

# EarMix™ 16M

16x2 AVB-networked personal monitor mixer

Owner's Manual



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## 1 Overview

### 1.1 Introduction



**Thank you** for purchasing an EarMix 16M Personal Monitor Mixer. Designed to work seamlessly with the PreSonus StudioLive® Series III digital mixers, the EarMix 16M personal monitor mixer provides a high-quality, expandable, networked monitoring solution for stage, installed sound systems, and studio recording.

PreSonus Audio Electronics is committed to constant product improvement, and we highly value our customers and their creative endeavors. We appreciate the support you have shown us by purchasing your EarMix 16M Personal Monitor Mixer and are confident that you will enjoy for years to come!

### 1.2 About This Manual

We suggest you spend some time with this manual before beginning to work with your EarMix 16M, to familiarize yourself with its features, functions, and proper connection procedures. This will facilitate configuring your AVB network and make the process go as smoothly as possible.

This manual describes the function of the EarMix 16M with the StudioLive Series III digital mixers. More information about AVB Networking best practices and configurations can be found in the PreSonus AVB Networking Guide and we highly recommend that you review this document as well to avoid any difficulty in creating your AVB network. This manual only covers basic connection and use case configurations. For complex routing, ***please review the PreSonus AVB Networking Guide.***

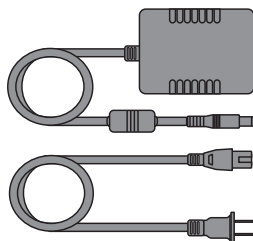
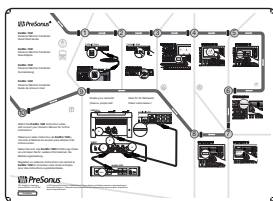
Throughout this manual, you will find ***Power User Tips.*** These suggestions provide useful information on getting the most out of your EarMix as well as explanations of various useful audio terminology.

Thank you, once again, for purchasing our product. We are confident that you will enjoy your new EarMix 16M.

**Note:** *When using your EarMix 16M with a StudioLive Series III mixer, your mixer will require the latest firmware and Universal Control version for proper functionality. Please log into your My PreSonus user account and update all associated software for your PreSonus AVB products before proceeding.*

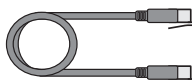
### 1.3 What's in the Box

In addition to a Quick Start Guide, your EarMix 16M package contains the following:



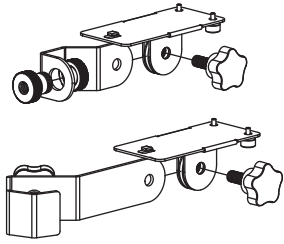
- EarMix 16M Personal Monitor: 16x2 AVB-networked personal monitor mixer
- EarMix 16M Quick Start Guide
- 24V External Power Supply (for use with AVB switches that do not provide PoE)
- PreSonus Health Safety and Compliance Guide

#### 1.3.1 What Else You Need



- **AVB Switch**  
The PreSonus SW5E AVB PoE Switch is fully compatible with all PreSonus AVB products and third-party AVB devices that adhere to the 1722.1 AVB standard. This switch also fully powers your EarMix 16M, allowing you to use it without the included external power supply.
- **Ethernet Cable**  
PreSonus requires a CAT5e or CAT6 Ethernet cable for all AVB devices. These can be acquired at most electronics dealers or [www.presonus.com](http://www.presonus.com)
- **1722.1 AVB-Compatible Mixer**  
All PreSonus StudioLive Series III mixer models are fully compatible with the 1722.1 AVB standard and the EarMix 16M. If you are using a third-party AVB mixer, please contact the manufacturer to verify compatibility with this standard.





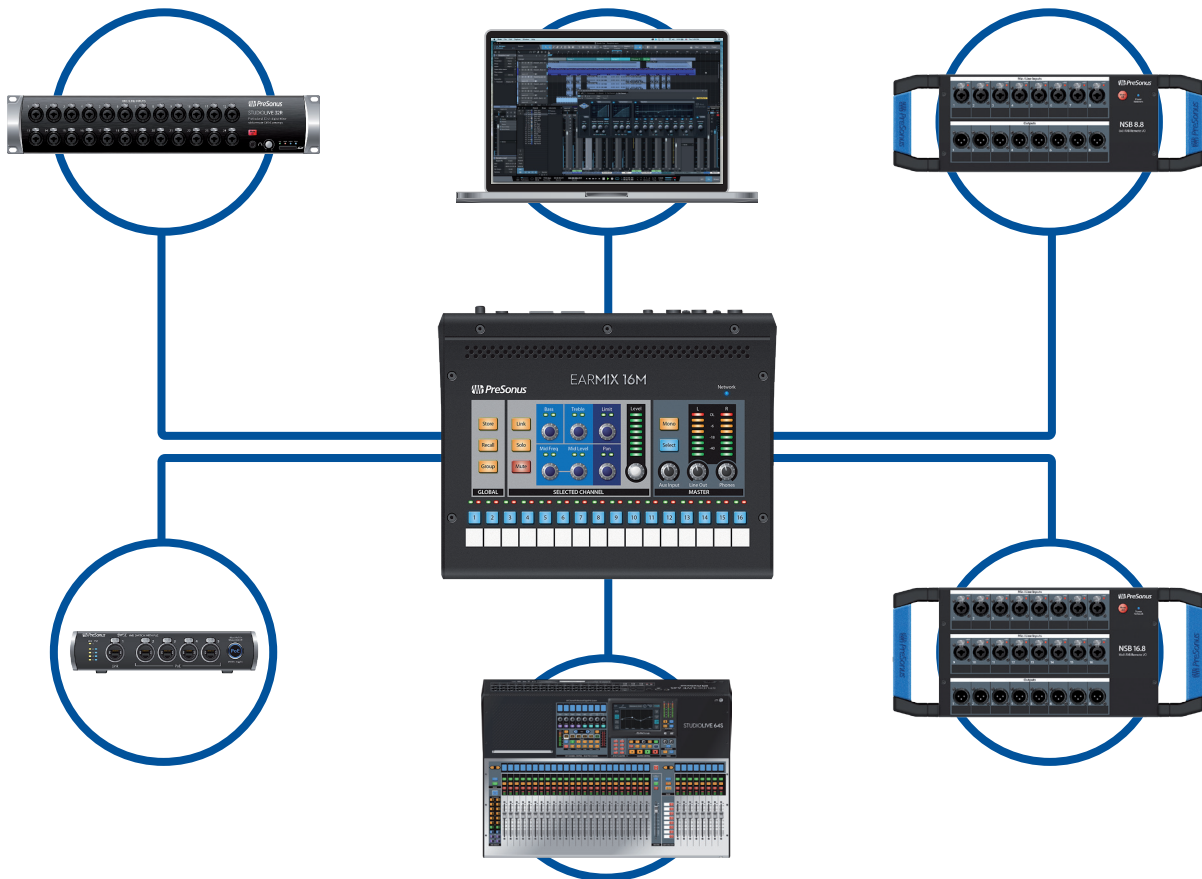
- **Mic Stand Adapter (optional)**

PreSonus has designed the EM-Mount to mount the EarMix 16M on a mic stand, allowing you to put your mix at your fingertips. This accessory is sold separately at your favorite PreSonus dealer or at [www.presonus.com](http://www.presonus.com).

## 1.4 Companion PreSonus Products

Welcome to the PreSonus Ecosystem! As a solutions company, we believe the best way to take care of our customers (that's you) is to ensure that you have the best possible experience from the beginning of your signal chain to the end. In order to achieve this goal, we've prioritized seamless integration throughout every design phase of these products from day one. The result is systems that communicate with each other as intended—straight out of the box—without excessive configuration hassle.

For more information on how our PreSonus AVB networking devices play so well with one another, *please review the PreSonus AVB Networking Guide*.



For more information on individual products, please visit [www.presonus.com](http://www.presonus.com).

## 2 Getting Started

A good monitor mix is critical for musicians to perform to the best of their ability. Whether you're on stage or in the studio, the EarMix 16M can make getting the best mix in your ears quick and easy.

Before you begin, here are a few rules to get you started:

- If your mixer is not properly gain staged, none of your mixes will sound their best, including your monitor mixes. If a source in your EarMix is too quiet or if it's distorting, chances are the problem lies closer to the input.
- Do not allow your inputs to clip. Watch the level meters; when the signal nears clipping, the top LED will illuminate, indicating that the digital-to-analog converters are in danger of being overdriven.

