 Make sure your system is in Config mode.
- 2 On the external screen, go to the Options > Devices page and locate the Available Devices column. All connected and powered on Stage I/O units are shown in this column.

 $\dot{\bigtriangledown}$ If any connected Stage I/O units do not appear in the Available Devices section, check network and power connections.

- **3** In the Available Devices column, select the top-most Stage 64 so it is outlined in blue. The blue outline indicates that device is targeted for connection, and is targeted in the Information area of the Devices page.
- 4 In the Information area, select the Device tab so it is highlighted in blue, then select the Identify button to latch it on. The Identify button on-screen flashes, and the Status and Fault LEDs on the front panel of the corresponding Stage I/O unit flash.





The Identify button (left) and flashing Status and Fault LEDs on the corresponding Stage 64 (right)

5 Select Identify again to turn it off.

Assigning Local 16

Local 16 lets you expand your local I/O capabilities, or add primary local I/O if mixing on the S6L-16C control surface. Each Local 16 provides 8 analog inputs, 8 analog outputs, 8 AES digital inputs, and 8 AES digital outputs in a compact, 3U rack.

Local 16 requires 2x AVB-192 Network cards be installed in the E6L engine. Unlike Stage I/O, Local 16 units are configured in the Option > Devices page by connecting them to the Ring 2 S6L network ring.

To assign Local 16:

- 1 Make sure the system is in Config Mode (see Enabling Config Mode).
- 2 Navigate the external screen to Options > Devices.
- 3 In the NETWORK CARDS section, select Ring 2.
- 4 In the AVAILABLE column, select the first Local 16 device so it is highlighted.
- 5 Click CONNECT.
- 6 Click to select a flashing Local 16 slot in the CONNECTED DEVICES column.
- 7 Repeat for any additional Local 16 units.

A On initial power-on after performing a System Restore, firmware updates of the Local 16 units begin just after assigning them.



Figure 2. Assigning Local 16 in Options > Devices

8 Proceed to Setting the System Clock.

Setting the System Clock

After pairing, make sure the system clock time, date and time zone are set appropriately. System Clock is set on the Options page of the external VENUE software screen.



To set the System Clock:

- 1 On the external screen, select Options, then select the Misc tab.
- If necessary, minimize (but do not Cancel) the Windows Activation alert by touching the down arrow at the top-right of the dialog.
- 2 In the System Clock section, select the Format pop-up menu to set the time format (12 Hour AM/PM or 24 Hour).
- 3 Select the Edit button in the System Clock section.
- 4 Select the Zone pop-up to choose the appropriate time zone. .

 $\dot{\bigtriangledown}$ On touch screens, touch in a field and slide your finger up or down on the screen to increase or decrease the value in the field.

5	Select each available field and enter the appropriate data to set the time and date.	Time:	02 : 01	PM 🔫
6	Select Apply. The new System Clock settings are applied.	Date: Zone:	Oct	02 , 2015 Pacific Time (US & C❤
			APPLY	CANCEL

How to Proceed

- If prompted to activate Windows, be sure to follow the previous instructions for Activating Windows on S6L.
- If not, proceed to Optional Connections for Pro Tools and ECx Ethernet Control.



Optional Connections for Pro Tools and ECx Ethernet Control

After assigning each S6L control surface and Stage I/O unit to an E6L engine, you can make optional connections for Pro Tools AVB/VENUE Link and ECx Ethernet Control.

To make Pro Tools AVB/VENUE Link connections:

• To connect a qualified Pro Tools computer, connect a supported Ethernet cable from Network port **C** on the S6L control surface to an available Ethernet port on the computer (or to a Thunderbolt port using a Thunderbolt-to-Ethernet adapter).

(Optional) For redundant recording, connect an additional qualified Pro Tools computer to Network port **D** on the S6L control surface. On both Pro Tools systems, enable VENUE Link and use Create Session from VENUE to be able to record your performance to both Pro Tools systems simultaneously. For more information, see the *VENUE S6L Live Recording Guide.pdf*.

If you need to simultaneously record to and play back from Pro Tools to integrate backing tracks, count-offs or other material, use a single Pro Tools system connected to S6L Network port **C**, only.



