

StudioLive™ Series III

Stagebox Mode Addendum



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1 Overview

There are two types of potential data flowing to and from your StudioLive Series III mixer: control and audio. Control connections can be made over standard Ethernet networks, including WiFi networks. Sending and receiving audio requires an AVB network. Unlike control, AVB audio cannot be sent wirelessly.

- **Control:** This is the primary communication between your StudioLive Series III rackmount mixer and your computer, iPad, or Android device. When networked to your StudioLive, any device running UC Surface controls the mixers' functions.
- **Audio:** An AVB network connection enables routing audio to and from the StudioLive Series III rackmount mixer's audio inputs and outputs with a StudioLive Series III console mixer in stage box mode; to a Mac for playback and recording; or to any 1722.1 AVB device.

***Power User Tip:** Network connections occasionally require troubleshooting, especially when a lot of wireless networks are in use. Because of this, it is always a good idea to get your networked devices happily communicating before the pressure is on and you have a singer trying to dial in a monitor mix while you're trying to mic the drum kit.*

1.1 About AVB Networking

AVB (Audio Video Bridging) is an extension to the Ethernet standard designed to provide "guaranteed quality of service," which simply means that audio samples will reach their destinations on time. AVB has been adopted by numerous audio companies, and more companies are adding it all the time. AVB networking offers a number of features that make it ideal for audio applications:

- **Long, light cable runs.** A single lightweight CAT5e or CAT6 cable can be run up to 100 meters (300 feet). This makes it easy to have audio I/O located in different rooms (or even different venues in the same building) and run multichannel audio between them in real time.
- **Low, predictable latency.** The AVB specification states latency of no longer than 2 ms sending an audio stream point-to-point over up to seven "hops" (trips through switches or other devices) at 1x (less than or equal to 48 kHz) sample rates.
- **Scalable, with high channel counts.** AVB's bandwidth is sufficient to carry hundreds of real-time channels using a single Ethernet cable. This offers the future possibility of expanding your system with additional devices that contain different kinds of audio I/O, multiple controllers, and other useful functions.
- **Integrated clock signal.** In a digital audio system with multiple devices, having a master clock is absolutely critical. The AVB specification defines such a clock to be accurately distributed to all devices in the system.

***Power User Tip:** The most important rule to keep in mind when setting up an AVB network is that the talker (device sending audio) and listener (device receiving audio) must be connected to an AVB-compatible switch.*

2 Getting Started

StudioLive Series III rackmount mixers can be used as digital stage boxes for any StudioLive Series III console mixer. This guide will get you up and running.