The tutorials in this section have been created for the following application, but can be altered accordingly for your personal needs:

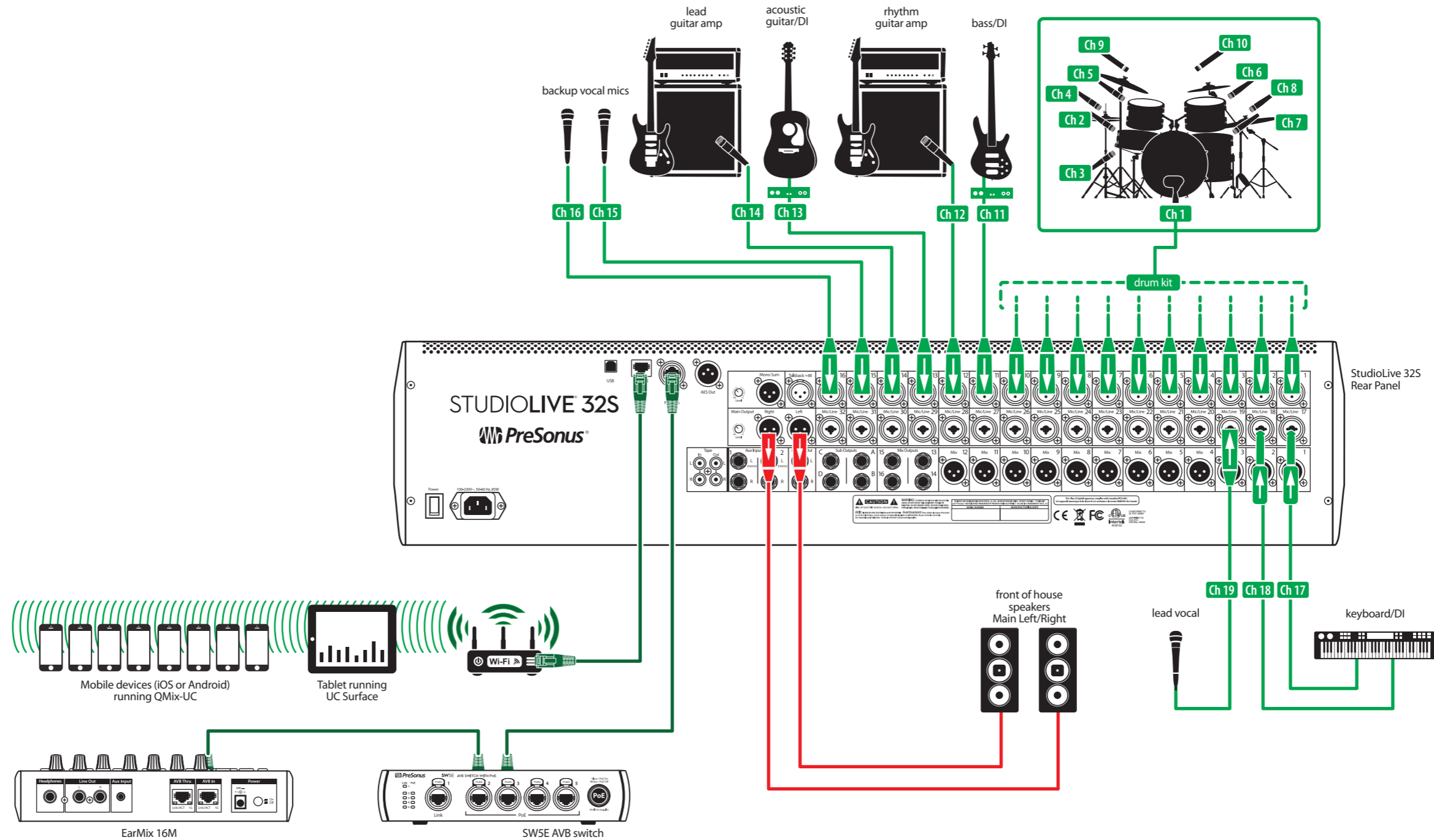
- Drum Kit with 10 microphones
- Bass (DI and Amp)
- Rhythm Guitar (Amp)
- Acoustic Guitar (DI)
- Lead Guitar (Amp)
- Background vocals (2)
- Keys (Stereo Left/Right)
- Lead vocals (1)

### 2.1 Using a StudioLive Series III Front-of-House mixer

In most situations, the source audio for your EarMix 16M will come from the same console that is running the front-of-house mix. This section will guide you through this application. A tutorial for using a StudioLive Classic- or AI-series mixer at Front-of-House can be found in **Section 2.2**.

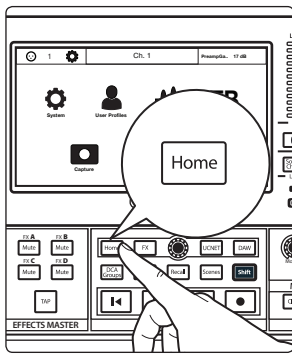
**Note:** While this tutorial discusses using the EarMix 16M with the StudioLive 32S, these steps are applicable to using any StudioLive Series III console mixer (Blue and S models).

Connect your EarMix 16M units to your StudioLive Series III mixer as shown below and power on your equipment:

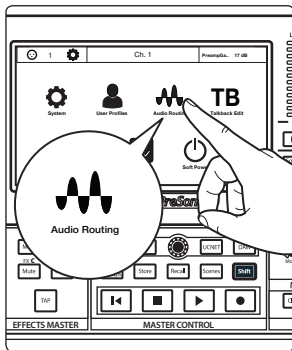


**Power User Tip:** The PreSonus SW5E AVB Switch provides PoE (Power over Ethernet) on ports 2-5. When connecting your EarMix 16M to these ports, you do not need to connect the external power supply that came with your unit. **Please Note:** You must use the AVB In port to power your EarMix 16M over Ethernet. The AVB Thru port does not accept input power.

### Step 1: Route Your Audio



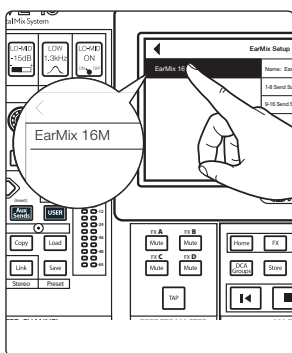
1. Press the Home button on your StudioLive Series III mixer.



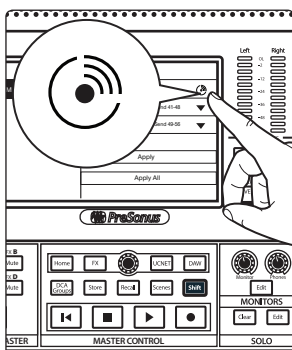
2. Press the Audio Routing icon on the Touchscreen.



3. Press the EarMix Setup button on the Touchscreen.

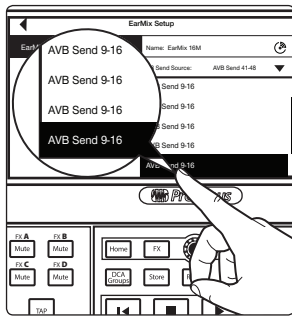


4. Select EarMix 16M from the list on the left.

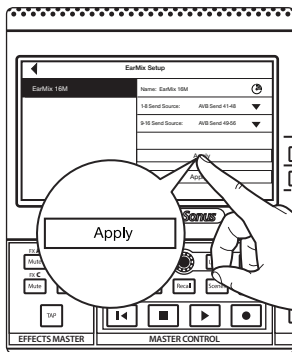


If you are unsure which EarMix 16M is which, press the Identify button. This will flash all the Select buttons on the currently selected EarMix 16M.





- Next you will need to select the AVB Sends from your mixer to which you route to your EarMix. By default, the last 16 AVB Inputs are patched from Flex Mixes 1-16. In our example, let's patch Inputs 41-48 to EarMix Sources 1-8 and Inputs 49-56 to EarMix Sources 9-16.

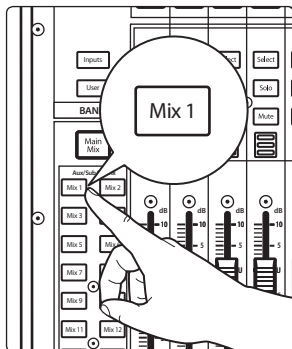


- Press apply to finish.

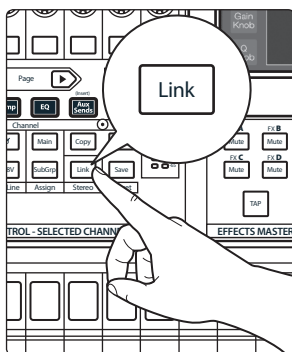
**Power User Tip:** If you are configuring multiple EarMix 16M Personal Monitor Mixers and would like them to receive the same routing from the mixer, press the Apply All button. This will apply the current AVB routings to every EarMix 16M currently on the AVB network.

By default, every Flex Mix on your StudioLive mixer is configured as a pre-fader Aux Mix. This tutorial will use this default setting.

### Step 2: Drums

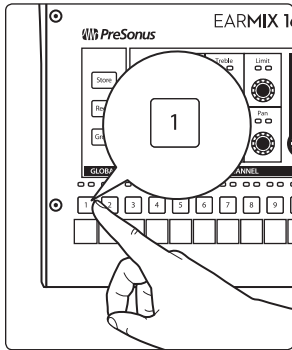


- Press Mix 1 on your StudioLive mixer, this will automatically select its output.

