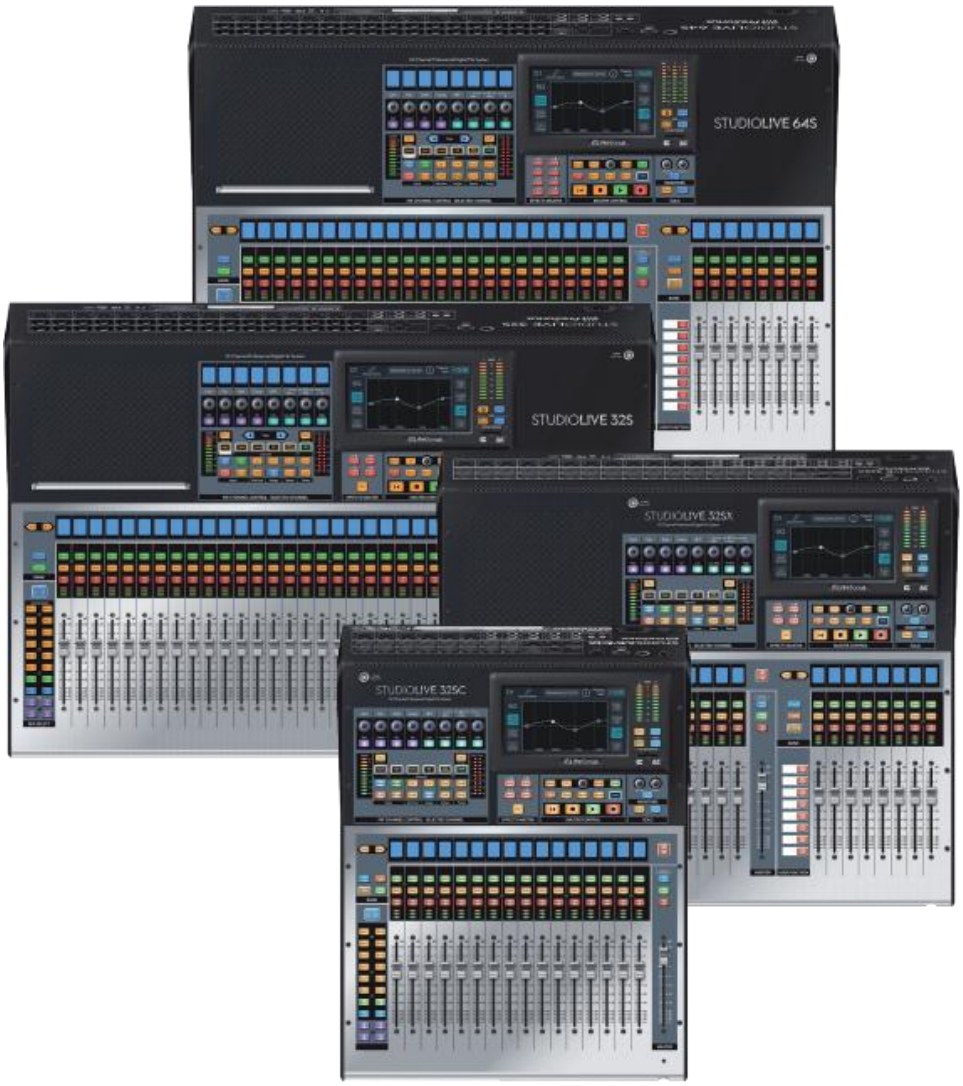
# StudioLive™ Series III

## Digital Mix Console / Recorder with Motorized Faders
## 电动推子数字混音控制台/录音机

Owner's Manual

用户手册




PreSonus® www.presonus.com

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# 1 Overview 概览

## 1.1 Introduction 介绍

**Thank you** for purchasing your PreSonus® StudioLive™ Series III Digital Mixer. PreSonus Audio Electronics has built your StudioLive mixer with high-grade components to ensure optimum performance for many years to come. StudioLive Series III breaks new boundaries for music performance and production.

We encourage you to contact us with questions or comments regarding this product. PreSonus Audio Electronics is committed to constant product improvement, and we value your suggestions highly. We believe the best way to achieve our goal of constant product improvement is by listening to the real experts: our valued customers. We appreciate the support you have shown us through the purchase of this product.

**感谢你**购买PreSonus® StudioLive™ Series III Digital Mixe。PreSonus Audio Electronics 在StudioLive调音台中使用了高等级的组件，以确保在未来多年中保持最佳性能。StudioLive III系列打破了音乐表演和制作的新界限。我们鼓励你与我们联系，提出有关该产品的问题或意见。PreSonus Audio Electronics 致力于不断改进产品，我们高度重视你的建议。我们相信，实现我们不断改进产品目标的最佳方式是倾听真正的专家：我们尊贵的客户。我们感谢你通过购买本产品对我们的支持。

## 1.2 About this Manual 关于本手册

We suggest that you spend some time with this manual before starting to work with your StudioLive Series III mixer, to familiarize yourself with its features, workflows, and connection procedures. This will help your setup process go as smoothly as possible. This manual applies to all StudioLive Series III mixers. While every StudioLive Series III mixer provides nearly identical mixing capabilities, some features and workflows vary between models. Where these differences occur, they will be called out. All illustrations for shared features and functions will show a StudioLive 64S.

我们建议，你在开始使用 StudioLive III 系列调音台之前，花一些时间阅读本手册，熟悉它的功能、工作流程和连接程序。这将尽可能有助于你在顺利进行设置过程。 本手册适用于所有StudioLive系列III调音台。虽然每个StudioLive III系列调音台，都提供了几乎相同的混音功能，但不同型号的一些功能和工作流程是不同的。在出现这些差异的地方，它们会被指出来。所有共享特征和功能的插图都显示是 StudioLive 64S。

This manual covers the following hardware products:

**StudioLive Series III S Models 型号**

- StudioLive 64S
- StudioLive 32S
- StudioLive 32SX
- StudioLive 32SC

**StudioLive Series III Blue Models (requires v. 2.0 firmware or later)**

**StudioLive III系列Blue 型号（需要2.0版固件或更高版本）。**

- StudioLive 32
- StudioLive 24

- StudioLive 16

Throughout this manual, you will find Power User Tips, providing mixing tricks and explanations of various useful audio terms. Near the end of this manual, you'll find a selection of audio tutorials, covering everything from microphone placement to recommended equalizer and compression settings. We hope these tutorials help you to get the most from your StudioLive Series III mixer.

在这本手册中，你会发现 " Power User Tips提示"，提供混音技巧和各种有用的音频术语的解释。在本手册的最后，你会发现一些音频教程，涵盖了从麦克风位置到均衡器推荐和压缩设置的所有内容。我们希望这些教程能帮助你从StudioLive III系列调音台中，获得最大的收益。

All models, except the StudioLive 64S, are 32-channel mixers and will be referred to as such when differences occur between the StudioLive 64S and the other mixers in the StudioLive Series III family.

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

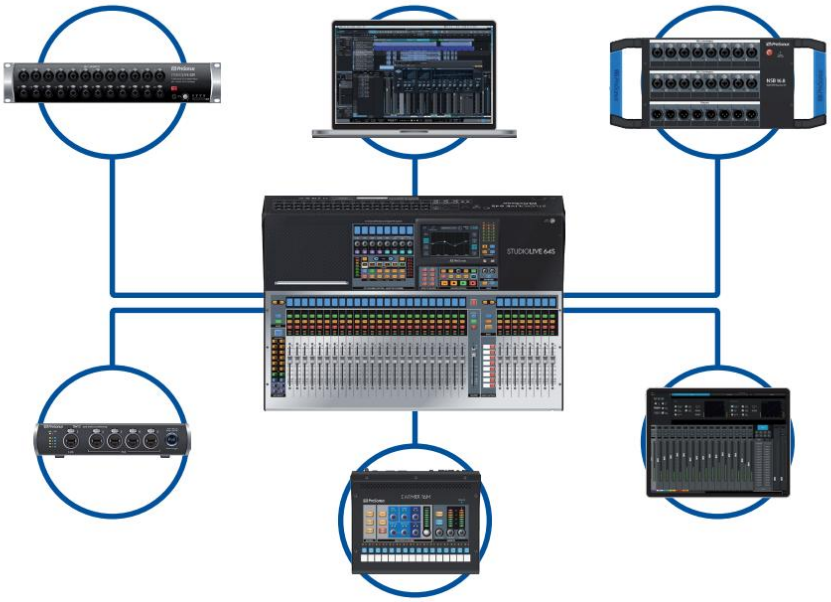
除 StudioLive 64S 外，所有型号都是32通道调音台，当 StudioLive 64S 与 StudioLive Series III系列中的其他调音台之间出现差异时，将将被称为这种差异。

再次感谢你购买我们的产品。我们相信，你会喜欢新的 StudioLive。

## 1.3 Companion PreSonus Products 配套产品

**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.

**欢迎来到 PreSonus生态圈!** 作为一家解决方案公司，我们相信照顾客户（也就是你）的最佳方式，是确保你从信号链的起点到终点都能获得最佳体验。为了实现这一目标，我们从第一天起，把无缝集成放在这些产品的每个设计阶段。其成果是，系统按照预期的方式相互传输，开箱即用，没有过多的配置麻烦。



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

***关于PreSonus AVB网络设备，如何相互配合的更多信息，请查阅PreSonus AVB网络指南。***

***For more information on individual products, please visit*** www.presonus.com.

***如需了解个别产品的更多信息，请访问*** www.presonus.com

## 1.4 What's in the Box 包装内都有什么

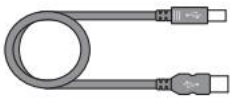
In addition to a Visual Quick Start Guide, your StudioLive package contains the following:

除了《Visual Quick Start Guide》入门指南，你的StudioLive软件包还包含以下内容：

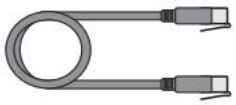
- A PreSonus StudioLive Series III digital recording and performance mixer

一台 PreSonus StudioLive III 系列数字录音和高性能调音台

- 1 meter USB cable
  1米USB线

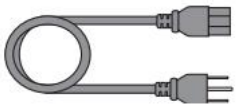


- 1 meter CAT6 Ethernet cable
  1米CAT6 网线



- StudioLive Series III Quick Start Guide
  StudioLive III系列 快速入门指南

- IEC power cord
  IEC电源线



***Power User Tip:*** *All companion software and drivers for yourPreSonus StudioLive Series III mixer are available for download from your My PreSonus user account. Please visit http://my.presonus.com and register your StudioLive Series III mixer to receive downloads and licenses.*

***Power User Tip:*** *你的 PreSonus StudioLive Series III调音台的所有配套软件和驱动程序，都可以从你的 My PreSonus用户帐户下载。请访问 http://my.presonus.com，并注册你的 StudioLive Series III调音台以获得下载和许可。*

## 1.5 Additional Resources 其它资源

**Software Guides: 软件指南：**

- **Capture 3 Reference Manual.** Included with StudioLive mixers is Capture, a digital-audio multitrack-recording application designed to make recording quick and easy.

  **Capture 3 Reference Manual**。StudioLive调音台包括Capture，这是一个数字音频多轨录音应用程序，旨在使录音快速而简单。

- **Networking for StudioLive Remote Control.** This guide will assist you in creating a LAN network to remote control your StudioLive from a computer, tablet, or mobile device.

  **Networking for StudioLive Remote Control**。本指南将帮助你创建一个LAN网络，从电脑、平板电脑或移动设备上远程控制你的StudioLive。

- **QMix-UC Reference Manual.** This guide describes the features and functions of QMix-UC with every StudioLive mixer model. QMix-UC lets up to 16 users remotely control the Aux Mixes on your StudioLive using their smartphone.

  **QMix-UC Reference Manual.** 本指南介绍了QMix-UC与每个StudioLive调音台型号的特点和功能。QMix-UC可以让多达16个用户, 用智能手机远程控制StudioLive上的Aux Mixes。

- **Studio One Integration Reference Manual.** Studio One Artist is included with every StudioLive mixer. In addition to being a powerful DAW, Studio One provides unique routing and integration features. This manual will help you get the most from your StudioLive mixer when used with Studio One or Studio One Artist.

  **Studio One Integration Reference Manual.** Studio One Artist 包含在每个StudioLive调音台中。除了是一个强大的DAW之外，Studio One 还提供了独特的路由和集成功能。当与Studio One或Studio One Artist一起使用时，本手册将帮助你从StudioLive调音台中获得最大收益。

- **UC Surface Reference Manual.** This guide describes the features and functions of UC Surface with every StudioLive mixer model. UC Surface can be used to remotely control ever function on your StudioLive mixer or specific functions, depending on the set permissions, or to turn your tablet into additional screens for your mixer.

  **UC Surface Reference Manual.** 本指南介绍 UC Surface与每个StudioLive调音台型号的特点和功能。UC Surface可以用来远程控制 StudioLive 调音台上的任何功能或特定功能，这取决于设置的权限，或者把你的平板电脑变成调音台的附加屏幕。

- **Using Your StudioLive as an Audio Interface with Universal Control Reference Guide.** This guide describes the features and functions Universal Control as well as how to use your StudioLive mixer as an audio interface with your favorite DAW application.

  **Using Your StudioLive as an Audio Interface with Universal Control Reference Guide.** 本指南介绍了Universal Control的特点和功能，以及如何将StudioLive调音台,作为音频接口与你喜爱的DAW应用程序一起使用。

**Additional Resources: 其它资源：**

- **StudioLive Series III AVB Networking Guide.** This manual covers advanced AVB audio networking configuration for the StudioLive Series III mixers.
- **StudioLive Series III Fat Channel Plug-ins Addendum.** Additional Fat Channel plug-in models can be purchased from PreSonus.com. This guide covers the installation and authorization process as well as the features of each plug-in model.
- **StudioLive Series III HUI for ProTools DAW Control Addendum.** StudioLive Series III console mixers can control Avid ProTools® using HUI emulation.

- **StudioLive Series III MCU for Logic DAW Control Addendum.** StudioLive Series III console mixers can control Apple Logic® using Mackie Control Universal emulation.
- **StudioLive Series III Stage Box Mode Addendum.** The StudioLive Series III rackmount mixers (StudioLive 32R, StudioLive 24R, StudioLive 16R) can be used as advanced stage boxes for any StudioLive Series III console mixer.
- **StudioLive Series III Studio One DAW Control Addendum.** StudioLive Series III console mixers can be used to control Studio One and Studio One Artist.

-**StudioLive Series III AVB网络指南**。本手册涵盖了StudioLive Series III调音台高级AVB音频网络配置。

-**StudioLive Series III Fat Channel Plug-ins Addendum**。可以从PreSonus.com买附加的Fat Channel插件型号。本指南涵盖了安装和授权过程，以及每个件模型的功能。

-**StudioLive Series III HUI for ProTools DAW Control Addendum**。StudioLive **III** 系列调音台可以使用HUI模拟控制Avid ProTools®。

-**StudioLive Series III MCU for Logic DAW Control Addendum**。StudioLive Series III 控制台调音台可以使用Mackie Control Universal仿真技术控制Apple Logic®。

-**StudioLive Series III Stage Box Mode Addendum** 。StudioLive Series III机架式调音台（StudioLive 32R、StudioLive 24R、StudioLive 16R）可以作为任何StudioLive Series III 调音台的高级舞台箱。

-**StudioLive Series III Studio One DAW Control Addendum**。StudioLive Series III控制台可以用来控制Studio One 和 Studio One Artist。

# 2 Getting Started 入门

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

在你开始之前，这里有几条规则可以让你入门：

- Always turn down the Main fader and both the Monitor and Phones knobs in the Monitor section before making connections.

  在进行连接之前，一定要把主推子和监听部分的监听和麦克风旋钮都调低。

- Before plugging or unplugging a microphone while other channels are active, mute the channel to which you are connecting.
  插入或拔出麦克风之前，其他通道处于激活状态时，请将你要连接的通道静音。

- Your faders should be set on or near the "U" mark whenever possible. The "U" indicates unity gain, meaning the signal is neither boosted nor attenuated.
  你的推子应该尽可能地设置在 "U " 标记上或附近， "U " 表示统一增益，意味着信号既没有被提升也没有被衰减。

- Do not allow your inputs to clip. Watch the level meters; when signal nears Clipping, the top LED illuminates, indicating that the analog-to-digital converters are in danger of being overdriven. Overdriving the converters will cause digital distortion, which has a negative effect on sound quality.

  不要让你的输入出现clip。观察 level meters；当信号接近Clipping时，顶部的LED会亮起，表明模数转换器有被过度驱动。过度驱动转换器将导致数字失真，这对声音质量有负面影响。

Your P.A. and studio equipment should be powered on in the following order:

你的P.A.和演播室设备应按以下顺序通电。

- Sound sources (keyboards, direct boxes, microphones, etc.) connected to the StudioLive inputs 连接到StudioLive输入的声源（键盘、direct boxes、麦克风等）。
- StudioLive Series III mixer 调音台
- Computer (if applicable) 计算机（如果适用）
- Power amplifiers or powered loudspeakers 功率放大器或有源音箱

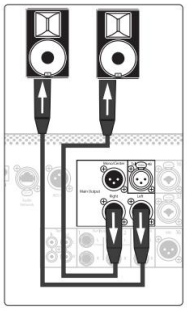
When it is time to power down, your system should be turned off in the reverse order. Now that you know what not to do, let's get started!

关机时，你的系统应该按照相反的顺序关闭。现在你了解什么是不应该做的，让我们开始吧!

## 2.1 Level Setting Procedure Level设置过程

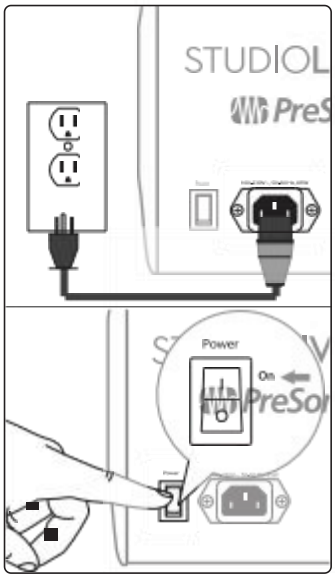
1. Plug a microphone into the Channel 1 input on your StudioLive Series III with a standard XLR cable.

用标准的XLR电缆，将麦克风插入StudioLive系列III的Channel 1 输入。



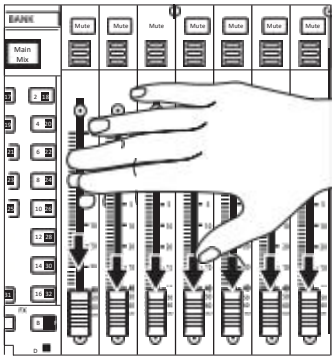
2. Connect the main outputs of your StudioLive to your powered monitors (or power amp if using passive speakers).

将 StudioLive 的主输出连接到有源音箱（如果使用无源音箱，则为功率放大器）。

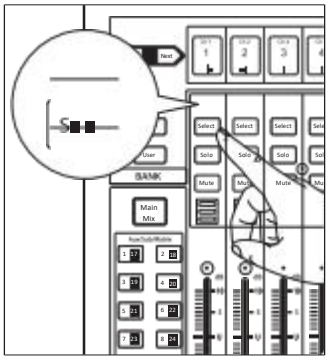



3. Plug your StudioLive into a power outlet and turn it on.

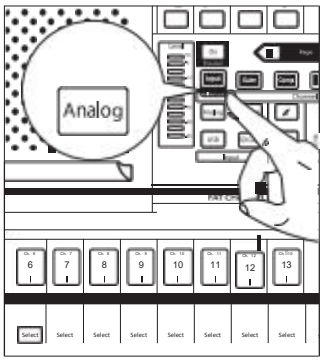
   将 StudioLive 插入电源插座，并打开。



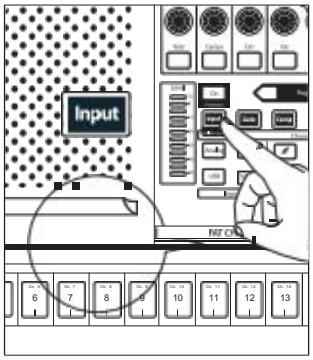
4. Move all of the faders on your StudioLive down to the lowest setting.
   将 StudioLive上的所有推子移到最低设置。



5. Press the Select button on Channel 1 to bring its settings into focus in the Fat Channel.
   按Channel 1的选择按钮，使其设置在Fat Channel中成为焦点。

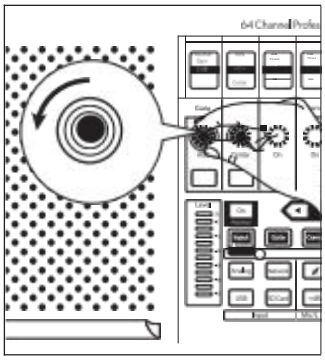



6. Press the Analog button in the Fat Channel to patch in the analog input.
   按 Fat Channel中的 Analog 模拟按钮，接线模拟输入。

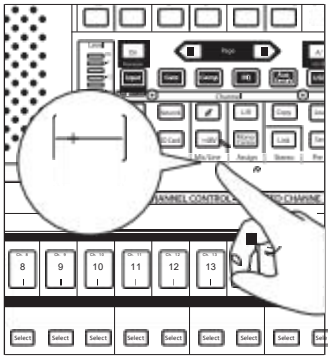



7. Press the Input button in the Fat Channel.

按 Fat Channel 的 Input 输入按钮。



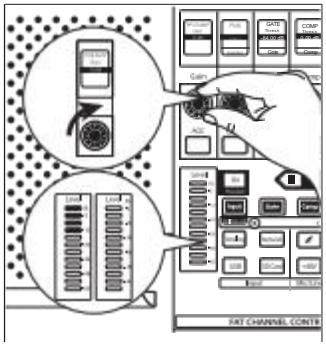
7. Turn the first knob in the Fat Channel section (Preamp Gain) counter - clockwise to its lowest setting.
将 Fat Channel 部分的第一个旋钮（Preamp Gain），逆时针旋转至最低设置。



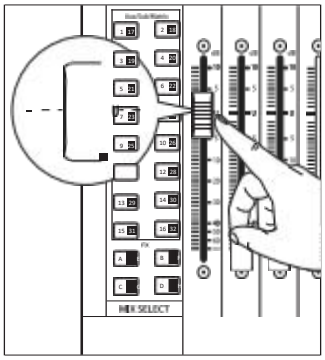
8. If your microphone requires phantom power, press the +48v button in the Fat Channel.
如果你的麦克风需要幻象电源，请按 Fat Channel 的+48v按钮。

10. Turn on your powered monitors or power amp. 打开你的有源监听或功放。

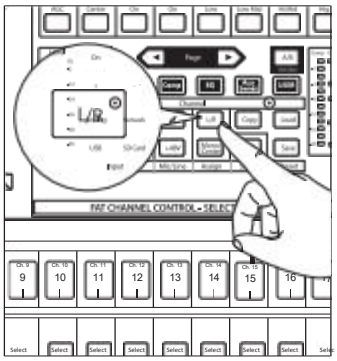
11. Speak or sing into your microphone at the same volume as the performance.
与表演相同的音量，对着麦克风说话或唱歌。



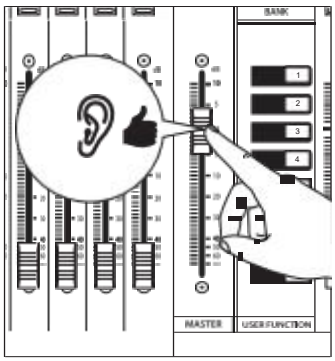
12. Turn the first knob in the Fat Channel section (Preamp Gain) clockwise while watching the Level (input) meter in the Fat Channel. Adjust the Preamp Gain knob until the meter shows an average level around the middle of its range. Avoid lighting the red (clip) LED at the top of the meter.
顺时针转动 Fat Channel 部分的第一个旋钮（Preamp Gain），同时观察Fat Channel 的电平（输入）表。调整Preamp Gain knob前置放大器增益旋钮，直到电平表显示出其范围中间附近的平均电平。避免亮起仪表顶部的红色（clip）LED。



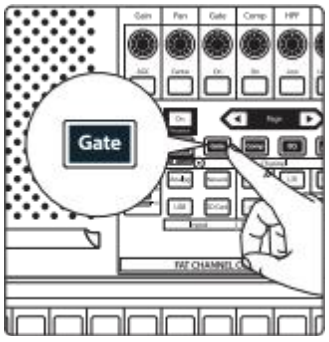
13. Raise the Channel 1 fader to its "U"setting (unity gain).
将 Channel 1的推子提高到 "U "设置（统一增益）。



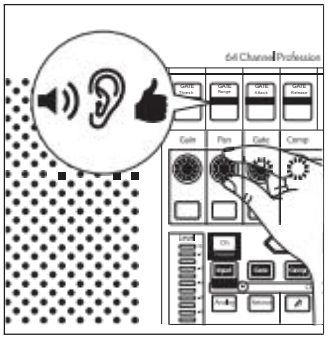
14. Press the "Main" button in the Fat Channel to assign Channel 1 to the Main output bus.
按 Channel 1的 "Main " 按钮，将Channel 1 分配到主输出总线上。



15. Raise the Main fader while singing or speaking into the microphone until you are satisfied with output level.
对着麦克风唱歌或讲话时，提高主推子，直到你对输出电平感到满意为止。




16. Select the Fat Channel processor (Gate, Compressor, or EQ) you would like to edit first.
首先选择你想编辑的 Fat Channel 处理器 (Gate, Compressor, or EQ)。



17. Use the controls in the Fat Channel or on the Touch Display to set the parameters to taste.
使用 Fat Channel 或 Touch Display 上的控制按钮，根据兴趣设置参数。

*StudioLive 32SX and 32SC Users will utilize the Touch Display to edit all Fat Channel parameters. The controls in the Fat Channel are fixed to their designated function.*
*StudioLive 32SX和32SC用户，使用Touch Display触屏来编辑所有 Fat Channel 参数。Fat Channel 中的控制，被固定在其指定的功能上。*

## 2.2 Useful Concepts 实用概念

This section covers some basic workflow concepts to help you to more quickly get acquainted with your StudioLive.

本节包括一些工作流程的基本概念，以帮助你快速地熟悉你的 StudioLive。

### 2.2.1 Select Buttons and the Fat Channel 选择 Buttons & Fat Channel


All around the StudioLive, you will see Select buttons. There is a Select button on each channel as well as the master fader. Each of these buttons serves exactly the same purpose: to access the available Fat Channel parameters for its channel or bus. These buttons will also change colors to alert you as to the type of mix you are viewing (Aux, Subgroup, or Matrix)

在StudioLive的周围，你会看到 " Select"按钮。每个 channel 和主推子上都有一个 Select 按钮。每一个按钮都有完全相同的目标：访问其 channel 通道或总线的可用Fat Channel参数。这些按钮也会变化颜色，以提醒你正在观察的混音类型，(Aux, Subgroup, or Matrix)


The Fat Channel is the heart of the StudioLive. It gives you a wealth of powerful signal processing, mixing, and configuration tools to help you make the most of your mixer. Each channel and mix in your StudioLive can take advantage of the Fat Channel functions at the touch of the corresponding **Select** button.

Fat Channel是StudioLive的中心。它为你提供了大量强大的信号处理、混音和配置工具，帮助你充分利用你的调音台。StudioLive 中的每个通道和混音，都可以使用Fat Channel的功能，只需触摸相应的 **Select 选择**按钮。

The 8 multipurpose knobs, buttons, and Scribble Strip displays in the Fat Channel shift their functions to suit your needs as you move between tasks. The integrated Touch Display works in tandem, providing useful information and fluid touch control.

Fat Channel 中的 8个多用途旋钮、按钮和 Scribble Strip 显示，在你的任务之间移动时，可以改变它们的功能来适应你的需求。集成的Touch Display触摸显示器与之一起工作，提供有用的信息和易变的触摸控制。


The StudioLive 32SX and 32SC feature a Fixed mode Fat Channel that is locked to the Input layer controls you need under your fingertips quickly. All other StudioLive users can toggle between the Fixed and Dynamic modes by pressing and holding the **Input** button in the Fat Channel.

StudioLive 32SX和32SC具有一个Fixed模式的 Fat Channel，它会锁定在你指尖下迅速需要Input输入层控制。所有其他的StudioLive用户，可以通过按住Fat Channel 的输入按钮在 Fixed 固定和Dynamic动态模式之间切换。

For more information on using the Fat Channel system, ***seeSection 6***.

关于使用Fat Channel系统的更多信息，***请见第 6 节***。

### 2.2.2 Fat Channel Plugins 插件

The Compressor and EQ in the Fat Channel are equipped with multiple plug-in models that can be loaded on each input and output to alter the sound and provide your mix with more character. Additional Fat Channel plug-ins can be purchased from the PreSonus Shop.

Fat Channel中的压缩器和均衡器，配备了多个插件，可以加载到每个输入和输出上，以改变声音，为你的混音提供更多的特色。Additional Fat Channel 插件，从PreSonus Shop 商店可以购买。

Every Fat Channel plug-in model can also be loaded in Studio One. Purchased plug-ins come with both installers included.

每个 Fat Channel 插件，也可以在Studio One中加载。购买的插件都包含了两个安装程序。

For more information on loading a purchased Fat Channel models, ***see StudioLive Series III Fat Channel Plug-ins Addendum.***

***Fat Channel models 更多加载购买的信息，请见 StudioLive Series III Fat Channel Plug-ins Addendum。***

### 2.2.3 FlexMixes

In a traditional analog console, there are several different types of buses, each feeding a dedicated output. Your StudioLive mixer features analog Mix outputs, each driven by a FlexMix bus. Why do we call them FlexMixes? Because each FlexMix can be configured as any one of three bus types:

在传统的模拟控制台中，有几条不同类型的总线，每条总线都有专门的输出。你的 StudioLive 调音台，具有模拟Mix混合输出，每个由 FlexMix 总线驱动。为什么我们叫它们 FlexMixes？因为每个 FlexMix 可以配置为三种总线类型中的任何一种：

- **Pre- or Post-Fader Send Aux Bus.** Aux buses provide auxiliary mixes that are separate from the main and subgroup mixes. Aux

  总线模式，提供了独立于主混音和子组混音的辅助混音。

- **Subgroup.** Subgroups are alternate buses that act much like the Main L+R bus on your StudioLive.

  Subgroups 是备用总线，其作用与StudioLive上的Main L+R总线很相似。

- **Pre- or Post-Fader Matrix Mix.** Matrix mixes provide auxiliary mixes created from any bus output as well as every input channel.

Matrix 矩阵混音提供辅助混音，在任意总线输出以及每个输入通道创建。

What's more, FlexMixes can be stereo linked or used as mono, providing maximum flexibility.

还有，FlexMixes可以立体声连接或作为单声道使用，提供跟多灵活性。

***Power User Tip:*** *Compact StudioLive Series III mixers, like the StudioLive 32SC, are equipped with more FlexMix buses than physical analog FlexMix outputs. These additional buses can be routed over the AVB network to NSB-series stageboxes, EarMix personal monitor systems, and other mixers on the network.*

***Power User Tip:*** *小型 StudioLive III系列调音台，如StudioLive 32SC，配备了比物理模拟 FlexMix输出更多的FlexMix总线。这些额外的总线，可以通过AVB网络路由到NSB系列舞台箱、EarMix个人监听系统和网络上的其他调音台。*

For more information on using and configuring FlexMixes, ***seeSection 5.1***

*关于使用和配置 FlexMixes 的更多信息，**请参见第 5.1 节。***

### 2.2.4 Fader Layers 推子层

To provide the most compact form factor, the StudioLive mixer utilizes fader layers. Each layer allows you to view the channel strip controls for the input channels in each mix. Additional fader layers allow you to view just the Aux Inputs, the DCA Group outputs, or the Mix Master outputs.

为了提供最紧凑的外形，StudioLive 混音器采用了推子层。每个推子层允许你查看每个混音中的输入通道的 channel strip 通道条控制。Additional fader layers 推子层允许你只查看Aux Inputs输入，DCA Group 输出，或 Mix Master 输出。

More information about Fader Layers can be found in ***Section 4.2***.

关于推子层的更多信息，可以在**第 4.2节**找到。

### 2.2.5 DCA Groups DCA组

Filter DCA Groups are a way to control the overall volume of a group of related channels (such as all drum channels). While you can accomplish a similar result by routing channels to a subgroup and controlling their volume with the subgroup master, DCA Filter Groups require no such re-routing and offer some additional utility.
Filter DCA Groups是相关通道整体音量（如所有鼓通道）控制的方法。虽然你可以将通道路由到subgroup 子组，并通过子组主控器控制它们的音量来达到类似的效果，但 Filter DCA Groups不需要重新路由，还提供一些附加的效用。

Filter DCA Groups provide two different fader functions: **Default** and **Traditional.**

Filter DCA Groups 有两种不同的推子功能：**Default** 默认和**Traditional** 传统

- While in Default mode, the faders for the channels assigned to the Filter DCA Group will move when the Filter DCA Group fader is adjusted. In this way, you always have a clear visual cue of the actual fader level for every channel.

  在Default默认模式下，当调整 Filter DCA Group 推子时，分配给 Filter DCA Group 的通道的推子会移动。通过这种方式，你总是能清楚地看到每个通道的实际推子的电平提示。

- While in Traditional mode, the faders for the channels assigned to the Filter DCA Group will not move when the Filter DCA Group fader is adjusted.

  在Traditional传统模式下，当调整Filter DCA Group 推子时，分配给Filter DCA Group的通道的推子不会移动。

For more information on using DCA Filter Groups, ***seeSection 4.3***.

关于使用 DCA Filter Groups 的更多信息，***见第4.3节。***

### 2.2.6 Recording and Playback 录制与播放

The StudioLive Series III mixers are equipped with a 34-track SD recorder that is completely integrated with your mixer, making multi-track recording and Virtual Soundchecks quick and easy. Playback channels from the SD card can be switched individually per channel.

StudioLive III系列调音台配备了一个34-track 的SD录音机，与调音台成为一体，使多轨录音和Virtual Soundchecks变得快速而简单。SD卡的Playback 通道，可以在每个通道上单独切换。

In addition to the onboard SD recorder, a USB audio interface is also included. This interface is continuously bidirectional, allowing you to use plugins as inserts as well as recording and playback applications.

除了板载 SD录音机外，还包括一个USB音频接口。这个接口是连续双向的，允许你使用插件，作为inserts以及录音和回放应用。

More information about SD recording and playback is available in ***Section 8***.

More information on USB recording and playback is available in the ***Using Your StudioLive as an Audio Interface with Universal Control Reference Guide.***

更多关于SD录制和播放的信息，***请见第8节。***

关于USB录音和回放的更多信息，***可在《Using Your StudioLive as an Audio Interface with Universal Control Reference Guide.》参考指南中找到。***

### 2.2.7 Digital Patching 数字配线

StudioLive Series III mixers allow you route any input to any channel and any mix to any output. This enables you to create a customized configuration for your mixer. In this way, you can patch any analog input or digital return (AVB, USB, or SD) to any channel you like as well as route any FlexMix to any analog output, the AVB network, or as sources for the USB audio interface and SD multitrack recorder.

StudioLive III系列调音台，接受将任何输入路由到任何通道，将任何混音路由到任何输出。这样你能够为你的调音台，创建一个定制的配置。你可以把任何模拟输入或数字返回（AVB、USB或SD）拼接到你喜欢的任意通道，以及把任何FlexMix 路由到任意模拟输出、AVB网络，或作为USB音频接口和SD多轨录音机的信号源。

The Digital Patching screen provides a detailed overview of what type of source is feeding each channel, which input or return is patched to each channel, and where each bus is routed.