= Pro Tools record/playback connections= ECx Ethernet Control connection

Figure 3. Optional connections for Pro Tools and ECx Ethernet Control

Required Mac Optimizations for Pro Tools AVB Do the following to optimize your Mac for AVB recording and playback: Disable Wi-Fi, Airport, and Blue Tooth, and turn off Internet Sharing. Turn off Energy Saving. Disable Notification Center. For more information, see the *S6L Live Recording Guide.pdf*.

Y If multiple Pro Tools systems are present, Avid recommends that you first connect, power on, and configure S6L system devices before connecting and configuring Pro Tools computers.

To make connections for ECx Ethernet Control:

• To connect to a router or computer for ECx Ethernet Control, connect a standard Ethernet cable from the port labeled **ECx** on the S6L control surface to the router or client computer.

 \overleftarrow{O} VENUE Link is not supported via the ECx port. Use Network port **C** for Pro Tools/VENUE Link connection only.

Network Connection Guidelines for ECx Unsupported ECx connections can destabilize VENUE when connected to a large network. The **ECx** port on the S6L control surface is intended to be connected to a private network containing only S6L-compatible devices such as a laptop or tablet for remote control. Do not connect the **ECx** port directly to a LAN such as a corporate network which contains other types of devices. Doing so may disrupt the device discovery mechanisms used by some S6L components, decrease stability in IO Sharing setups, and threaten AVB recording. For more information, see the *ECx Ethernet Control Guide.pdf*.

igodow For information on installing and configuring the VENUE | On-Stage or Function Pad apps for iPad and iPhone, see their guides.

How to Proceed

If you are configuring your system for the first time, or if you performed a System Restore, proceed to Installing VENUE Plug-Ins.

Transferring Plug-In Licenses

Installing VENUE Plug-Ins

After activating your software, transfer plug-in licenses to the S6L plug-ins iLok. *Do not transfer the Live Sound Production Toolkit license to the plug-ins iLok.* The Live Sound Production Toolkit license (only needed for Pro Tools 2018.7 or earlier) must reside on the Pro Tools iLok.

To install plug-ins on your S6L system, you must transfer plug-in licenses to your plug-ins iLok, copy the S6L plug-ins installer to a USB drive, and then install the plug-ins on the S6L control surface using the USB drive containing the plug-ins installer.

For Waves plug-ins (if any) see the Waves SoundGrid for VENUE.pdf from Waves (also available in your Avid account).

Beginning with Pro Tools 2018.9, the functionality provided by the Live Sound Production Toolkit is included in Pro Tools and is automatically enabled whenever the Playback Engine is set to E6L. For maximum compatibility you should still transfer the Live Sound Production Toolkit to your Pro Tools iLok to enable 64- and 128-channel Pro Tools AVB with Pro Tools 2018.7 or earlier.

Wait until you activate and install Pro Tools to transfer the Live Sound Production Toolkit license.

To transfer plug-in licenses to the S6L plug-ins iLok:

- 1 Launch the iLok License Manager on your computer.
- 2 Insert the S6L plug-ins iLok into an available USB port on your computer.
- **3** In the dialog asking you to register the iLok to your account, select **Yes** to confirm. If this iLok is already registered to your account, skip to the next step.
- 4 In the License Manager, select the licenses for the S6L plug-ins and drag them to the iLok.

Do not transfer the Live Sound Production Toolkit license to the S6L plug-in iLok.

5 Label this iLok so you can easily identify it as containing the licenses for your S6L system plug-ins (such as "S6L Plug-Ins").

Copying the Plug-Ins Installer to a USB Drive

Do not use the VENUE System Restore USB Drive to store software or any other data.

To copy the plug-ins installer to a USB drive:

- 1 Make sure there is enough free space on your USB drive to accommodate all the software.
- 2 Format your USB drive to the exFAT, FAT32 or NTFS file system using Disk Utility (Mac) or Windows Disk Management (Windows).
- 3 If you have not done so already, download the "S6L Plug-Ins Installer" file from the My Products and Subscription section of your Avid account to your computer.
- 4 Unzip the S6L plug-ins installer file by doing the following, depending on your computer platform:

Mac Double-click the ZIP file containing the software to unzip it.