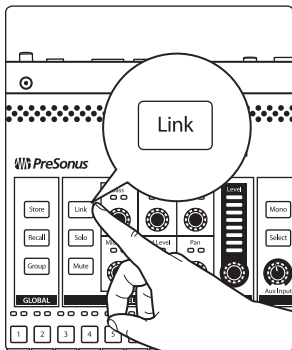


- Press Link in the Fat Channel to create a stereo Aux mix.

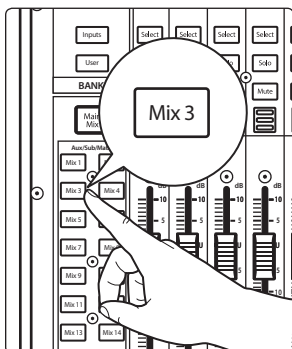
- Create a mix on Flex Mix 1-2 for your drum channels. Because this aux mix is stereo, you can configure pans as well as levels. This will allow you to create a more polished mix. If you would like to add Fat Channel compression and EQ, do that as well. Creating the best stereo mix for your drums will provide your musicians with the best foundation to create their own mixes locally on their EarMix 16M.



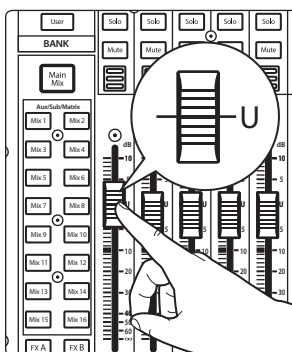
4. On your EarMix, press the Channel 1 Select button.



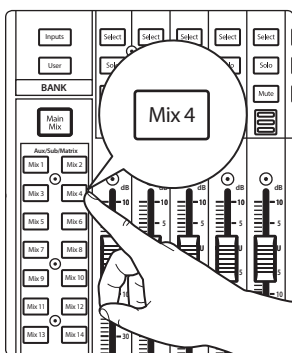
5. Press Link in the Selected Channel section. This will create a stereo input on your EarMix for your stereo drum mix.



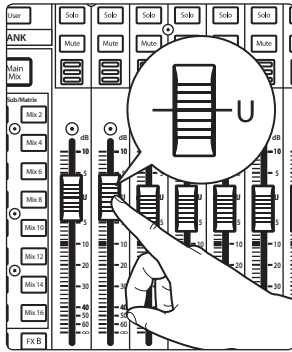
6. To provide your musicians with the most flexibility, it is recommended that you provide unique control over the kick and snare in addition to the overall drum mix. Press Mix 3 on your StudioLive.



7. Raise the level of the Kick channel to unity.

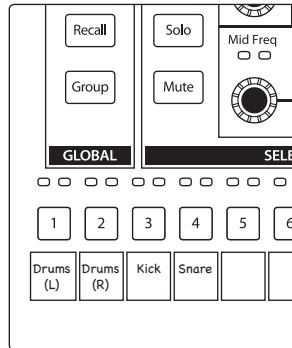


8. Select Mix 4 on your StudioLive.

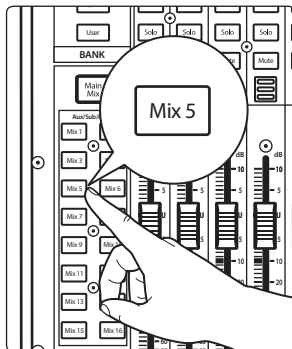


9. Raise the level of the Snare channel to unity.

Your EarMix 16M is now setup as follows:

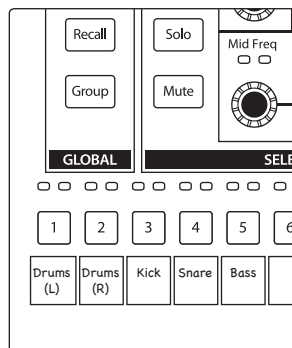


**Step 3: Bass**

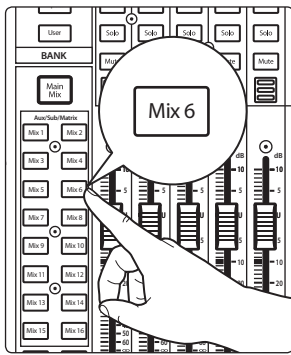


1. Press Mix 5 on your StudioLive mixer.
2. Create a blend between the DI channel and the amplifier channel. Add compression and EQ to taste. Again, the more cohesive sound with which you provide your musician, the easier it will be for them to create a good mix of their own.

Your EarMix 16M is now setup as follows:



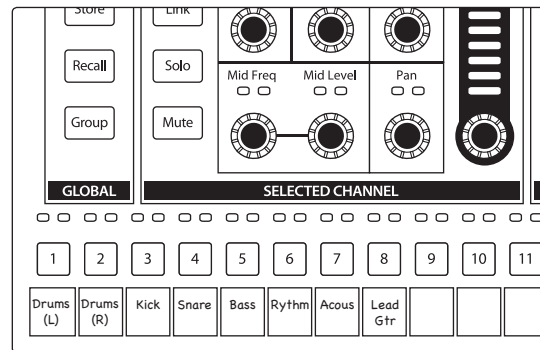
**Step 4: Guitars**



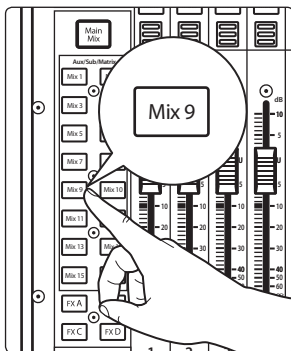
1. Press Mix 6 on your StudioLive mixer.
2. Raise the Rhythm Guitar channel to unity.
3. Repeat Steps 1 and 2 for the Acoustic and Lead Guitars using Mixes 7 and 8 respectively.

**Note:** While this tutorial uses Aux Mixes for every instrument in the band, whether they are mixed individually or in groups. You can also use digital patching to route individual channels. Please review your StudioLive Series III User Manual and UC Surface Reference Manual for more information.

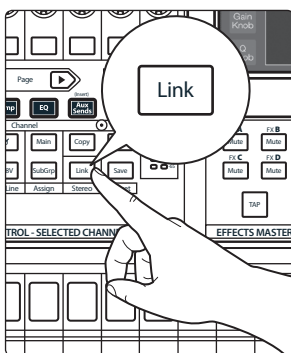
Your EarMix 16M is now setup as follows:



**Step 6: Keyboards**



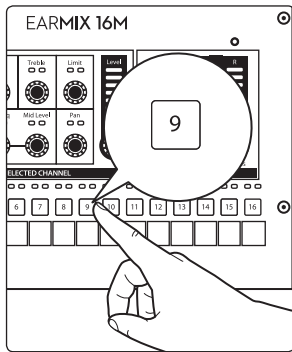
1. Press Mix 9 on your StudioLive mixer, this will automatically select its output.



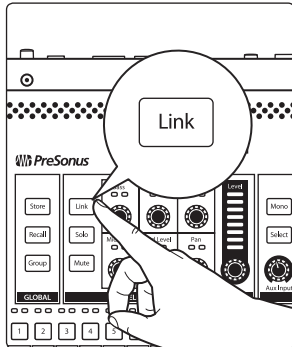
2. Press Link in the Fat Channel to create a stereo Aux mix.

3. Create a mix on Flex Mix 9-10 for keyboard channels. Like the drum mix, you can configure pans as well as levels. This will allow you to create a more polished mix. If you would like to add Fat Channel compression and EQ, do that as well.



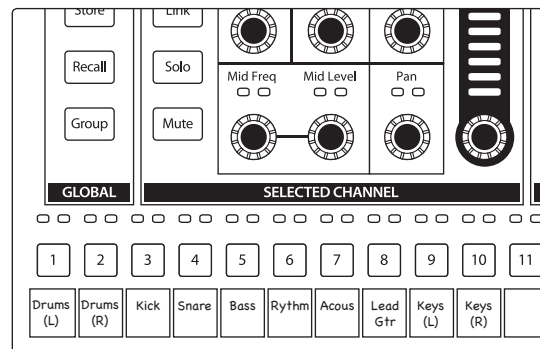


4. Select Channel 9 on your EarMix 16M.

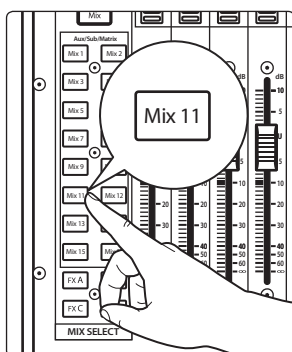


5. Press Link on your EarMix to stereo link inputs 9 and 10.

Your EarMix 16M is now setup as follows:



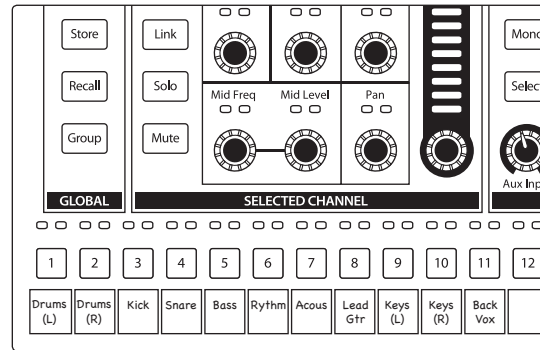
### Step 7: Backing Vocals



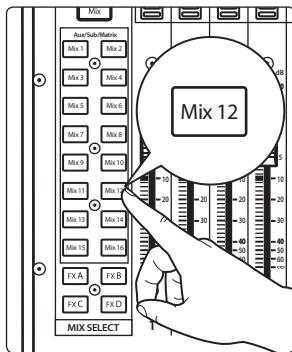
1. Press Mix 11 on your StudioLive mixer.