Digital Patching 显示了一个详细的概述，即输入或返回配置的每个通道提供信号源是什么类型的，以及每个总线被路由到哪里。

***For more information, please review Section 12.3.***

***欲了解更多信息，请查阅第 12.3 节。***

### 2.2.8 Projects, Scenes, and Presets 项目、场景和预设

Every parameter on your StudioLive mixer can be stored and recalled later. These settings are saved as follows:

StudioLive调音台上的每一个参数都可以被存储，并在以后调用。这些设置的保存方式如下：

**Projects**

Global System settings and routing are stored within a Project. A Project saves the mode for each FlexMix, Talkback assignments, and all the routing set in the Digital Patching menu in addition to System settings like Sample Rate, Network Settings, and Cue Source.

Global System设置和路由存储在一个Project中。Project可以保存每个FlexMix的模式、Talkback的分配、以及在Digital Patching菜单中所有路由的设置，此外还有System设置，如Sample Rate采样率、Network Settings网络设置和Cue Source音源。

Because fundamental routing and bus structure is being changed when a Project is recalled, the load time for Projects is slightly longer than loading a Scene or Preset. It is recommended that Projects are not loaded during a performance or other live application.

因为在调用 Project时，会改变基本的路由和总线结构，所以 Project的加载时间比加载场景或预置的时间稍长。建议在演出或其他现场应用中，不要加载 Project。

For more information on saving and loading Projects, ***seeSection 9.6.1.***

关于保存和加载Projects的更多信息，***见第 9.6.1 节。***

**Scenes场景**

Scenes that share the same Global System settings should be stored within the same Project. Many Scenes can be stored within each Project. A Scene saves all the settings you need to recall your mix like Channel Strip parameters, Fat Channel models and settings, and Channel Identifiers like name, color, and type. Scenes created in one Project cannot be recalled in any other Project.

共享相同的Global System设置的场景应存储在同一个Project中。每个Project中可以存储许多场景。一个场景可以保存所有你想调用的混音设置，如Channel Strip 参数、 Fat Channel 模式和设置，以及Channel Identifiers ，如名称、颜色和类型。在一个Project中创建的场景，是不能在任何其他Project中调用。

For more information on saving and loading Scenes, ***seeSection 9.6.2.***

关于保存和加载场景的更多信息，***见第 9.6.2 节。***

**Presets预置**

When you've dialed in a setting for a Fat Channel or FX processor that you'd like to use on another channel later or in a future mix, you can save it as a Preset. Presets are globally accessible from any Project or Scene. So, even if you've created the perfect Reverb preset in one Project or Scene, you can recall it later from any other Project or Scene.

当你为一个 Fat Channel 或 FX处理器调节设置，想之后在另一个通道或今后的混音中使用，你可以把它作为Preset预置保存。Preset 可以从任何 Project 或 Scene 全局中访问。因此，即便在一个 Project或 Scene中，你创建了完美的 Reverb预置，在以后你也能从任何其他Project或Scene中调用它。
场景中调用。

For more information on saving and loading Fat Channel Presets, ***seeSection 6.1.2.***

关于保存和加载 Fat Channel Presets的更多信息，***请见第 6.1.2 节。***

## 2.2.9 User Profiles 用户配置文件

User Profiles provide an easy way to grant access to some features and scenes to some users, while locking out others. In this way, more advanced users can manage critical functions like Digital Patching and bus configuration that cannot be changed by guest users.

User Profiles 用户配置文件提供了一个简单的方法，可以将一些功能和场景的访问权授予某些用户，而将其他用户锁定。通过这种方式，更高级的用户可以管理关键的功能，如 Digital Patching 和总线配置，这些功能是来宾用户无法改变的。

By default, an Admin profile is active when your StudioLive mixer is powered on. This profile type has access to every feature and function on the mixer.

默认情况下，当 StudioLive 调音台开机时，Admin 配置文件是激活的。这种配置类型可以访问调音台的每个特性和功能。

Restricted profiles are always locked out of the Settings, Audio Routing, and UCNET screens and cannot lock or unlock scenes nor can they change a soft patch. Restricted profiles can also be locked out from other optional functions as the Admin user sees fit.

受限制的配置文件总被锁定在Settings、Audio Routing和UCNET 屏幕之外，不能锁定或解锁场景，也不能改变 soft patch。

受限制的配置文件也可以锁定在管理用户认为其他合适的可选功能之外。

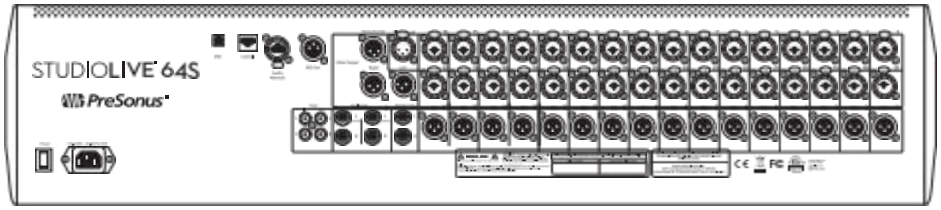
For more information on configuring and using User profiles, ***seeSection 12.2.***

关于配置和使用用户配置文件的更多信息，***见第 12.2 节***。

# 3 Hookup 联机

## 3.1 Rear Panel Configurations 后面板的配置

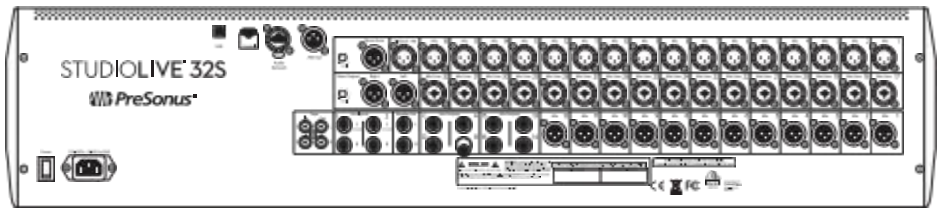
### 3.1.1 StudioLive 64S




| Analog Inputs 模拟输入 | | | | |
|---|---|---|---|---|
| **Mic / Line** | **Mic Only** | **Aux Inputs** | **Tape Inputs** | **Talkback In** |
| 32 Combo | n/a | 4 1/4" TRS | 2 RCA | 1 XLR (F) |

| Analog Outputs 模拟输出 | | | | | |
|---|---|---|---|---|---|
| **Flex Mix** | **Subgroup** | **Main Out** | **Mono / Center** | **Monitor Out** | **Tape Out** |
| 16 XLR (M) | n/a | 2 XLR (M) | 1 XLR (M) | 2 1/4" TRS | 2 RCA |

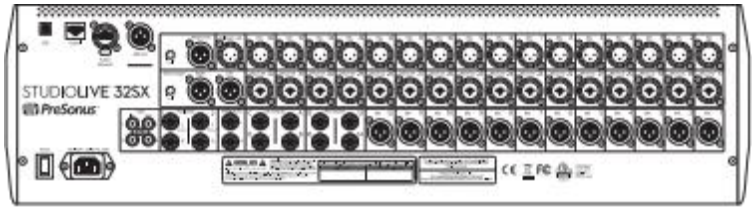
### 3.1.2 StudioLive 32S




| Analog Inputs 模拟输入 | | | | |
|---|---|---|---|---|
| **Mic / Line** | **Mic Only** | **Aux Inputs** | **Tape Inputs** | **Talkback In** |
| 16 Combo | 16 XLR | 4 1/4" TRS | 2 RCA | 1 XLR (F) |

| Analog Outputs 模拟输出 | | | | | |
|---|---|---|---|---|---|
| **Flex Mix** | **Subgroup** | **Main Out** | **Mono Sum** | **Monitor Out** | **Tape Out** |
| 12 XLR (M)<br>4 1/4" TRS | 4 1/4" TRS | 2 XLR (M) | 1 XLR (M) | 2 1/4" TRS | 2 RCA |

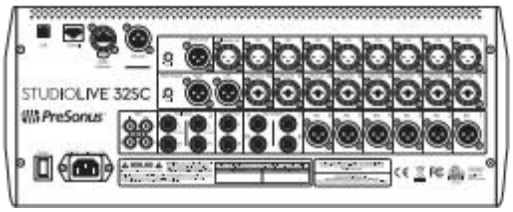
### 3.1.3 StudioLive 32SX




| Analog Inputs 模拟输入 | | | | |
|---|---|---|---|---|
| **Mic / Line** | **Mic Only** | **Aux Inputs** | **Tape Inputs** | **Talkback In** |
| 16 Combo | 16 XLR | 4 1/4" TRS | 2 RCA | 1 XLR (F) |

| Analog Outputs 模拟输出 | | | | | |
|---|---|---|---|---|---|
| **Flex Mix** | **Subgroup** | **Main Out** | **Mono Sum** | **Monitor Out** | **Tape Out** |
| 12 XLR (M)<br>4 1/4" TRS | 4 1/4" TRS | 2 XLR (M) | 1 XLR (M) | 2 1/4" TRS | 2 RCA |

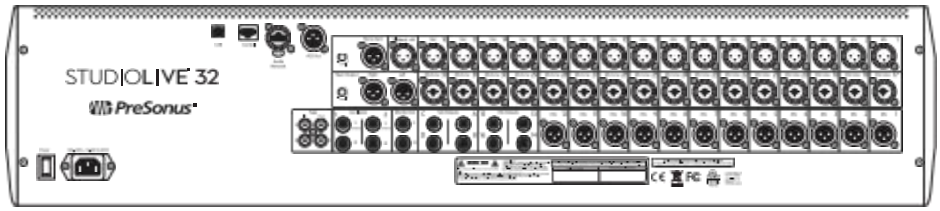
### 3.1.4 StudioLive 32SC




| Analog Inputs 模拟输入 | | | | |
|---|---|---|---|---|
| **Mic / Line** | **Mic Only** | **Aux Inputs** | **Tape Inputs** | **Talkback In** |
| 8 Combo | 8 XLR | 4 1/4" TRS | 2 RCA | 1 XLR (F) |

| Analog Outputs 模拟输出 | | | | | |
|---|---|---|---|---|---|
| **Flex Mix** | **Subgroup** | **Main Out** | **Mono Sum** | **Monitor Out** | **Tape Out** |
| 6 XLR (M)<br>4 1/4" TRS | N/A | 2 XLR (M) | 1 XLR (M) | 2 1/4" TRS | 2 RCA |

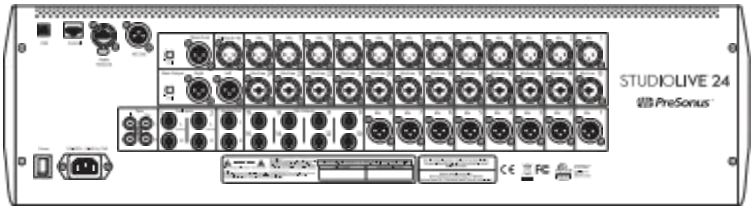
### 3.1.5 StudioLive 32 (Blue Model) 型号




| Analog Inputs 模拟输入 | | | | |
|---|---|---|---|---|
| **Mic / Line** | **Mic Only** | **Aux Inputs** | **Tape Inputs** | **Talkback In** |
| 16 Combo | 16 XLR | 4 1/4" TRS | 2 RCA | 1 XLR (F) |

| Analog Outputs 模拟输出 | | | | | |
|---|---|---|---|---|---|
| **Flex Mix** | **Subgroup** | **Main Out** | **Mono Sum** | **Monitor Out** | **Tape Out** |
| 12 XLR (M)<br>4 1/4" TRS | 4 1/4" TRS | 2 XLR (M) | 1 XLR (M) | 2 1/4" TRS | 2 RCA |

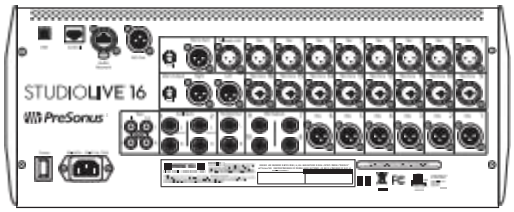
### 3.1.6 StudioLive 24 (Blue Model) 型号




| Analog Inputs 模拟输入 | | | | |
|---|---|---|---|---|
| **Mic / Line** | **Mic Only** | **Aux Inputs** | **Tape Inputs** | **Talkback In** |
| 12 Combo | 12 XLR | 4 1/4" TRS | 2 RCA | 1 XLR (F) |

| Analog Outputs 模拟输出 | | | | | |
|---|---|---|---|---|---|
| **Flex Mix** | **Subgroup** | **Main Out** | **Mono Sum** | **Monitor Out** | **Tape Out** |
| 8 XLR (M)<br>8 1/4" TRS | n/a | 2 XLR (M) | 1 XLR (M) | 2 1/4" TRS | 2 RCA |

### 3.1.7 StudioLive 16 (Blue Model) 型号




| Analog Inputs 模拟输入 | | | | |
|---|---|---|---|---|
| **Mic / Line** | **Mic Only** | **Aux Inputs** | **Tape Inputs** | **Talkback In** |
| 8 Combo | 8 XLR | 4 1/4" TRS | 2 RCA | 1 XLR (F) |

| Analog Outputs 模拟输出 | | | | | |
|---|---|---|---|---|---|
| **Flex Mix** | **Subgroup** | **Main Out** | **Mono Sum** | **Monitor Out** | **Tape Out** |
| 6 XLR (M)<br>4 1/4" TRS | n/a | 2 XLR (M) | 1 XLR (M) | 2 1/4" TRS | 2 RCA |

## 3.2 Rear Panel Connections 后部面板连接

While the complement of analog I/O differs between the various StudioLive Series III models, the function of each component is consistent across the mixer range.

虽然模拟输入/输出的弥补在不同的 StudioLive 系列 III 型号之间有所不同，但每个组件的功能在整个调音台范围内是一致的。

### 3.2.1 Analog Inputs 模拟输入


**Mic/Line Inputs.** Each microphone input on the StudioLive Series III mixers is supplied with a remote PreSonus XMAX microphone preamplifier, for use with all types of microphones. The XMAX preamp features a Class A input buffer circuit, followed by a dual-servo gain stage. This results in exceptionally low noise, and a wide range of gain, allowing you to boost signals significantly without introducing unwanted background noise.

**Mic/Line Inputs.** StudioLive III系列调音台的每个麦克风输入都提供了一个远程 PreSonus XMAX前置放大器，可用于所有类型的麦克风。XMAX前置放大器具有一个A类输入缓冲电路，然后是一个双伺服增益级。这导致了特别低的噪音，以及广泛的增益范围，在没有引入不想要的背景噪音时，可以大幅提高信号。

It is important to note that the XMAX circuit is an analog design that is remotely controlled digitally.

Each model is also equipped with a number of inputs that can also accept line-level signals. These inputs use TRS-XLR combo jacks that can accept both XLR and balanced or unbalanced 1/4" cables. The ¼-inch TRS connectors bypass the gain stage and are scaled to accept line-level signals up to +18 dBu.

需要注意的是，XMAX电路是一种模拟设计，以数字方式进行远程控制。

每个型号还配备了一些输入，也可以接受线路电平信号。这些输入端使用TRS-XLR组合插座，可以接受XLR和平衡或不平衡的1/4 "电缆。¼英寸 TRS 接头绕过了增益级，可以接受高达 +18dBu 的线路电平信号。

The StudioLive 64S features locking combo jacks. All other models are equipped with standard combo connections.

StudioLive 64S具有锁定式组合插座。其他所有型号都配备了标准的组合连接。

***Power User Tip:*** *When the line inputs are engaged, the microphone preamp circuit is bypassed completely, however, +20 dB ofdigital gain is available. Typical examples of line-level connections are synthesizer outputs, signal processors, and stand-alone mic preamps and channel strips. Use the output level control on your line-level device to adjust its level.*

***Power User Tip:*** *当线路输入时，麦克风前置放大电路被完全绕过，但是，+20dB的数字增益是可用的。线路连接的例子是合成器输出、信号处理器、独立的麦克风前置放大器和通道条。使用线级设备上的输出电平控制来调整其电平。*


**Microphone Only Inputs.** Every model StudioLive Series III mixer, except the StudioLive 64S, is also provided with Microphone Only inputs. These inputs can only be used with line level sources connected to a D.I. box.

除 StudioLive 64S 外，每个型号的StudioLive III系列调音台，还提供 **Microphone Only Inputs** 输入。这些输入只能与连接到D.I.盒的线路电平源一起使用。


48-**volt Phantom Power.** The StudioLive provides individually-switchable 48V phantom power for each microphone input.

StudioLive为每个麦克风输入提供可单独切换的 48V 幻象电源。

***WARNING:*** *Phantom power is required for condenser microphones and certain other specialty microphones that contain active preamp circuitry. However, applying phantom*

*power to mics that don't require power can damage them (especially ribbon mics). Switch phantom power offfor all channels where it is not required.*

***警示：***电容式麦克风和其他一些包含有源前置电路的特殊麦克风，需要幻象电源。然而，对不需要电源的麦克风应用幻象电源会损坏它们（特别是带状麦克风）。对所有不需要幻象电源的通道关闭幻象电源。

**XLR connector wiring for phantom power: 幻象电源的XLR连接器接线：**
**Pin 1** = GND **Pin 2** = +48V **Pin 3** = +48V

***Note:*** *As with many audio devices, plugging a microphone or line-level device, or enabling/disabling phantom power can create a momentary noise spike in the audio output ofyour StudioLive mixer. It is highly recommended that you mute or turn down a channel's fader before changing connections or toggling phantom power on or off.*

***注意：****与许多音频设备一样，插入麦克风或线路级设备，或启用/禁用幻象电源，可能会在你的StudioLive调音台的音频输出中，产生瞬间的噪音峰值。强烈建议你在改变连接或开启或关闭幻象电源之前，将通道的推子静音或调低。*


**Aux Inputs.** The StudioLive offers two balanced stereo auxiliary inputs. While these line inputs are generally used as effects returns, they can also be used for any line-level source (synthesizers, amp modelers, etc.). The left input of each pair is normalled to the right input, so if you are returning a mono signal to the mix, connect it to the left input, and the signal will be routed to both sides of the mix.

**Aux Inputs.** StudioLive 提供了两个平衡立体声辅助输入。虽然这些线路输入通常被用作效果器的返回，但它们也可用于任何线路电平的信号源（合成器、放大器建模器等）。每对输入中的左边输入与右边输入是常态的，所以如果你要把单声道信号返回到混音中，把它连接到左边输入，信号就会被传送到混音的两边。

***Power User Tip:*** *More information about using external effects processors can be found in* ***Section 5.2.3****.*

***Power User Tip:*** *关于使用外部效果器的更多信息，请见第* ***5.2.3*** *节。*


**Talkback Mic Input.** StudioLive mixers do not have a built-in talkback microphone, rather they are equipped with an additional XMAX mic preamp to connect an external microphone for talkback use.

*Note: Phantom power is always enabled on the Talkback Mic input. If using a dynamic mic, we recommend checking its documentation to verify that phantom power will not harm it.*

**Talkback Mic Input.** *StudioLive调音台内置没有对讲机，而是配备了一个额外的XMAX麦克风前置放大器，它来连接外部麦克风进行对讲使用。*

***注意：****在Talkback Mic input输入上始终启用幻象电源。我们建议，如果使用动圈麦克风，要检查其文件，以确认幻象电源不会损坏它。*

***Power User Tip:*** *The Talkback Micinput uses the same high-quality XMAX mic preamp employed by the other input channels, and can be enabled as a recording input or as an additional input channel in any mix.*

***Power User Tip:*** *对Talkback Mic input 使用，与其他输入通道相同的高质量XMAX麦克风前置放大器，可以作为录音输入或混音中的额外输入通道。*


**Tape In/Out.** These RCA input and output jacks can be used to connect a music player (MP3, CD, tape) or other consumer device to your system. The Tape inputs are an available input source within the mixer, while the Tape outputs mirror the output of the Main output pair.

**Tape In/Out.** 这些RCA输入和输出接口可用于连接音乐播放器（MP3、CD、磁带）或其他消费设备到您的系统。磁带输入是调音台内的一个可用输入源，而磁带输出则反映了主输出对的输出。

### 3.2.2 Analog Outputs 模拟输出


**Sub Outputs (StudioLive 32S, StudioLive 32SX, and StudioLive 32 only).** These are balanced mono outputs, one for each subgroup.

这些都是平衡的单声道输出，每个子组都有。

***Power User Tip:*** *While other StudioLive Series III models do not provide dedicated subgroups outputs, every 32-channel StudioLive Series III is equipped with four dedicated subgroups in addition to the FlexMixes. These subgroups can be routed to any FlexMix output, USB send, or routed to other hardware, like an NSB-series stagebox, over an AVB network. The StudioLive 64S is equipped with 32 FlexMixes, any or all of which can be configured as a subgroup.*

***Power User Tip:*** *虽然其他 StudioLive 系列 III 型号，没有提供专门的子群输出，但每一个 32-channel StudioLive 系列 III，配备了四个专门的子群，除了FlexMixes之外。这些子群可以被路由到 FlexMix 输出，USB 发送，或通过AVB网络路由到其他硬件，如 NSB 系列舞台箱。StudioLive 64S配备了32 FlexMixes，任何或所有的 FlexMixes，都可配置为一个子群。*

More information about Subgroups can be found in ***Section 5.3.1.***

***关于子群的更多信息，请见第 5.3.1 节。***


**Mix Outputs.** Local analog outputs are provided for the FlexMixes on your StudioLive Series III mixer. While any FlexMix can be routed to any output, by default, these mixes are routed in order (i.e. FlexMix 1 to Mix Out 1, FlexMix 2 to Mix Out 2, etc.)

**Mix Outputs.** 本地模拟输出，是为 StudioLive III系列调音台的FlexMixes提供的。虽然FlexMix可以被路由到任何输出，但在默认情况下，这些混音是按顺序路由的（即FlexMix 1 到 Mix Out 1，FlexMix 2 到 Mix Out 2，等等）。

More information about configuring FlexMixes can be found in ***Section 5.1***.

More information about routing to Mix Outputs can be found in ***Section 12.3.2***.

关于 FlexMixes 配置的更多信息，**请见第 5.1节**。

关于路由到 Mix Outputs 混合输出的更多信息，**请见第12.3.2节**。


**Main Left / Right Outputs.** The StudioLive features stereo main outputs on XLR connections.

**Main Left / Right Outputs.** StudioLive具有 XLR 连接的立体声主输出。


**Main Mono Output.** A mono output is also provided for the Main Output bus. The function of this output is model dependent:

**Main Mono Output.** 主输出总线还提供了一个单声道输出。这个输出的功能取决于型号。

- **StudioLive 64S.** The Mono Output on the StudioLive 64S is equipped with its own mono bus. This bus can be confiured as a mono mix or a center channel and provides level control for all input independently of the Main Mix bus. When configured as a Center channel, each channel has a unique center divergence control. For more information on the StudioLive 64S Mono Bus, please see ***Section 5.6***.

**StudioLive 64S** 的 Mono Output 输出配备了自己的单声道总线。这条总线可以配置为单声道混音或中心通道，并为独立于主混音总线的所有输入，提供电平控制。当配置为中心通道时，每个通道都有一个独特的中心发散控制。关于 StudioLive 64S 单声道总线的更多信息，请参见**第5.6节**。

- **All other models.** For all other StudioLive Series III models, the Mono output is an analog sum of the Main stereo mix.

  **All other models.** 对于所有其他 StudioLive 系列III型号，单声道输出是主立体声混音的模拟和。


**Main / Mono level controls (32-channel models).** All 32-channel StudioLive mixer models are equipped with a level control to adjust the output level at the analog stage. The Main (stereo) output attenuation control has a range of -80 to 0 dB. The Mono output level control has a range of -80 to +6 dB.

**Main / Mono level controls (32-channel models).** 所有 **32-channel** StudioLive 调音台型号都配备了一个电平控制，用于调整模拟阶段的输出电平。Main（立体声）输出衰减控制的范围为 -80至0dB。单声道输出电平控制的范围是 -80至+6dB。

***Note:*** *This feature is not available on the StudioLive 64S*

***注意：****这项功能在 StudioLive 64S 上不可用。*


**Monitor Outputs.** This pair of balanced 1/4”TRS outputs are provided to connect a pair of monitors in the control room or sound booth. The level is controlled by the Monitor knob in the Monitors section on the top panel.

**Monitor Outputs.** 这对平衡的1/4 "TRS 输出是用来连接控制室，或录音室的一对监听。其电平由顶部面板上监听部分的监听旋钮控制。

### 3.2.3 Digital and Networking 数字与网络化


**AES Output.** By default, the AES/EBU digital output receives the same signal as the stereo Main outputs. However, you can route any of the mix buses, Tape input, or the Solo bus to this output. Because the StudioLive cannot be synced externally, you will need to use it as the master clock and set your AES-equipped device to receive word clock externally via AES. Please consult the documentation for your external digital device for instructions.

默认情况下，AES/EBU 数字输出接收与立体声主输出相同的信号。然而，你可以将任何混合总线、Tape input 输入或 Solo bus 总线路由到这个输出。因为 StudioLive不能从外部同步，所以你需要把它作为 master clock 主时钟，并设置 AES-equipped 的设备，通过AES从外部接收word clock字时钟。请查询你的外部数字设备的说明。

***Power User Tip:*** *This output can also be connected to S/PDIF-format devices, through the use ofan AES/EBU-S/PDIF adapter. A standard XLR-RCA adapter will not function. AES/EBU-S/PDIF adapters contain impedance-matching circuitry that is required for proper function.*

***Power User Tip:*** 通过使用 AES/EBU-S/PDIF 适配器，这个输出也可以连接到 S/PDIF 格式的设备。标准的 XLR-RCA 适配器不起作用。AES/ EBU-S/PDIF 适配器包含 *impedance-matching* 电路，这是正常功能所需要的。


**Audio Network.** This connection accepts both locking XLR Ethernet (e.g. etherCON$^{m}$) and RJ45 connections and is used for AVB audio networking.

**Audio Network.** 这个连接接受锁定XLR以太网（如etherCONm）和RJ45连接，用于AVB音频网络。

For more information on AVB networking, see the ***StudioLive Series III AVB Networking Guide.***

关于AVB网络的更多信息，*请参阅* ***StudioLive Series III AVB Networking Guide指南。***


**Ethernet Port.** This RJ45 port is used to connect your StudioLive to a standard LAN network for control applications only.

**Ethernet Port.** 这个RJ45端口，用于将你的StudioLive连接到标准的LAN网络，仅用于控制应用。

For more information on configuring a network for remotely controlling your mixer, see the ***StudioLive Series III AVB Networking Guide.***

*关于配置网络远程控制调音台的更多信息，请参阅* ***StudioLive Series III AVB Networking Guide网络指南。***


**USB Port.** This female USB-B jack provides connection to a computer for audio interfacing, control, and file transfer duties.

这个母插头USB-B插孔与计算机的连接，用于音频接口、控制和文件传输任务。

### 3.2.4 Power 电源


**Power Input.** Connect the provided IEC power cable to this input.

将提供的IEC电源线连接到这个输入口。


**Power Switch.** Push the top part of this switch to power your StudioLive on, and the bottom to switch power off.

按下这个开关的上半部分，可以打开StudioLive的电源，按下下半部分可以关闭电源。

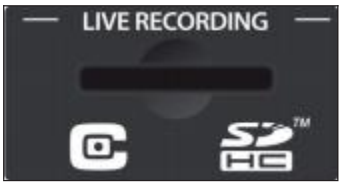
***Power User Tip:*** *StudioLive Series III mixers provide a Soft Power Down option from the Home menu. Selecting this option first will store your StudioLive's current mix state, allowing you to power it off without losing any settings. You will also be given the option to log out of the current User Profile.*

***Power User Tip:*** *StudioLive III系列调音台在主菜单中，提供了一个软关机选项。首先，这个选项选择将存储你的 StudioLive 的当前混音状态，使你在不丢失任何设置的情况下，可以关闭电源。你还可以选择注销当前的User Profile用户配置文件。*

## 3.3 Top Panel Connections 顶部面板连接


**Lamp Connector.** This 12V BNC connection is provided to connect a third-party console lamp. Do not use a bulb that is larger than 12V, 380 mA.

**Lamp Connector.**这个12V的BNC接口，是用来连接第三方的控制台灯泡的。不要使用大于12V、380mA的console lamp。



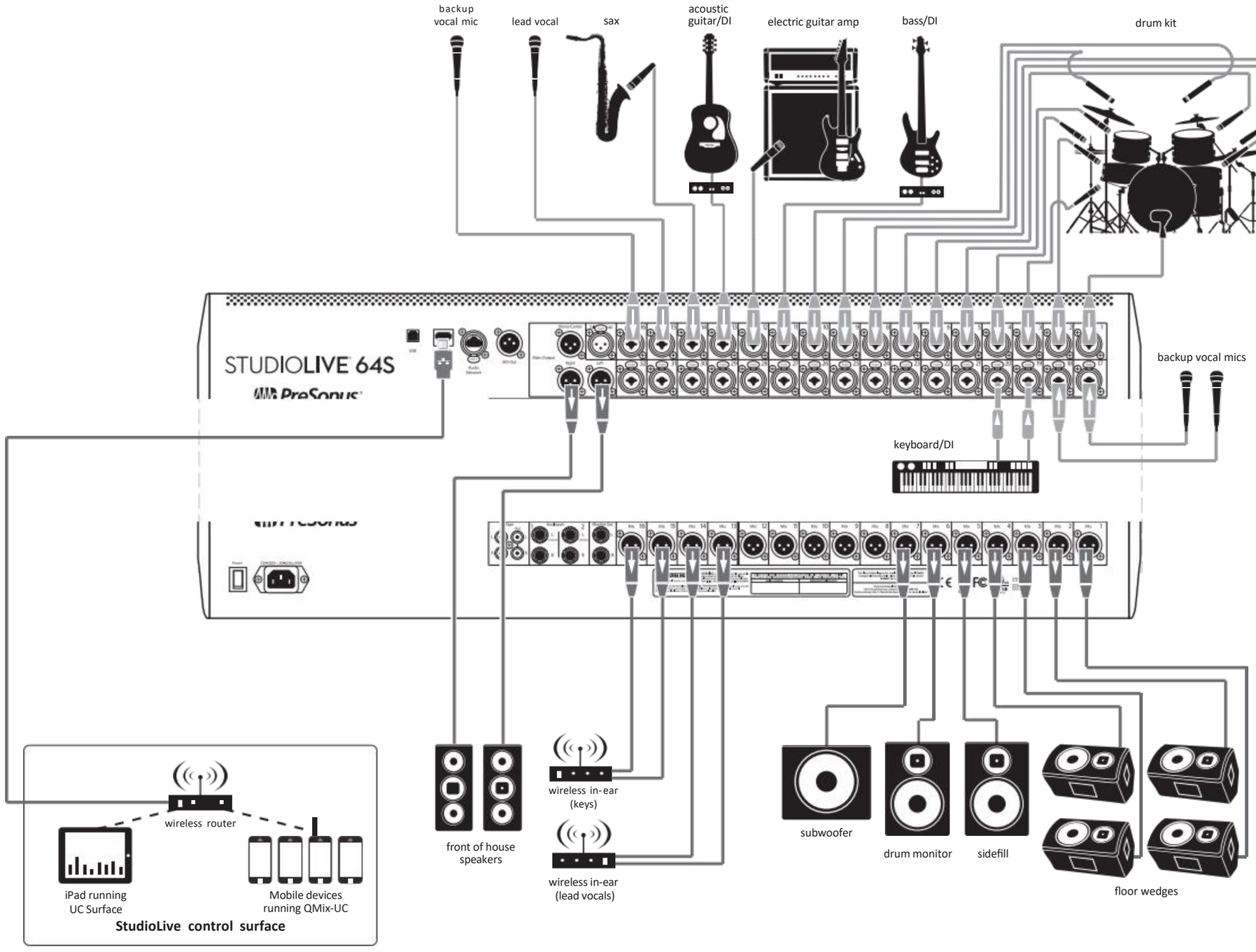

**SD Card Slot.** This slot accepts standard-sized SD cards at capacities up to 32 GB (SDHC supported). SD cards can be used for audio recording and playback, transferring Capture 3 session from your computer to your mixer, and firmware updates.

**SD Card Slot.** 这个插槽可以接受标准尺寸的SD卡，容量最大为32GB（支持SDHC）。SD卡可用于音频录制和回放，将 Capture 3会话，从你的计算机传输到调音台，以及固件更新。

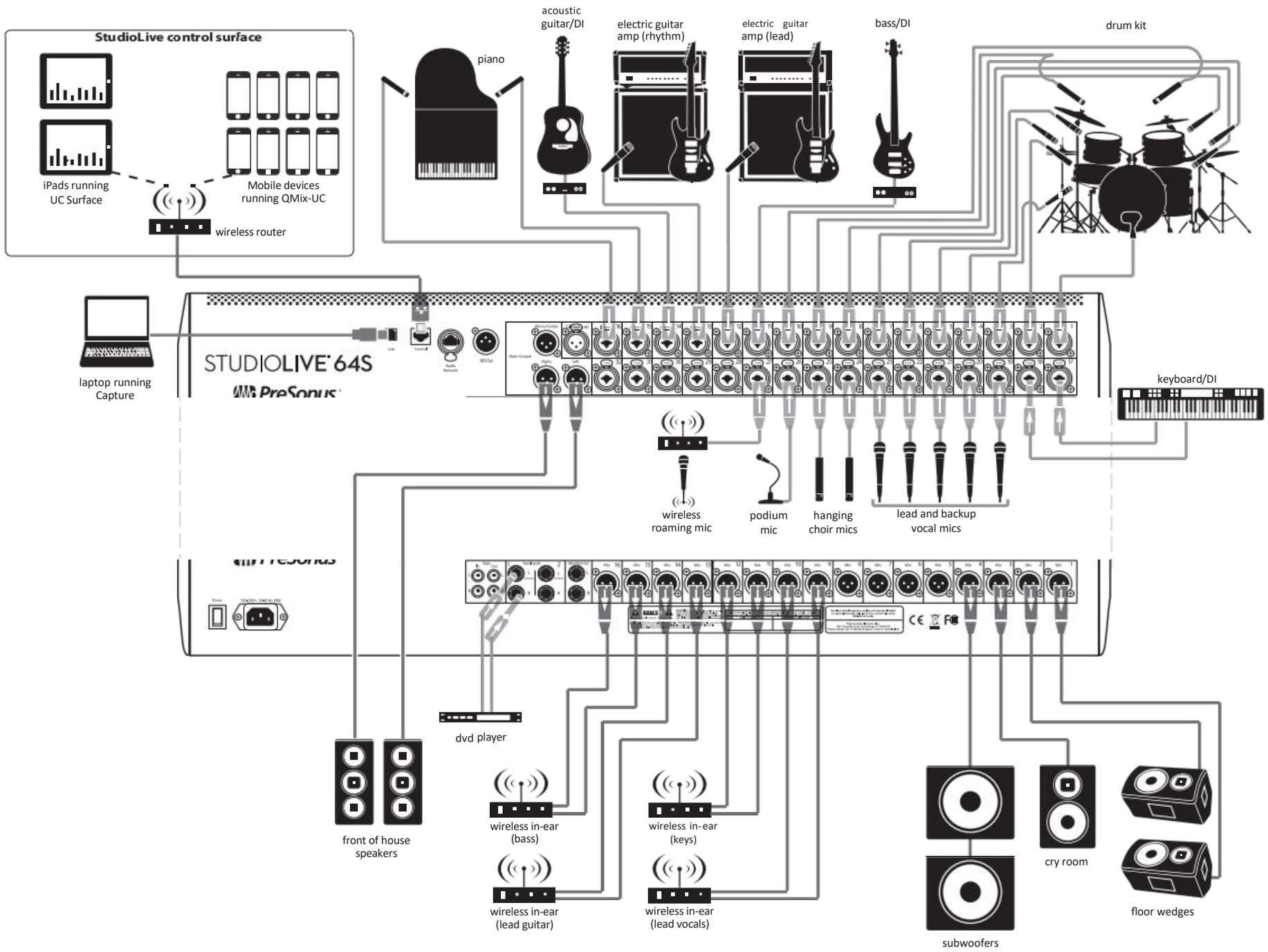
**Headphone Output.** On the front of the StudioLive, a 1/4-inch TRS jack is available for connecting a pair of headphones. Headphone output level is set by turning the Phones knob in the Monitors section of the mixer. By default, this output receives its signal from the solo bus, but you can freely assign any mix bus (pre-or-post-fader) as well as the Tape Input to the Headphone output. ***See Section 10*** for more information.