Windows Right-click the ZIP file containing the software, select Extract All... from the pop-up menu, and in the ensuing dialog click Extract.

- 5 In the unzipped file, locate the "AAX Plug-Ins" folder.
- 6 Copy the entire "AAX Plug-Ins" folder to the top (root) level of the USB drive.
 - Be sure to copy the AAX Plug-Ins folder itself, not the individual plug-ins inside the AAX Plug-Ins folder. If the S6L system does not find the plug-ins during installation, check your USB drive to make sure you have properly copied the AAX Plug-Ins folder to your USB drive.







Installing Plug-Ins

To install plug-ins:

- 1 Connect and power-on your S6L system as described in the VENUE | S6L System Guide.
- 2 Insert the iLok containing the plug-in licenses into a USB port on your S6L control surface. Make sure this iLok is connected to your S6L control surface whenever your system is in use.
- *A secure USB port inside the S6L control surface is provided to securely protect an iLok. See the VENUE* | *S6L System Guide instructions on accessing the port.*
- 3 Insert the USB drive containing the plug-in installers into an available USB port on the S6L control surface.

A Plug-ins must be installed using the USB ports on the S6L control surface only.

4 Press the **Config** switch on the S6L control surface so that it is lit.

5 In the VENUE software, go to the Options page and select the Plug-Ins tab. The following two lists are shown:

Plug-ins to Install This list shows available plug-in installers. At the top of the list is the Device selector, which provides a pop-up menu of available media sources.

Installed Plug-Ins This list shows all plug-ins already installed on the system.

- 6 In the Plug-Ins to Install list, select the Device selector menu and choose the USB drive from the pop-up to access the plug-in installers located on the drive.
- 7 Select a plug-in from the Plug-Ins to Install list to target that plug-in for installation.
- 8 Select Install to install the selected plug-in.
- **9** When prompted, select Accept to accept the End User License Agreement for the plug-in. Once installed, the plug-in appears in the Installed Plug-Ins list on the right.
- 10 Repeat the three previous steps to install any other available plug-ins.
- 11 Proceed to Installing Optional S6L System Software.

Installing Optional S6L System Software

Your system also includes ECx Ethernet Control software, VENUE Standalone software, VENUE On-Stage for iPad and iPhone, and system documentation, all of which are available in your Avid account.

ECx Ethernet Control Software ECx is installed separately on both your S6L system *and* a client computer (or other mobile device) for remote control of your VENUE system. Follow the instructions in the *ECx Ethernet Control Guide.pdf*, included in the ECx software bundle.

VENUE Standalone Software VENUE standalone software is installed on a separate compatible computer (Windows XP SP3 and higher required) and is used to simulate an S6L system, letting you prepare a Show file and learn S6L system basics.

VENUE On-Stage On-Stage is available for free download from the App Store and is installed on any compatible tablet or phone. VENUE On-Stage lets performing artist remotely control their own monitor mix. Follow the instructions in the *VENUE On-Stage Guide.pdf*, available for download from your Avid account.

VENUE Function Pad The VENUE Function Pad app is available for free download from the App Store and is installed on any compatible tablet or phone. VENUE Function Pad lets engineers remotely access Function switch assignments. Follow the instructions in the *VENUE Function Pad Guide.pdf*, available for download from your Avid account.

Waves SoundGrid Plug-Ins If your system includes an Avid WSG-HD Waves SoundGrid Option Card, follow the instructions in the *Waves SoundGrid for VENUE User Guide.pdf* from Waves (also available in your Avid account).

Documentation The documentation included with your S6L system include PDFs of the *VENUE* | *S6L System Guide*, providing complete operational information for your system, and other useful documentation. Download these PDFs from your Avid account to your personal computer or tablet.

Installing Pro Tools

Pro Tools software is installed on a separate compatible computer. A Pro Tools Activation Card and iLok are included with the S6L control surface. Follow the instructions in the package to activate, download, and install Pro Tools software.