2. Create a mix using your background vocals. Adding compression and EQ will create a more polished mix for your musicians.

Your EarMix 16M is now setup as follows:



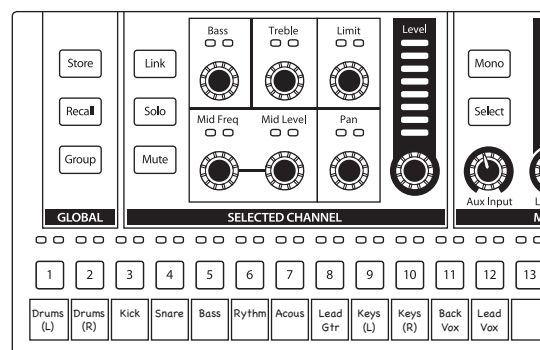
### Step 8: Lead Vocals



1. Press Mix 12 on your StudioLive mixer.

2. Raise the fader for the lead vocal channel to unity. If you are using a dedicated reverb or delay to your vocals, you can raise the Effects Return fader as well and create a wet / dry mix.

Your EarMix 16M is now setup as follows:



## 2.2 Using a StudioLive Classic- or AI-series Front-of-House mixer

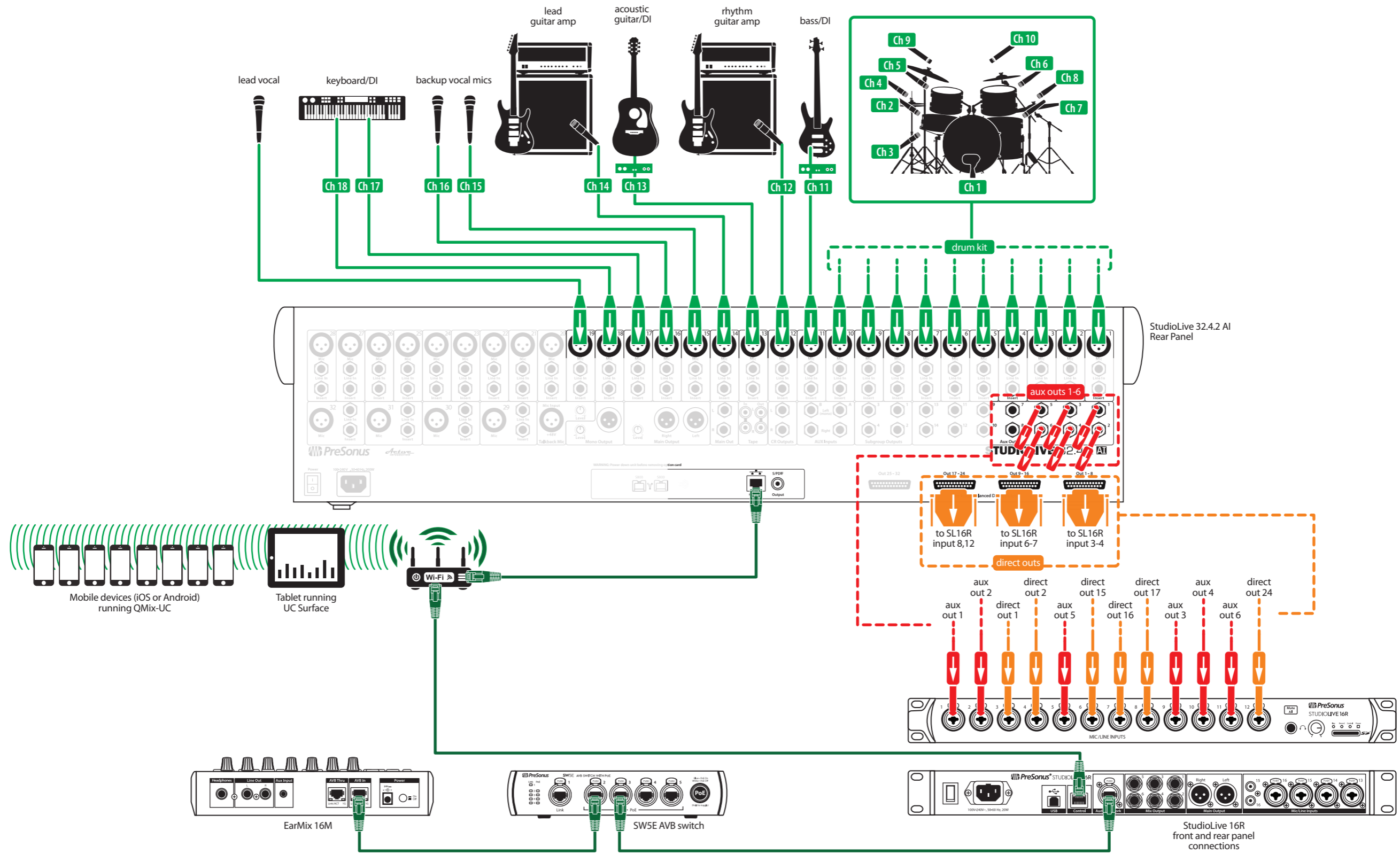
When combined with the StudioLive 16R, the EarMix 16M can be integrated into almost any existing mixing system and used as a stand-alone personal monitor mix system, but with some unique benefits.

Because the StudioLive 16R is a complete digital mixing solution, it comes equipped with all the dynamics and effects processing you'd expect from a professional monitor mix system.

In addition to being able to network with the EarMix 16M, the StudioLive 16R also features six analog outputs of its own that can be used to connect floor wedges. Monitor mixes for these outputs can then be remotely controlled from QMix-UC or UC Surface.

Because both Classic and AI-series StudioLive mixers are equipped with Direct Outputs, integrating a StudioLive 16R with EarMix 16M Personal Monitor Mixers is even easier.

Connect your Front-of-House mixer, StudioLive 16R and EarMix 16M units as shown below and power on your equipment:



In our example, we will only be using six of the StudioLive 32.4.2AI's aux mix outputs, leaving the remaining six available for other uses (external effects processing, overflow rooms, subwoofer networks, etc.). We will also be connecting the direct outputs for Channels 1-2, 15-17, and 24 as follows:

StudioLive 32.4.2AI Output	StudioLive 16R Input
Aux Mix 1	Input 1
Aux Mix 2	Input 2
Direct Out 1	Input 3
Direct Out 2	Input 4
Aux Mix 5	Input 5
Direct Out 15	Input 6
Direct Out 16	Input 7
Direct Out 17	Input 8
Aux Mix 3	Input 9
Aux Mix 4	Input 10
Aux Mix 6	Input 11
Direct Out 24	Input 12

**Power User Tip:** The PreSonus SW5E AVB Switch provides PoE (Power over Ethernet) on ports 2-5. When connecting your EarMix 16M to these ports, you do not need to connect the external power supply that came with your unit. Please Note: You must use the AVB In port to power your EarMix 16M over Ethernet. The AVB Thru port does not accept input power.

**Note:** This hook-up diagram shows the StudioLive 32.4.2AI, the same setup can be used for either StudioLive Classic mixer (16.4.2 or 24.4.2) and any StudioLive AI-series console mixer (16.4.2AI, 24.4.2AI, or 32.4.2AI). Because the StudioLive 16.0.2, 16.0.2USB, RM/RML16AI, and RM/RML32AI do not feature direct outputs, you will need to route every input to an aux mix similar to what is described in Section 2.1.

Variations on this setup can also be used to integrate EarMix 16M Monitor Mixers with third-party analog and digital mixers.

### Step 1: Route Your Audio



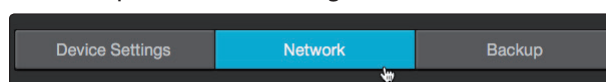
1. Launch Universal Control on the device that is connected to your StudioLive 16R.

2. Select the StudioLive 16R from the device list.



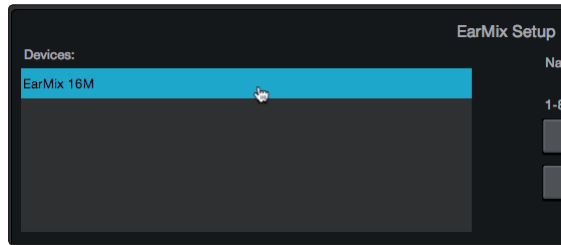
3. Click or Tap on the Settings Gear.