**Headphone Output.** 在 StudioLive 的前面，有一个1/4英寸的 TRS 接口，可以连接一副耳机。耳机输出电平，通过转动调音台 Monitors 部分的 Phones knob 旋钮来设置的。默认情况下，该输出从 solo bus总线接收信号，但你可以自由分配任何混合总线（推子前或推子后），以及磁带输入到耳机输出。更多信息见**第10节**。

## 3.4 Typical Band Setup Diagrams 有代表性的波段设置图



## 3.5 Typical Church Setup Diagrams 有代表性的 Church设置图



# 4 Basic Mix Functions Overview 基本 Mix 混音功能概述

StudioLive Series III mixers offer many powerful and flexible mixing tools that allow you to quickly set up and monitor multiple mixes at once and have been designed to make managing multiple layers of input channels, mix masters, and fader mixes, as well as navigating even the most complicated systems simple.

StudioLive III 系列调音台，有许多强大而又灵活的混音工具，让你能够快速设置，并同时监听多个混音，其设计使管理多层输入通道、混音母版和推子混音，甚至使浏览最复杂的系统变得简单。

## 4.1 Channel Strip Basics 基础知识

If you've used a mixer before, the StudioLive channel strip layout should look familiar. Each channel strip on your StudioLive (apart from the Master) features the following controls and visual aids:

如果你以前使用过调音台，对StudioLive 的通道条布局，你看起来会很熟悉。StudioLive上的每个通道条（除了Master）都有以下控制和视觉辅助功能：

**Scribble Strip Display 通道标记显示**


This graphical display shows you useful information about the input channel or mix master that the channel is currently addressing. The following details are displayed:

这个图形显示，目前通道正在处理的输入通道或混合主控的有用信息。显示的细节如下：

- **Name.** Shows the name for the channel currently being controlled by the channel strip.

  显示当前由通道条控制的通道的 name。

- **Number.** Shows the number and type of the channel currently being controlled by the channel strip. Standard inputs are numbered normally. Aux input channels begin with"A,"Tape inputs with"Tape," FX returns with "FX," Aux Bus Masters with "Ax," Subgroup Masters with "Sb,"and Matrix Masters with "Mx."

  显示当前由通道条控制的通道的编号和类型。标准输入的编号是正常的。Aux input channels 通道以 "A " 开始，Tape inputs 输入以 "Tape" 开始，FX 返回以 "FX " 开始，Aux Bus Masters 总线主控以 "Ax " 开始，Subgroup Masters 主控以 "Sb" 开始，Matrix Masters 矩阵主控以 "Mx" 开始。

- **Pan Position.** Shows the current pan position for the channel currently being controlled by the channel strip.

  显示当前被通道条控制的通道的当前的pan声音位置。

**Select Button 按钮**


Press this button to select a channel or bus to bring its Fat Channel settings into focus. Select buttons can also be used to add and remove channels from Subgroups, DCA Filters, and Mute Groups. For more information, ***seeSections 5.3, 4.3, and 12.1***.

按这个按钮，可以选择一个通道或总线，使其Fat Channel设置成为焦点。Select按钮也可以用来从Subgroups、DCA Filters和Mute Groups中添加和删除通道。更多信息，***请参见第5.3、4.3 和12.1节***。

**Solo Button 按钮**


This button will solo its channel to the main outputs or to the monitor outputs, depending on whether AFL/PFL (Pre-Fader Listening) or SIP (Solo In Place) is selected in the Solo Edit Menu. ***Please review Section 10.1.1*** for details.

这个按钮将把它的通道solo到主输出或监听输出，这取决于在solo编辑菜单中，是选择 AFL/PFL（Pre-Fader Listening）还是SIP（Solo In Place）。详情***请查阅第10.1.1节。***

**Mute Button 按钮**


Press this button to mute the corresponding channel, mix, or bus.
Press it again to unmute.

这个按钮可以静音相应的通道、混音或总线。再按一次就可以取消静音。

**Level Meter**

Each channel has a three-segment LED level meter, to provide an indication of the signal level. The bottom segment illuminates when the signal reaches -40 dBFS. The middle segment illuminates when the signal reaches - 18 dBFS. The top segment will begin to illuminate red as the input signal approaches clip at - 1.5 dBFS. Once the signal exceeds -0.2 dBFS, the LED will illuminate more brightly.

每个通道都有一个提供信号电平指示的三段式的 LED level meter。当信号达到-40dBFS 时，底部的部分会亮起。达到 -18dBFS 时，中间部分在信号亮起。当输入信号接近 -1.5dBFS 的剪辑时，顶部的部分将开始亮起红灯。一旦信号超过-0.2dBFS，LED 就会亮得更亮。

**Channel Fader**


This touch-sensitive motorized fader lets you control output volume for the input, mix, or bus that the channel is currently addressing. When the fader is pulled all the way down (to the ∞ mark), the signal is muted entirely. At the “U” mark (for unity gain), the mixer is neither boosting nor attenuating the signal. Settings above “U”add up to 10 dB of gain.

这个触摸感应电动推子，可以让你控制目前通道正在处理的输入、混音或总线的输出音量。当推子被全部拉下时（到∞标记），信号被完全静音。在 "U "标记处（表示统一增益），混音器既不提升也不衰减信号。高于 "U "的设置最多可以增加10dB的增益。

***Power User Tip:*** *Because the channel faders are motorized, you can quickly flip between mixes and recall mix scenes without needing to manually recall them.*

***Power User Tip:*** *因为通道推子是电动的，在混音之间你可以快速翻转，调用混音场景，而不需要手动调用。*

## 4.2 Fader Layers and Banks 推子层与波段

With so many available analog and digital inputs, mixes, buses, and DCAs, your StudioLive has more internal mix elements than it does channel strips to control them. This is where fader layers come in.

由于有这么多可用的模拟和数字输入、混合、总线和DCA，你的 StudioLive 的内部混合元素，比控制它们的通道条要多。这就是fader layers 推子层的作用。

You can switch between these layers using the following buttons:

可以使用以下按钮在这些层之间进行切换：


**Inputs.** This displays the input channels across all faders. By default, each local analog input is routed to the corresponding channel (i.e. Input 1 is routed to Channel 1, etc.), however, any local analog input or network source can be routed to each channel. For more information on Digital Patching, ***seeSection 12.3***.

这显示了所有推子的输入通道。默认情况下，每个local analog input 输入被路由到相应的通道（例如， Input 1 被路由到 Channel 1，等等），然而，任何本地模拟输入或网络源都可以被路由到每个通道。更多关于数字配线的信息，***请参见第 12.3 节。***

For a more detailed overview of default analog routing, ***please review the table in Section 14.2.1***.

关于default analog routing 路由的更详细概述，***请查看第14.2.1 节的表格。***


**User.** The User layer allows you to create a custom selection of channels for quicker access. For more information on the User layer, ***seeSection 4.2.1***.

User layer 用户层允许你创建一个自定义的通道选择，以便更快地访问。关于 User layer 的更多信息，***请见 4.2.1 节***。


**Aux Inputs.** While active, the eight channel strips to the right of the Master fader control FX Returns A-D, Aux Input 1 & 2, Tape Input, and Talkback. The channel strips to the left of the Master fader continue to address input channels as normal. *Note: this control is not available on the StudioLive 32SC and StudioLive 16.*

*当激活时，*Master fader *主推子右边的8个通道条，控制 FX Returns A-D, Aux Input 1 & 2, Tape Input, and Talkback*。Master fader *左边的通道条，继续处理输入通道*。***注意：****这个控制在 StudioLive 32SC 和 StudioLive 16 上不可用。*


**DCA Groups.** Each of the 24 DCA Groups is equipped with a group master control. Press Prev and Next buttons to bank through the 24 DCA Groups. When enabled, the group masters are available from your StudioLive control surface as follows:

24个 DCA Groups中的每一个组都带有一个群组主控制器。按 "Prev上一步 "和 "Next 下一步 "按钮，可以在24个DCA Groups 中进行切换。启用后，主控可以从你的 StudioLive 控制界面获得，如下：

- **StudioLive 64S, StudioLive 32S, StudioLive 32SX, StudioLive 32, and StudioLive 24.** The 8 channel strips to the right of the Master fader control the Filter DCA Group masters.

  Master fader主推子右边的8个通道条，控制Filter DCA Group 的主推子。

- **StudioLive 32SC and StudioLive 16.** The DCA Group masters are available on the channel faders.

  DCA Group的主控器可在通道推子上使用。

***Power User Tip:*** *In addition to the 24 user-definable DCA groups, your StudioLive mixer will automatically create DCA groups for channels that are placed within the same category (Drums, Guitar, etc). These Auto DCA groups will populate below the user-definable groups.*

***Power User Tip:*** *除了24个用户可定义的DCA组之外，你的StudioLive 调音台将自动为放置在同一类别（鼓、吉他等）的通道创建DCA组。这些自动DCA群组将在用户可定义的群组下面填充。*


**Mix/FX Masters.** When enabled, the master level for Subgroups, FlexMixes, and FX buses are available from your StudioLive control surface as follows:
启用后，Subgroups、FlexMixes 和 FX 总线的主控电平可以从你的 StudioLive 控制界面获得，如下所示：

- **StudioLive 64S, StudioLive 32S, StudioLive 32SX, StudioLive 32, and StudioLive 24.** The 8 channel strips to the right of the Master fader control the bus masters.
  Master fader 主推子右侧的8个通道条，控制着总线的主控。
- **StudioLive 32SC and StudioLive 16.** The bus masters will be available on the channel faders.
  总线母线将可在通道推子上使用。


Press the **Prev** and **Next** buttons to scroll through the other available input channels and output buses.
按 "**Prev** 上一步 "和 "**Next** 下一步 "按钮，滚动浏览其他可用的输入通道和输出总线。

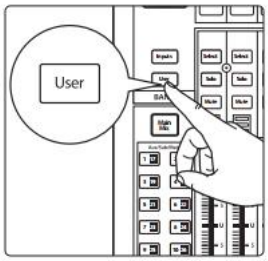
## 4.2.1 User Fader Layer 用户推子层

The User layer lets you choose a selection of channels that are visible when you press the **User** button. This can be useful to access crucial channels quickly, especially in mixes with high channel counts.

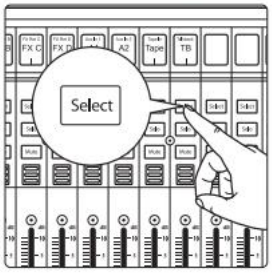
User layer 用户层可以让你选择一些通道，当你按下**User** 按钮时，这些通道是可见的。这对快速访问关键通道很有用，特别是混音中数量较多的通道。

To assign channels to the User layer, do the following.

要给 User layer 分配通道，请做以下工作：

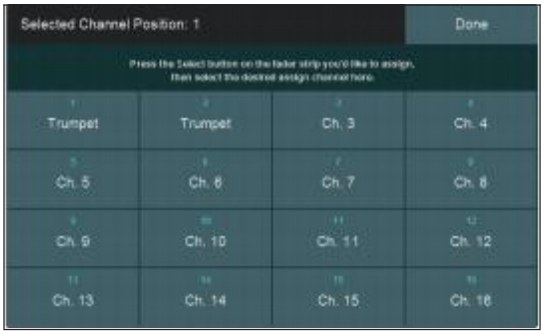



1. Navigate to the User layer by pressing the **User** button.
   按下**User** 按钮，导航到 User layer 用户层。




2. Press **Select** on a channel strip to which you wish to assign a mixer channel or any unused channel in the user layer.
   按通道上的 **Select** 选择你希望分配混音器通道，或用户层中任何未使用的通道。

3. The User Layer Assignment screen will be displayed on the Touch Display.
   在 Touch Display 显示屏上，将展示User Layer Assignment 。



4. Select the channel of your choice on the Touch Display to assign it to the channel strip of your choice.
   在Touch Display屏上,选择你所选择的通道，将其分配到你所选择的通道条上。
5. Repeat steps 2-4 as necessary to populate the User layer with your most needed channels.
   根据需要重复步骤 2-4，用你最需要的通道填充 User layer 用户层。

6. Press **Done** when finished.
   完成后，按 "**Done**"。

To Edit the User layer, press and hold the **Select** button for the channel for which you'd like to change the assignment. This will open the User Layer Assignment screen. From here you can unassign the channel completely or change the channel assigned to it.

要 Edit 编辑用户层，按住**Select**按键，选择你想分配的通道。这将打开 "User Layer Assignment "屏幕。这里，你可以完全取消通道的分配，或者改变分配给它的通道。

***Power User Tip:*** *Every channel, mix master, and DCA group master is available to assign to the User Layer. Use the encoder below the Touch Display to navigate through all the available options.*

***Power User Tip:*** *每个通道、混音主控和 DCA 组主控，都可以分配给 User Layer。Touch Display 下方的编码器，使用它来浏览所有可用的选项。*

## 4.3 Filter DCA Groups 滤波器DCA数字控制音频组

Professional mixing consoles have addressed the problem of managing complex mixes with population groups that reduce the channels you're viewing at one time and DCAs that control the overall level of a group of channels.

专业调音台解决了复杂混音处理的问题。群体组可以减少你在同一时间查看的通道，DCA可以控制一组通道的整体电平。

We've combined the best aspects of these solutions with Filter DCAs. A Filter DCA can contain any combination of the available input channels and effects returns. You can even include the same channel in multiple Filter DCAs so you can manage mixes in multiple ways. Each group is given a master level control so you can control the overall level of the group while maintaining each channel's relative balance in the mix. In this way, for example, you can create a single fader to control every drum in a monitor mix and maintain the relative level of the drum mix that you created.

将这些最佳的解决方案与滤波器DCA相结合。一个Filter DCA 可以包含任何可用的输入通道和效果返回的组合。甚至你可以在多个Filter DCA中，包含同一个通道，这样你可以以多种方式处理混音。每个组都有一个主电平控制，所以，你可以控制该组的整体电平，同时保持每个通道在混音中的相对平衡。例如，通过这种方式，你可以创建一个单一的推子，来控制监听混音中的每个鼓，并维持你创建的鼓混音的相对电平。

Once selected, a Filter DCA group stays active until exited regardless of which mix is selected. This allows you to adjust the group independently across different mixes. You can also flip between groups on the fly to change the view of a selected mix. You can create up to 24 Filter DCA Groups.

一旦选择了Filter DCA 组，无论选择哪种混音，退出之前都会保持激活状态。这使得你可以在不同的混音中独立地调整该组。 你也可以在不同的编组之间快速翻转，以改变所选混音的视图。你最多可以创建24个Filter DCA Groups。

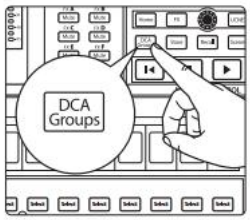
When controlling the master level of a DCA Group, the faders for the channels assigned to that group will move to more accurately provide a visual indication of the actual level of each channel in the group.

当控制DCA Group的主电平时，分配给该组的通道的推子将会移动，以便更准确地提供该组中每个通道的实际电平的visual indication指示。


This feature can be defeated by enabling "Traditional DCA" mode from the Filter DCA Group edit screen.

这个功能可以通过Filter DCA Group 编辑屏幕上启用 "Traditional DCA" 模式，来解决。

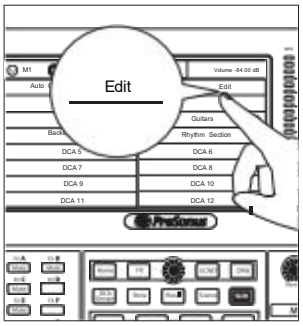
### 4.3.1 Creating Filter DCAs 创建Filter DCAs




1. To create a new Filter DCA Group, press the **DCA Groups** button in the Master Control section.

要创建一个新的Filter DCA Group，请按 Master Control 的 **DCA Groups** 按钮。

2. This will open the Filter DCA Group edit screen.
这将打开Filter DCA Group编辑界面



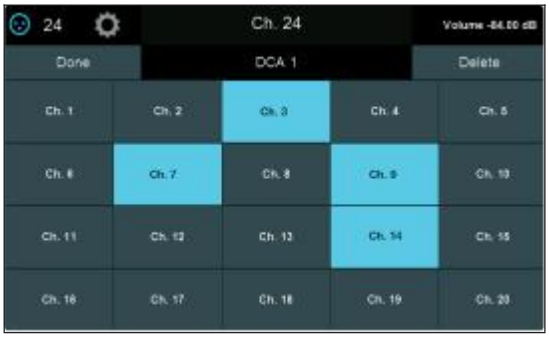

3. Select the DCA Group you'd like to use.
选择你想要的DCA Group

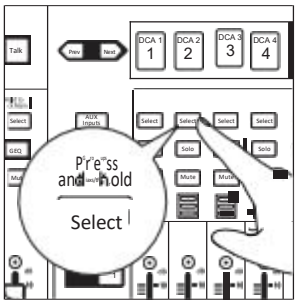
4. Press the"**Edit**" button on the Master Control Touch Display.
按 Master Control Touch Display 屏上的 "**Edit** "按钮。

5. Press the default name to create custom filter name. Press "Enter" when done.
按default name创建自定义过滤器名称。完成后按 "Enter"。

6. The **Select** buttons on your mixer will flash. Press the Select buttons for the channels you'd like to assign to your new Filter DCA Group. The Select buttons will illuminate solid as the channel is assigned to the group. You can also use the select buttons on the Touch Display to assign channels.
调音台上的 "**Select**" 按钮，将会闪亮。按下Select按钮，分配给你新的 Filter DCA Group 组中你想要的的通道。这时，"Select" 按钮将亮起。你也可以使用 Touch Display屏上的选择按钮，来分配通道。

7. Press "Done"when you've finished making your channel selections.
当你结束通道选择后，按 "Done"。




You can add and remove channels to a DCA group, or quickly create a new group by pressing and holding the Group Master Select button.

All the Select button for any channel currently not in the DCA group will flash. Simply touch the select button for a channel to add or remove it to the group.

你可以在一个 DCA 组中，添加和删除通道，或按住Group Master Select按钮快速创建一个新的组。

当前所有不在DCA组中的通道的Select按钮将会闪烁。只需触摸通道的选择按钮，从改组中就可以将其添加或删除。

### 4.3.2 Editing or Deleting a Filter DCA Group 编辑或删除滤波器DCA组

1. To edit or delete a Filter DCA Group, first touch its name to select it.
2. Touch the **Edit** button to enter the Filter DCA Group Edit screen.
3. To add or remove a channel from the group, touch the name of the channel in the provided list to select or deselect them.
4. To name or rename the group, touch the name field.
5. To delete this group, touch the **Delete** button.

When you're finished, touch Done to confirm your changes.

1 编辑或删除一个Filter DCA Group，首先触摸其名称来选择它。

2 触摸 " **Edit** " 按钮，进入 "Filter DCA Group Edit"界面。

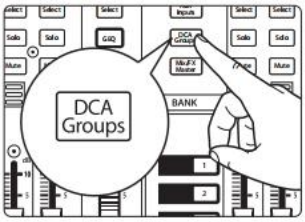
3 要从组中添加或删除一个通道，在提供的列表中触摸通道的名称，来选择或取消选择它们。

4 要命名或重命名该组，请使用 name field。

5 要删除该组，请触碰 **Delete** 按钮。

结束后，使用 "Done " 以确认你的更改。

### 4.3.3 Managing DCA Group Masters 处理 DCA Group Masters




You can bring the master faders for all existing Filter DCA Groups to the channel strips by pressing the **DCA Groups** button in the Bank section.

按下Bank部分的DCA Groups按钮，使现有的所有 Filter DCA Groups 的主推子，转入通道条上。

Pressing the Select button on a DCA Group master while the DCA Groups screen is active will select it on the screen.

DCA Group 屏幕处于激活状态时，在 DCA Groups master主控上按下 "Select" 按钮。

Pressing and holding the Select button for a DCA Group master will allow you to add or remove channels from the group by pressing the desired channel's Select button.

按住 DCA Group master 的 " Select "按钮，可以按所需通道的 " Select "按钮，从该组中添加或删除通道。

***Power User Tip:*** *Pressing the Select button for a DCA Group Master will spill the group on the faders. In this way, you can quickly make adjustments to a DCA mix.*

***Power User Tip:*** *按 "Select" 键，为 DCA Group Master 在推子上设定spill功能。通过这种方式，可以迅速对 DCA 混音进行调整。*

### 4.3.4 DCA Group Options 可选 DCA Group

From the DCA Groups page, you have two options to customize the way these groups function on your mixer:

在 DCA Groups 组页面，你有两个选项，可以自定义这些群组在你的调音台上的运作方式：

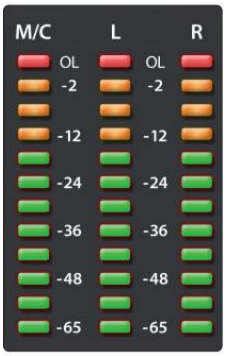

Your StudioLive will automatically create a DCA group for channels that are tagged in the same category (i.e., Drums, Horns, etc.), this button allows you to toggle that option on or off.

你的 StudioLive 自动会为标记为同一类别的通道（如鼓、喇叭等）创建一个DCA组，你可以切换这个按钮选择的开或关。


By default, the individual levels of every channel in a DCA group will adjust with the group's master fader and maintain their relative mix. Enabling Traditional DCA mode will adjust the output level of the group without changing the fader position of the channels within that group.

默认情况下，DCA组中每个通道的独立电平，会随着该组的主推子进行调整，并维持它们的相对混合。启用 Traditional DCA 模式，将调整该组的输出电平，不会改变该组内各通道的推子位置。

## 4.4 Main Meters 主输出电平




These meters show signal level for the Main bus. An additional meter is provided to the left of the Main L/R meters on the StudioLive 64S to monitor the signal level on the Mono/Center bus.

这些仪表显示 Main bus 的信号电平。在 StudioLive 64S Main L/R仪表的左边，有一个额外的仪表，可以监听单Mono/Center总线的信号电平。

For all Main meters, the green LEDs at the bottom begin to light at -65 dBFS, continuing upward to - 18 dBFS. The bottom-most yellow LED begins to light at - 12 dBFS, continuing upward to -2 dBFS. The red LED at the top of the meter lights when the signal reaches -0. 1 dBFS, and remains lit for 5 seconds, once activated, to better alert you that clipping is occurring.

对于所有Main meters 表，在-65dBFS，一直向上到-18dBFS时，在底部开始亮起绿色LED灯。在-12 dBFS时，最下面的黄色LED开始亮起，继续向上到-2 dBFS。当信号达到-0.1dBFS时，仪表顶部的红色LED会亮起，一旦激活，会持续亮起5秒钟，这是提醒你正在发生削波。

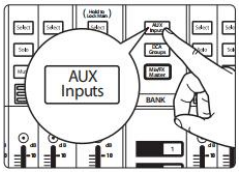
## 4.5 Talkback System 系统

The StudioLive features a Talkback microphone input on the back panel. This can be routed to your choice of Aux outputs, as well as the Main output.

StudioLive 的背板上有一个 Talkback microphone input 输入。它可以被路由到你选择的 Aux outputs 输出，以及 Main output输出。


To enable talkback, press the **Talk** button. To prevent unwanted noise, this is disabled by default. The Talk button must be engaged for the Talkback input to be heard in any mix.

要启用对讲机，请按 "通话 "按钮。为了防止不必要的噪音，默认情况下是禁用的。要想在任何混音中听到对讲输入，必须启动对讲按钮。

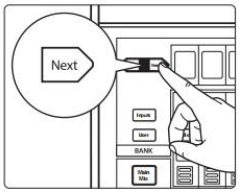



The Talkback level can be adjusted independently in each mix.

Talkback 的电平，可以在每个混音中独立调整。

Pressing the Aux Inputs button will bring up the Talkback channel on the last fader.

按下Aux Inputs 按钮，在最后一个推子上，会转入 Talkback 通道。



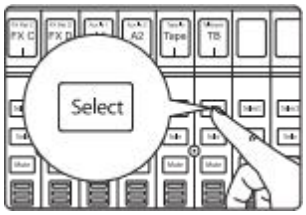

***Note:*** *This feature is not available on the StudioLive 32SCand StudioLive 16. The Talkback channel is always at the end of the Inputs layer. Press the Next button to navigate to the last bank of channels.*

***注意：****这项功能在 StudioLive 32SC 和 StudioLive 16上不可用。Talkback 通道总是在 Inputs layer 的最后。按 "Next"，导航到最后的通道库。*

Alternatively, press the Next button to bank to the Talkback channel on the Inputs layer.

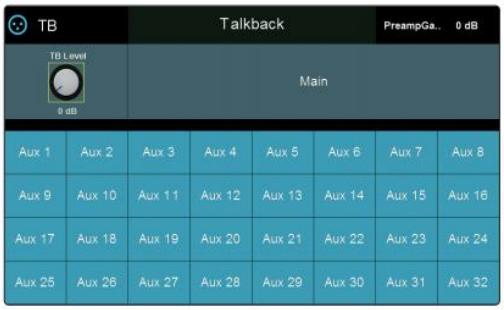
或者，按 "Next" 键，进入 Inputs layer 的 Talkback channel 通道。

### 4.5.1 Talkback Edit Screen 对讲编辑图像




Press the Talkback Channel's **Select** button to open the Talkback Edit screen, giving you access to additional options.

按下Talkback Channel 的 "**Select**" 按钮，打开 Talkback Edit 屏幕，授权你访问更多的选项。




- **Preamp Gain.** Sets the preamp gain for the Talkback mic input.
- **Talk Destination.** Use these buttons to select the mixes to which you'd like to route the Talkback input.

**Preamp Gain.** 设置 Talkback mic input 输入的前置放大器增益。

**Talk Destination.**使用这些按钮，选择你想 Talkback input 输入路由到的混音。

***Power User Tip:*** *While the Talkback has a dedicated rear-panel analog input, this can be changed and sourced from any Analog, AVB, USB, or SD stream from the Digital Patching menu. In this way, you can quickly patch playback to every wedge for rehearsal, use an NSB-series stage box input, and much more. To change the source type of the Talkback between Analog, Network, USB, or SD Card, use the Input Source buttons in the Fat Channel. For more information on using the Digital Patching menu to change the Talkback source, see* ***Section 12.3.1.***

***Power User Tip:*** *虽然 Talkback 有一个专门的后面板模拟输入，但可以改变它，并且从任意 Analog、AVB、USB 或 SD stream 的 Digital Patching 菜单中获得。通过这种方式，使用 NSB 系列的舞台箱输入，可以快速地将回放 patch 到每一个排练用的 wedge（音频处理）上，以及更多。要在 Analog、Network、USB 或 SD Card 之间，改变 Talkback 来源类型，请使用 Fat Channel 中的 Input Source 按钮。更多关于使用 Digital Patching 菜单来改变 Talkback 来源的信息，请见* ***第 12.3.1 节****。*

# 5 Buses and Routing 总线和路由

StudioLive Series III mixers were designed to be highly adaptive to your mix environment. At the core of this design philosophy are the FlexMixes, however, dedicated Internal FX buses, four fixed subgroups (32-channel models), and a main mono bus (StudioLive 64S) round out the complement of routable outputs on your StudioLive mixer.

StudioLive III系列调音台的设计，是以你的混音环境来适应的。它的设计理念的核心是FlexMixes。然而，专门的内部 FX总线、四个固定的子群（32-channel 型号）和一个 main mono bus（StudioLive 64S）使 StudioLive调音台上的可路由输出更加完善。

## 5.1 FlexMixes 混音


StudioLive Series III mixers provide FlexMixes that can be used for a variety of applications. The StudioLive 64S is equipped with 32 FlexMixes; all other models are provided with 16. Regardless of model, FlexMixes all function exactly the same way and can be configured as follows:

StudioLive III系列调音台的FlexMixes可以用于各种应用。StudioLive 64S配备了32 FlexMixes；其他所有型号都提供了16个。无论哪种型号，FlexMixes 的功能都是完全相同的，可以按以下方式配置：

- **Aux Mix.** Sums the input channels after they routed to the bus, pre- or post-main mix level. Each channel is equipped with its own level control to create a completely independent mix. Aux mixes can be used for many applications. The two most common applications are creating monitor mixes and inserting external effects processors into the mix.
  在输入通道路由到母线后，在主混音前或后的水平上进行求和。每个通道都有自己的电平控制，来创建一个完全独立的混音。Aux mixes 可以用于许多应用。两个最常见的应用是创建监听混音和在混音中插入外部效果处理器。
- **Subgroup.** A subgroup allows you to combine multiple channels into a single bus so that the overall level for the entire group is controlled by a single fader and processed by the Fat Channel. Subgroups can be routed to the main mix, to a dedicated output, or both.
  Subgroup 允许你将多个通道合并到一个总线上，这样整个组的总体电平就由一个推子控制，并由Fat Channel处理。Subgroup可以被路由到 main 混音，也可以被路由到专门的输出，或两者都可以。
- **Matrix.** A variant of the Aux, a Matrix can combine signals from inputs, other mixes, buses, the main output bus, and so on. Matrix mixes are more commonly used to send audio to different loudspeaker zones, create a front fill, or to provide a producer or director a different mix.
  Matrix 是 Aux 的一个变体，它可以将来自输入、其他混音、总线、主输出总线等信号结合起来。Matrix 混音常用于将音频发送到不同的扬声器区域，创建一个front fill（前区补声），或为制作人或导演提供不同的混音。

The **Mix Select** buttons allow you to choose the mix you'd like to control. When a mix is selected, the channel faders will display the level for that mix only. These buttons will change color depending on how they are configured.

**Mix Select** 按钮，是选择你想控制的混音。当一个混音被选中时，通道推子将只显示该混音的电平。这些按钮将根据它们的配置方式而改变颜色。

***StudioLive 64s Users:*** *To access the second mix layer for any Mix button, press the button a second time. For instance, if you press the Mix 1| 17 button once, you will be viewing Mix 1. A second press of this button will show Mix 17. The button will toggle between the two mixes with each consecutive press until another Mix button is selected. When the first layer Mix is selected for any Mix button, the button light is solid and it will blink when the second layer is selected for visual reference.*

*要访问任何 Mix 按钮的第二个 mix layer，请再按一次该按钮。举例，一旦你按了Mix 1|17按钮，你会看到 Mix 1。第二次按将显示 Mix 17。每连续按一次，该按钮就会在两个混合间切换，直到选择另一个混音按钮为止。 当选择 first layer Mix时，按钮灯是实心的，当选了second layer时，以作为视觉参考，它将会闪烁。*


When a mix is selected, the **Master fader** will control its output level.

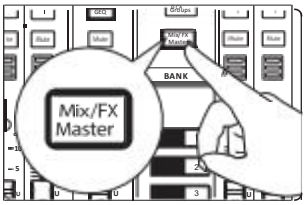
当选择一个混音时，**Master fader** 将控制其输出电平。

***Power User Tip:*** *While having the Master fader follow the currently selected mix is most commonly needed, occasionally, it will be beneficial to lock the Master fader to the Main mix. To do this, simply press and hold the Master Select button. The Select button will cease to illuminate, indicating that the function is now locked to the Main Mix. To unlock the fader and return to normal functionality, press and hold the Select button.*

***Power User Tip:*** *虽然让 Master fader 跟随当前选择的混音是最常见的需求，但偶尔，将 Master fader 锁定在 Main 混音上也有好处。做到这一点，只需按住 Master Select 按钮。 Select 按钮停止闪亮，表明该功能现在已经锁定在Main Mix上。要解除推子的锁定并返回到正常功能，请按住 "Select" 按钮。*

***StudioLive 64S Users:*** *Press the Main Mix Select button a second time while focused on the Main Mix to access the Center bus Master.*

*在专注于 Main Mix 的同时，再按一次 Main Mix Select 按钮，就可以进入 Center bus Master。*

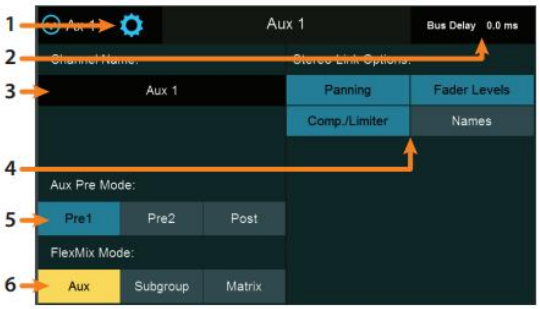



To view the master output level for every mix, press the Mix/FX Masters button.

要查看每个混音的主输出电平，请按 Mix/FX Masters 按钮。

To select the type of FlexMix functionality (Aux, Subgroup, or Matrix), touch the gear-shaped button to open the FlexMix Settings screen and make your selection from the menu. Once you're done, exit the FlexMix Settings screen and create your mix.

要选择 FlexMix 功能的类型（Aux、Subgroup或Matrix），触摸齿轮状按钮，打开FlexMix设置屏幕，从菜单中进行选择。完成后，退出FlexMix设置屏幕，创建你的混音。




1. **Close Settings.** Tap to exit the Settings menu.
2. **Current Parameter.** Displays the currently selected parameter and its current value.

3. **Mix Name.** Tap to customize name.
4. **Stereo Link Options.** You can choose to link the four functions when creating a stereo bus, or leave them independently controllable: Fader Level, Compressor/ Limiter, Names, and Bus Panning (Stereo Matrix Mixing only).
5. **Aux Pre Mode (Aux and Matrix Modes only).** Sets the Channel Send position when a FlexMix is designated as an Aux Mix. ***See Sections 5.2 and 5.4*** for details.
6. **FlexMix Mode.** Sets the functionality of the FlexMix: Aux, Subgroup, or Matrix.
*A note to StudioLive 64S users: The Matrix Mix option is only available on FlexMixes 17-32. Aux and Subgroup options are available on every FlexMix.*

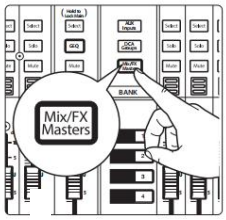
*1* **Close Settings.** *点击退出*"Settings"*菜单。*
*2* **Current Parameter.** *显示当前选择的参数和它的当前值。*
*3* **Mix Name.** *点选来定制名称。*
*4* **Stereo Link Options.** *在创建立体声母线时，你可以选择链接四个功能，或者让它们独立控制。* Fader Level, Compressor/ Limiter, Names, 和 Bus Panning（*仅* Stereo Matrix Mixing）。
*5* ***Aux Pre Mode*** *（**仅Aux和Matrix模式**）。当FlexMix被指定为**Aux**混音时，设置Channel Send位置。**详见第5.2和5.4节**。*
*6* ***FlexMix Mode****。设定 FlexMix 的功能。Aux, Subgroup, or Matrix.*
*StudioLive 64S 用户请注意：Matrix Mix 选项只在FlexMixes 17-32上可用。Aux 和Subgroup选项在每个FlexMix上都可用。*

## 5.2 Aux Mixes Aux混音

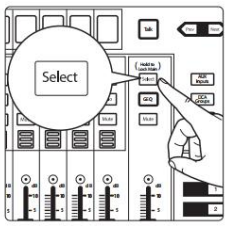
As its name implies, an Aux mix allows you to create an alternate, or "auxiliary" mix that can be routed to an output separate from the Main bus. Aux buses have many applications, the two most common of which are creating monitor mixes and inserting external effects processors into the mix. When you turn up the aux send level on a channel, its signal is sent to the corresponding aux output at the level you choose. In this way, the same channel can be used to create several alternate mixes to the main mix.