Important! Do the following to optimize your Mac for AVB recording and playback:

- Turn off Internet Sharing
- · Disable Wi-Fi, Airport, and Blue Tooth
- · Turn off Energy Saving
- · Disable Notification Center

For a complete list of optimizations for your Pro Tools computer, visit Pro Tools Computer Optimization.

For the most recent compatibility and requirements information, visit What are the system requirements for Pro Tools with **S6L?**

Beginning with Pro Tools 2018.10, the functionality provided by the Live Sound Production Toolkit is included in Pro Tools automatically. If you are using Pro Tools 2018.7 or earlier, be sure to transfer the Live Sound Production Toolkit to your Pro Tools iLok to enable 64- and 128-channel Pro Tools AVB. For more information, see Transferring the Live Sound Production Toolkit License.

Transferring the Live Sound Production Toolkit License

Beginning with Pro Tools 2018.10, the functionality provided by the Live Sound Production Toolkit is included in Pro Tools automatically. For compatibility with Pro Tools 2018.7 or earlier, be sure to transfer the Live Sound Production Toolkit to your Pro Tools iLok to enable 64- and 128-channel Pro Tools AVB.

Do not transfer the Live Sound Production Toolkit to the iLok containing S6L plug-in licenses. The Live Sound Production Toolkit license must be transfered to the iLok containing the Pro Tools license, and connected to your Pro Tools computer.

To transfer the Live Sound Production Toolkit license to your iLok:

- 1 Locate the Pro Tools iLok and insert it into an available USB port on your computer.
- 2 Launch the iLok License Manager.
- **3** In the License Manager, select the Live Sound Production Toolkit license and drag it to the Pro Tools iLok.
- 4 Label this iLok so you can easily distinguish it from the iLok containing S6L plug-in licenses. Make sure this iLok is connected to your Pro Tools computer whenever you launch Pro Tools.

How to Proceed

Refer to the following after configuring your system:

- See the VENUE S6L System Guide.pdf for additional configuration information for I/O Sharing and managing connections, and for complete system operational information.
- See the most recent edition of the What's New in VENUE 6.x.pdf to learn about the new features that are available, and to see what was fixed to optimize performance and improve reliability.
- See the *S6L Live Recording Guide.pdf* to learn how to integrate Pro Tools recording and playback.
- See the Intro to S6L Guide.pdf for an introduction to fundamental S6L concepts and terminology, with tutorials, examples, and links to dozens of videos.

These and all other VENUE guides are available to download from your Avid account (https://www.avid.com/account), and from our Knowledge Base (http://avid.force.com/pkb/articles/user guide/S6L-Documentation).

Your Pro Tools computer must be AVB-audio compatible to connect to the S6L system Network port. Visit www.avid.com/S6Lsupport for a list of qualified computers.

Part V: Reference

Appendix A: Day to Day Powering Up and Down

Use the following instructions to power the system up and down for regular, day-to-day start up and shut down. Only use these abbreviated steps *after* the system(s) have been connected and configured, and all components have been confirmed.

Powering Up the System

Power up the system in the following sequence:

A Make sure no VGA monitor, mouse, keyboard, or internet is connected to the E6L engine before powering up your S6L system.

- 1 If more than one system is connected for I/O Sharing, do the following steps for the Clock Master system first.
- 2 If applicable, power on routers for use with ECx remote control.
- **3** Power on any connected computers for recording/playback.
- 4 Power on the control surface video monitor.
- 5 Power on the E6L engine by pressing the power switch on the back to the on (1) position.Wait until the front panel Status LED lights green and the System LED begins flashing amber.
- 6 Power on the S6L control surface by pressing the power switch on the back panel to the on (1) position. If you are powering up the system for the first time, or the S6L control surface is connected to a different E6L engine than it was previously connected to, the Please Select Engine screen appears on the MTS when initialization is complete. If this occurs, see **Please Select Engine**.

 $\dot{\phi}$ If the E6L engine has not fully initialized by the time the S6L control surface has initialized, "Waiting for the E6L Engine to start..." appears in the MTS until the E6L finishes initializing.