4. Click or Tap on the Networking tab.





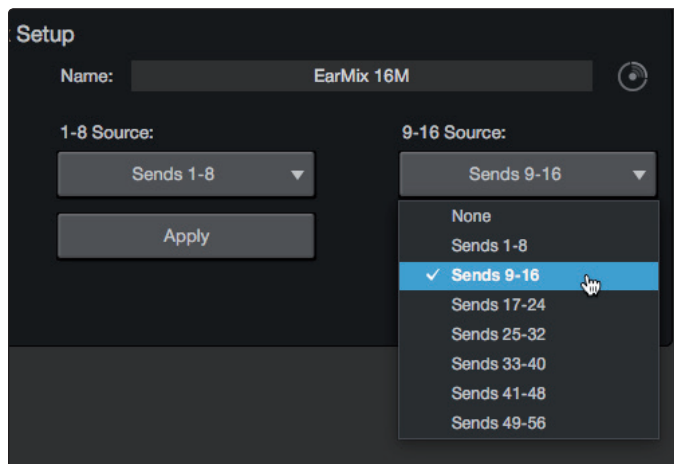
5. Select EarMix 16M in the device list.



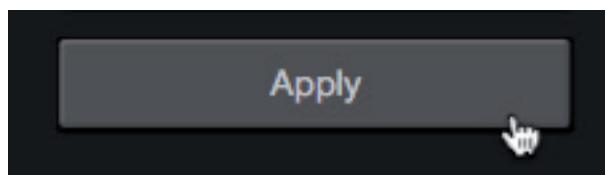
If you are unsure which EarMix 16M is which, click or tap the Identify button. This will flash the Select buttons on the currently selected EarMix 16M.



6. For the purposes of this tutorial, select Sends 1-8 for 1-8 Source Selection and Sends 9-16 for Source Selection 9-16.

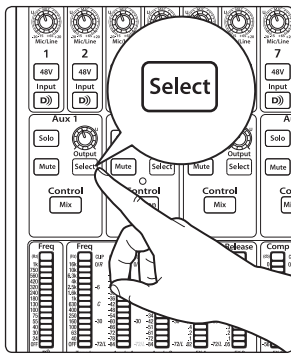


7. Press apply to finish.

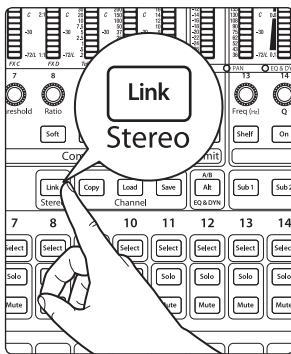


By default, every Flex Mix on your StudioLive mixer is configured as a pre-fader Aux Mix. This tutorial will use this default setting.

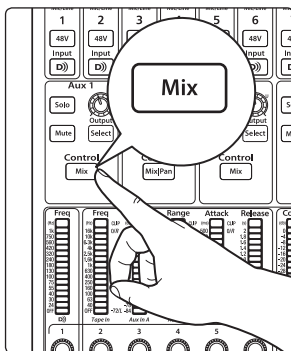
### Step 2: Drums



1. Press the Aux 1 Select button on your StudioLive 32.4.2AI mixer.



2. Press Link in the Fat Channel to create a stereo Aux mix.

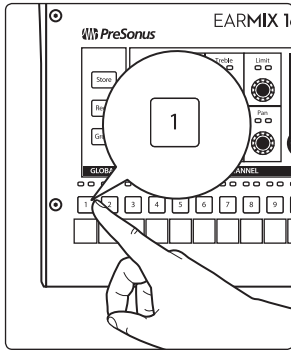


3. Press the Aux 1 Mix button.

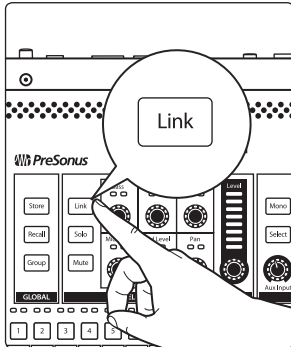
4. Create a mix on Aux Mix 1-2 for your drum channels. Because this aux mix is stereo, you can configure pans as well as levels by pressing the Aux 2 Mix/Pan button.
5. In the UC Surface instance connected to the StudioLive 16R, select Channel 1 and press the Channel Settings gear.



6. In UC Surface, click on the Link button and close Channel Settings.
7. In UC Surface, raise the fader level for Channel 1-2 to Unity. At this point, you can also dial in dynamics processing for your drum bus to create a more polished mix for your musicians.



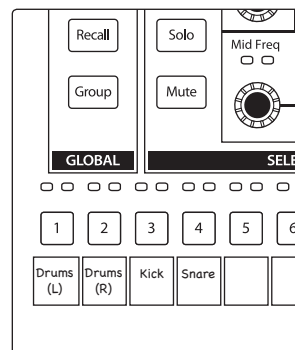
8. On the currently selected EarMix, press the Channel 1 Select button.



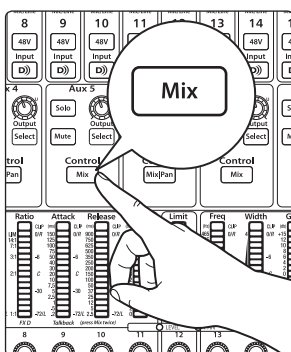
9. Press Link in the Selected Channel section. This will create a stereo input on your EarMix for you stereo drum mix.

10. To provide your musicians with the most flexibility, it is recommended that you provide unique control over the kick and snare in addition to the overall drum mix. To that end, connect the direct outputs for your Kick and Snare channels (Channels 1 and 2 in our example) to your StudioLive 16R (Channels 3 and 4 in our example). From here you can add custom EQ and Dynamics using the instance of UC Surface connected to your StudioLive 16R.

Your EarMix 16M is now setup as follows:



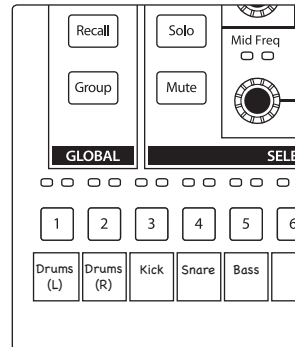
**Step 3: Bass**



1. Press the Aux 5 Mix button on your StudioLive 32.4.2 AI mixer.

2. Create a blend between the DI channel and the amplifier channel.
3. In the UC Surface instance connected to the StudioLive 16R, raise the Channel 5 fader to unity. Add compression and EQ to taste. Again, the more cohesive sound with which you provide your musician, the easier it will be for them to create a good mix of their own.

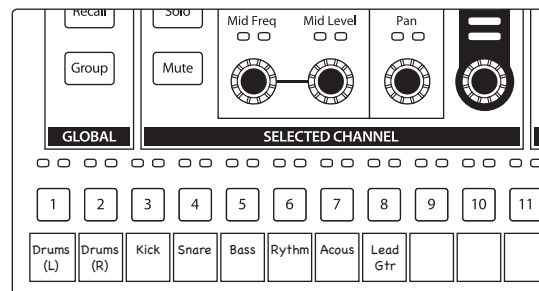
Your EarMix 16M is now setup as follows:



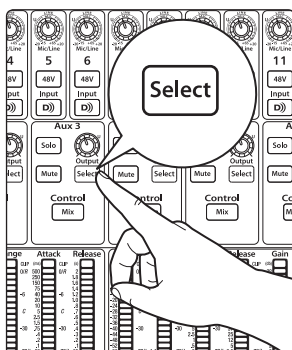
#### Step 4: Guitars

1. In the UC Surface connected to the StudioLive 16R, raise the Rhythm Guitar channel (Channel 6 in our example) to unity and add compression and EQ to taste.
2. Repeat Step 1 for the Acoustic and Lead Guitars using Channels 7 and 8 respectively.

Your EarMix 16M is now setup as follows:

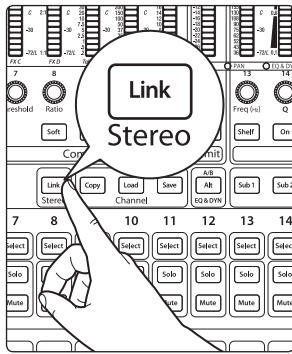


#### Step 6: Keyboards



1. Press the Aux 3 Select button on your StudioLive 32.4.2AI mixer.

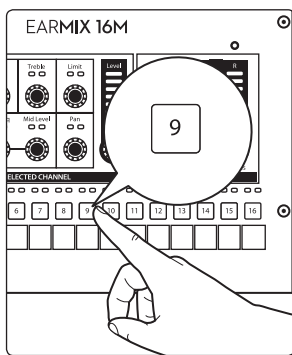




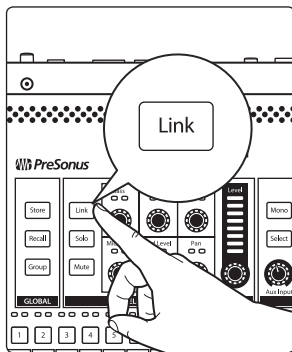
2. Press Link in the Fat Channel to create a stereo Aux mix.