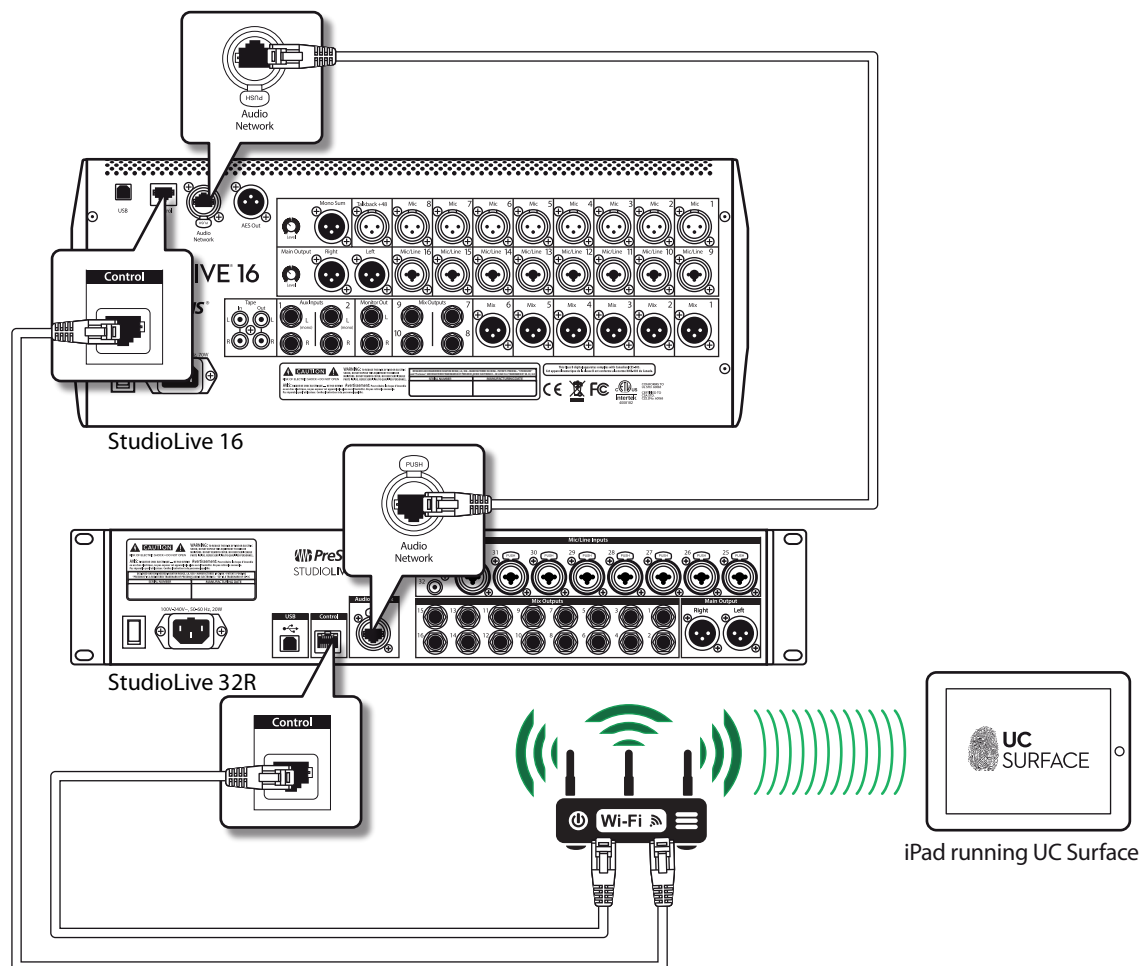
Important: Both StudioLive Series III mixers must be updated with the latest firmware before configuring stagebox mode. Firmware updates and instructions are available from within your My PreSonus user account. Please verify that the latest firmware is loaded on both mixers before proceeding.

What you will need:

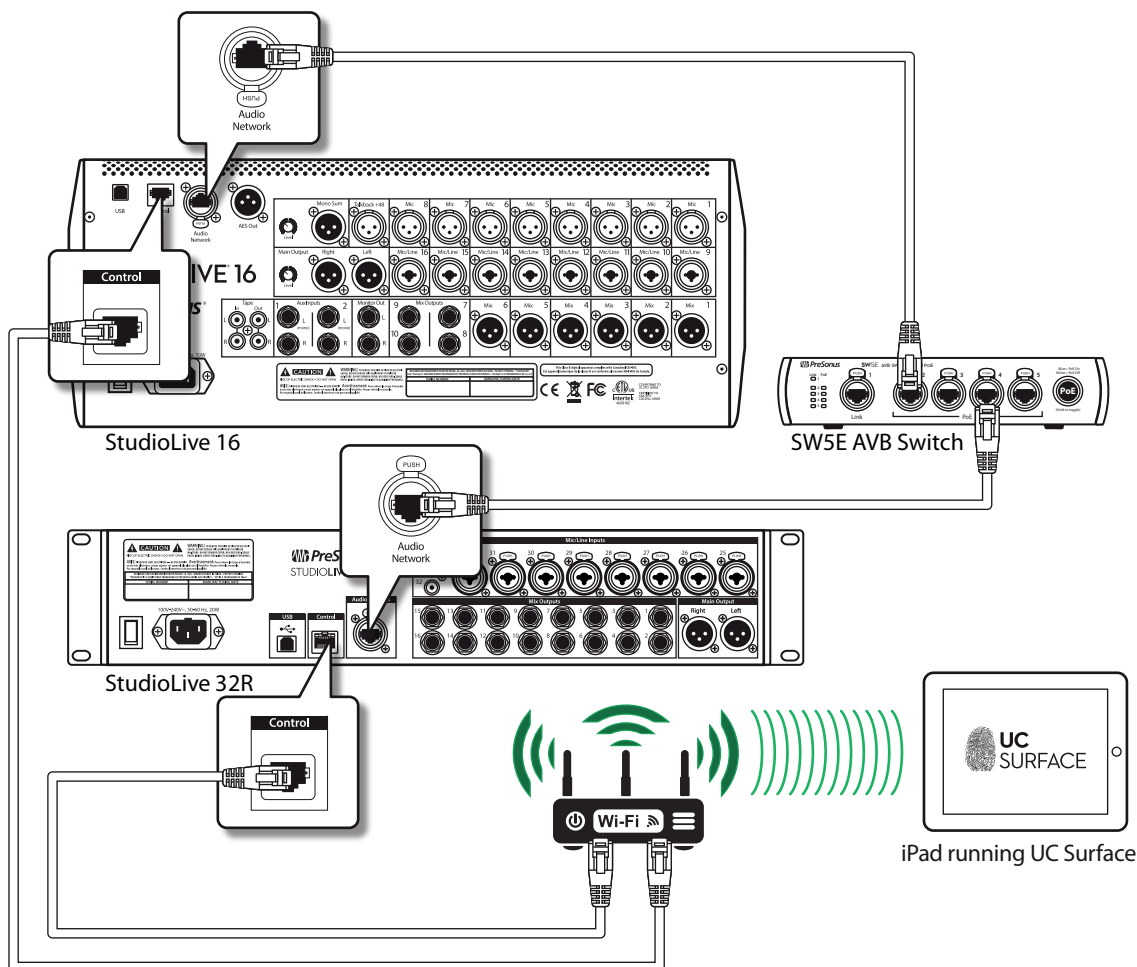
- StudioLive Series III console (StudioLive 32, StudioLive 24, StudioLive 16) with the latest firmware update
- StudioLive Series III rackmount mixer (StudioLive 32R, StudioLive 24R, StudioLive 16R) with the latest firmware update
- Ethernet cable
- AVB switch (optional)

2.1 Making the Connections

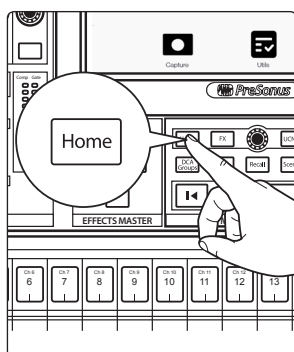
Direct connection



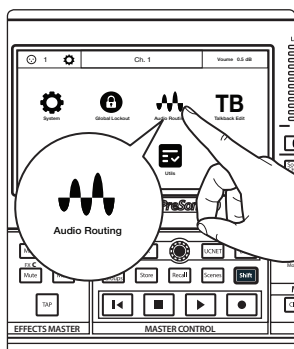
Connect using an AVB switch



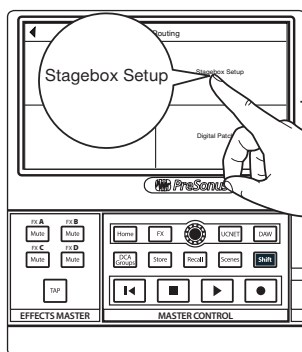
After you have made all the physical connections, you'll need to make the digital network connections.



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



2. Press Audio Routing on the Home Screen.

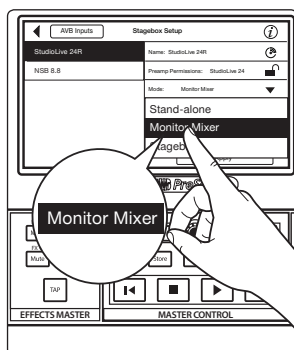


3. Press the Stagebox Setup button on the screen.

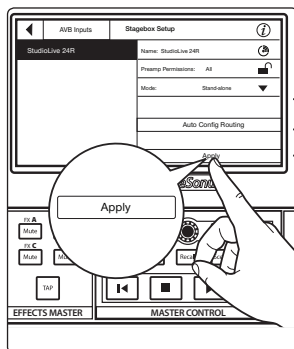
4. Select your rack mixer from list at the left.