- 7 Power on the first Stage I/O unit (such as Stage 64) by pressing the power switch to the On position for the PSU that is plugged into an AC power source. If both PSUs are connected for redundancy, power-on both PSUs. The power switch(es) lights green. On the front panel of the Stage 64 the Status LED lights green, the AVID logo appears while the device initializes. When initialization is complete, the Controller Menu HOME page is shown.
- 8 Power on any other Stage I/O units in the system.
- 9 If more than one system is connected for I/O Sharing, repeat the preceding steps for the Clock Slave system.

Powering Down the System

Power down the system in the following sequence:

- 1 Turn off the audio monitoring system.
- 2 Turn off any connected computers for recording/playback.
- 3 Put the system into *Config* mode (see **Enabling Config Mode**), then on the external VENUE software screen go to the **Options** page and select the **System** tab.
- 4 Select Shut Down, then select Shut Down again to confirm.
- 5 When the MTS and the external screen go black, power off the S6L control surface using the back-panel power switch.
- 6 On the front panel of the E6L engine, once the Status LED is *unlit* and the System LED is *lit amber* you can power off the E6L using the back-panel power switch.
- 7 Power off any connected Stage I/O units.

Appendix B: Updating Option Card and Other Firmware

If on startup you receive a message saying that the firmware for any Option or Expansion cards needs to be updated, or that the BIOS needs to be updated, use the instructions in this section.

- Updating MADI Card Firmware
- Updating the BIOS

Updating MADI Card Firmware

If you have installed one or more MADI-192 MADI Option Cards in your E6L engine, or on startup you encounter the message that the firmware needs to be updated, use this procedure to update the firmware on the MADI card(s).

To update MADI-192 MADI Option Card firmware:

- 1 If necessary, shut down your system, and power off all components.
- 2 Make sure a VGA monitor and USB keyboard and mouse are still connected to your E6L engine.
- 3 Power on your E6L engine, and repeatedly press F5 on the keyboard while the engine starts up.
- 4 Close the window that appears on screen to show the Desktop.
- 5 Double-click the Update MADI Firmware icon on the Desktop.
- 6 Follow the on-screen instructions to update the firmware on your MADI-192 MADI Option Cards. When the firmware update completes, the E6L engine shuts down (indicated by the front-panel System LED going dark, and the Status LED lighting amber).
- 7 After the E6L engine shuts down, do the following:
 - Disconnect power from the E6L and wait at least 30 seconds.
 - · Make sure to disconnect the VGA monitor, mouse, and keyboard.

You must unplug the VGA monitor, USB keyboard and mouse before proceeding.

Updating the BIOS

All systems that are updating from VENUE software version 5.1.0 or lower must first update the E6L engine BIOS. Other versions of VENUE software might also require a BIOS update (the installer will inform you of this during installation).

If you are performing a System Restore or Software Update on a system that is already running VENUE software version 5.1.1 or higher, and the VENUE software installer does not prompt you to update the BIOS, you can skip these instructions.

Updating your system to BIOS 50 involves the following steps:

- Collecting the Required Components
- Creating the BIOS 50 Update Key
- Updating the BIOS on the E6L

Required Components

Before you begin, make sure you have all the following required components:

- Blank USB key
- VGA display and VGA cable
- USB keyboard and mouse (connect to USB ports on the front panel of the E6L Engine)
- Windows computer for creating a DOS bootable USB key
- BIOS50_Update.zip (included in the System Restore or Update .zip downloaded from your Avid Account)
- rufus-2.9.exe (included with VENUE 6.x.x software, and available for download at https://rufus.ie/en_IE.html)

After collecting all the required components, proceed to Creating the BIOS 50 Update Key.

Creating the BIOS 50 Update Key

To create the BIOS 50 Update Key:

- 1 Make sure you have the BIOS50_Update (included in the Restore and Update .zip files), and downloaded and installed the Rufus utility (rufus-2.8.exe) as explained in Downloading VENUE Software.
- 2 Insert a USB key drive into an available USB port on your Windows computer.
- 3 Launch Rufus.
- 4 In Rufus, do the following:
 - Choose the USB drive from the Device pop-up menu.
 - Choose FAT32 from the File System pop-up menu.
 - (Optional) Enter a name for the USB drive in the Volume label field.
- **5** Under Format options, do the following:
 - Choose Quick Format.
 - Choose Create a bootable disk using, and then from the pop-up choose Free-DOS.
- 6 Click Start, then click OK.