3. Create a mix on Aux 3-4 for keyboard channels.

4. In UC Surface, select Channel 9 and link it to Channel 10. Like the drum mix, you can configure pans as well as levels. This will allow you to create a more polished mix. If you would like to add Fat Channel compression and EQ, do that as well.

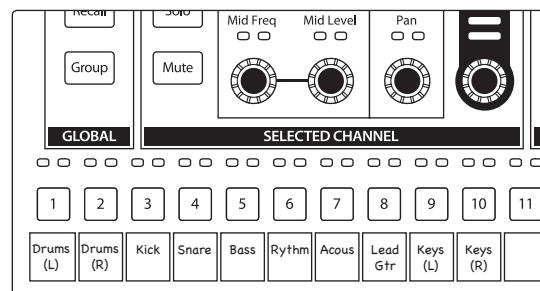


5. Select Channel 9 on your EarMix 16M

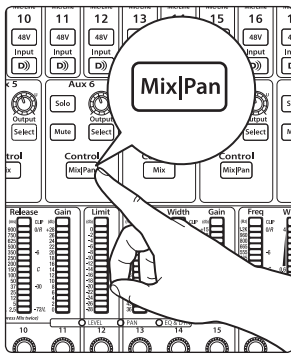


6. Press Link on your EarMix to stereo link inputs 9 and 10.

Your EarMix 16M is now setup as follows:



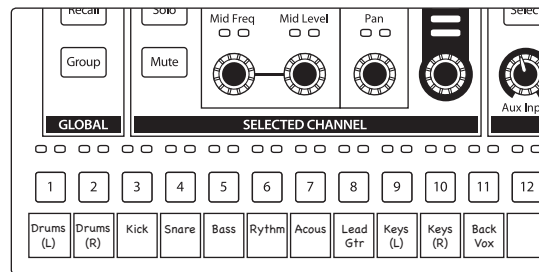
**Step 7: Backing Vocals**



1. Press the Aux 6 Mix button on your StudioLive mixer.

2. Create a mix using your background vocals.
3. In UC Surface raise the Channel 11 fader to Unity and add EQ and Dynamics to taste.

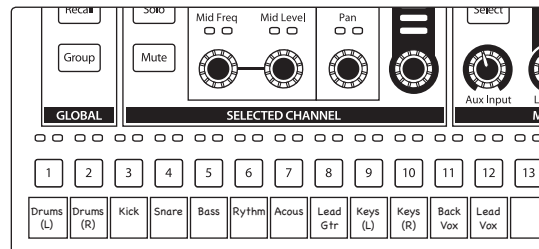
Your EarMix 16M is now setup as follows:



**Step 8: Lead Vocals**

1. In UC Surface, raise the Lead Vocal Channel (12) to Unity and add EQ and Dynamics to taste.

Your EarMix 16M is now setup as follows:



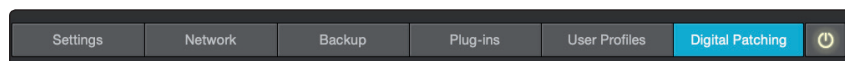
**Step 9: Adding FX**

Digital Patching allows you to route any analog input or output bus to any channel. In this example, we will route the output for FXA and FXB on your StudioLive 16R to Channels 13 and 14. This will allow you to create custom effects mixes for your vocals and instruments.



1. In UC Surface, Click or Tap on the Settings Gear.

2. Click or Tap on the Digital Patching tab.



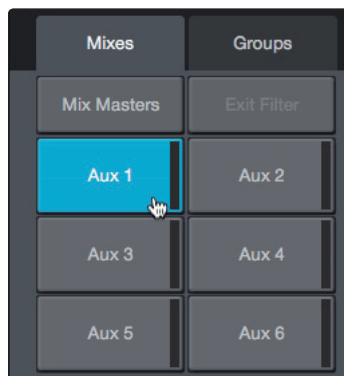
3. Click or Tap on the AVB Sends tab.



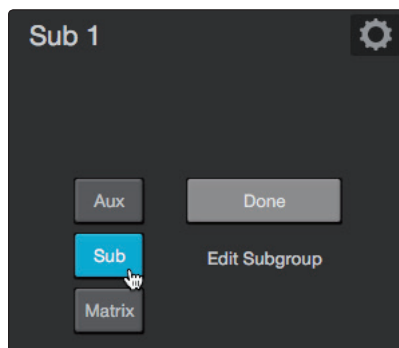
4. In the Digital Patch bay, scroll over until the top list of mixer streams displays FlexMix 1 and FlexMix 2. In the router, patch FlexMix 1 to AVB13 and FlexMix 2 to AVB14.



5. Close out the Settings and select FlexMix 1.



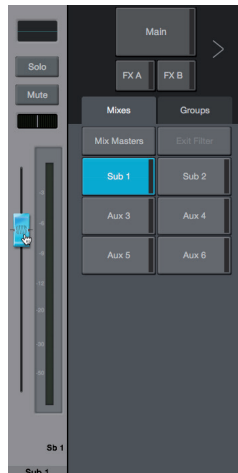
6. Change its configuration setting to Sub.



- Patch FXA to Subgroup 1 by clicking on it in the mixer.



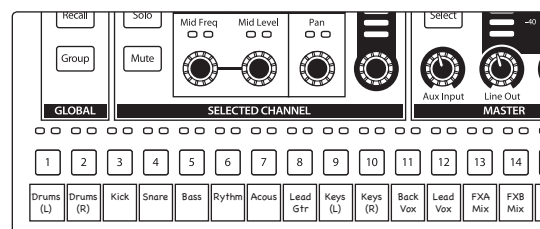
- Raise the Subgroup 1 fader to Unity.



- Repeat Steps 5-8 with FlexMix 2 and FXB
- Select FXA and blend your vocal channels to taste.
- Select FXB and blend your instrument channels to taste.

**Power User Tip:** If you would like your FX Returns to be stereo, stereo link the FlexMixes and route accordingly.

Your EarMix 16M is now setup as follows:



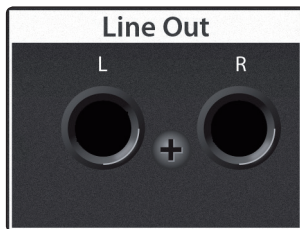
## 3 Hookup

### 3.1 Rear-Panel Connections



**Headphones.** This is the Headphone output for your EarMix 16M. This high-powered headphone amplifier was designed to drive low-impedance devices such as professional-caliber in-ear monitors. The output level is controlled via the Phones knob on the top panel.

**Warning:** The headphone output on the EarMix 16M provides 150mW per channel across the frequency response spectrum when driving with a 60Ω impedance load. In other words, it can get very loud, very quickly. Please use caution when connecting your headphones to your EarMix 16M.



**Line Out.** These balanced line outputs are to connect external devices like powered floor monitors or additional headphone amplifiers. This stereo output pair receives the same mix as the Headphone output. The Line Output level is controlled by the Line Out knob on the top panel.

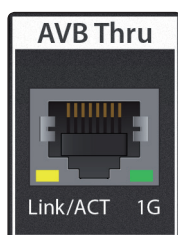


**Aux Input.** This 1/8" stereo line input allows you to connect an external device like your Smartphone to play along with rehearsal music or backing tracks. The Aux Input level is controlled by the Aux Input knob on the top panel.

**Power User Tip:** The Aux Input is a great way for drummers to play along to a click track that only they can hear. Simply connect the output of your metronome, drum machine, or Smartphone (if you're using a metronome app) to the Aux Input.



**AVB In.** This RJ45 connection should be used to connect your EarMix 16M to your AVB network. Your EarMix 16M can be powered using PoE (Power over Ethernet) using this connection and an AVB switch that provides PoE.



**AVB Thru.** This RJ45 connection can be used to connect your EarMix 16M to your AVB network, but does not accept PoE. You can also use this connection to daisy chain additional EarMix 16M personal monitor mixers in situations where you are connecting your EarMix devices directly to your mixer without an AVB switch or if you have exhausted the available ports on your AVB switch.



**Power.** This Power input accepts power from the included external power supply. Alternatively, you can use PoE and the AVB In.



**Power Switch.** This is the on / off switch for your EarMix 16M. Whether you are powering your EarMix over PoE or with the included power supply, use this switch to turn your unit on or off.