顾名思义，Aux mix 允许你创建一个备用的或 "auxiliary" 混音，它可以被路由到 Main bus外的输出。Aux总线有许多应用，其中最常见是混音中的 creating monitor mixes混音和inserting external effects 处理器。当你调高一个通道的Aux 发送电平时，它的信号就会以你选择的电平，发送到相应的Aux输出。通过这种方式，同一个通道可以用来创建几个主混音的备用混音。

To create an Aux Mix: 要创建一个辅助混音：



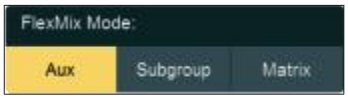

1. Press the **Mix/FX Master** button. This will bring up the FlexMix Masters onto the channel strips.




2. Press the **Select** button for the FlexMix Master you'd like to make an Aux Mix.

3. Press the **Settings** button on the Master Control Touch Display.

   按Master Control Touch Display屏上的 **Settings** 按钮。




4. Press the **Aux** button under FlexMix Mode.

   按下FlexMix模式下的Aux按钮。

## 5.2.1 Pre/Post Channel Sends 前置/后置通道发送

You can select the send positions for the channels routed to each Aux mix. By default, all aux buses are set to Pre 1. This places the send of every input channel to each aux bus before the fader, limiter, EQ, and compressor, but after the Polarity Invert switch, high-pass filter, and gate.

你可以为路由到每个Aux mix的通道选择发送位置。默认情况下，所有的aux总线都被设置为Pre 1。每个输入通道的发送放置推子、限制器、均衡器和压缩器之前，但在Polarity Invert开关、高通滤波器和噪声门之后。


From the FlexMix settings menu, you can choose between three send positions for your mix:

在FlexMix设置菜单中，你可以为你的混音选择三个发送位置。

**Pre 1:** Sends each channel to the Aux bus after the polarity invert, high-pass filter, and gate.

**Pre 2:** Sends each channel to the aux bus after all Fat Channel processing (polarity invert, high-pass filter, gate, compressor, EQ, and limiter) but before the fader.

**Pre 1：** 在 polarity inver、高通滤波器和门之后，将每个通道发送到Aux bus母线。

**Pre 2:** 在所有Fat Channel处理（polarity invert、高通滤波器、噪声门、压缩器、均衡器和限制器）之后，但在推子之前，将每个通道发送到Aux bus总线。

**Post:** Sends each channel to the Aux bus after all Fat Channel processing (polarity invert, high-pass filter, gate, compressor, EQ, and limiter), and after the fader.

**Post:** 在所有Fat Channel处理（polarity invert、高通滤波器、噪声门、压缩器、均衡器和限制器）以及推子之后，将每个通道发送到 Aux bus 总线。

***Power User Tip:*** *Use the Pre 2 position for headphone and in-ear mixes to give your performers a polished "studio" sound. This setting should be avoided for floor wedges, as compression can cause feedback problems.*

***Power User Tip:*** *在耳机和入耳式混音中使用 Pre 2位置，给你的表演提供一个"studio" 录音室级的声音。这个设置应该避免用于floor wedges，因为压缩会导致反馈噪音问题。*

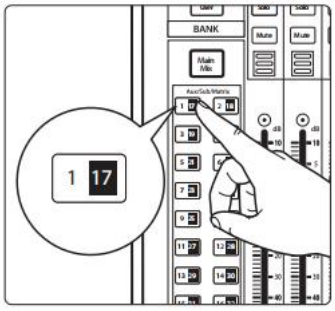
## 5.2.2 Creating Aux Mixes 创建 Aux Mixes

Creating custom monitor mixes is critical. If musicians can't hear themselves or their bandmates, their erformance will suffer. A monitor mix can be mono or stereo. Most often, an individual live monitor mix is mono and is sent to a floor-wedge or sidefill monitor (the obvious exception being in-ear monitor systems). A studio monitor mix is usually stereo because it is sent to a headphone amplifier that requires both a left and a right-channel input. In both cases, the function of the aux bus is the same.

创建自定义的监听混音是至关重要的。如果听不到自己或乐队成员的声音，音乐人们的表演会受到影响。监听混音可以是单声道或立体声。大多数情况下，现场个人的监听混音是单声道的，并被发送到地板边缘或侧面监听（很明显耳内监听系统是个例外）。录音室监听混音通常是立体声的，因为它被发送到一个需要左、右声道输入的耳机放大器上。在这两种情况下，aux bus 总线的功能是相同的。

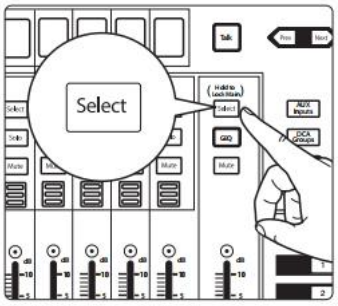
As an example, let's create a mono monitor mix on FlexMix 1.

作为一个例子，让我们在 FlexMix 1上创建一个单声道监听混音。



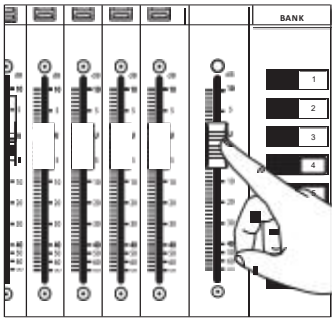

1. Press the **Mix 1** button in the Mix Select section to access settings for Aux Mix 1. The faders move to show send levels to Aux 1 for each channel in your mix.
按 Mix Select 部分中的 Mix 1按钮，进入 Aux Mix 1 的设置。推子移动在混音中以显示对每个通道 Aux 1 发送的电平。

2. Ask the musician(s) what signals they would like to hear in their monitors, and use their requests as a starting point, adjusting the faders for the relevant channels to create a monitor mix.
问过音乐人们，他们希望在监听中听到什么信号，并以他们的需求为出发点，调整相关通道推子，来创建一个监听混音。



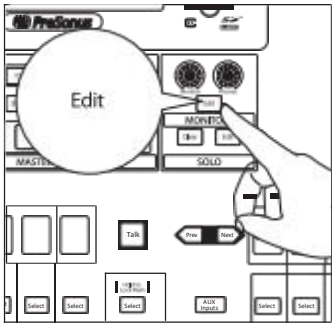

3. Press the **Flex Fader Select** button to access the Fat Channel processing for the monitor mix output. This can be useful for eliminating feedback in a monitor. EQ can also be used to increase the presence of an instrument by boosting that particular frequency range without necessarily boosting the send level in the mix. This is great for getting the lead guitar to cut through in the guitarist's monitor mix and to provide that extra rumble in the bassist's mix.

按下**Flex Fader Select**按钮，进入监听混音输出的Fat Channel 处理。这对于消除监听中反馈的噪音是很有用的。EQ也可以用来增加乐器的存在感，通过提高特定的频率范围，而不一定要提高混音中的发送电平。这样非常好，主音吉他在吉他手的监听混音中切入，以及在贝斯手的混音中，给出特别的低沉声。




4. Move the **Master** fader to adjust the overall level of the monitor mix.

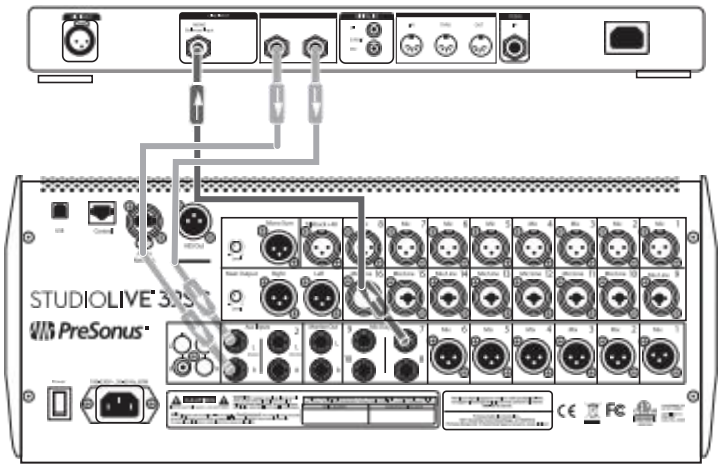
   移动 **Master** 推子, 来调整监听混音的整体水平。



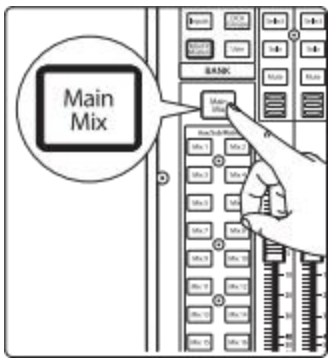

5. You can listen to the monitor mix you're creating in your headphones or control room monitors by pressing the **Edit** button in the Monitors control section.
   按下Monitors（监听）控制部分的Edit（编辑）按钮，在你的耳机或控制室监听中，可以聆听你正在创建的监听混音。
6. Select **Monitor** or **Phones** on the Touch Display, then touch the Aux mix you're working on at the moment (Mix 1, in this example).
   在 Touch Display屏上选择 "**Monitor**"或 "**Phones**"，然后触控你目前正在处理的Aux mix混音（本例中是Mix 1）。

### 5.2.3 Working with External Effects Processors 与External Effects Processors一起工作

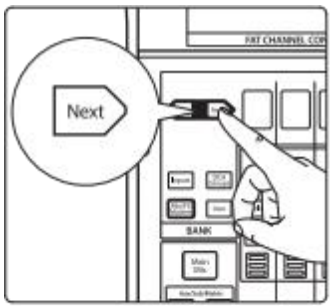
Creating a mix to send to an external effects processor is similar to creating an internal FX mix, only in this case, we route the mix signal to a mix output (Mix Output 7, in this example), and route the effected signal from the processor back to a stereo Aux input (Aux Input 1, in this example) on a StudioLive 32SC, for our example. If your effects processor is mono, connect its output to the L (left) jack of the Aux Input.



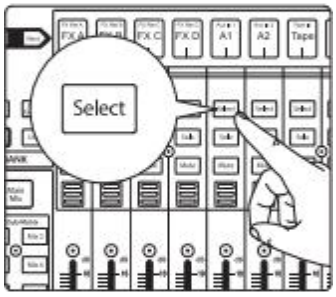

类似内部创建FX混合信号，创建一个external effects processor处理器的混合信号，只是在这种情况下，我们将混合信号路由到一个Mix Output 混合输出（Mix Output 7，在本例中），并将处理器的效果信号路由回 StudioLive 32SC上的立体声Aux Input 输入（Aux Input 1，在本例中）。如果你的效果处理器是单声道的，将其输出，连接到Aux Input的 L（左）插孔。



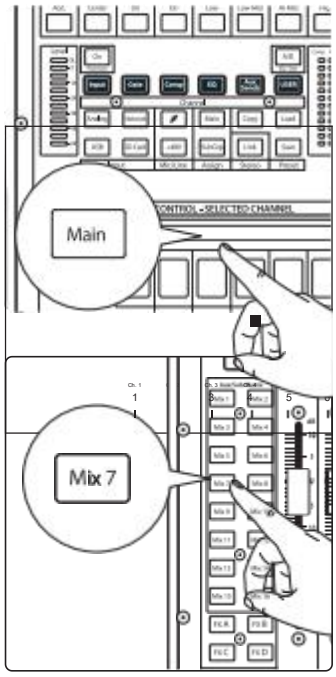

1. Connect Mix Output 7 to the input of your external effects processor, and connect the outputs of the processor to the Aux Input 1 jacks.
   将 Mix Output 7 连接到你的external effects processor处理器的输入，并将处理器的输出连接到 Aux Input 1 输入的插孔。
2. Press the **Main Mix** button.
   按下**Main Mix** 按钮。




3. Press the **Next** button to bring the Aux Input channel layer.
按 "**Next**"按钮，使 Aux Input 输入通道层。




4. Press the **Select** button that corresponds to Aux Input 1 (the input pair you're using as an effects return), to access its settings in the Fat Channel.
按与 Aux Input 1（作为效果器返回的输入组）相对应的 "**Select**" 按钮，以进入Fat Channel的设置。




5. Press the **LR** (StudioLive 64S) or **Main** button in the Fat Channel to assign Aux Input 1 to the main output mix.
按LR（StudioLive 64S）或 Fat Channel 的Main按钮，将Aux Input 1分配给 main output mix 混音。

6. Press the **Mix 7** button in the Mix Select section to access settings for Aux 7 (the Aux mix you're using to send channels to the external processor). The faders move to show send levels to Aux 7 for each channel in your mix.
按 Mix Select 部分的Mix 7按钮，进入 Aux 7 的设置（用来发送通道到外部处理器的Aux 混音）。混合中移动推子，显示每个通道对Aux 7 的发送电平。

7. For each channel that you wish to send to the external processor, move the related fader to the desired level. Setting a fader higher makes the related channel sound more processed (or "wet" ).
每一个你想发送到外部处理器的通道，请将相关的推子移到所需的电平。将推子设置得更高，使相关通道的声音得到更多的处理（或 "wet"）

8. Move the **Master** fader to adjust the overall level of the output you're sending to the external processor.
移动 **Master** 推子，调整你发送给外部处理器输出的整体电平。

9. If you want to send a stereo signal (rather than mono) to your effects processor, connect a pair of Aux outputs, starting with an odd-numbered output (1 & 2, 3 & 4, or similar) to the inputs of your effects processor and link the output pair to create a stereo bus.

   如果你想发送立体声信号（而不是单声道）到你的效果处理器，可以连接一对Aux outputs输出，从单数输出开始（1和2，3 和 4，或类似的）到效果处理器的输入，连接这对输出，形成一个立体声总线。

## 5.3 Subgroups 子群

A subgroup allows you to combine multiple channels into a single bus so that the overall level for the entire group is controlled by a single fader and can be processed using the Fat Channel's noise gate, limiter, compression, and EQ, in addition to the processing available for each channel. Subgroups can also be soloed and muted.

Subgroup可以将多个通道合并到一个总线上，这样整个组的整体电平由一个推子控制，除了每个通道可用的处理外，还可以使用Fat Channel的噪音门、限制器、压缩和均衡器进行处理。Subgroup 也可以进行独奏和静音。

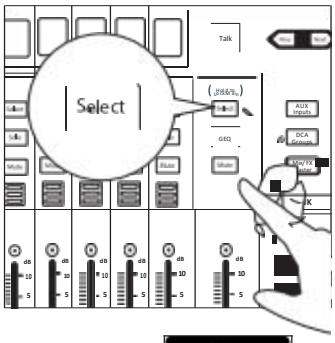
You will find many uses for subgroups that will make mixing more convenient and will provide better control of your mix. At the end of this section, we explore one of the most common ways in which subgroups can help you to create a more efficient mixing environment and a more successful live mix. But first let's go over the subgroup controls.

Subgroups有很多用途，可以使混音更方便，更好地控制你的混音。在本节的最后，我们将探讨Subgroups，它可以帮助你创造一个更有效的混音环境，以及现场混音中最常见的方法之一。首先，让我们来看看Subgroups的控制。

***Note:*** *In addition to providing FlexMixes that can function as subgroups, 32-channel StudioLive models also provide four dedicated Subgroups.*

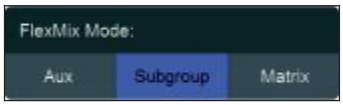
***注：****除了 FlexMixes 可以作为 subgroups 以外，StudioLive 的 32-channel 型号还有四个专用的 subgroups。*

## 5.3.1 Creating a Subgroup 创建 Subgroup

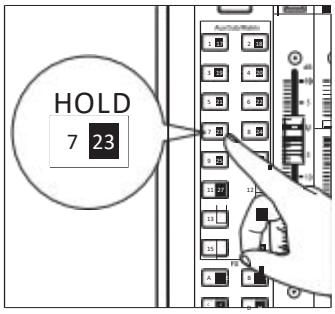



1. Press the **Select** button for the FlexMix Master you'd like to make a Subgroup.
   按 "**Select**"按钮，为 FlexMix Master选择你想创建 Subgroup 。

2. Press the **Settings** button on the Master Control Touch Display.
   按Master Control Touch Display屏上，按 **Settings**设置。




3. Press the **Subgroup** button under FlexMix Mode.
   在 FlexMix Mode 模式下，请按 Subgroup 按钮。

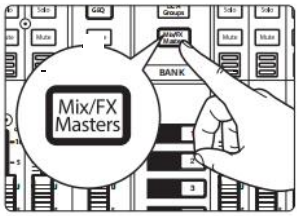



4. Press and hold the FlexMix button. All the channel **Select** buttons will begin to flash. Press the Select buttons for the channels you'd like to add to the subgroup. Release the FlexMix button when you have completed your channel selection.
   按住 FlexMix 按钮。所有通道的**Select**按钮，将开始闪烁。为你想添加到subgroup的通道，按**Select键**。当你完成了你的通道选择时，释放 FlexMix 按钮。

   Only channels that have been added to a FlexMix subgroup will be displayed across the fader layers when the FlexMix is selected.
   当选择 FlexMix 时，只有被添加到FlexMix子组的通道才会显示在整个推子层。

   Channels can be added or removed at any time by pressing and holding the FlexMix button for the desired FlexMix subgroup.
   通过按住所需FlexMix子组的FlexMix按钮，可以在任何时候添加或删除通道。

## 5.3.2 Fixed Subgroups (32-channel models only) 固定子群(仅适用于32-channel型号)





In addition to the FlexMixes, 32-channels StudioLive mixer models are equipped with four subgroups. Like the FlexMix Subgroups, the StudioLive allows you to group channels and apply the Fat Channel's noise gate, limiter, compression, and EQ to the group as a whole, in addition to the processing available for each channel. Subgroups can be soloed and muted. The StudioLive 32S, 32SX, and 32 provide dedicated Subgroup outputs on the back panel. Subgroups on the StudioLive 32SC, 24 and 16 can be routed to the AVB network.

除了 FlexMixes 之外，StudioLive 32-channels 型号还配备了四个 Subgroups。像 FlexMix Subgroups 一样，StudioLive 通道可进行分组，并将 Fat Channel 的噪音门、限制器、压缩和均衡器应用于整个组，还可以对每个通道的进行处理。Subgroups 可以进行独奏和静音。StudioLive 32S、32SX和32 的后面板提供了专门的 Subgroups 输出。StudioLive 32SC、24和16的 Subgroups 组可以被路由到AVB网络。

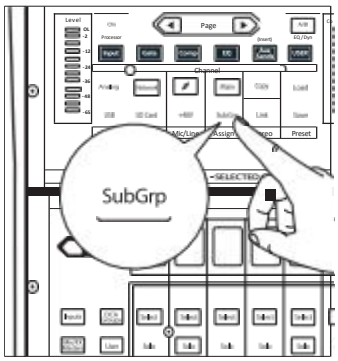
To view the fixed Subgroups' master faders, press the Mix/FX Masters button. This will bring up the master output control for every output bus.

要查看固定子群的主推子，请按Mix/FX Masters按钮。这将调出每个输出总线的主输出控制。

Use the **Next** button to bank to the end of the FlexMixes.

使用 **"Next"** 按钮，进入 FlexMixes 的末尾组。

**To add a channel to a fixed Subgroup: 添加频道到一个固定的Subgroup：**




1. Select the channel and press the **Subgroup** button in the Assign section of the Fat Channel. This will bring up the Assigns menu on the Touch Display. The four fixed Subgroups are at the top of the screen.
2. Touch the Subgroup to which you'd like to assign the channel.

1. 选择通道，按 Fat Channel 中Assign部分的 **Subgroup** 按钮。在Touch Display 屏上会显示弹出 Assigns 菜单。在屏幕的顶部是四个固定的 Subgroups。

2. 触控你想分配的通道的Subgroup。


For more information on Subgroup routing assignments, ***please refer to Section 5.3.1***.
关于 Subgroup 路由分配的更多信息，请***参考第 5.3.1 节。***

## 5.3.3 Creating Instrument Subgroups 创建乐器 Subgroups

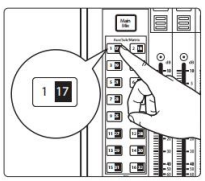
Grouping individual instruments that create a section in your mix has obvious advantages: The entire group can be muted or soloed, brought up or down in a mix, and faded in or out for a more polished intro or outro. Because subgroups can also be processed by the Fat Channel, some common groups are drums, backing vocals, horn sections, and string sections. Drums are a classic application for subgroup mixing. While we'll use a drum group in this particular example, these principles can be applied when grouping any type of instrument section.

将单个乐器分组，在你的混音中形成一个部分，会明显的优势：整组乐器可以被静音或独奏，在混音中被提高或降低，以及淡入或淡出以获得更精炼的前奏或结尾。Fat Channel可以处理subgroups，一些常见的群组是鼓、伴唱、喇叭和弦乐部分。鼓是 subgroups 混音的一个经典应用。即便我们在这个特定的例子中使用鼓组，但这些原则可以应用在任何类型的乐器部分的分组中。

In this example, our drums will be connected to the StudioLive as follows:
在这个例子中，把鼓连接到StudioLive上，如下所示：

- Channel 1: Kick
- Channel 2: Snare Top
- Channel 3: Snare Bottom
- Channel 4: Floor Tom
- Channel 5: Tom 1
- Channel 6: Tom 2
- Channel 7: Overhead Left
- Channel 8: Overhead Right
- Channel 9: Hi-Hat

We will create a stereo subgroup by first making both FlexMix 1 and 2 Subgroups and linking them to create a stereo bus.
首先通过 FlexMix 1和2 Subgroups，创建一个 stereo subgroup，连接它们，创建一个立体声总线。



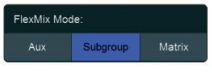
1.Press the **Mix 1** Select button. This will also automatically enable the Select button for the Mix 1 output master.

2.In the Touch Display, press the **Settings gear**.

3.Press the **Subgroup** button under FlexMix Mode.

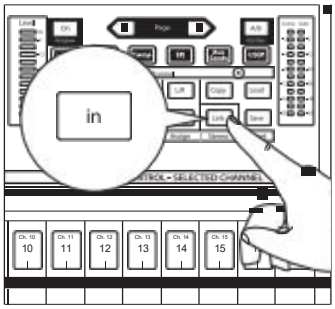
按 Mix 1 Select 。将自动启用Mix 1 output master中 Select 的按钮。

在Touch Display触屏上，按 "Settings gear" 。

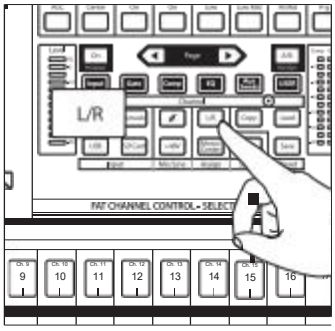



在FlexMix Mode下，按 Subgroup 按钮。


4. Enable all four Stereo Link Options.
启用所有四个Stereo Link Options 选项。




5. In the Fat Channel, press the **Stereo Link** button.
在Fat Channel中，按 **Stereo Link**按钮。

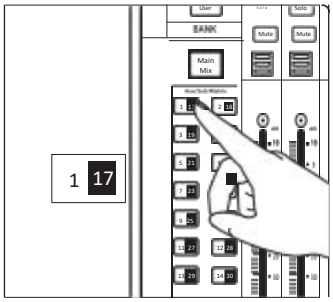



6. Assign the Subgroup to the Main bus by pressing the **L/R** (StudioLive 64S) or **Main** assign button in the Fat Channel.
按 L/R (StudioLive 64S) 或 Fat Channel中的Main assign按钮，分配 Subgroup 到 Main bus 总线上。

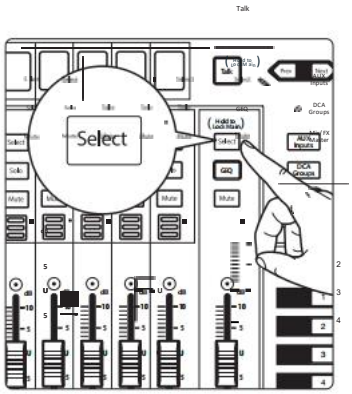

7. Turn the **Pan** knob all the way clockwise to set the stereo pan to hard left and right. Now Subgroups 1 and 2 are linked, with Sub 1 panned hard left and Sub 2 panned hard right. The channel panning is preserved.
顺时针转动 **Pan** 旋钮，将stereo pan设置hard left 和 right。现在 Subgroups1和2被连接起来，Subgroups1向左panning，2向右 panning。通道Panning被保留了。

Now that we've created a stereo subgroup, let's make an instrument group:
现在已经创建了一个stereo subgroup，让我们来做一个乐器组：

1. Press and hold the FlexMix button and then press the Select button for each of the drum channels to assign them to the subgroup.
2. The first step is to get a good mix of the instruments you are grouping—in this case, the drums. Beginning with Channel 1 (Kick), raise the fader and, with the drummer's assistance, set the input trim, EQ, and dynamics for each drum separately.
3. As you select each channel and dial in its Fat Channel settings, unassign it from the Main bus so that it is only assigned to the Subgroup. When you are done with each channel, lower the fader before moving on.




4. After you have gone through the entire kit and are satisfied with each channel's EQ and dynamics, have the drummer play the entire kit, and select the Mix 1 in the Mix Select area and set the relative volume and panning for each mic in the mix.




5. Press the FlexMix fader's **Select** button to use the Fat Channel section to add dynamics processing and EQ to the stereo drum group.

1.按住 FlexMix 键，接着按每个鼓通道的 "Select "键，把它们分配到subgroup中。

2. 第一步是对你要分组的乐器，进行良好的混音--本例中是鼓。从 Channel 1 (Kick) 开始，提高推子，在鼓手的协助下，为每个鼓分别设置 input trim, EQ和动态。

3. 当选择每个通道并调节到 Fat Channel设置时，从主总线上取消分配，这样它只被分配到Subgroup。当你完成了每个通道的设置后，继续之前，请降低推子。

4. 你看完整个配置，并对每个通道的均衡和动态感到满意后，让鼓手演奏全部，并在Mix Select区选择 Mix，为混音中的每个麦克风设置相对应的音量和panning 。

5. 按 FlexMix fader **Select** 按钮，使用 Fat Channel 部分为立体声鼓组，添加动态处理和EQ。

## 5.4 Matrix Mixes 矩阵混音

On the simplest level, a matrix mix is a mix of mixes. A matrix mix allows you to combine any bus on your StudioLive as well as input channels. Matrix mixes can be the Swiss Army knife to solve some of the most problematic audio routing issues.
在最简单的层面上，矩阵混合是混合的混合。矩阵混合允许你结合StudioLive 上的任何总线以及输入通道。矩阵混合可以作为瑞士军刀，解决一些最棘手的音频路由问题。

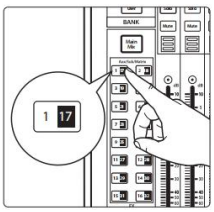
Here are some of the most common uses:

下面是一些最常见的用途：

- Feeding the house mix to multiple locations (i.e. the lobby, a webcast feed)
- Creating a front fill mix

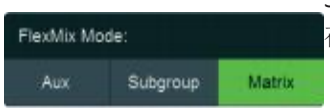
*A note to StudioLive 64S users: The Matrix Mix option is only available on FlexMixes 17-32. Aux and Subgroup options are available for every FlexMix.*

### 5.4.1 Creating a Matrix Mix 创建一个Matrix Mix




1. Press the **Mix Select** button for the FlexMix Master you'd like to make a Matrix mix. 你想创建Matrix 矩阵混音的 FlexMix Master，请按**Mix Select** 键。

2. Press the **Settings** button on the Master Control Touch Display.
按Master Control Touch Display 屏上的**Settings**按钮。




3. Press the **Matrix** button under FlexMix Mode .
在FlexMix Mode模式下，请按**Matrix键。**

When you select your Matrix mix, the StudioLive buses will be on the first layer of inputs followed by the input channels.

选择你的Matrix mix时，StudioLive总线将在 first layer 输入，其次是输入通道。

**Pre/ Post Channel Sends 前置/后置通道发送**

You can select the send positions for the channels routed to each Matrix mix. By default, all Matrix mixes are set to Pre 1. This places the send of every input channel to each aux bus before the fader, limiter, EQ, and compressor, but after the Polarity Invert switch, high-pass filter, and gate. 你可以为路由到每个Matrix mix混音的通道，选择发送位置。默认情况下，所有的Matrix mix被设置为Pre 1。将每个input channel 通道的发送放在推子、限制器、均衡器和压缩器之前，但在 Polarity Invert 切换、高通滤波器和门之后。

From the FlexMix settings menu, you can choose between three send positions for your mix:

在FlexMix设置菜单中，你的混音可以选择三个发送位置：

**Pre 1:** Sends each channel to the Matrix bus after the polarity invert, high-pass filter, and gate. 在polarity invert、高通滤波器和噪声门之后，将每个通道发送到 Matrix 矩阵总线。

**Pre 2:** Sends each channel to the Matrix bus after all Fat Channel processing (polarity invert, high-pass filter, gate, compressor, EQ, and limiter) but before the fader. 所有 Fat Channel处理（polarity invert、高通滤波器、噪声门、压缩器、均衡器和限制器）之后，在推子之前，将每个通道发送到Matrix 矩阵总线。

**Post:** Sends each channel to the Matrix bus after all Fat Channel processing (polarity invert, high-pass filter, gate, compressor, EQ, and limiter), and after the fader. 所有 Fat Channel 处理（polarity invert、高通滤波器、噪声门、压缩器、均衡器和限制器）以及在推子之后，发送每个通道到 Matrix 总线。

*Note: Buses on which a GEQ has been inserted will be sent to Matrix mixes before the GEQ.*

*注意：已插入 GEQ的总线，在 GEQ之前会发送到 Matrix mixes 矩阵混音中。*

## 5.4.2 Creating a Front Fill Mix 创建一个Front Fill Mix

In some venues, the house PA doesn't cover the front rows effectively. This can be especially problematic in the band on stage is using in-ear monitors instead of floor wedges. Without floor wedges the people seated in the first few rows are actually "behind"the PA because they will hear more stage volume from the instruments on stage than from the front-of-house system. This problem can be solved by placing a few low profile speakers on the front edge of the stage to cover the first few rows of the audience.

一些现场扩音器不能有效地覆盖前排。舞台上的乐队使用入耳式监听，不是floor wedges的情况下，可能会有问题。如果没有floor wedges，实际上坐在前几排的人是在扩音机后面，从舞台上的乐器中，他们更多的会听到舞台的音量，而不是来自舞台前的系统。通过在舞台前缘放置一些低矮的扬声器来解决这些问题，可覆盖前几排的观众。

You will want to blend the Main Left/Right mix at a low level with the source signals that may be difficult to hear, like the vocal and direct bass channels.

你要将 Main Left/Right 混音与可能难以听到的源信号（如人声和直接低音通道）在低电平下混合，就像人声和直接的低音通道。

## 5.5 FX Buses FX总线

FX Buses act just like Aux mixes, but rather than feeding an output, they feed one of the StudioLive's internal effects processors. This allows you to customize the amount of a channel's signal that is being effected. Your StudioLive has dedicated FX buses, each one feeding its own internal FX processor. The StudioLive 64S has 8 internal FX buses; all other models have 4.

FX Buses 的作用就像 Aux mixes 一样，但它们不是给一个输出，而是给 StudioLive 其中内置的效果处理器。你可以自定义一个受到影响的通道的信号量。你的 StudioLive 有专门的 FX Buses 总线，每个总线都供给自己的内部 FX 处理器。StudioLive 64S有8条内部 FX Buses；其他所有型号有4条。

**Pre/ Post Channel Sends**

**前置/后置通道发送**

Like Aux mixes, you can select the send position for each channel that is routed to an FX Mix. By default, all FX buses are set to Post. This places the send of every input channel to each FX bus after the fader, limiter, EQ, and compressor, Polarity Invert switch, high-pass filter, and gate. ***See Section 5.2*** for more information on the other available settings.

像 Aux mixes 混音一样，你可以选择每个通道的发送位置，这些通道会路由到FX Mix。默认情况下，FX总线都会设置为后置。这就把每个输入通道的发送放在推子、限制器、均衡器、压缩器、Polarity Invert切换、高通滤波器和噪声门之后的FX总线上。关于其他可用设置的更多信息，***请见第 5.2 节。***

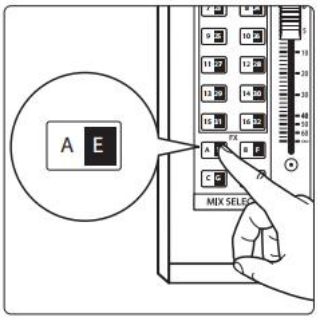
## 5.5.1 Creating Internal Bus FX Mixes 创建Internal Bus FX Mixes

There are at least two main advantages to creating an effects mix instead of inserting an effect on a channel. First, several channels can be sent to a single processor. In addition to greatly simplifying the number of parameters you have to control, this can help to create a cohesive sound for your mix. Second, you can vary the level sent from each channel to the processor, rather than patching the output directly into the effect. This allows you to add a lot or a little of an effect to any given channel.

创建一个混合效果而不是在一个通道上插入效果，至少有两个主要的优势。首先，几个通道可以被送到一个处理器上。除了简化了你必须控制的参数数量外，这还有助于为混音创造一个有凝聚力的声音。第二，你可以改变从每个通道发送到处理器的电平，而不是将输出直接拼接到效果器上。你可以在任何给定的通道上，添加或多或少的效果。

The internal effects buses are used much in the same way the Aux buses are used to create monitor mixes. Let's create a mix for FX A:

内部效果总线的使用方法，与Aux buses用于创建监听混音的方法相同。让我们为FX A创建一个混音：




1. Press the **FX A** button in the Mix Select section to access settings for the FX A mix. The faders move to show FX A send levels for each channel in your mix.
2. For each channel that you wish to send to FX A, move the related fader to the desired level. Increasing the fader level increase how processed, or"wet", any given channel will sound.
3. Using the Fat Channel, you can apply Compression and EQ to the FX A Output. This can help quell unwanted resonance and make the effected signal sound more polished.
4. Move the Flex fader to adjust the overall level of the effected output of FX A.
5. The FX A bus has a return in every FlexMix as well as the Mains. To adjust the FX A Return in any mix, press its Mix Select button and navigate to the "FX A" channel.