Rufus begins to format the USB drive and progress is indicated on-screen.

igodow If the Autoplay window appears during formatting, close is

- **7** Wait until formatting is completed (indicated by Done at the bottom of the Rufus window).
- 8 If you have not already done so, extract (unzip) the BIOS50_Update.zip.
- 9 Copy the contents of the BIOS50 folder (not the enclosing folder itself) to the root level of the USB drive.

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File system				
FAT32 (Default)	~			
Cluster size				
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New volume label				
VENUE				
Format Options 🔽				
Check device for bad blocks 1 Pass				
Create a bootable disk using FreeDOS	v 0.			
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READY				
About Log Start	Close			
1 device found	#			
Rufus window				

Updating the BIOS on the E6L

To update the BIOS on the E6L:

- 1 Connect a VGA Display to the E6L Engine VGA Port.
- 2 Connect a keyboard and mouse to the front panel E6L Engine USB ports.
- 3 Insert the bootable BIOS USB drive into an available USB port on the back panel of the E6L.
- 4 Power on the E6L Engine and press F10 repeatedly during bootup to enable video output and boot from the USB drive.
- 5 Type flash.bat to run the BIOS update.
- 6 Wait for the BIOS update process to complete (approximately one minute), indicated by the blinking cursor appearing to prompt another command.
- 7 Press Ctrl+Alt+Delete, and when the screen goes black alternate between holding down the Esc and F5 keys to access the Windows boot menu. While on this screen, wait at least 2 minutes and 30 seconds.
- 8 After waiting at least 2 minutes and 30 seconds, press the Enter key on your computer keyboard to Continue. Continue should be selected by default. If not, use the arrow keys to select it, then press Enter.
- 9 Depending on the version of VENUE software currently installed, you will see either of the following:
 - A black screen with no dialog box or text. If you see this, power down the system.
 - -Or-
 - A dialog with the following message: "The latest system software does not match the current hardware configuration. Please follow the instructions in the latest System Restore USB Drive to update the system software." If you see this, press Shut Down, then power down the system and follow the instructions in VENUE System Restore.

How to Proceed

After updating the BIOS, resume performing a VENUE System Restore or a VENUE Software Update.

Appendix C: Making Fiber Connections

When using fiber to connect S6L system components, you must use two SFP qualified transceiver modules per connection in addition to supported fiber-optic cable (see **Cabling Requirements** for information on supported cabling). To make a fiber connections to an S6L system component, insert the SFP transceiver module into a fiber Network port of an S6L system component, and then insert the fiber-optic cable into the SFP module.

It is recommended that you do not install or remove an SFP module with a cable attached to it, or install or remove an SFP module more often than is necessary. Always cover fiber-optic ports and connector ends when they are not connected using dust caps and plugs.

The following applies to S6L control surface, E6L Engine, Stage 64, and Stage 32 connections (Stage 16s do not support Fiber connections).

To make a fiber-optic connection to an S6L system component:

1 Remove the dust plug from the desired fiber Network port on the S6L system component, and set it aside for later use.



Fiber Network ports A (left) and B (right) on the S6L control surface (dust plugs removed)

- 2 Align the SFP module with the fiber Network port so that the release latch on the SFP module faces up (when installing in the S6L control surface or the E6L engine), or to the left (when installing in a Stage 64).
- 3 Insert the SFP module into the port until you feel the module snap into place inside the port.
- 4 Remove the dust plug from the SFP module's port, and set it aside for later use.
- 5 Remove the dust cap from the fiber-optic cable connector, align the connector with the port so that the tab on the top of the cable connector faces up (when installing in the S6L control surface or the E6L engine), or to the left (when installing in a Stage 64), and then insert the cable into the SFP module until you feel the cable connector snap into place.

To remove the fiber-optic cable from the SFP module:

- 1 Press the tab on the top on the cable connector to release the cable, and then pull the cable out of the SFP module.
- 2 Replace the dust cap on the end of the fiber-optic cable connector.