If you have more than one rack mixer connected to the network and are unsure which mixer is which, you can press the Identify button. This will flash the front panel LEDs on whichever mixer is currently selected.



5. Select the Stagebox Mode you would like to use. *See Section 2.3* for information on the different modes.



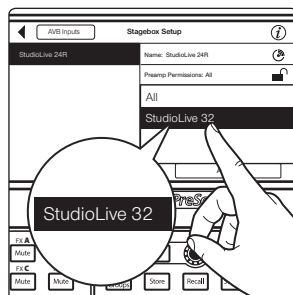
6. Tap Apply to save the mode.

Power User Tip: Connecting to your mixer and selecting the mode can be one or two steps. When Apply is pressed, both the selected mixer and the selected Stagebox Mode are saved simultaneously.

2.2 Preamp Permissions

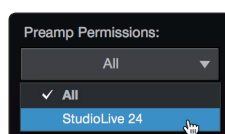
The preamps on StudioLive rackmount mixer can be controlled from any StudioLive Series III mixer on the network. When you have a StudioLive rackmount mixer in stage box or monitor mix mode feeding more than one mixer, it is recommended that you give only one mixer permission to adjust the StudioLive rackmount mixer preamp levels.

Setting Preamp Permissions on the Console Mixer



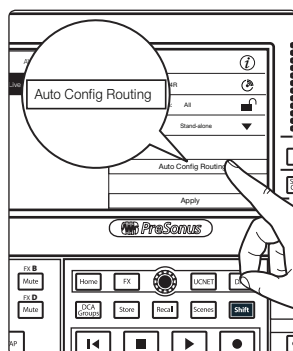
From the Stagebox Setup menu, select your rackmount mixer and then tap the arrow next to Preamp Permissions menu to select the mixer from which you would like to control your StudioLive rackmount mixer preamps.

Setting Preamp Permissions on UC Surface



From the Network tab in the Settings menu, you can set Preamp Permissions from the Stagebox Setup area.

2.3 Routing AVB Inputs



StudioLive Series III mixers route channels in banks of 8. From the AVB Inputs page, you can choose to auto-configure your routing as follows:

StudioLive 32R and 24R:

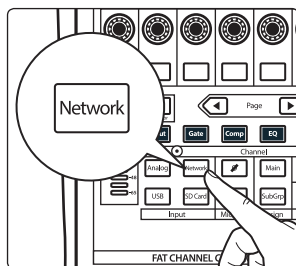
- **Stage Box Mode.** Inputs 1-32 will be routed between the two networked mixers so that they are available on both. The Main Mix and Flex Mixes 1-16 will be routed from the console mixer to the rack mixer.
- **Monitor Mixer Mode.** Inputs 1-32 will be routed between the two networked mixers so that they are available on both. The Main Mix and will be routed from the console mixer to the rack mixer but the Flex Mixes will remain local to each mixer.

StudioLive 16R:

- **Stage Box Mode.** Inputs 1-16 will be routed between the two networked mixers so that they are available on both. The Main Mix and Flex Mixes 1-6 will be routed from the console mixer to the rack mixer.
- **Monitor Mixer Mode.** Inputs 1-16 will be routed between the two networked mixers so that they are available on both. The Main Mix and will be routed from the console mixer to the rack mixer, but the Flex Mixes will remain local to each mixer.

Note: Once channels have been patched between your StudioLive Series III rackmount mixer to your StudioLive Series III console mixer, they can be accessed by selecting the Network input as the source on either mixer. For example, if you would like Channel 1 on your console mixer to be sourced from Channel 1 on your rack mixer, you must select Network as the input source on your console mixer. In this way, you can access local analog, network, USB, or SD input sources for each channel as needed.