**1** 按 Mix Select 部分的FX A键，进入FX A混音的设置。在你的混音中推子移动，显示每个通道的FX A发送的电平。

**2.** 对于每一个你想发送到FX A的通道，移动相关推子到所需的电平。增加推子的电平，可以增加任何给定通道的处理程度，或 "wet"。

**3.** 使用Fat Channel，你可以将压缩和均衡应用到FX A的输出上。这可以帮助缓和不需要的共振，使受影响的信号听起来更有质感。

**4.** 移动Flex fader推子，来调整FX A的效果输出的整体电平。

**5.** FX A bus在每个FlexMix中有一个返送，也是 Mains。要调整任何混音中的FX A返回，请按其Mix Select按钮，并导航到 "FX A"通道。

## 5.6 Main Mono/Center Bus (StudioLive 64S only) 主单声道/中心总线（仅限StudioLive 64S）

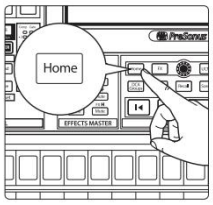
Unlike the other StudioLive Series III mixer models which are equipped with with a Mono Sum output that shares the Main bus with the Main stereo outputs, the StudioLive 64S's Mono output is provided with its own mix bus.

This bus can either be configured as a mono bus for the stereo main mix or as the center channel in an LCR configuration.

与其他StudioLive III系列调音台型号不同的是，StudioLive 64S的单声道总输出与主立体声输出共享主总线，StudioLive 64S的单声道输出有自己的混合总线。

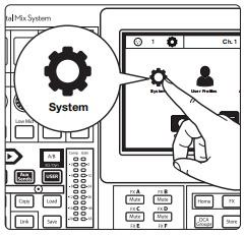
这条总线既可以配置为立体声主混音的单声道总线，也可以配置为LCR配置的中央通道。

**Selecting Pan Mode**
**选择Pan模式**



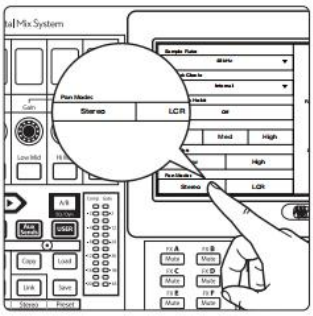

1. By default, your StudioLive 64S is set to Stereo Pan Mode; to change this to LCR Pan Mode, press the Home button.

默认情况下，你的StudioLive 64S被设置为立体声Pan模式；要将其改为LCR Pan 模式，请按下Home键。




2. Press the System icon to open the System menu.

按System图标，打开System menu.菜单



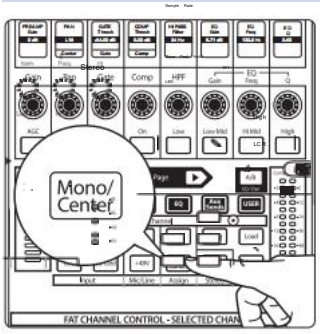

3. From this menu, you can toggle between Stereo Pan Mode and LCR Pan mode.

从菜单中，你可以在 Stereo Pan Mode 和 LCR Pan mode模式之间进行切换。

Regardless of mode, the Mono/Center output level is always grouped to the Main output level. This means that while the Mono/Center output level can be adjusted up or down independently to taste, when you move the Master fader while the Main Mix is selected, you will be controlling the relative mix of both the stereo Main Mix and the Mono/Center output levels.

无论什么模式，Mono/Center 输出电平总是与Main output level电平组合在一起。这意味着，虽然 Mono/Center 输出电平，根据兴趣可以单独调高或调低，但你在选择主混音移动主推子时，将控制stereo Main Mix混音和Mono/Center output levels电平的相对混音。

## 5.6.1 Mono Bus Mode Mono 总线模式

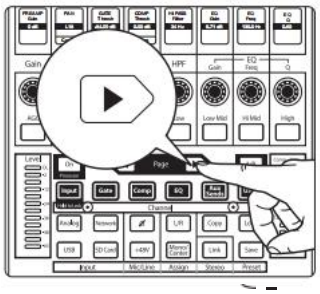



When Stereo Pan mode is active, the send level for each channel to the Mono bus is set to 0.0 dB and the send position is set to post-fader by default. In this way, each channel can be assigned to the Mono bus simply by engaging the Mono/Center assign button in the Fat Channel.

While in Stereo Pan Mode, each channel is provided with a Mono Send from the Input section of the Fat Channel so that its level can be adjust in the Mono bus output independently of the Main mix.

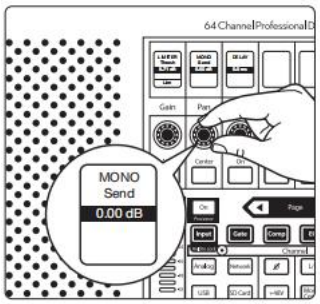
激活 Stereo Pan mode 模式时，设置每个通道到单声道总线的发送电平为 0.0dB，post-fader设置为默认发送位置 。这样，每个通道都可以分配到单声道总线上，只需按下 Fat Channel 的 Mono/Center 分配按钮即可。

在 Stereo Pan mode 模式下，每个通道都有一个 Fat Channel 输入部分的单声道发送，这样，它的电平可以单独在主混音的单声道总线输出中进行调整。



With the Input layer active, page to the next bank.

在 Input layer 激活的情况下，翻到下一个bank。




From the second Input layer page, use the encoder below the Mono Send display to adjust the send level up or down.

在第二个输入层页面，使用单声道发送显示下面的编码器，向上或向下调整发送电平。

The send to the Mono bus is alway set to post-fader.

Mono bus 总线的发送总是被设定为 post-fader。

### 5.6.1.1 Using the Mono Bus to Feed Subwoofers 使用 Mono Bus 供给 Subwoofers

One of the best ways to improve efficiency in any loudspeaker system, is to drive the subwoofers separately from the full-range speakers. By isolating only the channels you want in your subwoofers, you can achieve a much cleaner sub-frequency mix. This also allows you to send less low-frequency content to your full-range system and to create more clarity in the critical mid-range of your system.

提升扬声器系统效率的最佳方法之一，是将超低频扬声器与全频扬声器分开驱动。在低音炮中只隔离你想要的通道，可以实现一个更纯净的次频混音。你也可以向全频系统发送更少的低频内容，并在系统关键的中频部分，创造更多的清晰度。

In a conventional mixer, this can be done by using a subgroup, an aux mix, or a matrix mix. Each has its own unique benefits, however, they all have the same drawback: you must use up one of your precious buses to drive the subwoofer and nothing else.

The StudioLive 64S allows you to use your Mono bus just like a subgroup or an aux mix.

在传统的调音台中，这可以通过使用subgroup、aux mix混音或matrix mix 混音来实现。每种方法都有其独特的好处，但是，它们都有相同的缺点：你必须使用你宝贵的总线之一，驱动超重低音扬声器，并不是用其他的。

就像使用 subgroup 或 aux mix 一样，StudioLive 64S 可以使用单声道总线。

The benefit of using a subgroup workflow, is that adding channels to the subwoofer is greatly simplified: you simply need to press the assign button and the channel will be outputted through the subwoofer at the same level you've set in the Main mix. This is the default behavior of the Mono bus.

使用 subgroup workflow 的好处是，简化了向重低音扬声器添加通道的工作：你只需要按下 assign按钮，该通道以你在Main mix混音中设置的相同电平，通过重低音扬声器输出。这就是Mono bus的默认反应。

But what if you want more kick in your subwoofer? Or less keys?

但是，你想让低音炮有更多的冲击力？或更少调试？

This is where the Mono send comes into play, allowing you to customize your low-frequency mix to better enhance your system.

If you need even more control, you can set the send position to pre-fader for a truly independent subwoofer mix.

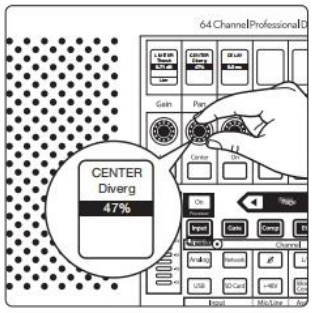
这就是Mono send的作用，允许你定制你的低频混合，更好地增强你的系统。

如果你需要更多的控制，可以将发送位置设置为 pre-fader，以获得真正独立的低音炮混音。

### 5.6.2 LCR Mode 模式

LCR Pan mode allows you to pan each channel across three positions, from left to center to right and back again, through any position in between. This is accomplished using the Center Divergence control. This powerful feature provides a true LCR panning experience and allows you to precisely place each channel where you want it in your LCR system, affording more clarity and greater system efficiency.
LCR Pan mode 模式允许你在三个位置上Pan每个通道，从左边到中间到右边，再到中间的任何位置。这是通过Center Divergence control控制完成的。这个强大的功能，提供了一个真正的 LCR Pan 体验，并精确地将每个通道放置在你的LCR系统中，提供更清晰和更高的系统效率。

The Center Divergence works in conjunction with the pan control, setting the prominence of each channel in the Center bus as the pan position approaches center (<C>).
中心偏移与 pan 控制一起工作，当pan位置接近中心时，设置Center bus中每个通道的重要位置。




To adjust the Center Divergence, scroll to the second page of the Fat Channel Input layer and use the encoder below the Center Divergence display.
The Center Divergence control has a range from 0% to 100%.

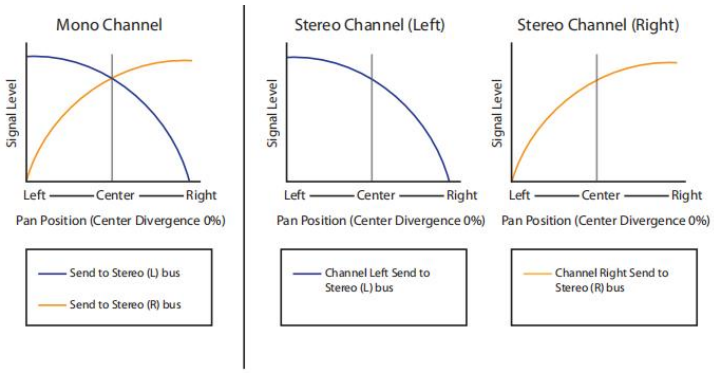
要调整Center Divergence，请滚动到 Fat Channel Input layer 的第二页，并使用 Center Divergence display 显示下面的编码器。

Center Divergence control 控制的范围是0%到100%。

**Understanding Center Divergence**
**了解 Center Divergence（中心偏离）**

When the Center Divergence control is set to 0% and the channel is panned to center (<C>), a mono channel's signal will be sent equally to the left and right sides of the Main Stereo bus. Stereo channels will retain their stereo positions (i.e. the left side will be sent to the left side of the Main stereo bus and the right side will be sent to the right).

当Center Divergence 控制设置为0%，通道被 Pan到中心（< C >）时，单声道的信号，会平均发送到主立体声总线的左右两侧。立体声通道，会保留它们的立体声位置（即左边将被发送到主立体声总线的左边，右边将被发送到右边）。




As the Center Divergence is adjusted from 0% toward 100%, a channel panned to the center (<C>) will be more prominent in the Center bus as the Center Divergence percentage is increased.

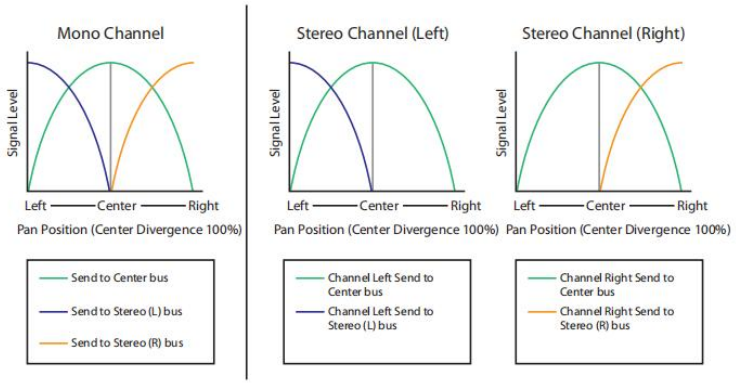
当Center Divergence 从0%向100%调整时，随着Center Divergence百分比的增加，Pan 到中心（<C>）的通道将在中心总线上更为突出。

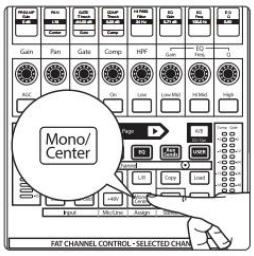
When the Center Divergence is set to 50% and the channel is panned to the center (<C>), the signal will be sent to the both sides of the Stereo bus and the Center bus at the same level.

当 Center Divergence设置为50%时，通道Pan到中央（<C>），信号将以相同的电平，发送到立体声总线和中央总线的两侧。

When the Center Divergence control is set to 100% and the channel is panned to center (<C>), the entire signal will be sent to the Center bus and none will be sent to the Left or Right sides of the Main stereo bus:

Center Divergence控制设置为 100%，通道被Pan到中心（<C>）时，整个信号将发送到中心总线，而没有信号的送到主立体声总线的左或右两侧。




Any channel or subgroup can be assigned to the L/R Main bus and/or the Center bus by pressing the Mono/Center button.

任何通道或subgroup都可以分配到 L/R Main bus 和/或 Center bus 上，只要按Mono/Center 按钮就可以。

# 6 The Fat Channel

## 6.1 Overview 概述


The Fat Channel gives you powerful signal processing, mixing, and configuration tools for each channel and bus on your StudioLive.


To begin working on a channel or mix with the Fat Channel, simply press its **Select** button. When you press a **Select** button, the number (and name, if applicable) of the selected channel or mix is shown on the Touch Display.

为 StudioLive 的每个通道和总线，Fat Channel 提供强大的信号处理、混音和配置工具。

开始用Fat Channel处理一个通道或混音，只需按下它的Select键。当你按下 "**Select** " 键时，所选通道或混音的（和名称，如果适用）将显示在触摸显示屏上。

Mix Select buttons can be accessed one of two ways:

访问Mix Select 按钮可以通过以下两种方式:

- Press the **Mix/FX Masters** button in the Bank section. This makes the mix and bus master faders available on the channel strips. Then, you can press the **Select** button that corresponds with the mix or bus you want to work with, bringing it into focus in the Fat Channel.

  在Bank部分按Mix/FX Masters键。主推子可用在通道条的混合和总线上。然后，按下相对应你想操作的混音或总线的 **Select** 按钮，使它在Fat Channel中成为焦点。

- Press the **Mix Select** button that corresponds with the mix or bus you want to work with. The Master fader on the mixer surface then addresses the master fader for that mix or bus. Press the **Select** button above the Master fader to access Fat Channel controls for that mix or bus.

  按下**Mix Select键**，相对应你要处理的混音或总线。混音器界面的主推子就会成为该混音或总线的 Master fader 。按下主推子上方的**Select** 按钮，可以访问该混音或总线的Fat Channel 控制。

The Fat Channel provides different types of processing and utility settings depending on what type of channel or mix is selected. The following is a quick reference of the available processors and utility settings for each type of signal that the Fat Channel can process.

Fat Channel 提供了不同类型的处理和实用设置，这取决于所选择的通道或混音的类型。下面是Fat Channel可以处理的每种信号类型的可用处理器，和实用设置的快速参考。

| | Input Channels | Aux & Tape Inputs | FX Returns | FlexMixes | Main Mix |
|---|---|---|---|---|---|
| Preamp Gain | √ | --- | --- | --- | --- |
| Hi Pass Filter | √ | --- | --- | √ | --- |
| Pan | √ | --- | --- | --- | --- |
| Gate | √ | --- | --- | --- | --- |
| Compressor | √ | √ | √ | √ | √ |
| EQ | 4-Band | 4-Band | 4-Band | 6-Band | 6-Band |
| Limiter | √ | --- | --- | √ | √ |
| USB Send | All Channels and Buses up to 64 | All Channels and Buses up to 64 | All Channels and Buses up to 64 | All Channels and Buses up to 64 | All Channels and Buses up to 64 |
| SD Send* | Channels 1-32 | --- | --- | Up to 1 stereo bus | Up to 1 stereo bus |
| Delay | √ | --- | --- | √ | √ |
| Aux Sends | √ | √ | √ | --- | --- |
| Aux Mute | √ | √ | √ | --- | --- |
| Aux Pan | √ | √ | √ | --- | --- |

*Note to StudioLive 64S users: The 34 SD Sends are freely routable between all channels and buses.*
*请注意 StudioLive 64S 用户：34 SD Sends 可以在所有通道和总线之间路由。*

### 6.1.1 A/B Comparison for EQ and Dynamics Settings EQ和Dynamics设置的A/B比较


The A/B button lets you make A/B comparisons of EQ, compressor, and gate settings for the selected channel or mix. This function lets you try various changes as you look for the optimum setting, without the risk of losing your original settings. If this button is dimmed, you're looking at the"A"set of parameter settings. If this button is lit fully, you're looking at the "B" parameter set.

A/B 按钮，你可以对所选通道或混音的均衡器、压缩器和噪声门的设置，进行A/B比较。当你寻找最佳设置时，你可以尝试各种变化，而不会丢失你原始设置。如果这个按钮变暗了，你就在看 "A "组参数设置。如果这个按钮完全亮起，你就看到了 "B " 参数集。

To A/B Fat Channel settings, press the A/B button. This saves the current EQ and dynamics settings for the selected channel as the"A"snapshot, and copies its settings to a second snapshot, we'll call "B."The A/B button lights, to tell you that you are now working with the "B"snapshot.

设置 A/B Fat Channel ，按A/B 键。所选通道的当前均衡和动态设置保存为 "A " snapshot，并将其设置复制到第二个snapshot，我们称之为 "B"。

***Power User Tip:*** *The A/B function can also be used to maintain two distinct Fat Channel settings for a given channel or bus. So, the next time the guitar player tells you that they plan to switch to a hollowbody mid-show, you can be ready with a more appropriate alternate setting, saved as the "B" snapshot.*

***Power User Tip:*** *A/B功能，也可以为一个特定的通道或总线，保持两个不同的 Fat Channel 设置。这样当下一次吉他手告诉你，他们打算在演出中途，换成空心琴时，你可以准备好一个更合适的替代设置，保存为 "B " snapshot。*

### 6.1.2 Copy/Paste & Preset Load/Save 复制/粘贴和预设加载/保存


Press **Copy** to copy Fat Channel settings from the currently selected channel to one or more other channels. Once Copy is pressed, the Select buttons for all other channels start blinking. Press the **Select** button on any channels to which you want to copy Fat Channel settings from the currently selected channel.

"**Copy**" 键，可以将当前所选的通道的 "Fat Channel"设置复制到一个或多个其他的通道。一旦按下 "**Copy**"，所有其他通道的 "**Select**"按钮，会开始闪烁。在你想复制的任何通道上，按下 "**Select**"按钮。

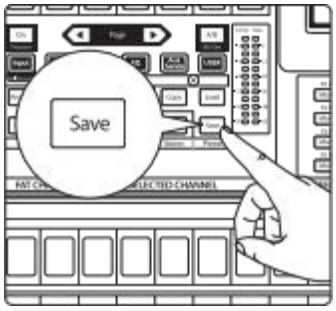

Press **Load** to paste the settings to the selected channels.

按 " **Load**" 键，将设置粘贴到所选的通道上。

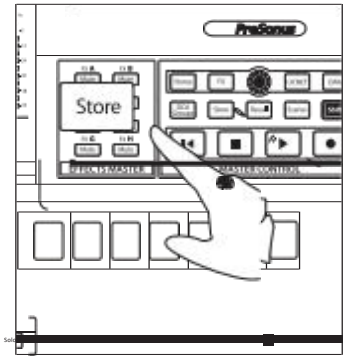

The **Save** and **Load** buttons let you save and load Fat Channel presets, letting you store and reapply useful Fat Channel processing and utility settings to future mixes. While all Fat Channel settings are included when you save a preset, you can choose to filter out some types of settings, to load only part of a preset (such as only EQ and compressor parameters).

**Save**和**Load**按钮，可以保存和加载 Fat Channel 预设，让你存储和重新应用有用的Fat Channel处理，和实用设置到之后的混音中。你保存一个预设时，所有的Fat Channel设置都包括在内，你可以选择过滤掉某些类型的设置，只加载预设的一部分（比如，只有均衡器和压缩器参数）。

**To save a preset:**
**要保存一个预置。**

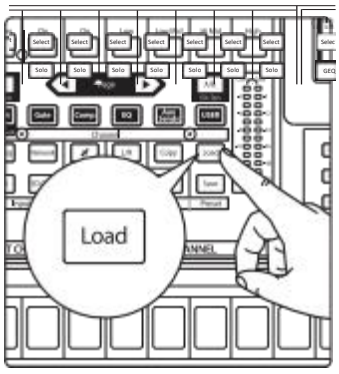



1. Press **Save**. The Fat Channel Presets view is shown on the Touch Display.
按 **Save**。Fat Channel Presets 预设视图，会显示在 Touch Display 触摸显示屏上。

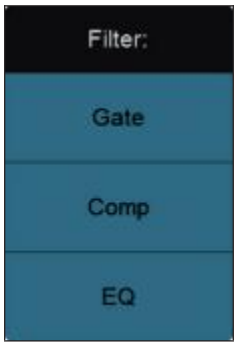



2. Press the **Store** button in the Master Control area to bring up the onscreen keyboard. Enter your preset name with the keyboard, and choose a category (such as Kick Drum or Guitar) from the Category selector, if desired.
按 Master Control 区域的 Store 键，调出屏幕上的键盘。用键盘输入你的预置名称，如果需要的话，从Category选择器中，选择一个类别（如 Kick Drum 踢鼓或 Guitar吉他）。
3. Press the **Enter** button on the keyboard to save your preset, or press the **back-arrow** to cancel and exit this screen.
按键盘上的**Enter**键，保存你的预设，或者按**Enter**键来取消并退出这个屏幕。

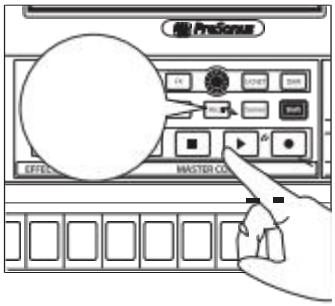
**To load a preset:**




1. Press **Load**. The Fat Channel Presets view is shown on the Touch Display.
按 **Load**。Touch Display 屏上会显示出 "Fat Channel Presets " 视图。

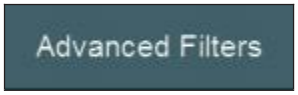



2. To partially load a preset (for example, EQ parameters only), press the relevant buttons in the Filter column to disable loading for one or more processors.
要部分加载预置（例如，只加载均衡器参数），请按Filter 滤波器栏中的相关按钮，以禁用一个或多个处理器的加载。
3. To filter the presets by channel category (such as Kick Drum or Guitar), make a selection from the Category selector.
通过 channel category （如Kick Drum或Guitar）做过滤预置，请从Category类别选择器中进行选择。



4. Select a preset and load it by pressing the **Recall** button in the Master Control area. 按 Master 主控区的 Recall 键，选择一个预设与加载它。

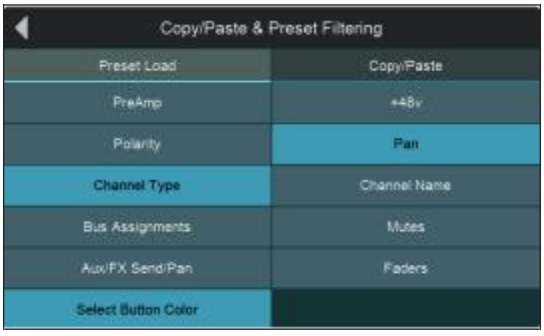
You can also momentarily audition the effects of a preset by selecting a preset and pressing the **Audition** button on the Touch Display, or rename it by pressing **Rename** and entering a new name with the onscreen keyboard. To return all Fat Channel parameters to Factory Default, press the Reset button.
你也可以通过选择一个预置，并按Touch Display屏上的**Audition键，**来瞬间试听预置的效果，或者通过按 "**Rename**"，用屏幕键盘输入一个新的名字来重命名它。恢复所有Fat Channel的参数到出厂默认值，请按Reset。


If you need finer control of which Fat Channel settings are included when copy/pasting or loading presets, press **Advanced Filtering** to open the **Copy/Paste & Preset Filtering screen**. In this screen, you can set the exact parameter types that are included in each these two preset actions.
如果你需要更精细地控制在copy/pasting 或 loading 预设时，包括Fat Channel设置，请按**Advanced Filtering**来打开**Copy/Paste & Preset Filtering screen**。在这个屏幕中，在包含这两个预设动作中，你可以设置各自确切的参数类型。

- Touch Copy/Paste and press the desired parameter buttons to filter parameters for copy/paste actions.
- Touch Preset Load to do the same for preset loading actions.

触摸 "Copy/Paste"并按下所需的参数按钮，来进入复制/粘贴操作参数。
触摸''Preset Load''预设加载，对预设加载动作进行同样的操作。




## 6.2 Fat Channel Navigation 访问

StudioLive Series III mixers provide two Fat Channel options: Dynamic and Fixed. The StudioLive 32SX and 32SC use the Fixed Fat Channel at all times. All other models can utilize both.

StudioLive III系列调音台提供了两个Fat Channel 选项：Dynamic和Fixed。在任何时候，StudioLive 32SX和32SC都使用Fixed Fat Channel通道。其他所有型号，都可以使用这两种方式。

**Dynamic Fat Channel**

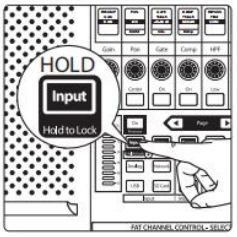

The eight Scribble Strip displays, encoders, and buttons at the top of the Fat Channel change dynamically to provide access to a variety of features and mixing tools. What is controlled here is determined by both the type of channel or bus that is selected and by the Fat Channel mode buttons.

Fat Channel 顶部的 8个 Scribble Strip 显示器、编码器和按钮动态变化，可提供对各种功能和混音工具的访问。这里控制的内容是由所选通道或总线的类型，以及 Fat Channel 模式按钮决定的。

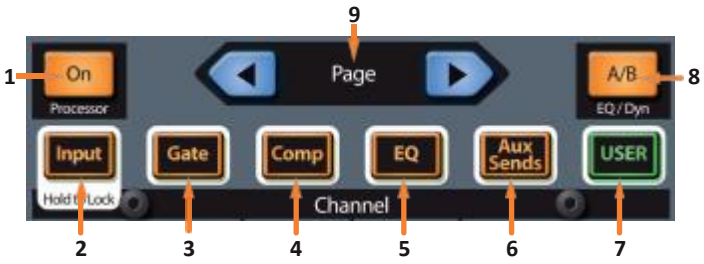
**Fixed Fat Channel**

The eight encoders and buttons on the StudioLive 32SX and StudioLive 32SC always control the following functions: StudioLive 32SX和StudioLive 32SC上的八个编码器和按钮，始终控制以下功能：


1. **AGC (Automatic Gain Compensation)**.
2. **Preamp Gain**.
3. **Center.**
4. **Pan.**
5. **Gate On / Off.**
6. **Gate Threshold.**
7. **Compressor On / Off.**
8. **Compressor Threshold.**
9. **Low Band Active.**
10. **High Pass Filter Frequency.**
11. **Low Mid Band Active.**
12. **Active EQ Band Gain Control.**
13. **High Mid Band Active.**
14. **Active EQ Band Frequency Control.**
15. **High Band Active.**
16. **Active EQ Band Q Control.**




All other mixers can lock to these controls by pressing and holding the Input layer button. For more information on the Input functions, ***please seeSection 6.3.***
所有其他混音器，通过按住 Input layer 按钮，锁定这些控制。关于输入功能的更多信息，***请参见第 6.3 节***。




1. **Processor On/Off.** Enables/Disables the currently active processor.
   启用/停用当前活动的处理器。
2. **Input.** For all StudioLive models, this opens the Channel Overview screen on the Touch Display. For models equipped with a Dynamic Fat Channel, this button will spill the Input layer controls onto the Fat Channel displays, encoders, and buttons. ***See Sections 6.3 and 6.8.1***.
   对于所有的StudioLive型号，这是打开Touch Display上的Channel Overview屏幕。对于配备了Dynamic Fat Channel 型号，这个按钮将把Input layer控制spill到 Fat Channel displays 显示屏、编码器和按钮上。***见第6.3和6.8.1节。***
3. **Gate.** For all StudioLive models, this opens the Gate Overview screen on the Touch Display. For models equipped with a Dynamic Fat Channel, this button will spill the Gate controls onto the Fat Channel displays, encoders, and buttons. ***See Sections 6.4 and 6.8.3.***
   对于所有的StudioLive型号，这是打开触摸显示屏上的Gate Overview屏幕。对于配备了Dynamic Fat Channel的型号，这个按钮，将把Gate controls 的Spill到Fat Channel的显示屏、编码器和按钮上。***见第6.4和6.8.3节。***
4. **Comp.** For all StudioLive models, this opens the Compressor Overview screen on the Touch Display. For models equipped with a Dynamic Fat Channel, this button will spill the Compressor controls onto the Fat Channel displays, encoders, and buttons. ***See Sections 6.5 and 6.8.***
   对于所有的StudioLive型号，这将打开触摸显示屏上的Compressor Overview屏幕。对于配备了动态肥大通道的型号，这个按钮将把压缩机控制溢出到肥大通道的显示屏、编码器和按钮上。见第6.5和6.8.4节。
5. **EQ.** For all StudioLive models, this opens the EQ Overview screen on the Touch Display. For models equipped with a Dynamic Fat Channel, this button will spill the EQ controls onto the Fat Channel displays, encoders, and buttons. ***See Sections 6.6 and 6.8.5.***
   对于所有的StudioLive型号，这是打开Touch Display屏上的EQ Overview。对于配备了Dynamic Fat Channel型号，这个按钮将把EQ控制Spill到 Fat Channel 的显示屏、编码器和按钮上。***See Sections 6.6 and 6.8.5.***
6. **Aux Sends.** For all StudioLive models, this opens the Aux Sends Overview screen on the Touch Display. For models equipped with a Dynamic Fat Channel, this button will spill the Aux Send levels, mutes, and pan controls for the currently selected channel onto the Fat Channel displays, encoders, and buttons. ***See Sections 6.7 and 6.8.6***.
   对于所有的StudioLive型号，这是打开触摸显示屏上的Aux Sends Overview 显示。对于配备了Dynamic Fat Channel的型号，这个按钮将把当前所选的通道的Aux Send levels、静音和pan控制Spill到Fat Channel显示屏、编码器和按钮上。***见第6.7和6.8.6节***。
7. **User.** Model-dependent: 取决于模型：
   - **StudioLive 32SX and 32SC.** Opens User Profile screen on Touch Display.
     在Touch Display上打开User Profile屏幕。
   - **All Other Models.** Spills user-customizable parameters on Fat Channel displays, encoders, and buttons. ***See Section 6.9.***
     在Fat Channel显示器、编码器和按钮上，spill用户自定义参数。***见第6.9节***。
8. **Fat Channel A/B.** Switches between two different Fat Channel Settings. ***See Section 6.1.1.***
   在两个不同的Fat Channel Settings设置之间进行切换。***见第6.1.1节。***
9. **Prev/Next Page.** Navigates to additional parameters (if available). ***Note:*** *These controls are not available on the StudioLive 32SX and 32SC.*
   *访问到其他参数（如果有的话）。**注意：**这些控制在StudioLive 32SX和32SC上不可用。*

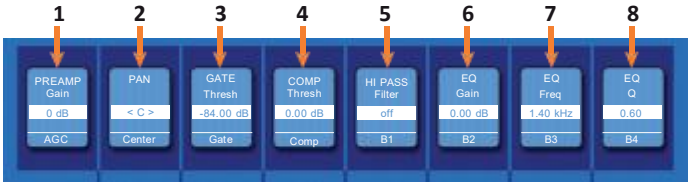
## 6.3 Input Mode 输入模式


Pressing the **Input** button in the Fat Channel gives you access to important controls and informative displays for the currently selected channel or mix.

*Note: These controls are fixed on the StudioLive 32SX and 32SC. For all other models, pressing holding the Input button will lock or unlock these functions to the Dynamic Fat Channel controls.*

在 Fat Channel 中按下 **Input** 按钮，可以访问当前所选通道或混音的重要控制和信息显示。

*注意：这些控制在StudioLive 32SX和32SC上是固定的。对于所有其他型号，按住输入按钮，将锁定或解锁这些功能到Dynamic Fat Channel controls控制。*




1. **Preamp Gain (Input Channels only).** Use the encoder to set the amount of preamp gain applied to the currently selected channel. The scribble strip displays the current gain level. Press the button below to enable Automatic Gain Compensation. For more information on Gain Compensation, ***please see the NSB-series Stage Box Owners Manual***.

   使用编码器，设置应用于当前所选通道的前置放大器的增益量。scribble strip 显示当前的增益水平。按下面的按钮，可以启用自动增益弥补。关于增益弥补的更多信息，***请参见 NSB系列舞台箱用户手册。***

2. **Pan.** Use the encoder to set the currently selected channel or subgroup's pan position across the stereo field. The pan position will be displayed on the Scribble Strip. Press the button below the encoder to reset the pan position to Center.

   使用编码器来设置当前选择的通道，或subgroup在立体声场中的声音位置。Pan声音位置将显示在Scribble Strip上。按编码器下面的按钮，可以将Pan重置为中心。

3. **Gate Threshold.** The encoder sets, and the scribble strip displays, the gate threshold for the selected channel. The gate threshold sets the level at which the gate opens. Essentially, all signals above the threshold setting are passed through unaffected, whereas signals below the threshold setting are reduced in level by the amount set by the range control. If the threshold is set fully counterclockwise, the gate is turned off (always open), allowing all signals to pass through unaffected. You can set the threshold from 0 to -84 dB. ***See Section 6.4*** for more information on the Noise Gate and its parameters.

   编码器设置，scribble strip显示所选通道的门限。门限设定了门打开的电平。从本质上讲，所有高于门限设置的信号都不会受影响，而低于门限设置的信号，则按设置范围控制的量降低电平。如果门限值被逆时针完全设定，那么门限值就会被关闭（总是打开），允许所有的信号不受影响地通过。你可以将门限设置在0到-84dB之间。***关于噪声门及其参数的更多信息见第 6.4 节。***

4. **Compressor Threshold.** This encoder sets, and the scribble strip displays, the compressor threshold for the selected channel or output bus. When the signal's amplitude (level) exceeds the threshold setting, the compressor engages. Turning the knob counterclockwise lowers the threshold so that compression begins at a lower amplitude. The threshold can be set from -56 to 0 dB. ***See Section 6.5*** for more information on the Compressor and its parameters.

   这个编码器设置，并在 scribble strip上显示所选通道或输出总线的压缩器门限。当信号的振幅（电平）超过阈值设置时，压缩器开始工作。 逆时针旋转旋钮可以降低门限，在较低的振幅下开始。阈值可以设置为-56到0dB。关于压缩器及其参数的更多信息，***见第 6.5 节***。

5. **High-Pass Filter.** Use the encoder to set the High-Pass Filter Frequency Threshold for the Selected Channel or Output Bus. The filter's threshold can be set from 24 Hz to 1 kHz. When the threshold is set to its lowest point, the filter is off. The high-pass filter's slope is - 12 dB/8va. Press the button below to enable the Low Band (B1) for control.