To remove the SFP module from the fiber port:

- 1 Pull the release latch on the SFP module out and down to release the module from the port, using a small flat head screwdriver if necessary.
- 2 Pull the module out of the port.
- 3 Replace the dust plug on the SFP module port and place the module in an anti-static bag.

Appendix D: Managing Stage I/O Unit Connections

After initial setup, S6L Stage I/O devices on the network can be named and renamed, reassigned, and removed.

Th the following sections, references to "Stage I/O devices" includes Stage 64, Stage 32, and Stage 16 unless noted otherwise.

Naming System Components

You can name the S6L control surface, the E6L engine, and any connected and assigned Stage I/O devices. The device name is stored with the respective device, and stays with that device until it is changed. Names can be changed at any time. Though not required, naming components is highly recommended.

To name S6L system components:

- 1 In the Options > Devices tab of the external screen, select the component graphic so it is outlined in blue.
- 2 In the Information list, select the DEVICE tab.
- **3** Touch-and-hold (double-click) the field next to Name, then enter a unique name using the keyboard, then press Enter when finished.

Managing Stage IO Unit Connections

When power-cycling your system and/or reconnecting Stage I/O devices to the same E6L engine, the original Stage 1–6 assignments are automatically recalled, regardless of the order in which Stage devices are connected. Depending on the hardware combinations being used, however, you may want or need to reconfigure system Stage I/O. You can reconfigure Stage I/O on the Options > Devices tab any time after the initial system set up and configuration. You can reassign connected Stage I/O racks, remove Stage I/O racks from the current configuration, and add new Stage I/O racks to the current configuration.

Reassigning a Stage I/O Rack

You can reassign a Stage device to a different Stage slot. For example, for a particular stage setup you may want to rearrange the order of Stage 64 I/O racks as they appear in the VENUE Patchbay. Or you might want to add one or more Stage 32 or Stage 16 I/O racks.

To reassign a Stage I/O unit:

- 1 Put the system into Config mode.
- 2 Go to Options > Devices.
- 3 Select a Stage device in the Connected Devices column, then select the Disconnect button.The unassigned Stage device appears in the Available Devices column.
- 4 Re-assign Stage I/O racks as necessary.

Removing a Stage I/O Rack

You can unassign a Stage I/O rack from your configuration. Do this if you are removing a connected Stage device from your configuration, or if a Stage device from a previous configuration is not connected and you want to dismiss warning dialogs.

To remove a Stage device from the current configuration:

- **1** Put the system into Config mode.
- 2 Go to Options > Devices.

- 3 Do either of the following depending on the status of the Stage device:
 - To remove a connected Stage device, select that device in the Connected Devices column and choose Disconnect.
 - To remove a Stage device that is not connected (indicated by a greyed-out Stage device in the Connected Devices list), touch and hold (right-click) the grayed-out Stage device and choose Forget missing Stage device.

The I/O for that Stage device is now grayed-out under the corresponding Stage 1–3 hardware tab in the Patchbay.

Managing S6L–E6L Connections in Shared I/O Configurations

After the initial setup, the next time you power on your S6L system an S6L will automatically attempt to reconnect to the most recently assigned E6L. This allows for a specific S6L to always be paired with a specific E6L. The command Forget Engine is provided to manage subsequent S6L–E6L connections.

Forget Engine Lets you disconnect the currently connected E6L from the S6L control surface. This command is useful if you have multiple E6Ls and S6Ls that may or may not be used together regularly.

To disconnect an E6L from an S6L:

- 1 Enable Config Mode (see Enabling Config Mode).
- 2 Go to the Options > Devices page.
- 3 Right-click the E6L Engine graphic and choose Forget Engine.

On subsequent restarts, the S6L will not attempt to pair with any E6Ls on the network. Any pairings to an E6L must be made manually (see Pairing the E6L and S6L).

Managing E6L–Stage I/O Connections in Shared I/O Configurations

After the initial setup, the next time you power on your system the previous Input Master/Slave and shared Output (if any) relationships between Stage I/O devices and E6Ls are maintained. If the E6L Master for a given Stage device in the network is not detected or is lost, the following dialogs are presented on the other E6L:

Master Engine Not Detected Appears when the E6L Master in the previous configuration is either not powered on or is not connected.