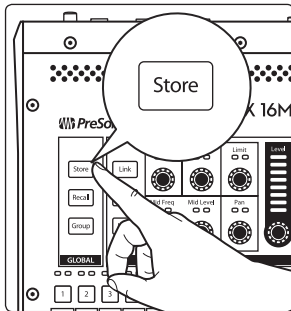
## 3.2 Top Panel Controls

### 3.2.1 Store and Recall

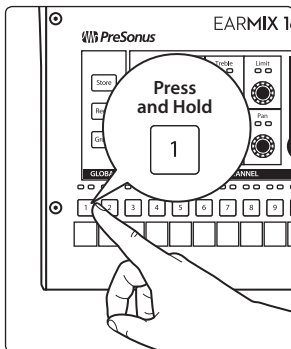


You can store 16 scenes on your EarMix 16M. This allows you to preserve mixes and EQ settings.

#### To Store a new Scene:



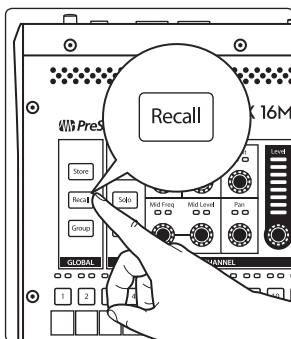
1. Press the Store button. All the Select buttons will begin to flash.



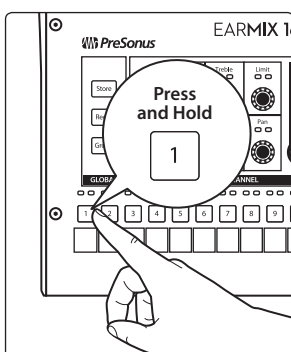
2. Press and Hold the Select button for the Library position to which you'd like to save your Scene.

**Note:** Library slots that have already been filled with a previously stored scene will not flash, however, pressing and holding their Select button will overwrite the previously stored scene.

#### To Recall a Stored Scene:



1. Press the Recall button.



2. Press and hold the Select button for the stored Scene you would like to Recall.

**Note:** Select buttons for Scene Library positions that do not have a stored scene will flash.

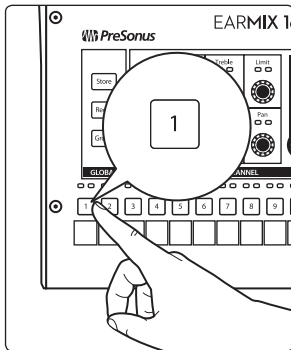


### 3.2.2 Group

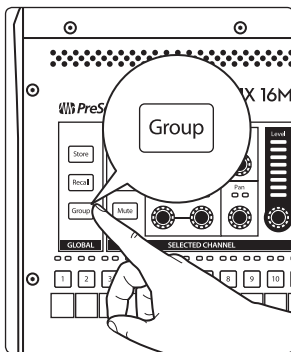


Grouping channels allows you create submixes on your EarMix 16M so that you can control the relative level of every channel in the group with the Level encoder.

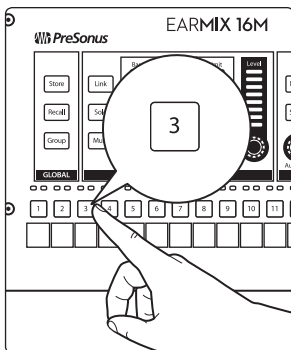
#### Creating, Modifying or Querying a Group:



1. Select the channel you'd like to add or remove from a group.



2. Press the Group button to enter Group Assign Mode. If the currently selected channel is already a part of a group, its companion channels will illuminate solid. All channels currently not grouped with the selected channel will flash.

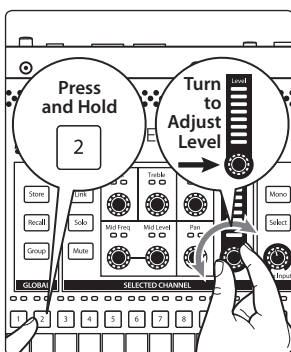


3. Press any channel's select button to add or remove it from the group.

**Note:** Channels can only be added to one Group at any time. Adding a channel to a new group will automatically remove it from the Group in which it was included previous.

#### Adjusting Individual Channel Level:

While grouped, selecting any channel in the group will let you control the overall volume of the group using the Level encoder.



To adjust the level of an individual channel, press and hold its Select button and use the Level encoder.

**Note:** While grouped, only channel level requires that you press and hold the Select button. Other controls (EQ, Limiter, etc.) follow the Select button regardless of group status.

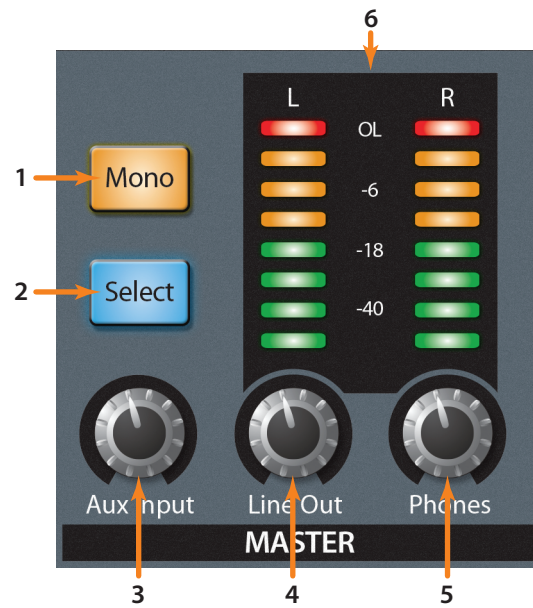
### 3.2.3 Channel Controls

When a channel is selected, the following controls will be available:



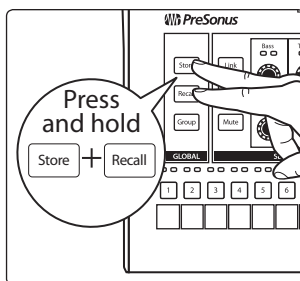
1. **Link.** Creates a stereo pair with the adjacent channel (odd/even pairs only).
2. **Solo.** Isolates the Selected channel in the mix.
3. **Mute.** Mutes the Selected channel in the mix.
4. **Pan.** Set the panning of the selected channel. The LEDs above display the current setting.
5. **Level.** Sets the level of the selected channel in the mix. The ladder LEDs above the control display the current level setting.
6. **Limit.** When the signal's amplitude (level) exceeds the threshold setting, the limiter is engaged. Turning the knob counterclockwise lowers the threshold, so limiting begins at a lower amplitude. The LEDs above display the current setting.
7. **EQ.** This 3-band EQ allows you to customized the tonality of every channel in your mix. The LEDs above each control display the current setting.

### 3.2.4 Master Controls

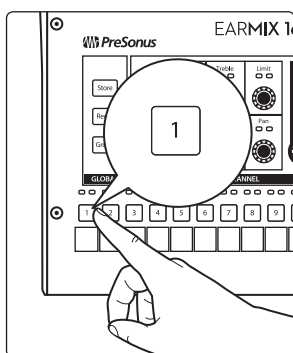


1. **Mono.** Sums the stereo mix mono.
2. **Select.** Selects the Main Mix to add EQ and Limiting as well as adjust the overall level of the mix.
3. **Aux Input.** Adjusts the level of the Aux Input source.
4. **Line Out.** Adjusts the level for the stereo Line Outputs.
5. **Phones.** Adjusts the Headphone output level.
6. **Main Meters.** Displays the level of the main EarMix 16M mix.

### 3.2.5 Resetting Your EarMix



To reset your EarMix settings to its default state, press and hold both the Store and Recall buttons.

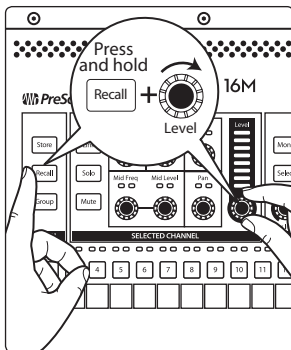


While continuing to hold both buttons, press the Channel 1 Select button.

### 3.2.6 Adjust LED Brightness

You can adjust the brightness of the LEDs on your EarMix 16M between three different levels. This allows you to compensate for ambient light, depending on the environment in which you're using your EarMix 16M.

To adjust the LED brightness, press and hold the Recall button and turn the Level encoder to the desired luminosity.



## 4 Technical Information

### 4.1 Specifications

#### Headphone Output

Type	¼" TRS Female, active stereo
Maximum Output	150 mW/ch. @ 60Ω load
Frequency Response	20 Hz – 20 kHz (± 0.05 dB)
THD+N	0.01%, 1 kHz, max gain, 20 Hz BW, unwt'd

#### Line Outputs

Type	¼" TRS Female, balanced
Maximum Output Level	+18 dBu, ±0.5 dBu
Output Impedance	100Ω

#### Digital Audio

DAC Dynamic Range	115 dB (A-wtd, 48 kHz)
AVB Audio Network Ports	RJ45
Sampling Rate	48 kHz

#### Power

External Power Supply	24 VDC
PoE Power	802.3at Type 1

#### Physical

Height	1.8" (46 mm)
Width	9.4" (239 mm)
Depth	7.6" (193 mm)
Weight	1.2 lbs (0.5 kg)

## 5 Warranty

### 5.1 Warranty Information

PreSonus' warranty obligations for this hardware product are limited to the terms set forth below:

#### How Consumer Law Relates To This Warranty:

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE (OR BY COUNTRY OR PROVINCE). OTHER THAN AS PERMITTED BY LAW, PRESONUS® DOES NOT EXCLUDE, LIMIT OR SUSPEND OTHER RIGHTS YOU MAY HAVE, INCLUDING THOSE THAT MAY ARISE FROM THE NONCONFORMITY OF A SALES CONTRACT. FOR A FULL UNDERSTANDING OF YOUR RIGHTS YOU SHOULD CONSULT THE LAWS OF YOUR COUNTRY PROVINCE OR STATE.