   使用编码器，来设置所选通道或输出总线的High-Pass Filter Frequency Threshold 阈值。Filter 阈值可以设置在24Hz到1kHz之间。设置阈值到最低点时，滤波器关闭。高通滤波器的斜波是-12dB/8va。按下面的按钮，启用低频段（B1）进行控制。

***Power User Tip:*** *A high-pass filter attenuates all frequencies below the set threshold. Use the Fat Channel high-pass filter to remove unwanted low-frequencies from your source signal, rather than trying to EQ them out.*

***Power User Tip:*** *高通滤波器衰减所有低于设定阈值的频率。使用 Fat Channel高通滤波器从你的源信号中去除不需要的低频，而不是试图将它们均衡化。*

6. **EQ Gain.** Sets the amount by which the selected frequency will be boosted or cut. Press the button below to enable the Low Mid Band (B2) for control.
   设定所选频率被提升或削减的量。按下面的按钮，可以启用中低频段（B2）进行控制。

7. **EQ Frequency.** Sets the center frequency at which signals are boosted or cut for the current EQ band. Press the button below to enable the High Mid Band (B3) for control.
   设置当前均衡器频段的信号被提升或削减的中心频率。按下面的按钮，可以启用中高音段（B3）进行控制。

8. **EQ Q.** Sets the Q (or width) of the current EQ band. Larger Q values affect a narrower range of frequencies. Lower Q values affect a wider range. Press the button below to enable the High Band (B4) for control.
   设置当前均衡器频段的Q值（或宽度）。较大的Q值影响较窄的频率范围。较低的Q值则影响较宽的范围。按下面的按钮，可以启用高频段（B4）进行控制。

Pressing the **Next Page** button in the Fat Channel provides access to additional parameters.

在Fat Channel 中按下 "**Next Page**" 按钮可以访问更多的参数。

***Note:*** *These controls are not available from the Fat Channel on the StudioLive 32SX and 32SC.*

注意：在StudioLive 32SX和32SC上，这些控制不能从Fat Channel上使用。StudioLive 32SX 和 32SC 上没有这些控制。



1. **Limiter Threshold.** This encoder sets, and the scribble strip displays, the threshold of the limiter for the selected channel or output bus. 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 Limiter ratio is ∞:1.

   这个编码器设置了所选通道或输出总线的限制器的门限，并在scribble strip上显示。当信号的振幅（电平）超过门限的设置时，限制器开始工作。可以逆时针旋转旋钮，降低门限值，因此限制器从较低的幅度开始。限制器的比例是∞：1。

2. **Mono Send / Center Divergence (StudioLive 64S only).** The encoder sets the Mono Send level or the Center Divergence percentage depending on the Pan Mode set in the System Menu. The button toggles between Pre- and Post-fader send to the Mono Bus. For more information on the Mono Bus, ***seeSection 5.6.***

编码器根据系统菜单中，设置的Pan Mode set 设置Mono Send level电平或Center Divergence percentage 百分比。该按钮在Pre- &Post-fader推子前和推子后，发送至Mono Bus之间进行切换。关于单声道总线的更多信息，***见第5.6节。***

3. **Delay.** Sets the alignment delay for the currently selected input or bus. More information about input and output delays and be found in ***Section 13.6 and 13.7***.

设置当前选择的输入或总线的alignment delay。关于输入和输出延迟的更多信息，***见第13.6和13.7节***。

## 6.4 Gate Mode (Dynamic Fat Channel) 门控模式（动态发声通道）


Pressing the **Gate** button in the Fat Channel gives you access to the Noise Gate parameters for the selected channel or mix. A Gate is a dynamics processor that lets you silence (or attenuate) signals that fall beneath a chosen signal level. This makes it possible to reduce the presence of noise or other undesirable signals in the spaces between the sounds you want.
在Fat Channel 中按**Gate键**，你就可以访问所选通道或混音的噪声门参数。噪声门是一个动态处理器，可以让你将低于选定信号电平的信号静音（或衰减）。这样，在你想要的声音之间的空隙中，可以减少噪音或其他不良信号的存在。

The Noise Gate can be switched to function as an Expander. An Expander is another type of dynamics processor, that works like a Compressor in reverse. Rather than attenuating signals that pass a chosen threshold level, an expander boosts signals that pass its threshold. This comes in handy when trying to restore punch and impact to signals that have been overly compressed, or which are not naturally as dynamic as desired.

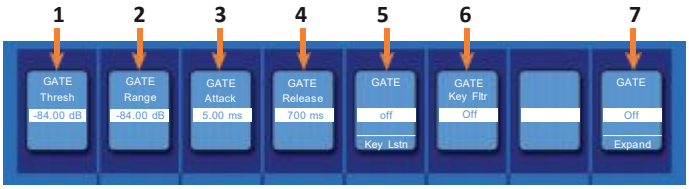
噪声门可以被切换成扩展器的功能。扩展器是另一种类型的动态处理器，它的工作原理类似于反向的压缩器。扩展器不是减弱通过选定阈值的信号，而是提升通过其阈值的信号。当试图恢复被过度压缩的信号的冲击力时，或者当信号的自然动态不理想时，这就很方便了。

***Power User Tip:*** *Inpractice, expanders and noise gates are used almost identically. The main difference is that an expander is smoother and more gradual, so that it is easier to set the attack and release times correctly.* ***More information about Gates and Expanders can be found at:*** *www.presonus.com/learn/technical-articles/How-To-Use-Dynamics-Processing-Getting-Started-With-Compressors-Gates-and-More*

Inpractice，扩展器和噪声门的使用几乎相同。主要的区别是，扩展器更平滑、更渐进，更容易正确设置attack和release的时间。关于门和扩展器的更多信息的可以在以下网站找到：*www.presonus.com/learn/technical-articles/How-To-Use-Dynamics- Processing-Getting-Started-With-Compressors-Gates-and-More*

### 6.4.1 Dynamic Fat Channel Controls 动态Fat Channel控制

The eight displays above the Gate/Expander controls show pertinent data about the current settings of these controls.
门控/扩展器控制上方的八个显示屏显示了这些控制的当前设置的相关数据。




1. **Threshold.** Sets the signal level that bisects the signals you wish to keep from the signals you want to attenuate. Signals below this level are attenuated according to the setting of the Range parameter. Signals above this level pass through unaffected. 设置信号电平，将你希望保留的信号与想衰减的信号一分为二。低于此电平的信号，根据范围参数的设置进行衰减。高于此电平的信号，不受影响。
2. **Range.** Sets the amount of attenuation applied to a signal when its level falls below the Threshold. Lower settings pull signal level down further, all the way to -∞, if desired. Higher settings pull the signal down to a lesser extent, de-emphasizing noise and other nuisance signals more subtly (without a"hard" cut-off). Note: Range is disabled when the Expander is engaged. 当信号的电平低于阈值时，设置应用于信号的衰减量。如果需要的话，较低的设置可以进一步拉低信号电平，一直到 -∞。较高设置将信号拉低到一个较小的程度。更巧妙地强调噪音和其他干扰信号（没有一个 "hard"的切断）。注意：当扩展器投入使用时，范围被禁用。

3. **Attack.** Sets the time it takes for the gate to“open”when a signal passes the threshold. 设置当信号通过阈值时，门 "open" 所需的时间。

***Power User Tip:*** *A fast attack rate is crucial for percussive instruments. Slow-rising signals such as vocals and bass guitar require a slower attack; with these signals, a faster attack can cause an audible click. All gates have the ability to click when opening but a properly set gate will never click.*
*快速的Attack率，对于打击性乐器来说是至关重要。缓慢上升的信号，如人声和低音吉他，需要较慢的Attack 速度；对于这些信号，较快的Attack 速度，会听到的咔嗒声。所有的门都有在打开时，发出咔哒声，正确设置的门，永远不会发出咔哒声。*

4. **Release.** Sets the time it takes for the gate to“close”when a signal falls beneath the threshold.

   设置当信号低于阈值时，门 "关闭 "所需的时间。

***Power User Tip:*** *Gate release times should typically be set so that the natural decay of the instrument or vocal being gated is not affected. Shorter release times help to clean up the noise in a signal but may cause “chattering“ with percussive instruments. Longer release times usually eliminate chattering and should be set by listening carefully for the most natural release of the signal.*
*Gate 释放时间的设置，通常被Gate控的乐器或人声的自然衰减不受影响。较短的释放时间有助于清除信号中的噪音，但可能会造成打击乐器的"chattering"。较长的释放时间通常可以消除颤动，应该通过最自然释放信号，仔细聆听来设置。*

5. **Key Listen.** Press the button to engage or disengage the Key Listen function in the solo bus. It will illuminate to indicate that the Key Listen is active. When Key Listen is enabled, and the selected channel is soloed, you can use the Control Room outputs to monitor what the gate key filter is removing.

   按这个按钮，可以在独奏总线上启用或取消听键功能。它将会亮起，表示键听功能已经激活。当Key Listen被启用时，所选的通道被独奏，你可以使用控制室的输出，监听门控滤波器正在删除的内容。

6. **Key Filter.** This encoder sets, and the scribble displays, the frequency at which the gate will open. Setting a specific frequency, in addition to a specific decibel level, provides more sonic shaping.
   编码器设置，并在scribble displays中显示，闸门将打开的频率。除了特定的分贝水平外，设置一个特定的频率，可以提供更多的声学塑造。

***Power User Tip:*** *Aproperly set key filter on a gate can greatly improve the overall sound quality ofa mix. For example, if you are inserting a gate on a snare-drum mic, you may get enough bleed from the kick drum to open the gate. This is where a key filter can come in handy. By setting the key filter to remove some of those low frequencies, the gate won’t be as apt to open for the kick drum.*

*正确地在gate上设置关键的滤波器，可以大大改善整体混音的音质。例如，你在小军鼓麦克风上插入一个gate，可能会从鼓上得到足够的泄漏，从而打开gate。这时关键滤波器，就派上用场了。通过设置关键滤波器，来去除一些低频，gate就不会像踢鼓那样容易打开。*

7. **Expander Mode.** Press the button or turn the encoder to switch between Gate and Expander functions for this processor. See the next section of this manual for information on available parameters when in Expander mode.

   按下按钮或转动编码器，可以在该处理器的Gate & Expander 功能之间进行切换。在扩展器模式下，有关可用参数信息，请参见本手册的下一节。


Press the **Processor** button to turn the Gate on or off.
按 **Processor** 按钮，打开或关闭 Gate。

## 6.5 Compressor Mode (Dynamic Fat Channel) 压缩器模式 （动态Fat Channel）


Pressing the **Comp** button in the Fat Channel gives you access to the Compressor parameters for the selected channel or mix. A compressor is a dynamics processor that reduces the dynamic range of a signal by attenuating it by a set ratio when it exceeds a defined threshold.

在Fat Channel中按 Comp 键，可以访问所选通道或混音的压缩器参数。压缩器是一个动态处理器，当信号超过一个定义的阈值时，它通过一个设定的比例衰减，减少信号的动态范围。

StudioLive Series III mixers ship with three compressor models from which to choose and the Fat Channel behaves differently, depending on which model is loaded. The eight Scribble strips in the Fat Channel show pertinent data about the current settings of these controls. The controls differ, based on the model of compressor you select.

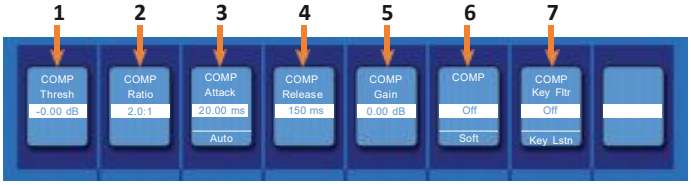
StudioLive III系列调音台有三种型号的压缩器可供选择，Fat Channel的表现也不同，取决于加载的是哪种型号。Fat Channel中的八个Scribble strips条，显示关于这些控制的当前设置的相关数据。根据你选择的压缩型号，这些控制也有所不同。

For more information on available Fat Channel plug-in models, ***seeSection 6.8.4***.
关于可用的Fat Channel插件模型的更多信息，***见第6.8.4 节***。

### 6.5.1 Standard Compressor 标准压缩器

The Standard Compressor is selected on every channel by default.
默认情况下，每个通道都选择标准压缩器。

**Dynamic Fat Channel Controls 动态Fat Channel Controls 控制**




1. **Threshold.** Sets the level above which the compressor begins to attenuate the signal.

   设置压缩器开始衰减信号的电平。

2. **Ratio.** Sets the relationship between the amount a signal goes above the threshold, and the amount it is attenuated. At a 1-to- 1 ratio (often written as 1:1), no compression occurs. At a 4:1 ratio, a signal that passes the threshold by 8 dB is attenuated to within 2 dB of the threshold (dividing by four). The higher the ratio you choose, the more pronounced the compressor effect becomes.
   设定信号超过阈值的量和被衰减量之间的关系。在1比1的比例下（通常写成1：1），不发生压缩。在4:1的比例下，一个通过阈值8dB的信号，衰减到阈值的2dB以内（除以4）。你选择的比率越高，压缩器的效果就越明显。

3. **Attack.** Sets the time it takes for the compressor to begin attenuating a signal, once it passes the threshold. Press the button below to toggle Auto mode on or off. When Auto mode is active, the Attack and Release controls become inoperative, and a preprogrammed attack and release curve is used. In this mode, the attack is set to 10 ms, and the release is set to 150 ms. All other compressor parameters can still be adjusted manually.

   设定信号通过阈值后，压缩器开始衰减。按下面的按钮来切换自动模式的开或关。激活自动模式时，Attack和Release控制变得不可用，要使用预先编程的Attack和Release曲线。在这种模式下，Attack被设定为10ms，Release设定为150ms。其他所有的压缩器参数仍然可以手动调整。

4. **Release.** Sets the time it takes for the compressor to stop attenuating a signal once it falls below the threshold.
设定当信号低于阈值时，压缩器停止衰减。

***Power User Tip:*** *Very short compressor release times can produce a choppy or “jittery” sound, especially when compressing instruments that have a lot oflow-frequency components, such as bass guitar. Very long release times can result in an over-compressed, or “squashed,” sound. All ranges ofrelease can be useful, however, and you should experiment to become familiar with different sonic possibilities.*

*非常短的压缩器释放时间，会产生不稳定或 "jittery"的声音，特别在压缩有大量低频成分的乐器时，如低音吉他。非常长的释放时间，可能导致过度压缩，或 "squashed"的声音。然而，所有的释放范围都是有用的，你应该通过实验，来熟悉不同声音的可能性。*

**5 Gain.** Sets the amount of “makeup gain”to apply to a signal. Once a signal is compressed, its overall level is often reduced. This gain control lets you bring it back up to the proper level after compression occurs.
设置应用于信号的 "makeup gain" 的量。一旦信号被压缩，整体电平往往会降低。在压缩后，这个增益控制可以把它恢复到适当的电平。

**6**. **Compressor Knee Soft/Hard.** Press this button to toggle the compressor between soft and hard-knee modes. Soft-knee compression offers a smooth transition between uncompressed and compressed states. Hard-knee compression offers a more abrupt transition, and more exacting protection from stray peaks.

按这个按钮，可以在 soft & hard-knee modes模式之间切换压缩器。soft-knee 压缩，在未压缩和压缩状态之间提供了一个平顺的过渡。hard-knee 提供更突然的过渡，以及更严格的保护，使其不受stray peaks影响。

7. **Key Filter.** This encoder sets, and the scribble displays, the frequency at which the compressor will engage. The compressor will still process the entire frequency range, but it is only engaged when the specified frequency is present. Press the button below to listen to the signal being used to trigger the compressor (including the effects of the high-pass filter, as set with the Key Filter control). Press again to switch back to the normal channel signal.

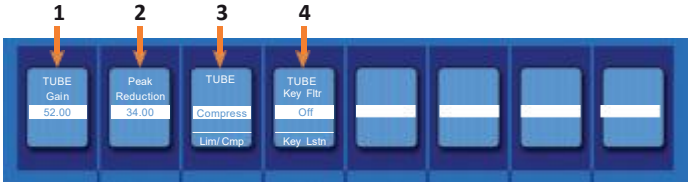
这个编码器设定了压缩机的接合频率，并在scribble中显示。压缩器处理整个频率范围，但只有当指定的频率出现时，它才会启动。按下面的按钮，可以听到用于启动压缩器的信号（包括高通滤波器的效果，如用关键滤波器控制所设定的）。再按一下，就可以切换回正常的通道信号。


Press the **Processor** button to turn the Compressor on or off.
按 **Processor** 处理器按钮，可以打开或关闭压缩器。

## 6.5.2 Tube Leveling Amplifier 电子管平衡放大器

### Dynamic Fat Channel Controls 动态 Fat Channel Controls 控制

When the Tube Leveling Amplifier is selected, the following controls are available in the Fat Channel:
当选择了电子管均衡放大器时，在Fat Channel中可以使用以下控制：




1. **Gain.** Sets input gain to the compressor. Because this type of compressor operates in a different way than a standard compressor, much of the way that it affects signals is based on the input level. Try different settings to see what suits your needs.
设置压缩机的输入增益。这种压缩器的工作方式，与标准的压缩器不同，它影响大部分信号的方式是基于输入电平。尝试不同的设置，看看什么适合你的需要。

2. **Peak Reduction.** Sets the amount of peak reduction to apply to the signal. Higher settings result in more gain reduction and more pronounced compression effect.
设置应用于信号的峰值减少量。较高的设置会导致更多的增益减少和更明显的压缩效果。

3. **Compressor/Limiter Toggle.** The button below toggles the Tube Leveling Amplifier between its compressor and limiter modes. When in compressor mode, it acts with a variable ratio of 1:1- 10:1. When in limiter mode, it acts with a variable ratio of 10:1-20:1, more aggressively limiting peaks.
下面的按钮，可以在压缩器和限制器模式之间切换Tube Leveling Amplifier。当处于压缩器模式时，它以1:1-10:1的可变比率工作。当处于限制器模式时，会以10:1-20:1 的可变比率工作，更积极地限制peaks峰值。

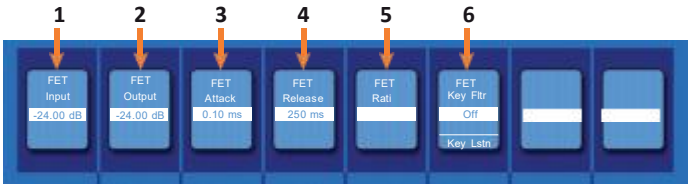
4. **Key Filter.** This encoder sets, and the scribble displays, the frequency at which the Tube Leveling Amplifier will engage. It will still process the entire frequency range, but it is only engaged when the specified frequency is present. Press the button below to listen to the signal being used to trigger the compressor (including the effects of the high-pass filter, as set with the Key Filter control). Press again to switch back to the normal channel signal.
这个编码器设置，Tube Leveling Amplifier 将接合的频率，并且 scribble 显示。它仍然会处理整个频率范围，只有当指定的频率出现时，它才会启动。按下面的按钮，可以听到用于起动压缩器的信号（包括高通滤波器的效果，如用关键滤波器控制所设定的）。再按一下，就可以切换回正常的通道信号。


Press the **Processor** button to turn the Compressor on or off.
按**Processor**按钮，可以打开或关闭压缩器。

## 6.5.3 Class-A FET Compressor A类 FET 压缩机

**Dynamic Fat Channel Controls**

When the Class-A FET Compressor is selected, the following controls are available in the Fat Channel:
当选择了A类FET压缩器时，Fat Channel中可用控制：




1. **Input Gain.** Sets input gain to the compressor. This setting affects the action of the compressor, so feel free to try various settings to find the optimal effect for your needs.
设置压缩器的输入增益。这一设置会影响到压缩器的作用，因此可以随意尝试各种设置，以找到适合你的最佳效果。
2. **Output Gain.** Sets the amount of "makeup gain" to apply to a signal. Once a signal is compressed, its overall level is often reduced. This gain control lets you bring it back up to the proper level after compression occurs.
设置应用于信号的 "makeup gain" 的量。一旦信号被压缩，它的整体电平往往会被降低。这个增益控制，可以在压缩后把它恢复到适当的电平。
3. **Attack.** Sets the time it takes for the compressor to begin attenuating a signal once it passes the threshold.
在信号通过阈值后，设定压缩器开始衰减的时间。
4. **Release.** Sets the time it takes for the compressor to stop attenuating a signal once it falls below the threshold.
设定当信号低于阈值时，压缩器停止衰减的时间。
5. **Ratio.** Sets the Ratio for the compressor. The following Ratios are available: 4:1, 8:1, 12:1, 20:1, or All.
设置压缩机 Ratio。有以下比例可供选择：4:1, 8:1, 12:1, 20:1, 或全部。
6. **Key Filter.** This encoder sets, and the scribble displays, the frequency at which the compressor will engage. The compressor will still process the entire frequency range, but it is only engaged when the specified frequency is present. Press the button below to listen to the signal being used to trigger the compressor (including the effects of the high-pass filter, as set with the Key Filter control). Press again to switch back to the normal channel signal.

   这个编码器设置，并在 scribble displays 显示出压缩器的频率。压缩器将在该频率上工作。压缩器仍将处理整个频率范围，只有当指定的频率出现时，它才会投入。按下面的按钮，可以听到用于启动压缩器的信号（包括高通滤波器的效果，如用关键滤波器控制所设定的）。再按一下，就可以切换回正常的通道信号。


Press the **Processor** button to turn the Compressor on or off.
按 **Processor**处理器按钮，可以打开或关闭压缩器。

## 6.6 EQ Mode (Dynamic Fat Channel) 模式


Pressing the **EQ** button in the Fat Channel gives you access to equalization settings for the currently selected channel or mix. An EQ (or equalizer) is a tone control that lets you make changes in the tonal balance of a signal. You can boost or cut the level of ranges of frequencies, to make corrective or creative changes to the signal.

Like the compressor, StudioLive Series III mixers ship with three EQ models from which to choose and the Fat Channel behaves differently, depending on which model is loaded. For more information on available Fat Channel plug-in models, ***see Section 6.8.5***.

在Fat Channel 中按EQ键，可以访问当前选定的通道或混音的均衡设置。EQ（或均衡器）是一个音调控制，改变信号的音调平衡。你可以提高或降低频率范围的电平，对信号进行纠正或创造性的改变。

与压缩器一样，StudioLive III系列调音台有三种EQ模型可供选择，Fat Channel 的表现也不同，取决于加载的模型。关于可用的Fat Channel插件模型的更多信息，***请见第6.8.5 节。***

### 6.6.1 Standard EQ 标准EQ

**Dynamic Fat Channel Controls**

The Standard EQ is selected on every input channel and output by default:
默认选择的每个输入通道和输出的标准Standard EQ：


1. **Band 1 / Low Gain.** Sets the amount by which the selected frequency will be boosted or cut. Press the button below to turn the band on or off.
设定所选频率被提升或削减的量。按下面的按钮，可以打开或关闭该频段。
2. **Band 1 / Low Frequency/Q.** The encoder can control either frequency or Q for this band of EQ. Use the button below to toggle between the two. When in Frequency mode, it sets the center frequency at which signals are boosted or cut by this band of EQ. When in Q mode, it sets the Q (or width) of the current EQ band. Larger Q values affect a narrower range of frequencies. Lower Q values affect a wider range.
编码器可以控制这个 EQ 段的频率或Q值。两者之间进行切换，使用下面的按钮。当处于Frequency模式时，通过这个EQ 频段提升或削减的信号，设置为中心频率。当处于Q模式时，它设置当前均衡器频段的Q值（或宽度）。较大的Q值，影响较窄的频率范围。较低的Q值则影响较宽的范围。
3. **Band 2 / Low-Mid Gain.** Sets the amount by which the selected frequency will be boosted or cut. Press the button below to turn the band on or off.
设定所选频率被提升或削减的量。按下面的按钮，可以打开或关闭该频段。
4. **Band 2 / Low-Mid Frequency/Q.** The encoder can control either frequency or Q for this band of EQ. Use the button below to toggle between the two. When in Frequency mode, it sets the center frequency at which signals are boosted or cut by this band of EQ. When in Q mode, it sets the Q (or width) of the current EQ band. Larger Q values affect a narrower range of frequencies. Lower Q values affect a wider range.
编码器可以控制这个EQ段的频率或Q值。在两者之间进行切换，使用下面的按钮。当处于Frequency模式时，通过这个EQ 频段提升或削减的信号，设置为中心频率。当处于Q模式时，它设置当前均衡器频段的Q值（或宽度）。较大的Q值，影响较窄的频率范围。较低的Q值则影响较宽的范围。

5. **Band 3 / High-Mid Gain.** Sets the amount by which the selected frequency will be boosted or cut. Press the button below to turn the band on or off.
设定所选频提升或削减的量。按下面的按钮，可以打开或关闭该频段。
6. **Band 3 / High-Mid Frequency/Q.** The encoder can control either frequency or Q for this band of EQ. Use the button below to toggle between the two. When in Frequency mode, it sets the center frequency at which signals are boosted or cut by this band of EQ. When in Q mode, it sets the Q (or width) of the current EQ band. Larger Q values affect a narrower range of frequencies. Lower Q values affect a wider range.
编码器可以控制这个EQ段的频率或Q值。使用下面的按钮在两者之间进行切换。当处于Frequency模式时，通过这个EQ 频段提升或削减的信号，设置为中心频率。当处于Q模式时，它设置当前均衡器频段的Q值（或宽度）。较大的Q值，影响较窄的频率范围。较低的Q值则影响较宽的范围。
7. **Band 4 / High Gain.** Sets the amount by which the selected frequency will be boosted or cut. Press the button below to turn the band on or off.
设定所选频提升或削减的量。按下面的按钮，可以打开或关闭该频段。
8. **Band 4 / High Frequency/Q.** The encoder can control either frequency or Q for this band of EQ. Use the button below to toggle between the two. When in Frequency mode, it sets the center frequency at which signals are boosted or cut by this band of EQ. When in Q mode, it sets the Q (or width) of the current EQ band. Larger Q values affect a narrower range of frequencies. Lower Q values affect a wider range.
编码器可以控制这个EQ段的频率或Q值。使用下面的按钮在两者之间进行切换。当处于Frequency模式时，通过这个EQ 频段提升或削减的信号，设置为中心频率。当处于Q模式时，它设置当前均衡器频段的Q值（或宽度）。较大的Q值，影响较窄的频率范围。较低的Q值则影响较宽的范围。


When a bus is selected, the EQ has six bands. Use the **Page navigation** buttons to navigate between Bands 1-4 and Bands 5-6.
当选择了一个总线时，EQ 均衡器有六个频段。使用 **Page navigation** 按钮在1-4段和5-6段之间访问。

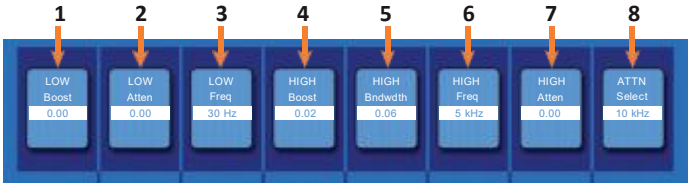

Press the **Processor** button to turn the EQ on or off.
按 **Processor** 键，打开或关闭EQ。

## 6.6.2 Passive Program EQ 均衡器

**Dynamic Fat Channel Controls**

When the Passive EQ is selected, the following controls are available in the Fat Channel:

选择 Passive EQ 时，以下控制可在Fat Channel：




1. **Low Boost.** Sets the level of boost applied around the chosen low frequency. This control interacts nicely with the Low Attenuation control, allowing for boosts in apparent bass energy while keeping overall bass energy within optimal limits.
   设定所选低频周围应用提升的电平。这个控制与 Low Attenuation 控制有很好的互动，可以提升明显的低频能量，同时将整体的低频保持在最佳范围。
2. **Low Attenuation.** Sets the level of attenuation applied around the chosen low frequency. This control interacts nicely with the Low Boost control, allowing for boosts in apparent bass energy while keeping overall bass energy within optimal limits.
   设定所选低频周围的衰减量。这个控制与Low Boost有很好的互动，可以提升明显的低音量，同时将整体的低音量保持在最佳范围内。
3. **Low Frequency Select.** Sets the center frequency of the band covered by the Low Boost and Low Attenuation controls.
   设置Low Boost和Low Attenuation控制所覆盖的频带的中心频率。
4. **High Boost.** Sets the level of boost applied around the chosen high frequency.
   设定所选择的高频周围应用的提升电平。
5. **High Bandwidth.** Sets the Q (or width) of the effect of the high EQ band.
   设置high EQ band 频段的Q值（或宽度）效果。
6. **High Frequency.** Sets the center frequency of the high EQ band.
   设置high EQ band的中心频率
7. **High Attenuation.** Sets the amount of attenuation applied in a shelving fashion to frequencies at and above the chosen high frequency.
   设置以shelving（搁架）方式应用于所选高频及以上频率的衰减量。
8. **Attenuation Select.** Sets the frequency at and above which the High Attenuation control attenuates treble content.
   设定High Attenuation 控制的衰减高音内容的频率，并在此之。

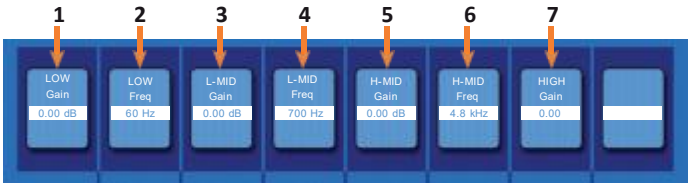

Press the **Processor** button to turn the EQ on or off.
按 **Processor** 按钮，可以打开或关闭EQ。

## 6.6.3 Vintage 1970s EQ 均衡器

**Dynamic Fat Channel Controls 控制**

When the Vintage 1970s EQ is selected, the following controls are available in the Fat Channel:

当选择 Vintage 1970s EQ 时，在Fat Channel中可以进行以下控制：



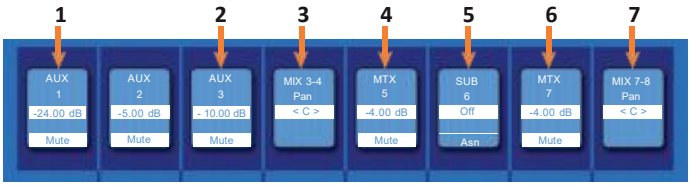

1. **Low Gain.** Sets the amount of boost or cut to apply the low-frequency band of this EQ.
   设定该均衡器的低频段的提升或削减量。
2. **Low Frequency.** Sets the shelving frequency of the low-frequency band of this EQ.
   设置该均衡器的低频段的 shelving 搁置频率。
3. **L-Mid Gain.** Sets the amount of boost or cut to apply the low-mid-frequency band of this EQ.
   设定该均衡器的中低频段的提升或削减量。
4. **L-Mid Frequency.** Sets the center frequency of the low-mid-frequency band of this EQ.
   设定该均衡器的中低频段的中心频率。
5. **H-Mid Gain.** Sets the amount of boost or cut to apply the high-mid-frequency band of this EQ.
   设定该均衡器的中高频段的提升或削减量。
6. **H-Mid Frequency.** Sets the center frequency of the high-mid-frequency band of this EQ.
   设定该均衡器的高-中频段的中心频率。
7. **High Gain.** Sets the amount of boost or cut to apply the high-frequency band of this EQ.
   设定该均衡器的高频段的提升或削减量。


Press the **Processor** button to turn the EQ on or off.
按**Processor** 按钮来打开或关闭EQ。

## 6.7 Aux Sends Mode (Dynamic Fat Channel) 模式

### Dynamic Fat Channel Controls


When the Fat Channel is in Aux Sends mode, the Scribble Strips will display different parameters depending on how you have your FlexMixes configured:
当Fat Channel 处于 Aux Sends 发送模式时，Scribble Strips 将显示不同的参数，这取决于FlexMixes的配置。

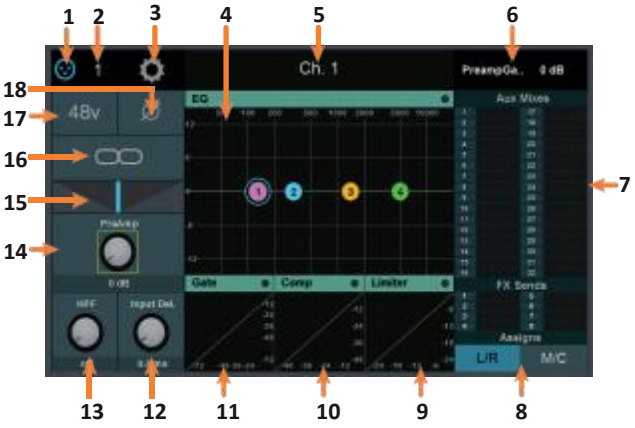



1. **Mono Aux.** The encoder controls the send level of the channel to the Mono Aux. The button beneath controls the channel mute in the Mono Aux.
编码器控制通道的发送电平到 Mono Aux 中。下面的按钮控制 Mono Aux 通道静音。
2. **Stereo Aux Send.** The encoder controls the send level of the channel to the Stereo Aux. The button beneath controls the channel mute in the Stereo Aux.
编码器控制通道的发送电平到Stereo Aux。下方的按钮控制通道的静音。
3. **Stereo Aux Pan.** The encoder controls the pan position of the channel in the Stereo Aux.
在Stereo Aux中，编码器控制通道的pan位置。
4. **Mono Matrix.** The encoder controls the send level of the channel to the Mono Matrix Mix. The button beneath controls the channel mute in the Mono Matrix Mix.
编码器控制通道的发送电平到Mono Matrix Mix。下方的按钮控制Mono Matrix Mix中的通道静音。
5. **Subgroup.** The button beneath controls the channel assignment to the Subgroup. Stereo Subgroups will be provided with a pan control as well.
下面的按钮控制Subgroup的通道分配。提供一个pan 控制给 Stereo Subgroups。
6. **Stereo Matrix.** The encoder controls the send level of the channel to the Stereo Matrix Mix. The button beneath controls the channel mute in the Stereo Matrix Mix.
编码器控制通道的发送电平到Stereo Matrix Mix。下方的按钮控制通道静音。
7. **Stereo Matrix Pan.** The encoder controls the pan position of the channel in the Stereo Matrix Mix.
在Stereo Matrix Mix中，编码器控制通道的pan位置。

# 6.8 Fat Channel Screens 图像

## 6.8.1 Channel Overview 概况


While an Input channel is selected and Input mode is active, the Channel Overview is shown on the Touch Display:




所选 Input channel 并激活Input mode模式时，图像会显示Channel Overview 通道概况：

1. **Signal Source.** Displays whether this channel is receiving signal from an analog or digital source. Press to open the Input Source screen. For more information, ***see Section 6.10.1.***
   该通道显示是否正在接收来自模拟或数字信号。按打开 Input Source screen。欲了解更多信息，***详见第 6.10.1 节***。
2. **Input Source Number.** Displays the number of the input source assigned to the current channel.
   显示分配给当前通道的输入源的编号。
3. **Settings Button.** Touch to access additional channel or bus settings.
   触控访问附通道或总线设置。
4. **EQ.** Displays the EQ overview. Touch to open the EQ Screen. ***See Section 6.6*** for more information.
   触控以打开EQ概况。更多信息***见第 6.6 节***。
5. **Name.** Displays currently selected channel or bus name.
   显示当前选定的通道或总线名称。
6. **Current Parameter.** Displays currently controlled parameter and its value.
   显示当前控制的参数和它的值。
7. **Aux and FX Send Levels.** Displays the send levels for current channel. Touch this area to open Channel Bus Sends screen. ***See Section 6.7*** for more information.
   显示当前通道的发送电平。触控以打开Channel Bus Sends图像。更多信息***见第 6.7 节***。
8. **Assignments.** Use these controls to assign/unassign the current channel to the Main bus and either the Mono/Center bus (StudioLive 64S) or the four dedicated Subgroups (all 32-channel models).
   这些控制器，将当前通道分配/取消分配到Main bus和Mono/Center bus（StudioLive 64S）或四个指定的 Subgroups（所有32通道型号）。
9. **Limiter.** Displays the Limiter overview. Touch to open the Limiter Screen.
   显示 Limiter 概述。触控以打开 Limiter Screen 图像。
10. **Compressor.** Displays the Compressor overview. Touch to open the Compressor Screen. ***See Section 6.8.4*** for more information.
    显示 "Compressor" 概况。触控以打开压缩机图像。更多信息***见第 6.8.4 节***。

11. **Gate.** Displays the Noise Gate overview. Touch to open the Noise Gate Screen. ***See Section 6.8.3*** for more information.
显示 "Noise Gate" 概况。触控以打开"Noise Gate" 图像。更多信息***见第 6.8.3 节。***
12. **Delay.** Sets the amount of alignment delay applied to the input channel or bus. Touch to enable manipulation by the Master Control encoder. ***See Section 13.6 and 13.7*** for more information.
设置应用于输入通道或总线的alignment delay（微调）的量。触控启用 Master Control encoder 编码器进行操作控制。更多信息***见 13.6和 13.7 节***。
13. **HPF Frequency.** Sets the High Pass Filter cut-off frequency. Touch to enable manipulation by the Master Control encoder.
设置High Pass Filter的cut-off截止频率。触控可使Master Control encoder 编码器进行操作控制。

    ***Note:*** *The Mainstereo and Mono bus on the StudioLive 64S provides a toggle between Low Pass Filter and High Pass Filter behavior.*
    ***注意：****StudioLive 64S 的 Mainstereo & Mono bus，可在 Low Pass Filter 和 High Pass Filter 反应之间切换。*
14. **Preamp Gain.** Sets the preamp gain. Touch this knob to enable manipulation by the Master Control encoder.
设置前置放大器的增益。触控这个旋钮，可通过Master Control encoder编码器进行操作控制。
15. **Pan.** Sets the pan position. Touch to enable manipulation by the Master Control encoder.