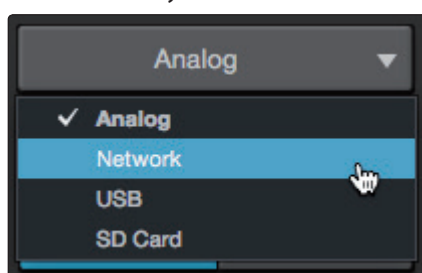
Select Network on Console



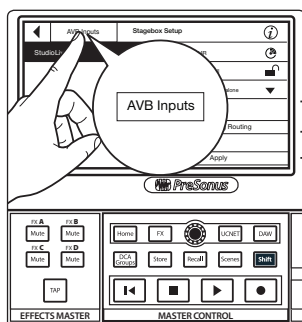
If you would like the input source for any channel on your StudioLive Series III console mixer to come from your StudioLive Series III rack mixer, select that channel on your console mixer and enable Network as the Input Source. For example, if you would like to use the guitar connected to Input 3 on your StudioLive 16R in any mix on your StudioLive 24, you would select Channel 3 on your StudioLive 24 and enable Network as the input source.

Select Network in UC Surface

If you would like the input source for any channel on your StudioLive Series III rack mixer to come from your StudioLive Series III console mixer, select that channel on your rack mixer in UC Surface and enable Network as the Input Source. For example, if you would like to use the microphone connected to Input 30 on your StudioLive 32 in any mix on your StudioLive 32R, you would select Channel 30 in UC Surface for your StudioLive 32R and enable Network as the input source.



2.3.1 Editing AVB Inputs



To edit the default setting, press the AVB Inputs button on the Touchscreen.

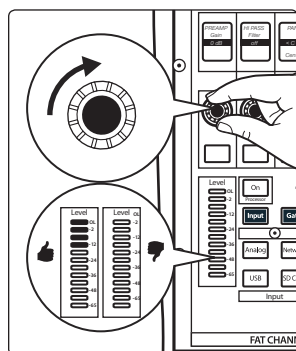
This will open the AVB Input Streams menu.

AVB Input Streams		
Input Streams	Assigned Stream	Available Stream
Input 1-8	StudioLive 16R: Output 1-8	None
Input 9-16	StudioLive 16R: Output 9-16	StudioLive 16R: Output 1-8
Input 17-24	StudioLive 16R: Output 17-24	StudioLive 16R: Output 9-16
Input 25-32	StudioLive 16R: Output 25-32	StudioLive 16R: Output 17-24
Input 33-40	StudioLive 16R: Output 33-40	StudioLive 16R: Output 25-32
Input 41-48	StudioLive 16R: Output 41-48	StudioLive 16R: Output 33-40
Input 49-56	StudioLive 16R: Output 49-56	StudioLive 16R: Output 41-48

To change a routing, press the Input Stream to which you'd like to route and then use the value encoder to scroll through the Available Streams list on the right. Tap on the desired routing to patch it.

Once an AVB Output Stream from the rackmount mixer is routed to an AVB Input on the console mixer, it cannot be routed to another input stream.

2.4 Preamp Control



Once the Network input has been selected on the StudioLive Series III console mixer, you can remote control the preamp level and phantom power for your rackmount mixer from the top panel of your console mixer.

Note: When “Stand-alone” is selected for Stagebox mode, preamp and phantom power control will not be available for remote control. These functions must be controlled from UC Surface for your rack mixer.

2.5 Stagebox Modes

StudioLive Series III rack mixers have three different modes of operation when connected as a stage box to a StudioLive Series III console mixer.

Whichever mode is selected, preset and scene store and recall are independent on each mixer. In other words, saving a scene or a preset on the console mixer will not save the settings on the rack mixer and vice versa.

Stagebox

This is a more traditional stage box function, where the StudioLive Series III rackmount mixer simply serves as a remote I/O box for the StudioLive Series III console at FOH. All mixing, both FOH and Aux mixing, is done on the StudioLive Series III console at FOH.