#### PreSonus Products And EU Statutory Warranty:

When you purchase PreSonus products, European Union consumer law provides statutory warranty rights in addition to the coverage you receive from the PreSonus limited warranty. A summary of the EU Statutory Warranty and the PreSonus Limited Warranty is below:

	EU Consumer Law	PreSonus Limited Warranty
Repair or Replacement Coverage For	Defects present when customer takes delivery	Defects arising after customer takes delivery
Warranty Period	2 years (minimum) from original date of purchase (unless superseded by PreSonus)	1 year from original date of purchase (unless superseded by PreSonus)
Cost of Coverage	Provided at no additional cost	Included at no additional cost
Who to contact to make a claim	The seller	PreSonus technical support for your region

#### What This Warranty Covers:

PreSonus Audio Electronics, Inc., ("PreSonus") warrants defects in material and workmanship in PreSonus-branded products under normal use. This Limited Warranty applies only to hardware products manufactured by or for PreSonus that can be identified by the PreSonus trademark, trade name, or logo affixed to them.

#### Exclusions and Limitations:

This warranty does not cover the following:

1. Damage caused by accident, abuse, improper installation, failure to follow instructions in the applicable owner's manual or improper operation, rental, product modification, alteration, or neglect.
2. Damage from improper grounding, faulty wiring (AC and signal), faulty equipment, or connection to a voltage range outside published specifications (see applicable owner's manual).
3. Damage to drivers or diaphragm assemblies found to have burnt voice coils from over/under driving or signal surge from another device.
4. Damage occurring during shipment or improper handling.
5. Damage caused by repair or service performed by persons not authorized by PreSonus.
6. Products on which the serial number has been altered, defaced, or removed.
7. Products purchased from an unauthorized PreSonus dealer (products that have transferable warranties are excluded from this provision, provided the customer and the product are registered with PreSonus).

**Who This Warranty Protects:**

This Warranty protects only the original retail purchaser of the product (products that have transferable warranties are excluded from this provision provided the customer and the product are registered with PreSonus).

**How Long This Warranty Lasts:**

The Warranty begins on the original date of purchase from the retail purchaser, and the duration is as follows:

1-Year Limited Warranty		
Product Category	Model	Transferable
Recording Interfaces	AudioBox® iOne, AudioBox iTwo, AudioBox Stereo, AudioBox Studio, AudioBox USB, AudioBox VSL (1818, 44, 22), FireStudio™ Project, FireStudio Mobile, FireStudio Mobile Studio, Studio 192, Studio 192 Mobile, Studio-series (1824, 1810, 68, 26), Quantum, and Quantum 2	No
Preamplifiers	ADL600, ADL700, BlueTube DP V2, DigiMax D8, DigiMax DP88, Eureka, RC500, Studio Channel, TubePre V2	No
StudioLive® Mixers	16.0.2, 16.4.2AI, 24.4.2AI, 32.4.2AI, AR8, AR12, AR16, AR22, RM16AI, RM32AI	No
Monitoring & Controlling	Eris®, Central Station PLUS, FaderPort™, HP4, HP60, Monitor Station, Monitor Station V2, R-Series, Sceptre®, Temblor®	No
Network Devices	NSB 8.8 and 16.8, EarMix 16M, SW5E	No
Accessories	Covers, Dolly, PRM1 mic, Sub Pole, breakout cables, power supplies, M10 Kit	No
3-Years Limited Warranty		
Product Category	Model	Transferable
Live Sound	StudioLive AI 328, 312, 315, 18S, ULT10, ULT12, ULT15, ULT18, AIR10, AIR12, AIR15, AIR15S, AIR18S, CDL12, and CDL18s	Yes
StudioLive® Series III Mixers	64S, 32S, 32, 32XS, 32SC, 24, 16, 32R, 24R, and 16R	No

**What PreSonus Will Do:**

PreSonus will repair or replace, at our sole and absolute option, products covered by this warranty at no charge for labor or materials. If the product must be shipped to PreSonus for warranty service, the customer must pay the initial shipping charges. PreSonus will pay the return shipping charges.

**How to Get Warranty Service (USA):**

1. You must have an active user account with PreSonus, and your hardware must be on file with your account. If you do not have an account, please go to: <http://www.presonus.com/registration> and complete the registration process.
2. Contact our Technical Support Department at (225) 216-7887 or log a support ticket at: <http://support.presonus.com>. TO AVOID THE POSSIBILITY OF SENDING IN A PRODUCT THAT DOES NOT HAVE A PROBLEM, ALL SERVICE REQUESTS SHALL BE CONFIRMED BY OUR TECH SUPPORT DEPARTMENT.
3. The return authorization number as well as shipping instructions shall be provided after your service request is reviewed and confirmed.
4. The product should be returned for service in the original product packaging. Products may be shipped in a manufactured “flight”- or “road”-style cases but PreSonus will NOT cover any shipping damage to these cases. Products that are not shipped in the original product package or a manufactured case may not receive a warranty repair, at PreSonus’s sole discretion. Depending on the product model and the condition of your original packaging, your product may not be returned to you in the original packaging. The return shipping box may be a generic box that has been fitted for that model tested if the original gift box is not available.



**How to Get Warranty Service (outside of USA):**

1. You must have an active user account with PreSonus and your hardware must be on file with your account. If you do not have an account, please go to: <http://www.presonus.com/registration> and complete the registration process.
2. Contact the Technical Support/Service Department for your region at [http://www.presonus.com/buy/international\\_distributors](http://www.presonus.com/buy/international_distributors) and follow procedures provided by your PreSonus contact.

**Limitation of Implied Warranties:**

ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WARRANTY.

Some states, countries, or provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

**Exclusion of Damages:**

PRESONUS'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT, AT PRESONUS'S SOLE OPTION. IF PRESONUS ELECTS TO REPLACE THE PRODUCT, THE REPLACEMENT MAY BE A RECONDITIONED UNIT. IN NO EVENT WILL PRESONUS BE LIABLE FOR DAMAGES BASED ON INCONVENIENCE, LOSS OF USE, LOST PROFITS, LOST SAVINGS, DAMAGE TO ANY OTHER EQUIPMENT OR OTHER ITEMS AT THE SITE OF USE, AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY, OR ANY OTHER DAMAGES WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, EVEN IF PRESONUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states, countries, or provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

If you have any questions about this warranty or service received, please contact PreSonus (USA) at +1 (225) 216-7887 or one of our authorized international distributors at: [http://www.presonus.com/buy/international\\_distributors](http://www.presonus.com/buy/international_distributors).

Product features, design, and specifications are subject to change without notice.

## Added bonus: PreSonus' previously Top Secret recipe for . . .

# Garfish Balls

### Ingredients:

- 5 lbs ground garfish
- 4 white potatoes
- 1 large onion
- 2 celery stalks
- 1 bunch parsley
- 6 green onions
- 1 tsp cayenne pepper
- 1 tsp black pepper
- 2 tsp salt
- Flour

### Cooking Instructions:

1. Peel potatoes and boil until tender. Set aside to cool.
2. Finely dice onion and celery and sauté in butter until tender. Set aside to cool.
3. Grind garfish in a meat grinder or food processor.
4. Mash potatoes with cooked vegetables.
5. Finely chop green onions and parsley.
6. Combine ground garfish with potato mixture, parsley, green onions, pepper, and salt. Mix well.
7. Form baseball-sized balls and set on a chilled cookie sheet.
8. Roll each ball in flour.
9. Heat 1/2-inch of cooking oil in skillet.
10. Set balls in cooking oil and flatten into patties with a spatula.
11. Cook for approximately 1-2 minutes and flip. Cook for another minute until cooked through.
12. Remove from oil and set aside to drain.
13. Serve with brown gravy over rice.

### Serves 12

This recipe will make approximately 24 garfish balls. Balls can be frozen at step 8. Do not freeze cooked patties.

Garfish have a lot of bones that can be difficult to remove. It's recommended to request that it be deboned by your fish monger if possible. It can also be substituted for cod or whiting...but garfish is better.

# EarMix™ 16M

16x2 AVB-networked personal monitor mixer

## Owner's Manual



18011 Grand Bay Ct. • Baton Rouge,  
Louisiana 70809 USA • 1-225-216-7887  
[www.presonus.com](http://www.presonus.com)

Part# 70-22000087-C