    设置pan位置。触控以启用Master Control encoder编码器进行操作控制。
16. **Link.** Links or unlinks the channel to the adjacent channel or bus to create a stereo pair.通道链接或解除与相邻通道的链接或总线，以创建一个立体声组。
17. **+48v.** Touch to enable/disable phantom power.
触控可启用/禁用幻象电源。
18. **Polarity Invert.** Touch to enable/disable polarity invert.
触控可启用/禁用polarity invert。

## 6.8.2 Channel Settings Screen 图像

When the overview screen for a channel or bus is open, can access the Channel Settings screen by tapping on the Settings button (Call-out #3).
当打开通道或总线概况图像时，通过点击Settings按钮（Call-out #3）进入Channel Settings screen。


1. **Channel Name.** Touch the **name field** to enter a new name with the onscreen keyboard.

   **触碰name field**，用屏幕键盘输入一个新的名称。

2. **Channel Type.** Touch the **type field** to choose between the standard identifying channel types (such as Guitars or Drums).

   触碰**type field**和标准识别通道类型（如吉他或鼓）之间选择。

3. **Digital Send Options.** Touch **Pre** (signal is sent before Fat Channel processing) or Post (signal is sent after Fat Channel Processing) to choose the signal routing when sending this channel or bus to a USB or network-connected audio device.
   触碰 Pre（信号在Fat Channel处理前发送）或 Post（信号在Fat Channel处理后发送），可以将此通道或总线发送到USB或网络连接的音频设备时，选择信号路由。

4. **Channel Color.** Sets the color of a channel's Select button. If no color is selected, the Select button will be blue.
   设置通道的Select按钮的颜色。如没有所选颜色，Select按钮将是蓝色的。

5. **Stereo Link Options.** These options let you specify the linking behavior when you link pairs of channels or buses, with the following options:
   链接成对的通道或总线时，这些选项让你指定链接，有以下选项：

   - **Preamp Level/Trim.** Enable this option to link preamp level and trim settings when channels are linked. Disable to allow these settings to be individually set for each linked channel.
     启用这个选项，当通道被链接时，可以链接前置放大器的电平和trim设置。禁用，允许为每个链接的通道单独设置这些设置。
   - **Panning.** Enable this option for "stereo" panning mode, which lets you use the pan controls on linked channels or buses to control overall stereo "width."Moving a pan control on a linked channel moves the corresponding pan control the same amount in the opposite direction. Disable this option to allow independent panning of linked channels or buses.
     启用这个选项，可以实现 "stereo" 的panning模式，使用链接通道或总线上的pan控制，来控制整体的立体声 "width"。移动链接通道上的pan控制，会在相反的方向移动相应的pan控制。禁用这个选项，允许链接的通道或总线单独panning。
   - **Fader Levels.** Enable this option to link volume faders for linked pairs of channels or buses. Disable it to allow independent manipulation of fader levels for linked channels.
     启用该选项，可以将成对的通道或总线的音量推子连接起来。仅用可允许单独操作链接通道的推子。

- **Comp./Limiter.** Enable this option to link the compression and limiting detection behavior for linked channels or buses. With this option on, signals occurring either linked channel cause identical gain reduction behavior in both. Disable this option to let the compressor/limiter act independently on each linked channel.

  启用这个选项，可以将链接通道或总线的压缩和限制的检测反应联系起来。打开选项后，任何链接通道发生的信号，都会在两个通道中引起相同的增益降低行为。禁用可让压缩器/限制器独立地作用于每个链接的通道。

- **Names.** Enable this option to keep linked channel/bus names identical. With this option on, a change to either name in a linked pair is reflected in the other linked channel.
  启用该选项以保持链接的通道/总线名称相同。开启选项后，成对链接中任何一个名称的变化，都会反映在另一个链接通道中。

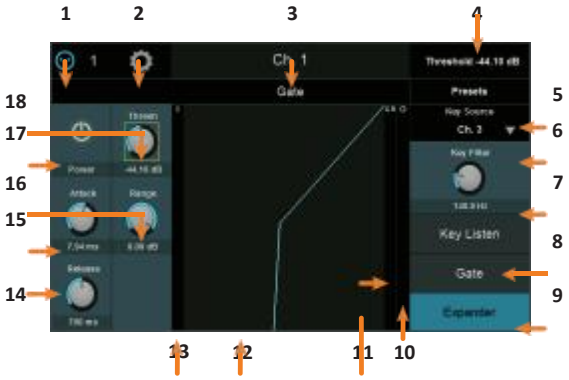
***Power User Tip:*** *Ifone of the digital inputs (Network, USB, or SD) is selected as the channel source, you will be presented with the option to designate the Digital Send source as either Analog or Digital. This is a great way to use plugin processing as an insert. This is also necessary if you'd like to record an AVB or USB input to the SD recorder. For more information, please see the* ***Using Your StudioLive as an Audio Interface with Universal Control Reference Guide****.*

***Power User Tip:*** *如果其中数字输入（网络、USB或SD）之一，选为通道源，你将会看到一个选项，即把 Digital Send 源指定为模拟或数字。这是使用插件处理作为插入的好方法。如果你想把AVB或USB输入录制到 SD录音机上，这也是必要的。更多信息，请参见* ***StudioLive《Audio Interface with Universal Control Reference Guide》****指南。*

### 6.8.3 Gate Overview Screen 图像


While Gate is active in the Fat Channel, the Touch Display displays the Gate Overview screen, displaying every Gate parameter available, along with useful metering and a graphical representation of the effect of current settings. Touching any onscreen knob allows you to use the Master Control encoder to set the selected parameter. Touching a drop-down selector (such as Key Source) lets you select from a list of relevant choices. Use the Master Control encoder to scroll through choices. Touching onscreen buttons toggles the related parameter on or off.

***Power User Tip:*** *For StudioLive models with dynamic Fat Channel displays, many of these parameters can also be controlled from the encoders and buttons in the Fat Channel.* ***See Section 6.4.1 for details****.*




Fat Channel中的 "Gate"，处于激活状态时，Touch Display 会显示 "Gate" Overview 的概况图像，显示每一个可用的 "Gate"参数，以及有用的测量和当前设置的效果的图形表示。触碰上的旋钮，可以使用 Master Control encoder来设置所选参数。触碰下拉选择器（如键源），可以从相关的选择列表中进行选择。使用Master Control 编码器滚动选择。触屏上的按钮，可以打开或关闭相关参数。

***Power User Tip:*** 对于带有动态 Fat Channel 显示的 StudioLive 型号，许多参数也可以通过Fat Channel中的编码器和按钮来控制。***详见第 6.4.1 节***。

1. **Signal Source.** Displays whether this channel is receiving signal from an analog or digital source. Press to open the Digital Patching screen. For more information, ***see Section 12.3.***
   显示该通道是否正在接收模拟或数字信号。按打开Digital Patching 图像。更多信息，***请见第 12.3 节。***
2. **Settings Button.** Touch to access additional channel settings.
   触控进入其他频道设置。
3. **Channel Name and Number.** Displays currently selected channel name and number.
   显示当前所选通道名称和编号。
3. **Current Parameter.** Displays currently controlled parameter and its value.
   显示当前控制的参数和它的值。
4. **Presets.** Opens the Preset Library. ***See Section 5.9*** for more information.
   打开 Preset Library。更多信息***见第 5.9 节***。
5. **Key Source (Input Channels only).** The encoder sets and the scribble strip displays the input signal that will trigger the gate. This method of triggering a dynamics processor is often called side chaining. Set to "None"to disable sidechaining. For more information on Sidechaining, ***seeSection 13.8***.
   编码器设置和scribble strip 显示将引发Gate的输入信号。这种动态处理器引发的方法，通常被称为侧链。设置为 "None"可以禁用侧链。关于侧链的更多信息，***见第 13.8 节***。

***Note:*** *Because the StudioLive 64S employs the quad-core FLEX DSP engine, any of the first 32 channels can be used a Key Source for channels 1-32 while any of the second 32 channels can be used as a Key Source for channels 33-64.*

*StudioLive 64S 采用四核 FLEX DSP 引擎，前 32 channels 通道中的任何一个都可以作为通道 1-32 的 Key Source 音源，后 32 个通道中的任何一个都可以作为通道 33-64 的 Key Source 音源。*

6. **Key Filter.** Sets the Key Filter frequency.

   设置 Key Filter 频率。

7. **Key Listen.** Touch to enable the Key Listen function.

   触控以启用 Key Listen功能。

8. **Gate / Expander Toggle.** Toggles the function of the processor between Gate or Expander.

   Gate 或 Expander处理器之间的切换功能。

10. **Output Meter.** Displays the post-Gate signal level.
    显示 post-Gate的信号电平。

11. **Gain Reduction Meter.** Displays the amount of Gain Reduction applied by the Gate to the channel.
    应用于Gate 通道显示Gain Reduction增益降低量。

12. **Graph.** Displays the Gate curve.
    显示 Gate curve

13. **Input Meter.** Displays the pre-Gate signal level.

    显示 pre-Gate 信号电平。

14. **Release.** Sets the Release time for the Gate/Expander.

    设置Gate/Expander的Release time。

15. **Attack.** Sets the Attack time for the Gate/Expander.

    设置Gate/Expander的Attack time。

16. **Range.** Sets the Range for the Gate.

    设置Gate的 Range范围。

17. **Threshold.** Sets the Threshold for the Gate/Expander.

    设置 Gate/Expander 的 Threshold （音频响度的标准）。

18. **Gate On/Off.** Turns the Gate on or off for the current channel or bus.

    为当前通道或是总线，打开或是关闭 Gate。

***Power User Tip:*** *Use the Tap or Shift buttons to "null" button any parameter by pressing and holding the Tap or Shift buttons while adjusting the control of your choice to return that control to its default setting.*

***Power User Tip:*** *使用Shift 或 Tap 按钮，调整你所选的控制，使该控制对应参数返回到其默认设置"null"归零*

### 6.8.4 Compressor Overview Screens 图像


Pressing the **Comp** button in the Fat Channel gives you access to the Compressor parameters for the selected channel or mix. A compressor is a dynamics processor that reduces the dynamic range of a signal by attenuating it by a set ratio when it exceeds a defined threshold.
在Fat Channel中的按Comp按钮，可以访问所选通道或混音的压缩器参数。压缩器是一个动态处理器，当信号超出定义的阈值时，通过设定的比例衰减，减少信号的动态范围。

This lets you tame transients in a signal and increase its overall level (if desired). It also lessens the risk of peaking and the resulting distortion. Compressing a signal and raising its level also lets you accentuate subtle details (such as room reverberation or ghost notes) which might otherwise go unheard.
这可以掌控信号中的瞬态，并提高其整体电平（如果需要的话）。它也减少了峰值和由此产生的失真。压缩一个信号并提高它的电平，还可以突显出微妙的细节（如房间混响或 ghost notes音符），否则可能听不到。

The Fat Channel gives you the following distinct compressor plug-in models to choose from, each with its own set of controls and its own behavior.
Fat Channel 提供以下不同的压缩器插件模型，供你选择，每个模型都有自己的控制和反应。

- **Standard Compressor.** A clean and full-featured compressor that offers transparent dynamic range reduction. 纯净而功能全面的压缩器，提供透明的动态范围的缩小。
- **Tube Leveling Amplifier.** A model of a tube-based optoelectronic compressor, with simple, quick controls and a classic tonal character.基于电子管的光电子压缩器的模型，具有简单、快速的控制和经典的音调特点。
- **Class-A FET Leveling Amplifier.** A model of a Class-A FET-based compressor, with an aggressive, punchy tonal character.一个基于FET的A类压缩器的模型，具有强烈、有力的音调特点。

In addition to the three plug-in models that come with your StudioLive mixer, the following additional compressor models are available for purchase from shop.presonus.com:

除了StudioLive调音台附带的三种插件型号外，还有以下额外的压缩器型号供购买，还有网站 shop.presonus.com :

- **Brit Comp.** Capturing the unique sound of a twin VCA gain-reduction amplifier design, the Brit Comp is ideal for taming piano dynamics or adding punch to drums and percussion. Included in the Classic Studio Bundle.
采集 twin VCA gain-reduction 增益减弱放大器设计的独特声音，Brit Comp 是掌控钢琴动态或增加鼓和打击乐力度的理想选择。包括 Classic Studio Bundle 捆绑包。
- **Classic Compressor.** The smooth character of this compressor allows you to create transparent or extreme color changes to your audio, making it a workhorse for just about any application. Included in the Vintage Channel Strips Bundle.
这款压缩器的平滑特性，为你的音频创造透明或 extreme color 变化，使它成为几乎所有应用的主力。包括在 Vintage Channel Strips Bundle。
- **Comp 160 Compressor.** With simple controls, yet cap able of extreme compression traits, the Comp 160 provides VCA character with a personality all its own. Try it on drums—you'll be glad you did! Included in the Modern Classics Bundle.
Comp 160具有简单的控制，能够实现extreme compression traits 特性，它提供VCA特性具有自我风格。在鼓上试试吧——你会感到高兴！ 包括 Modern Classics Bundle。
- **Everest C100A Compressor.** Based on a classic design focused on gentle, natural-sounding gain reduction, the Everest C100A helps control dynamics while still letting the signal breathe. Included in the Modern Classics Bundle.

经典设计 Everest C100A，专注于温和的、自然的增益减弱，帮助控制动态，同时仍可使信号顺畅。包括 Modern Classics Bundle。

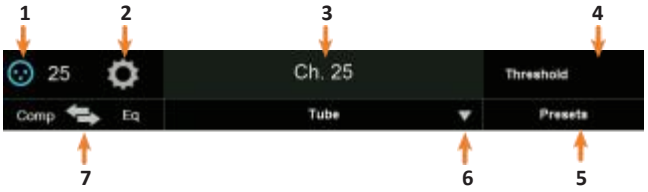
- **FC-670 Compressor.** This model of an iconic compressor/limiter of the 1950s imparts an unmistakable silky warmth on just about any signal. Included in the Classic Studio Bundle.
  这款具有标志性1950年代的压缩器/限幅器的模型，在任何信号上，都能赋予一种明确无误的顺滑宽厚感。包括Classic Studio Bundle。
- **RC-500 Compressor.** FET-based compressors such as the one in the PreSonus RC 500 use transistors to emulate a triode tube's operation and sound. Modeled after PreSonus' RC500 signature FET compressor, this plug-in provides an ultra-fast attack time and repeatable performance. Included in the free PreSonus Bundle.
  基于FET的压缩机，比如，PreSonus RC 500中的压缩机，使用晶体管来模拟三极管的操作和声音。这个插件以PreSonus的RC500标志性FET压缩器为模型，提供了超快的Attack time时间和可重复的性能。包括免费的PreSonus Bundle。
- **Tube P1B Compressor.** In general, the response time of optical compressors tends to soften the attack and release, which can smooth out uneven volume fluctuations. Emulating an all-tube, optical design, the Tube P1B compressor delivers musicality, preserving the clarity of the signal even at the most extreme settings. Included in the Vintage Channel Strips Bundle.
  通常，光学压缩机的响应时间倾向于减轻attack和release，这可以平顺不均匀的音量波动。模拟全管式光学设计，Tube P1B压缩器具有音乐性，即使在最极端的设置下，也能保持信号的清晰度。包括在Vintage Channel Strips Bundle。
- **VT-1 Compressor.** Stunning high-end sound and incredible versatility are hallmarks of PreSonus'VT- 1, which is modeled after a popular vacuum tube channel strip's FET compressor. The VT- 1 provides fast attack and repeatable performance with a fully variable ratio. Included in the free PreSonus Bundle.
  令人惊叹的高端声音和令人难以置信的多功能性是PreSonus VT- 1的特点，它是以流行的真空管通道条的FET压缩器为模型。VT-1以完全可变的比率，提供快速的Attack和可重复的性能。包括在免费的PreSonus Bundle中。

More information on installing and using plug-in models can be found in the ***PreSonus StudioLive Fat Channel Plug-ins Addendum***. Once a plug-in has been installed on your StudioLive, it will be available from the drop-down list on the Touch Display.

关于安装和使用插件模型的更多信息，可以在 PreSonus StudioLive Fat Channel Plug-ins Addendum 中找到。StudioLive上一旦安装了插件，从 Touch Display 屏的下拉列表中可获得。

***Power User Tip:*** *Use the Shift or Tap buttons to "null" button any parameter by pressing and holding the Shift or Tap button while adjusting the control of your choice to return that control to its default setting.*

The compressor models can be selected from the Touch Display when Compressor mode is active in the Fat Channel:




***Power User Tip:*** 使用Shift或Tap按钮，调整你所选的控制，使该控制对应参数返回到其默认设置"null"归零。

Fat Channel中的压缩器模式被激活时，可以从Touch Display 屏上选择压缩器型号。

1. **Signal Source.** Displays whether this channel is receiving signal from an analog or digital source. Press to open the Input Source screen. For more information, ***see Section 6.11.***
   该通道显示是否正在接收来自模拟或数字信号。按下打开Input Source screen屏幕。欲了解更多信息，***参见第6.11节。***
2. **Settings Button.** Touch to access additional settings.
   该触控可进入 additional settings。
3. **Name and Number.** Displays currently selected channel or bus name and number.
   显示当前所选通道或是总线名称，以及数量。
4. **Current Parameter.** Displays currently control parameter and its value.
   显示当前控制参数以及它的值。
5. **Presets.** Opens Presets menu on the Touch Display.
   在Touch Display 打开Presets菜单。
6. **Compressor Type.** Changes the type of Compressor model.
   改变 Compressor 模式的类型。
7. **Comp>EQ.** The Compressor and EQ can be reordered in the signal path. By default, the signal passes through the compressor before passing through through EQ. When reordered, the EQ is placed before the compressor in the signal path.
   在单独路径中的Compressor 和 EQ 可重新排序。默认下，信号通过EQ之前先经过压缩器。重新排序后，EQ在信号路径中被放在压缩器之前。

***Power User Tip:*** *Placing the compressor before the EQ allows you to make dramatic changes to the EQ settings without needing to alter the compressor setting. However, if you place the EQ before the compressor, you can better control different frequencies, achieving a more natural response.*
***Power User Tip:*** *将压缩器放在EQ之前，可以对EQ的设置进行大幅度的改变，而不需要改变压缩器的设置。如果把EQ放在压缩器之前，可以更好地控制不同的频率，实现更自然的响应。*

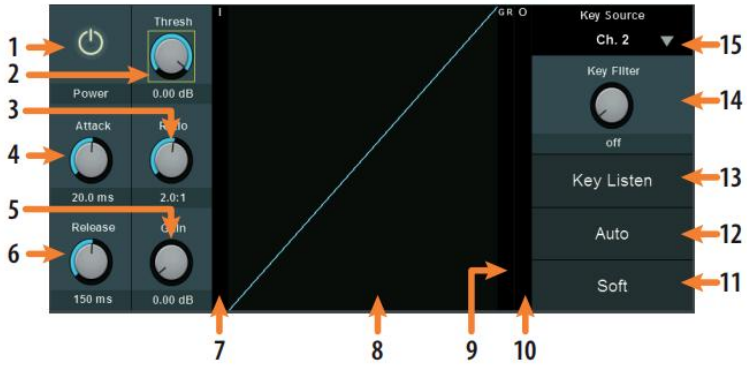
### 6.8.4.1 Standard Compressor Overview Screen 标准压缩器概况图像

When the Fat Channel is in Standard Compressor mode, the Touch Display shows an overview screen that displays the relevant parameters, along with useful metering and a graphical representation of the effect of current settings. Touching any onscreen knob allows you to use the Master Control encoder to set the selected

parameter. Touching a drop-down selector (such as Key Source) lets you select from a list of relevant choices. Use the Master Control encoder to scroll through choices. Touching onscreen buttons toggles the related parameter on or off.

当Fat Channel 处于Standard Compressor 模式时，Touch Display 会显示一个概览图像的相关参数，以及实用测量和当前设置的效果图形显示。触屏上的任意旋钮，可以使用Master Control encoder编码器来设置所选参数。触控下拉选择器（如键源），从相关的选择列表中可以选择。使用Master Control 编码器滚动选择。 触屏上的按钮，可以打开或关闭相关参数。

***Power User Tip:*** *For StudioLive models with dynamic Fat Channel displays, many of these parameters can also be controlled from the encoders and buttons in the Fat Channel.* ***See Section 6.5.1 for details****.*




当胖子通道处于标准压缩器模式时，触摸显示屏会显示一个概览屏幕，显示相关的参数，以及有用的计量和当前设置的效果的图形表示。触摸屏幕上的任何一个旋钮，就可以使用主控制编码器来设置所选的 参数。触摸一个下拉选择器（如键源）可以让你从相关的选择列表中选择。使用主控制编码器来滚动选择。 触摸屏幕上的按钮，可以打开或关闭相关参数。

***Power User Tip:*** 对于带有动态 Fat Channel 显示的 StudioLive 型号，许多参数也可以通过Fat Channel中的编码器和按钮来控制。 ***详情见第6.5.1节***。

1. **Processor On/Off.** Enables or disables the Compressor.启用或禁用Compressor。
2. **Threshold.** Sets the Threshold for the Compressor. 设定Compressor的门限。
3. **Ratio.** Sets the Compressor Ratio. 设置压缩的比率。
4. **Attack.** Sets the Attack time for the Compressor. 设定压缩器的Attack time。
5. **Gain.** Sets Make-up Gain for the Compressor. 设置Compressor 增益弥补。
6. **Release.** Sets the Release time for the Compressor. 设置Compressor的Release time。
7. **Input Meter.** Displays the pre-Compressor signal level. 显示pre-Compressor 信号电平。
8. **Graph.** Displays current compression curve. 显示当前Compressor 曲线。
9. **Gain Reduction Meter.** Displays the amount of Gain Reduction applied by the Compressor to the channel. 显示Compressor 应用于该通道的Gain Reduction 量。
10. **Output Meter.** Displays the post-Compressor signal level. 显示post-Compressor 的信号电平。
11. **Soft.** Enables Soft knee compression. 启动压缩的Soft knee（软拐点）。
12. **Auto.** Enables Auto Mode. 启动 Auto Mode（自动模式）。
13. **Key Listen.** Touch to enable the Key Listen function. 触控启用Key Listen功能。
14. **Key Filter.** Sets the Key Filter frequency. 设置Key Filter（键噪滤波器）频率。
15. **Key Source (Input Channels only).** Sets the Key Source for the Compressor. 设置Compressor的 Key Source 信号来源。

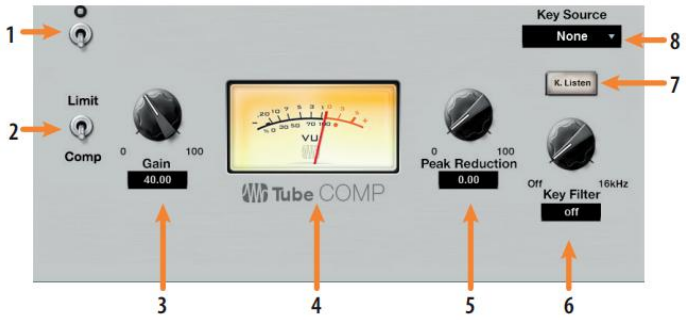
***Note:*** *Because the StudioLive 64S employs the quad-core FLEX DSP engine, any of the first 32 channels can be used a Key Source for channels 1-32 while any of the second 32 channels can be used as a Key Source for channels 33-64.*
***注意：****由于StudioLive 64S采用了四核FLEX DSP引擎，前32通道中的任何一个都可以作为通道1-32的音源，而后32通道中的任何一个都可以作为通道33-64的音源。*

### 6.8.4.2 Tube Leveling Amplifier Overview Screen

When the Fat Channel is in Tube Compressor mode, the Touch Display shows an overview screen that displays the relevant parameters. Touching any onscreen knob allows you to use the Master Control encoder to set the selected parameter. Touching a drop-down selector (such as Key Source) lets you select from a list of relevant choices. Use the Master Control encoder to scroll through choices. Touching onscreen buttons toggles the related parameter on or off.
当Fat Channel处于 Tube Compressor 模式时，触屏会显示一个概览图像的相关参数。触屏幕上的任何旋钮，可以使用Master Control编码器来设置所选参数。触控下拉选择器（如键源）可以从相关的选择列表中选择。使用Master Control编码器滚动选择。触屏上的按钮，可以打开或关闭相关参数。

***Power User Tip:*** *For StudioLive models with dynamic Fat Channel displays, many of these parameters can also be controlled from the encoders and buttons in the Fat Channel.* ***See Section 6.5.2 for details****.*

***Power User Tip:*** *带有动态Fat Channel显示的 StudioLive 型号，许多参数可以通过Fat Channel的编码器和按钮来控制。* ***详情见第6.5.2节****。*




1. **Processor On/Off.** Enables or disables the Compressor. 启动或禁用Compressor。
2. **Comp / Limiter.** Switches between the compressor and limiter modes. 在压缩器和限制器模式之间切换。
3. **Gain.** Sets the input gain to the compressor. 设置压缩器的输入增益。
4. **VU Meter.** Displays the post-Compressor signal level. 显示压缩后的信号电平。
5. **Peak Reduction.** Sets the amount of peak reduction to apply to the signal. 设置应用于信号源的峰值减少量。
6. **Key Filter.** Sets the Key Filter frequency. 设置Key Filter键噪滤波频率。
7. **Key Listen.** Touch to enable the Key Listen function. 触控启用Key Listen功能。
8. **Key Source (Input Channels only).** Sets the Key Source for the Compressor.设置 Compressor的Key Source键源。

**Note:** *Because the StudioLive 64S employs the quad-core FLEX DSP engine, any of the first 32 channels can be used a Key Source for channels 1-32 while any of the second 32 channels can be used as a Key Source for channels 33-64.*

***注意：****StudioLive 64S采用四核FLEX DSP引擎，前32 channels中的任何一个都可以作为通道1-32的音源，而后32 channels中的任何一个都可以作为通道33-64的音源。*

### 6.8.4.3 Class-A FET Compressor Overview Screen

When the Fat Channel is in Class A FET Compressor mode, the Touch Display shows an overview screen that displays the relevant parameters. Touching any onscreen knob allows you to use the Master Control encoder to set the selected parameter. Touching a drop-down selector (such as Key Source) lets you select from a list of relevant choices. Use the Master Control encoder to scroll through choices. Touching onscreen buttons toggles the related parameter on or off.

***Power User Tip:*** *For StudioLive models with dynamic Fat Channel displays, many of these parameters can also be controlled from the encoders and buttons in the Fat Channel.* ***See Section 6.5.3 for details.***


当 Fat Channel 处于A类FET Compressor模式时，Touch Display 显示一个概览图像的相关参数。触屏幕上的任何旋钮，可以使用 Master Control 编码器来设置所选参数。触控下拉选择器（如键源）可以从相关的选择列表中选择。使用 Master Control 编码器滚动选择。触屏上的按钮，可以打开或关闭相关参数。

***Power User Tip:*** 带有动态 Fat Channel 显示的 StudioLive 型号，许多参数也可以通过Fat Channel中的编码器和按钮来控制。***详情见第 6.5.3 节***。

1. **Processor On/Off.** Enables or disables the Compressor. 启动或禁用Compressor。
2. **Input.** Sets the input gain to the compressor. 设置Compressor输入增益。
3. **Output.** Sets the make-up gain for the compressor. 设置Compressor的增益弥补。
4. **Attack.** Sets the attack time for the compressor. 设置Compressor的attack time。
5. **Release.** Sets the release time for the compressor. 设置Compressor的release time。
6. **VU Meter.** Displays the post-Compressor signal level. 显示post-Compressor信号源电平。
7. **Ratio.** Sets the ratio for the compressor. 设置compressor压缩比率。
8. **Key Filter.** Sets the Key Filter frequency. 设置Key Filter 键噪滤波频率。
9. **Key Listen.** Touch to enable the Key Listen function. 触控启动Key Listen功能。
10. **Key Source (Input Channels only).** Sets the Key Source for the Compressor. 设置Compressor的Key Source。

**Note:** *Because the StudioLive 64S employs the quad-core FLEX DSP engine, any of the first 32 channels can be used a Key Source for channels 1-32 while any of the second 32 channels can be used as a Key Source for channels 33-64.*

***注意：****StudioLive 64S采用了四核FLEX DSP引擎，前32 channels中的任何一个都可以作为通道1-32的音源，而后32 channels中的任何一个都可以作为通道33-64 的音源。*

### 6.8.5 EQ Overview Screens EQ概况图像


Pressing the **EQ** button in the Fat Channel gives you access to equalization settings for the currently selected channel or mix. An EQ (or equalizer) is a tone control that lets you make changes in the tonal balance of a signal. You can boost or cut the level

of ranges of frequencies, to make corrective or creative changes to the signal.

The Fat Channel gives you the following distinct EQ models to choose from, each with its own set of controls and its own behavior.

按Fat Channel中的EQ键，可以访问当前所选定通道或混音的均衡设置。EQ（或均衡器）是一个音调控制，让你改变信号的音调平衡。你可以提高或降低频率范围的电平，以对信号进行纠正或进行创造性的改变。

Fat Channel为你提供了以下不同的EQ模型，供你选择，每个模型都有自己的一套控制和不同反应。

- **Standard EQ.** A clean and full-featured EQ that offers transparent tone shaping.
  具有纯净音频、功能全面的均衡器，提供透明的音色塑造。
- **Passive Program EQ.** A model of a tube-based EQ with simple, quick and a classic tonal character.

基于电子管的均衡器模型，具有简单、快速和经典的音质特点。

- **Vintage 1970s EQ.** A model of a classic solid-state EQ, with simple, musical frequency settings and a lot of character.
  一个经典的固态均衡器的模型，具有简单的、音乐频率设置等大量特点。

In addition to the three models that come with your StudioLive mixer, the following additional EQ models are available for purchase from shop.presonus.com. Like the Passive and Vintage EQ models, each of these plug-ins can be used on any input or output channel:

除了StudioLive调音台附带的三种型号外，还可以从shop.presonus.com购买以下额外的EQ型号。与Passive 和 Vintage EQ模型一样，这些插件都可以在任何输入或输出通道上使用。

**Alpine EQ-550.** The 1960s-vintage EQ provides consistent, repeatable equalization using three overlapping bands, divided into seven fixed frequency points, each with five steps of boost or cut. Its selectable peaking or shelving filters for the high and low band, along with an independently insertable bandpass filter, provide an easy path to creating acoustically superior equalization. Included in the Classic Studio Bundle.

1960年代的EQ，使用三个重叠的频段提供一致性的、可重复的均衡，分为七个固定的频率点，每个频率点，分为五个步骤的提升或削减。它的高、低频段，可选择的峰值或搁架滤波器，以及一个单独的可插入式的带通滤波器，为创造卓越的声学均衡提供了一个简单的途径。包括在Classic Studio Bundle中。

- **Baxandall EQ.** This EQ offers the world's most popular EQ curve. Using gently sweeping treble and bass EQ shelves, it allows you to make subtle, yet effective, changes over wide swaths of the frequency spectrum. Included in the Modern Classics Bundle.
  这个 EQ 提供了全球最热门的EQ曲线。使用平缓的掠过的高音和低音EQ均衡器搁架，在广泛的频谱范围内，可以创造微妙而有效的改变。包括在 Modern  Classics Bundle中。

**RC-500 EQ.** It's rare to find a truly outstanding solid-state channel strip that can deliver a vintage vibe reminiscent of classic high-end products, yet employs a thoroughly modern design. The PreSonus RC 500 was one of these rare gems. The RC 500 EQ plug-in is modeled after the channel strip's 3-band semi-parametric EQ and combines isolated filters and optimized, per-band Q to provide subtle signal- shaping without harsh artifacts. Included in the free PreSonus Bundle.

很少能找到一个真正出色的固态通道条，它能提供一种让人想起经典高端产品的复古氛围，但又采用了彻底的现代设计。PreSonus RC 500是这些罕见的宝石之一。RC 500 EQ 插件是以通道条的3段半参数EQ为模型，结合了隔离滤波器和优化的每段Q值，以提供微妙的信号整形，而没有刺耳的人工痕迹。包括在免费的PreSonus Bundle中。

- **Solar 69 EQ.** The sound of classic British EQ is absolutely legendary and has enhanced many a great recording. Emulating this classic British design, the Solar 69 EQ adds definition to kick drums, shapes electric guitars, and adds shimmer to acoustic guitars and vocals without sacrificing body. Included in the Classic Studio Bundle.
  传统英国的EQ声音，绝对是个传奇，增强了许多绝佳的录音。Solar 69 EQ模仿这种设计，为踢鼓增加了清晰度，电音吉他塑造，为原声吉他和人声添加shimmer振幅微扰，不会影响主体。包括在Classic Studio Bundle。
- **Tube Midrange EQ.** This midrange EQ is based on a passive, all-tube design for ultra-smooth and musical equalization, making it ideal for any midrange source material. Included in the Vintage Channel Strips Bundle.
  这个中间音 EQ是基于无源、全管设计，用于超平滑的音乐均衡，使其成为任何中间音源的理想选择。包括在Vintage Channel Strips Bundle中。
- **Vintage 3-band EQ.** With its distinct filter shaping, sheen, and bite, this three-band active EQ includes both high and low shelving filters, providing enhanced tone-shaping possibilities. Included in the Vintage Channel Strips Bundle.
  这款三段式有源均衡器具有独特的滤波器shaping、sheen和bite，包括高和低的搁架滤波器，提供音调塑造的可能性。包括在Vintage Channel Strips Bundle中。
- **VT-1 EQ.** The VT- 1 EQ models a popular vacuum tube channel strip's 4-band semi-parametric EQ, which combines isolated filters and optimized, per band Q. Designed with musicality in mind, this EQ is smooth and refined, which made it an instant classic. Included in the free PreSonus Bundle.
  VT- 1 EQ 型号是一个热门的真空管道条的4段半参数均衡器，它每段Q值结合了隔离优化的滤波器。考虑到了音乐性，EQ设计平滑而精致，这是它瞬间成为经典。包括在免费的 PreSonus Bundle 中。

More information on installing and using plug-in models can be found in the ***PreSonus StudioLive Fat Channel Add-on Addendum***. Once a plug-in has been installed on your StudioLive, it will be available from the drop-down list on the Touch Display.