Master Engine Lost Appears if the E6L Master is disconnected from the network, for example if the audio network connection is broken or the Master E6L loses power.

In both cases, you can choose to either maintain the current Master/Slave relationship and continue to operate as if the Master E6L were still online (if, for example, the Master E6L has lost power), or become the Input Master of any Slave Stage devices (if, for example, you do not expect the former E6L Master to come back online). If you choose the latter option, Stage devices must be re-assigned as described in **Reassigning a Stage I/O Rack**.

Show File Compatibility

Loading Show files is unaffected by Output ownership, and functions the same as when loading Show files onto systems configured for Shared Stage Input.

Configuring Stage Slots for Stage 16s, Stage 32s, or Stage 64s

As described in **Assigning Stage I/O Units**, when adding Stage 16s or Stage 32s for the first time, or when reconfiguring a system to use Stage 64s instead of Stage 32s or Stage 16s, you must first configure Stage slots in the **Options > Devices** tab before you can assign Stage I/O units. Each **Stage** slot corresponds to a **Stage** hardware tab 1–6 in the VENUE Patchbay.

 \overleftrightarrow{V} You can configure Stage slots and assign devices in VENUE Standalone Software (requires version 5.5 or higher).

To configure Stage slots and assign Stage I/O racks:

- 1 Make sure your system is in Config mode.
- 2 On the external screen, go to the Options > Devices page and locate the Connected Devices column. By default, three Stage 64 slots are displayed in the Connected Devices column.



Connected Devices showing one connected Stage 64 (above), and two Stage slot Type selectors (below)

3 Select any available slot Type selector and choose Stage 32 or Stage 16 from its pop-up menu. Up to four Stage 16 slots, or up to two Stage 32 slots, appear in the Connected Devices column.



Stage 32 and Stage 16 slots available in Options > Devices

Appendix D: Managing Stage I/O Unit Connections

The number of available Stage slots that appear is determined by the number of connected Stage 64s (if any), allowing for the maximum supported configurations to be connected. For example, when one or two Stage 64s are already connected configuring the third available slot to Stage 16 makes four Stage 16 slots become available. When three Stage 64s are already connected, no additional slots are available.

Virtual Soundcheck: Important Note The order of Stage I/O devices in the Connected Devices column does not need to match the order of physical network connections. Slot designation (1–6) determines where I/O appears in the Patchbay I/O tabs 1–6, which also determines Virtual Soundcheck channel order. For example, because each Stage 16 slot occupies 16 channels of Virtual Soundcheck, switching any slot from Stage 64 to Stage 16 will occupy 64 channels of Virtual Soundcheck. Even if only one Stage 16 I/O unit is connected and three Stage 16 slots are empty, followed by slot 5 assigned and connected to a Stage 64, the Pro Tools inputs corresponding to that Stage 64 will begin at channel 65. To avoid this, it is recommended to assign Stage 64s (if any) to the lowest numbered slots 1–3 whenever possible, followed by any Stage 32s, followed by any Stage 16s.

- 4 In the Available Devices column, select the desired Stage I/O device so it is outlined in blue.
- 5 Select the Connect button at the bottom of the Available Devices column.
- 6 In the Connected Devices columns, select a flashing Stage 16 slot to assign the selected Stage 16 to that slot.
- \bigtriangledown You can also right-click on the desired Stage device in the Available Devices column and assign it by selecting an available slot.





Flashing Stage slots in the Connected Devices column (left) and a Stage 16 assigned to Stage slot 2 (right)

The Stage slot is populated with the selected Stage 16, and the I/O on that Stage 16 is now available to be patched to system input and output channels in the VENUE Patchbay under the corresponding Stage 1–6 hardware tab. For more information on using the Patchbay, see the *VENUE S6L System Guide.pdf*.

7 Assign any other available Stage I/O racks as desired.

You can reassign Stage I/O units at any time after initial software installation, and after all necessary firmware updates are completed. If you are replacing Stage units with one of a different type, simply select and Disconnect the unwanted Stage I/O unit in the Connected Devices list, re-assign the corresponding Stage slot if necessary, then assign the desired Stage I/O units.


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