When this mode is active, the mixer DSP on the StudioLive Series III rackmount mixer is bypassed, and all StudioLive Series III rackmount Main Left/Right outputs are sourced from the console mixer’s Main Left / Right signals. The StudioLive Series III console mixer’s FlexMixes are sourced from the rack mixer as described below:

	StudioLive 16R	StudioLive 24R	StudioLive 32R
StudioLive 16, StudioLive 24, StudioLive 32	FlexMix 1-6	FlexMix 1-12	FlexMix 1-16

It should be noted that even though the StudioLive 16 console mixer only has 10 outputs, it still has a full 16 Flex Mixes. Using a StudioLive Series III rack mixer of a larger frame size will provide physical outputs for those mixes.

When Network is select as the Input Source for any channel on the console mixer, you can remotely control the preamp gain and phantom power for the respective channel on the rack mixer.

Note: While in Stagebox Mode, you will not have access to any function in UC Surface for your rack mixer.

Monitor Mix

While this mode is active, the StudioLive Series III rackmount mixer retains all its mixing functionality for every FlexMix, allowing you to create monitor mixes and more using the FlexMix outputs. The Main Mix in this mode will not be accessible or have any effect on the sound as this mix is sourced from the Main Left/Right mix of the console mixer and must be controlled from there.

Power User Tip: The FlexMix outputs on your console mixer will remain active as well, allowing you to use both sets of FlexMix outputs and, in effect, doubling your mixing capability.

When Monitor Mix mode is active, preamp gain and phantom power control can be controlled locally on the rack mixer from UC Surface or remotely via the Input section on the Fat Channel of the console mixer when Network is selected as the Input Source, depending on how Preamp Permissions are configured.

Stand-alone

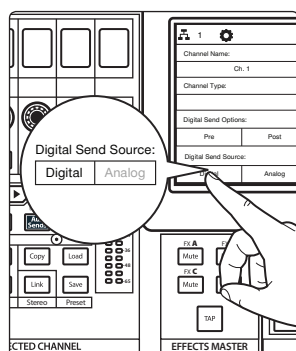
When “Stand-alone” is selected, the console and rack mixers will retain their AVB input connectivity (i.e., all the inputs from the rack mixer will be available on the console mixer and vice versa), but each mixer will source its Main Left/Right and FlexMixes locally, and preamp control will not be available for the rack mixer from the top panel of the console mixer.

2.6 Recording in Stagebox Mode

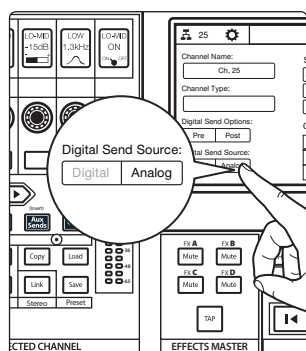
When any Stagebox Mode is active, recording is only supported from the console mixer (USB or SD). Because of this, you will want to configure the channels on your StudioLive Series III console mixer for your recording.

Note: Because of how macOS connects to an AVB device as an audio interface, it is not possible to have a Mac connected to either mixer over AVB while using Stagebox mode. Do not connect your Mac to your AVB network while using Stagebox mode.

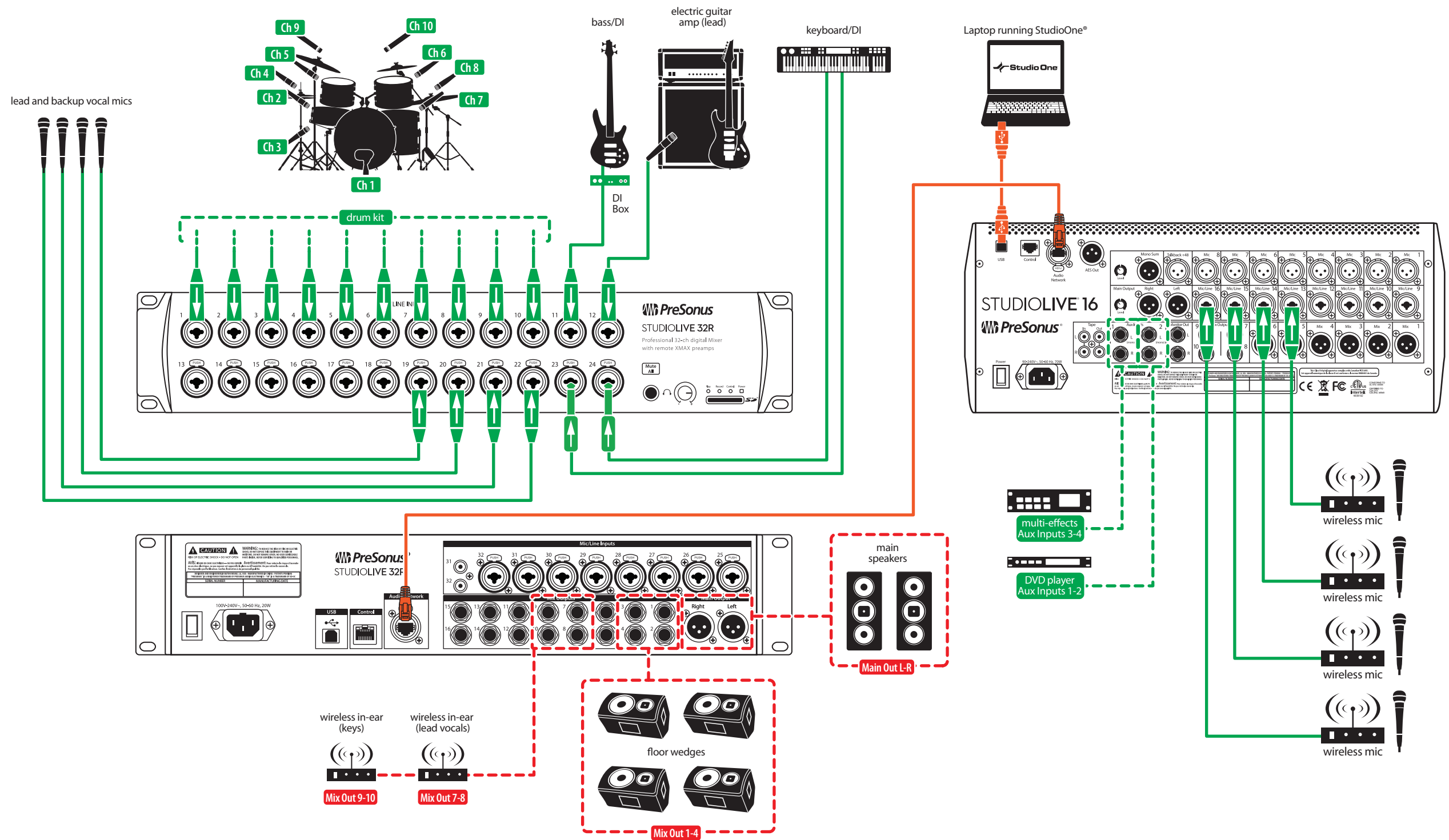
The illustration below, shows channels being sourced locally and over the network. Channels 1-12 and 19-24 are sourced from the rack mixer. Channels 13-16 are sourced from the local analog inputs on the console mixer:



For every channel that you want to source from the Network and record from the console mixer (either USB or SD), you need to set the Digital Send Source to “Digital.” To do this, navigate to the channel settings on the console mixer and enable the Digital Send Source.



For every channel that you want to source from the local analog inputs and record from the console mixer (either USB or SD), you need to set the Digital Send Source to “Analog.” To do this, navigate to the channel settings on the console mixer and enable the Analog Send Source.



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

Rice Dressing

Ingredients:

- 1 lb ground beef
- 1 lb chopped chicken liver
- 1 onion (diced)
- 2 green peppers (diced)
- 4-6 celery stalks (diced)
- 2 garlic cloves (minced)
- ¼ C. chopped fresh parsley
- 3 C. chicken stock
- 6 C. cooked rice
- 1 Tbs. oil
- Salt and pepper to taste
- Cayenne pepper to taste

Cooking Instructions:

1. In a large pot, heat oil on medium high and add meat, salt, and pepper to taste. Stir until meat begins to brown.
2. Lower heat and add all vegetables. Cook until onions are transparent and celery is very tender. Add stock as necessary to prevent burning.
3. Stir in cooked rice. Add remaining stock and simmer on low until ready to serve.

StudioLive™ Series III

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