关于安装和使用插件模型的更多信息，在PreSonus StudioLive Fat Channel Add-on Addendum 中可以找到。StudioLive一旦安装了插件，它就可以从触屏的下拉列表中获得。

The eight Scribble Strips in the Fat Channel show pertinent data about the current settings of these controls. The controls differ, based on the model of EQ you select.
Fat Channel中的八个Scribble Strips，显示控制的当前设置的相关数据。根据你所选的EQ型号，这些控制是不同的。

***Power User Tip:*** *Use the Tap button to "null" button any parameter by pressing and holding the Tap button while adjusting the control ofyour choice to return that control to its default setting.*

***Power User Tip:*** 使用 "*Tap*"按钮，同时调整你选择的控制时，使该控制返回其对应参数默认的设置“null”归零 。

The EQ models can be selected from the Touch Display when EQ mode is active in the Fat Channel:

当Fat Channel中EQ模式激活时，可以从Touch Display 屏上选择EQ模式。


1. **Signal Source.** Displays whether this channel is receiving signal from an analog or digital source. Press to open the Digital Patching screen. For more information, ***see Section 12.3.1.***

   ***显示该通道是否正在接收模拟或数字信号。按下打开数字配线屏幕。更多信息请见第12.3.1节。***

2. **Channel Settings Button.** Touch to access additional channel settings.
   触控可进入其他频道设置。

3. **Name and Number.** Displays currently selected channel or bus name and number.
   显示当前选择的通道或总线的名称和编号。

4. **Current Parameter.** Displays currently control parameter and its value.
   显示当前控制参数及它的值。

5. **Presets.** Opens Presets menu on the Touch Display.
   在 Touch Display中打开 Presets 菜单。

6. **EQ Type.** Changes the type of EQ model.
   改变 EQ 模式类型。

7. **Comp>EQ.** The Compressor and EQ can be reordered in the signal path. By default, the signal passes through the compressor before passing through through EQ. When reordered, the EQ is placed before the compressor in the signal path.
   Compressor 和EQ 可以在信号路径中重新排序。默认情况下，信号经过压缩器，再经过EQ。当重新排序时，EQ在信号路径中被放在压缩器之前。

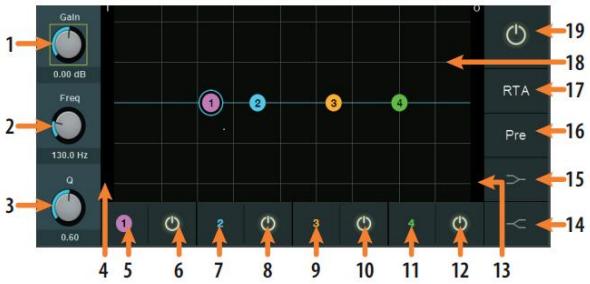
***Power User Tip:*** *Placing the compressor before the EQ allows you to make dramatic changes to the EQ settings without needing to alter the compressor setting. However, if you place the EQ before the compressor, you can better control different frequencies, achieving a more natural response.*
*将压缩器放在EQ之前，对EQ的设置可进行大幅度的改变，而不需要改变压缩器的设置。但是，如果把EQ放在压缩器之前，可以更好地控制不同的频率，实现更自然的响应。*

### 6.8.5.1 Standard EQ Overview Screen 标准EQ 概况图像

When the Fat Channel is in Standard EQ mode, the Touch Display shows an EQ overview screen, displaying the relevant parameters, along with useful metering and a graphical representation of the effect of current settings. Touching any onscreen knob (or EQ node, in the Standard EQ) allows you to use the Master Control encoder to set the selected parameter. Touching a drop-down selector (such as Key Source) lets you select from a list of relevant choices. Use the Master Control encoder to scroll through choices. Touching onscreen buttons toggles the related parameter on or off.
当Fat Channel处于标准EQ模式时， Touch Display屏显示EQ概述图像的相关的参数，以及实用的测量和当前设置效果的图形显示。触屏上的任何旋钮（或EQ节点，在标准EQ中），使用Master Control 编码器，可以设置所选参数。触控一个下拉选择器（如 Key Source）从相关的选择列表中可以选择。使用Master Control编码器滚动选择。触屏上的按钮，可以打开或关闭相关参数。

***Power User Tip:*** *For StudioLive models with dynamic Fat Channel displays, many of these parameters can also be controlled from the encoders and buttons in the Fat Channel.* ***See Section 6.6.1 for details****.*

***Power User Tip:*** *带有动态 Fat Channel显示的StudioLive型号，许多参数也可以通过Fat Channel中的编码器和按钮来控制。详情****见第6.6.1节****。*




1. **Gain.** Controls the amount of boost or cut applied to the frequency of the currently of the currently selected band (Call-out #5, 7, 9, or 11).
控制应用于当前所选频段（Call-out #5、7、9或11）频率的提升或衰减量。
2. **Frequency.** Sets the center frequency for the currently selected band (Call-out #5, 7, 9, or 11).
设置当前选择的频段的中心频率 (Call-out #5, 7, 9, or 11)。
3. **Q.** Sets the Q for the currently selected band (Call-out #5, 7, 9, or 11).
设置当前所选频段的Q值(Call-out #5, 7, 9, or 11).
4. **Input Meter.** Displays the Input signal to the EQ.
显示Input signal到EQ。
5. **Band 1 Select.** Selects Band 1 for control via Gain (#1), Frequency (#2), and Q (#3).
通过Gain（#1）、Frequency（#2）和 Q值（#3）用于 Band 1进行控制。
6. **Band 1 On/Off.** Enables/disables Band 1.
启用/禁用 Band1。
7. **Band 2 Select.** Selects Band 2 for control via Gain (#1), Frequency (#2), and Q (#3).
通过Gain（#1）、Frequency（#2）和 Q值（#3）选择Band 2进行控制。
8. **Band 2 On/Off.** Enables/disables Band 2.
启用/禁用Band 2。
8. **Band 3 Select.** Selects Band 3 for control via Gain (#1), Frequency (#2), and Q (#3).
通过Gain（#1）、Frequency（#2）和 Q值（#3）选择 Band 3 进行控制。
9. **Band 3 On/Off.** Enables/disables Band 3.
启用/禁用Band 3
10. **Band 4 Select.** Selects Band 4 for control via Gain (#1), Frequency (#2), and Q (#3).
通过Gain（#1）、Frequency（#2）和 Q值（#3）选择 Band 4 进行控制。
11. **Band 4 On/Off.** Enables/disables Band 4.
启用/禁用Band 4

***Note:*** *When one of the output buses is selected, Bands 5 and 6 will also be visible.*

***注意：****当选择了其中一个输出总线时，第5和第6的Bands频段也将被看到。*

12. **Output Meter.** Displays the post-EQ Output signal.
显示 post-EQ 的 Output signal输出信号。

14. **High Shelf On/Off.** Enables/disables the high shelf EQ. When the Shelf button is not engaged, the High band is a parametric EQ. Enabling the Shelf button turns the High band into a high shelving EQ that alters, by a fixed amount, a band of high frequencies at and above a user-selected shelving frequency.
启用/停用 high shelf EQ。当没有实用Shelf 键时，High band频段是一个参数式均衡器。启用 "Shelf " 键后，High band频段变成了high shelving EQ搁架均衡器，用户选定的搁架频率以上，以固定的数量改变高频段。

    ***Power User Tip:*** *A high shelving EQ is like a treble-control knob on a stereo. In this mode, the Center Frequency control selects the shelving frequency.*
    ***Power User Tip:*** *搁架式均衡器，像立体声中的高音控制旋钮。在这种模式下，Center Frequency控制可以选择 shelving frequency搁架频率。*

15. **Low Shelf On/Off.** Enables/disables the low shelf EQ. When the Shelf button is not engaged, the Low band is parametric. Enabling the Shelf button turns the Low band into a low-shelving EQ that alters, by a fixed amount, a band of low frequencies at and below a user-selected shelving frequency.

    启用/停用low shelf EQ。当未启用Shelf键时，Low band频段是参数式均衡器。启用Shelf键后，Low band频段变成low-shelving EQ低频搁架均衡器，用户选定的搁架频率以下，以一个固定的量，来改变低频段。

    ***Power User Tip:*** *A low shelving EQ is like a bass-control knob on a stereo. In this mode, the Center Frequency control selects the shelving frequency.*
    ***Power User Tip:*** *低频搁架均衡器，像立体声中的低音控制旋钮。在这种模式下，Center Frequency控制可以选择搁架频率。*

16. **Pre/Post.** Switches the RTA measurement between Pre- or Post-EQ.

    在Pre-或Post-EQ之间切换RTA的测量。

17. **RTA.** Engages/disengages the RTA display in the EQ graph.

    启用/取消EQ均衡器图中的RTA显示。

18. **Graph.** Displays EQ curve.

    显示均衡器曲线。

19. **EQ On/Off.** Globally switches all EQ bands On or Off.

    整体打开或关闭所有的均衡器频段。

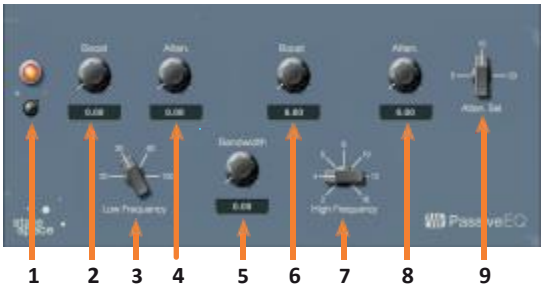
### 6.8.5.2 Passive Program EQ Overview Screen 概况图像3

When the Fat Channel is in Passive EQ mode, the Touch Display shows an overview screen, displaying the relevant parameters. Touching any onscreen knob allows you to use the Master Control encoder to set the selected parameter.

当 Fat Channel 处于Passive EQ 无源均衡模式时，Touch Display 触屏会显示概况图像相关的参数。触摸屏幕上的任何一个旋钮，就可以使用主控编码器来设置所选参数。

***Power User Tip:*** *For StudioLive models with dynamic Fat Channel displays, many of these parameters can also be controlled from the encoders and buttons in the Fat Channel.* ***See Section 6.6.2 for details****.*

***Power User Tip:*** *StudioLive带有动态 Fat Channel的型号，许多参数也可以通过 Fat Channel中的编码器和按钮来控制。****见第 6.6.2 节****。*




1. **EQ On/Off.** Enables/disables the EQ globally. Touch to toggle on or off
启用/禁用均衡器。触控来切换开启或关闭。
2. **Low Boost.** Boosts the Low Band.
提升了低频段。
3. **Low Frequency.** Sets the center frequency for the Low Band.
设置低频段的center frequency中心频率。
4. **Low Attenuation.** Attenuates the Low Band.
衰减Low Band低频段。
5. **High Bandwidth.** Sets the bandwidth (Q) for the High Band.
设置 High Band高频段的带宽（Q值）。
6. **High Boost.** Boosts the High Band.
提升 High Band高频段。
7. **High Frequency.** Sets the center frequency for the High Band.
设置 High Band的center frequency中心频率。
8. **High Attenuation.** Sets the attenuation for the High Band.
设置 High Band的衰减。
9. **Attenuation Select.** Sets the Frequency at which the attenuation begins.
设定衰减开始的Frequency频率。

### 6.8.5.3 Vintage 1970s EQ Overview Screen 复古的1970年代EQ 概况图像

When the Fat Channel is in Vintage EQ mode, the Touch Display shows an overview screen, displaying the relevant parameters.

***Power User Tip:*** *For StudioLive models with dynamic Fat Channel displays, many of these parameters can also be controlled from the encoders and buttons in the Fat Channel.* ***See Section 6.6.3 for details****.*

*当发声通道处于Vintage EQ模式时，触摸显示屏会显示一个总的屏幕，显示相关参数。*

***Power User Tip:*** *对于带有动态Fat Channel显示的StudioLive型号，许多参数也可以通过Fat Channel中的编码器和按钮来控制。详见第6.6.3节。*


1. **EQ On/Off.** Enables/disables the EQ globally. Touch to toggle on or off.
2. **Low Frequency.** Sets the shelving frequency for the Low Band.
3. **Low Gain.** Sets the Gain for the Low Band.
4. **Low-Mid Frequency.** Sets the center frequency for the Low-Mid Band.

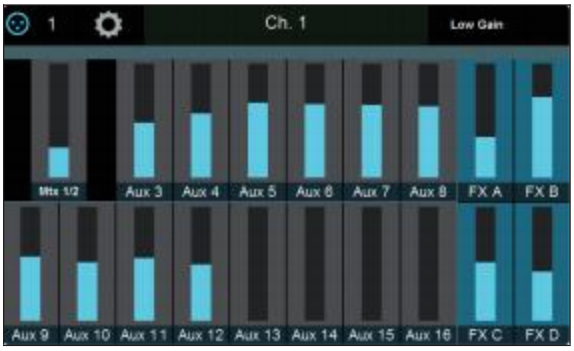
5. **Low-Mid Gain.** Sets the Gain for the Low-Mid Band.
6. **High-Mid Frequency.** Sets the center frequency for the High-Mid Band.
7. **High-Mid Gain.** Sets the Gain for the High-Mid Band.
8. **High Gain.** Sets the Gain for the High Band.

1. **EQ On/Off.** 统一启用/禁用均衡器。触控切换开启或关闭。
2. **Low Frequency.**设置低频段的搁架频率。
3. **Low Gain.**设定低频段的增益。
4. **Low-Mid Frequency.** 设置中低频段的中心频率。
5. **Low-Mid Gain.**设置中低频段的增益。
6. **High-Mid Frequency.** 设置高-中频段的中心频率。
7. **High-Mid Gain.** 设置中高频段的增益。
8. **High Gain.**设置High Band的增益。

### 6.8.6 Aux Sends Overview Screen Aux 发送概况图像


While Aux Sends Mode is engaged, the Touch Display displays the Aux Sends Overview screen. This screen displays the send level of the Selected channel in every FlexMix:

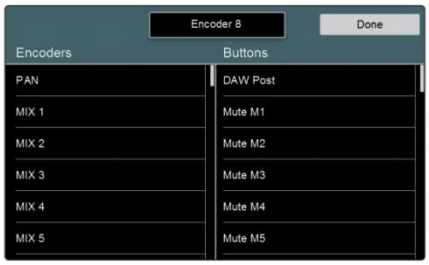
当 "Aux Sends Mode" 启用时，Touch Display显示 "Aux Sends Overview" 图像。这个屏幕显示每个 FlexMix 中，选定通道的发送电平。




## 6.9 User Mode 模式


The User Mode allows you to create your own custom Fat Channel controls. To assign a function to an encoder and its adjacent button, press any unassigned button. This will open the User Mode edit screen:

User Mode允许你创建自己的Fat Channel 自定义控制。要给编码器及其相邻的按钮分配一个功能，请按任意未分配的按钮。这将打开User Mode模式的编辑图像。

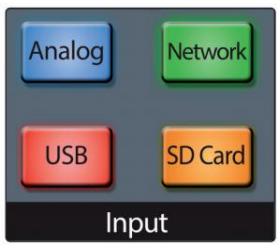



When you are done assigning function, press the Done button on the Touch Display. To edit any function, press and hold any Fat Channel function button while User mode is active.

当你完成功能分配后，按触摸显示屏上的 "完成" 按钮。要编辑任何功能，在用户模式激活时，按住任何胖频道功能按钮。

## 6.10 Input Controls 输入控制

### 6.10.1 Input Source 输入信号源




When a channel is selected (rather than a bus or output), these four buttons give you a choice of input type to be routed to that channel. Choose from the following:
所选通道时（而不是一个总线或输出），这里四个按钮，让你选择输入类型，以路由到该通道。从以下方面选择：

- **Analog.** Signal is routed from the corresponding analog input.
  信号从相应的模拟输入端路由。
- **Network.** Signal is routed from the corresponding channel from the AVB network input (if applicable).
  信号从AVB网络输入的相应通道路由（如果适用）。
- **USB.** Signal is routed from the corresponding USB audio channel, for playback from a computer. USB。
  信号从相应的USB音频通道路由，用于从电脑播放。
- **SD Card.** Signal is routed from the corresponding channel of the currently loaded multitrack recording on an inserted SD card.
  插入SD卡上的信号，从当前加载的多轨录音的相应通道路由。

By pressing and holding any of these buttons, you'll enter Multi-Assign mode, which allows you to set the input source for multiple channels at once. Once in this mode, the Select button for every Input Channel will flash. Press the Select button for any channel for you which you'd like to set to that source. For example, if you would like to engage the USB return for every Input Channel, press and hold the USB Input Source button, then press the Select button for every Input Channel. This will engage the corresponding USB Return for every channel.

按住这些按钮中的任何一个，进入Multi-Assign模式，一次你可以为多个通道设置输入源。一旦进入这个模式，每个 Input Channel 的 "Select" 按钮将闪烁。你想设置为该源的通道，按下任意的 "Select" 按钮。例如，如果你想让每个输入通道都有 USB 返回，按住USB输入源按钮，然后按每个输入通道的选择按钮。这将使每个通道都有相应的USB返回。

### 6.10.2 Input Meters 输入测量


On the left side of the Fat Channel control section, you'll see the "Level" meter. This meter gives you a visual indication of input signal level for the selected channel or mix. On the right side, you'll see meters that pertain to dynamics processing:"Comp" shows compressor gain reduction, and"Gate"shows gate gain reduction.
在Fat Channel控制部分的左侧，你会看到 "Level"表。这个电平表为你提供了所选通道或混音输入的信号电平的视觉指示。在右边，你会看到与动态处理有关的仪表。"Comp"显示压缩器的增益降低，"Gate"显示噪声门的增益降低。

### 6.10.3 Input Source Routing 输入源路由


While any Overview Screen is active, you will see the Input Source button in the upper left hand corner. Touching this button will open the Input Source Screen. From here you can select the sources for the different input types available for the currently selected channel or bus.

当任何 "Overview"屏幕处于活动状态时，你会看到左上角的Input Source按钮。触控这个按钮，将打开Input Source Screen。你可以为当前所选通道或总线，选择不同的输入类型的源。

By default, every input source is routed to its respective channel (Analog Input 1 to Channel 1, USB Playback stream 7 to Channel 7, etc.). You can reset the routing to the default setting at any time, by pressing the Reset button.
默认情况下，每个输入源都被路由到各自的通道（Analog Input1到Channel 1，USB Playback stream 7到 Channel7，等等）。你可以通过按下Reset按钮，将路由重置为默认设置。

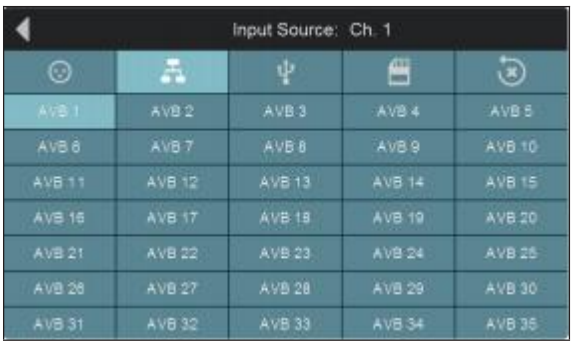
***Note:** Fora more detailed overview of the default channel routings, **please review Section 14.2**.*
*注意：关于默认通道路由的详细的概述，**请查看第 14.2 节**。*

**Analog Input Source（Input Channels only)模拟输入源（仅限于Input Channels）**


Press the Analog Input Source icon to select the input channel that will be active on the currently selected channel when the source is set to Analog in the Fat channel. Tap on an analog input to patch it to the current channel.

按 Analog Input Source 图标选择 input channel，当输入源被设置为模拟时，将在当前选择的通道上活动。 点击一个模拟输入，把它修补到当前通道上。

### Network Input Source
### 网络输入信号源




Press the Network Input Source icon to select the Network Input that will be active on the currently selected channel or bus when the source is set to Network in the Fat channel. Tap on an AVB input to patch it to the current channel.
按Network Input Source图标选择Network Input，当源在 Fat channel中被设置为Network 时，激活Network Input，在当前选定的通道或总线上。点选一个AVB input，将其修补到当前的通道上。

***Power User Tip**: It is important to understand that for output buses, this is the input to the bus, not the output itself. In most instances, this will be sourced from the internal DSP. This feature can be used to insert an external effect from the AVB network.*

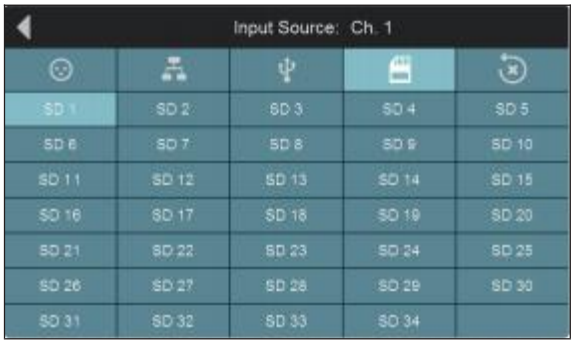
***Power User Tip**: 重要的是要理解，对于输出总线，这是总线的输入，而不是输出本身。在大多数情况下，这将是来自内部DSP的。这个功能可以用来从AVB 网络中插入一个外部效果。*

### USB Input Source（Input Channels only）USB输入源（仅限输入通道）


Press the USB Input Source icon to select the USB playback stream that will be active on the currently selected channel when the source is set to USB in the Fat channel. Tap on a USB return to patch it to the current channel.

按 USB Input Source 图标选择USB playback stream播放流，当源被设置为USB时，将在当前选择的通道上活动，在Fat channel中。点击一个USB回放，将其修补到当前通道上。

### SD Input Source（Input Channels only）SD输入源（仅输入通道）



Press the SD Input Source icon to select the SD Track that will be active on the currently selected channel or bus when the source is set to SD in the Fat channel. Tap on any SD playback stream to patch it to the current channel.

按 SD Input Source 源图标选择 SD Track，当源在Fat通道中被设置为SD时，该轨道将在当前选定的通道或总线上激活。点击 SD playback stream，将其修补到当前通道。

### 6.10.4 Polarity and Phantom Power 极性与幻象电源


When an analog input channel is selected, these buttons let you toggle channel polarity flipping (Ø) and phantom power (+48V) on or off.

***Power User Tip:*** *When recording with more than one open microphone, use the polarity invert to combat phase cancellation between microphones.*

选中一个模拟输入通道时，这些按钮，可以切换通道 polarity flipping（Ø）和幻象电源（+48V）的开启或关闭。

***Power User Tip:*** 使用*一个以上的开放性麦克风录音时，使用 polarity flipping（极性反转）来对抗麦克风之间的相位取消。*

### 6.10.5 Stereo Link 立体声连接


When a channel or mix is selected, pressing this button links some of the parameters of a channel or mix with those of its even or odd counterpart (channel 1 links only with 2, 7 links with 8, and so on). When this button is lit, the selected channel is linked to its paired channel.
当一个通道或混音被选中时，按这个按钮可以将一个通道或混音的一些参数与它的偶数或奇数对应的参数连接起来（Channel 1只与2 连接，7与8连接，以此类推）。当这个按钮被点亮时，选定的通道与它的配对通道相连接。

The following parameters are always kept in parity between linked channels or buses:
以下参数在连接的通道或总线之间始终保持奇偶性。

- Input assignment 输入分配
- Channel type 通道类型
- Bus mode (aux/subgroup) 总线模式（aux/子群）
- Compressor/EQ type 压缩机/均衡器类型
- Gate parameters & keying (signal from either channel or mix can trigger both related gates) 门控参数和键控（来自任何一个通道或混音的信号，都可以触发两个相关的门控。）
- EQ parameters EQ参数
- Graphic EQ settings 图形均衡器的设置
- Mute and Solo states 静音和Solo状态
- Bus assignments 总线分配
- Phantom power and polarity status 幻影电源和极性状态
- Fat Channel EQ/Dyn A/B status （Fat Channel带 EQ 处理/A/B状态）
- Aux and FX send levels （Aux辅助功能和FX Send设置效果发送电平）
- Pan position （声像电位器）
- Filter DCA group assignment Filter DCA组的分配
- Talkback and monitor routing settings 对讲和监听路由设置
- Pre/post fader settings 前/后推子设置
- Bus output delay 总线输出延迟

Some parameters have configurable linking behavior that allow them to work in tandem (stereo linked) or be independently set. This is configured in the Channel Settings screen in the Master Control section:
一些参数有可配置的连接行为，它们串联起来工作（立体声链接）或独立设置。这是在Master Control 部分中的Channel Settings 中配置的：

- Preamp trim （前置放大器修饰）
- Pan settings （声场定位设置）
- Channel or mix fader levels （通道或是混音推子电平）
- Compressor and limiter keying （压缩机和限制器的键控）

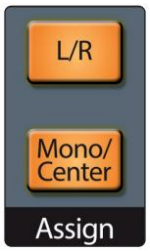
- Channel/bus names 通道名称/连接名

For more information on selecting linking options, ***seeSection 6.8.2***.

关于选择连接选项的更多信息，***见第 6.8.2 节***。

## 6.11 Output Assignment Buttons 输出分配键

### 6.11.1 Main/Mono Bus Assignment (StudioLive 64S only) 主/单声道总线分配（仅限StudioLive 64S）




When an input channel is selected, you can use these buttons to assign it to the Main and Mono/Center buses. Press **L/R** to send the selected channel output to the Main Stereo bus. Press **Mono/Center** to send the channel output to a Mono or Center bus (Pan Mode dependent). 选定输入通道时，你可以用这些按钮，把它分配到Main and Mono/Center buses。按L/R键，将所选通道的输出发送到主立体声母线。按**Mono/Center**，可以将通道的输出发送到Mono或Center总线上（取决于Pan Mode）。

For more information on the Main bus, ***seeSection 5.6.***

***更多Main bus信息，请见5.6节。***

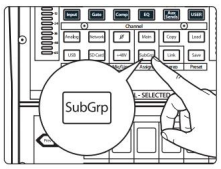
### 6.11.2 Main/Subgroup Assignment (All 32-Channel StudioLive Models) 主/子群分配（所有32-Channel StudioLive型号）


When an input channel is selected, you can use these buttons to assign it to an output path. Press **Main** to send the selected channel output to the Main bus. Press **SubGrp** to open the Bus Assignment screen on the Touch display.
当一个输入通道被选中时，你可以用这些按钮把它分配到一个输出路径。按 **Main键**，将所选通道的输出，送到Main总线上。按SubGrp，在Touch display上，打开Bus Assignment 图像。

You can assign a channel output to a subgroup in two different ways:
你可以用两种不同的方式，将一个通道的输出分配给一个子组：

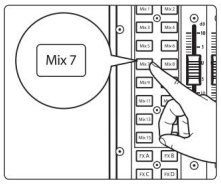

Press the **Subgroup** button and release it, the Subgroup Assignment view shows in the Touch Display, with a list of all available subgroups. You can then touch the desired subgroup to route the channel to the subgroup of your choice.
按下**Subgroup**按钮并松开，Touch Display 显示Subgroup Assignment视图，其中有所有可用子群的列表。你可以触控所需的子群，将通道路由到你所选的子群。

**To assign a channel to multiple FlexMix Subgroups: 要把一个通道分配给多个FlexMix Subgroups子群：**




1. While the channel is selected, press and hold the **SubGrp** button in the Assign section of the Fat Channel.

当通道被选中时，在Fat Channel的Assign 部分，按住 SubGrp 键。




2. The available subgroup FlexMix select buttons will flash. Press the **FlexMix** selectbuttons for the subgroups to which you'd like to assign the channel.

可用的子组FlexMix按钮会闪烁。按下你想分配给该通道子群的FlexMix选择按钮。

# 7 Tape Controls 磁带控制装置


By default, the Tape channel is sourced from the analog Tape In jacks on the rear of the mixer and the currently paired Bluetooth audio device simultaneously. The two signals are mixed together and summed on the Tape In channel.

***A note to StudioLive 32SX and 32SC users:*** *Bluetooth audio is not available on these models.*

If you prefer, you can instead route audio from a connected network device, computer connected via USB, or from tracks 33-34 in a Capture session stored on an inserted SD card.

默认情况下，Tape channel的信号来自调音台后部的模拟 Tape In jacks 接口，和当前配对的蓝牙音频设备，同时。这两个信号被混合在一起，并在磁带输入通道上相加。

***请注意 StudioLive 32SX和32SC用户：***蓝牙音频在这些型号上是不可用的。

如果你愿意，你可以从连接的网络设备、USB连接的计算机、或从存储在插入SD卡上的Capture会话中的音轨33-34，进行路由音频。

To configure the tape input options, press the **Edit** button in the Tape control area, next to the Touch Display.

要配置磁带输入选项，请按磁带控制区的**Edit**按钮，在Touch Display旁边。


The Tape Edit screen is displayed. Here, you can choose a signal to be routed to the Tape input channel from the following options:

"Tape Edit" 显示，你可以从以下选项中选择一个信号被路由到Tape input通道。

- **Analog/BT.** Touch this button to route both the Tape input jacks and the currently selected paired Bluetooth device to the Tape input channel. When selected, two slots are shown for paired Bluetooth devices. Touch the button that relates to your choice of device to route its audio output to the Tape input channel. A Forget Devices button is provided to break pairing connections, allowing you to pair another device, or to work out pairing issues with a device that doesn't seem to function. *Bluetooth audio is not available on the StudioLive 32SX and 32SC.*
  *触控此按钮可将 Tape input jacks和当前选定的配对蓝牙设备，全部路由到Tape input channel通道。选择时，两个插槽会显示为配对的蓝牙设备。触控你所选设备的相关按钮，将其音频输出路由到Tape input channe通道。提供一个Forget Devices设备的按钮，可中断配对连接，允许你配对另一个设备，或者解决与一个似乎不起作用的设备的配对问题。蓝牙音频在StudioLive 32SX和32SC上不可用。*
- **Network.** Touch this button to use audio from the designated network tape channels as the local tape input source. For more information ***seeSection 5.4.1***.
  此按钮可使用指定网络磁带通道的音频作为本地磁带输入源。***更多信息见第5.4.1节***。
- **USB.** Touch this button to route audio from a USB-connected computer to the Tape input channel. Once selected, USB streams 37 and 38 will be available as the tape source. For more information on USB audio routing, ***see Section 6.10.3***.

这个按钮可以将 USB 连接的计算机的音频，路由到磁带输入通道。一旦选择，USB streams 37和38将作为磁带源可用。关于USB音频路由的更多信息，***请见 6.10.3 节。***

- **SD Card.** Touch this button to route audio residing on an inserted SD card to the Tape input channel.

此按钮，将驻留在插入的SD卡上的音频，路由到 Tape input channel 通道。

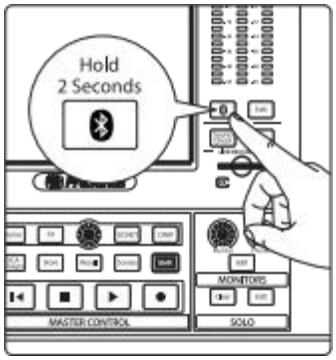
The Tape to Main knob mirrors the setting of the Tape input channel fader. Touch the knob to adjust this setting with the Master Control encoder.

Tape 到 Main knob 反映了 Tape input channel 推子的设置。该旋钮，用 Master Control 编码器调整该设置。

## 7.1 Pairing a Bluetooth Device 配对蓝牙设备

To pair a Bluetooth audio device for use with the Tape input:

要将一个蓝牙音频设备与磁带输入配对使用：




- Press and hold the **Bluetooth** button in the Tape control area for two seconds to enter pairing mode.
- The button will flash, indicating that your StudioLive is searching for a discoverable Bluetooth device.
- Once your device is successfully paired, the Bluetooth button will illuminate and stop flashing.

- 按住Tape control 控制区的蓝牙按钮两秒，进入配对模式。
- 该按钮将闪烁，表明你的StudioLive正在搜索可用蓝牙设备。
- 一旦你的设备配对成功，蓝牙按钮将点亮并停止闪烁。

***Note** that while up to two Bluetooth devices can be paired at one time, only one device can input audio at a time.To remove a device, tap Forget Devices. Bluetooth is not available on the StudioLive 32SX and 32SC.*

***注意，**虽然一次最多可以配对两个蓝牙设备，但一次只能输入一个设备的音频。要删除一个设备，请点击 Forget Devices。蓝牙在 StudioLive 32SX 和 32SC 上不可用。*

# 8 SD Recording SD 录制


Your StudioLive mixer has audio recording and playback abilities that can come in very handy, especially in a live sound context. You can record multi-track live performances to an SD card for later use. Also, you can play back multi-track audio from previously recorded performances, for use as a"virtual sound check," allowing you to dial in your mix even when the band isn't around.

To begin the process of recording or playing back a performance, press the **Edit** button in the Live Recording control section, which brings up the Live Recording Edit screen on the Touch Display.

你的 StudioLive 调音台具有音频录制和回放能力，特别是在现场声音方面，可以派上用场。你可以将多轨现场表演录制到SD卡上，以便以后使用。此外，还可以从以前录制的表演中回放多轨音频，作为 "virtual sound check" 使用，乐队不在身边时，也能拨动你的混音。

要开始录制或回放表演的过程，请按现场录音控制部分的**Edit**按钮，在 Touch Display 屏上出现现场录音编辑屏幕。


This screen is the starting point for recording or playing back a live performance on an SD card and allows you to create new sessions, load saved sessions from your SD/SDHC card, and test your SD/SDHC card's speed.

这个图像是在SD卡上录制或回放现场表演的起点，允许你创建新的会话，从SD/SDHC卡上加载已保存的会话，并测试SD/SDHC卡的速度。

Before beginning any multitrack recording, it is recommended that you format your SD/SDHC card in FAT32 format, even if your card was formatted prior to being packaged. There are several utilities that allow you to format your SD/SDHC card.

在开始任何多轨录音之前，建议你将SD/SDHC卡格式化为FAT32格式，即使在包装之前你的卡已经被格式化。有几个工具可以让你格式化你的SD/SDHC卡。

***Please note:*** *The StudioLive Series III mixers support both SD and SDHC cards up to 32 GB. Tested and approved models and brands can be found at www.PreSonus.com.*

***请注意：****StudioLive III系列调音台同时支持SD和SDHC卡，最大容量为32GB。经过测试和认证过的型号和品牌，可在 www.PreSonus.com 找到。*


The first time you insert your SD/SDHC card, you should perform a Speed Test. This simple test can take several minutes, depending on card speed, and will tell you the transfer rate of your card, as well as the amount of simultaneous tracks you can reliably record.

当你第一次插入你的SD/SDHC卡时，你应该执行一个速度测试。这个简单的测试可能需要几分钟，这取决于卡的速度，它将告诉你卡的传输速率，以及同时记录的曲目数量。

***Power User Tip:*** *Your StudioLive is also equipped with a USB audio interface to record and play back from a computer. More information on USB recording and playback is available in the* ***Using Your StudioLive as an Audio Interface with Universal Control Reference Guide****.*

***Power User Tip:*** *StudioLive还配备了一个USB音频接口，可以从电脑上进行录音和播放。关于USB录音和回放的更多信息可在《将你的StudioLive作为通用控制的音频接口参考指南》中找到。*

## 8.1 Creating a New Session for Recording 创建一个New Session会话

When the Live Recording screen is displayed on the Touch Display, you can create a new live recording Session by touching New Session on the Touch Display. This brings up the **New Session** screen.

当实时录音显示在 Touch Display上时，通过在 Touch Display 上的 "New Session"，创建一个新的实时录音Session。这样就会出现 "**New Session**"图像。


In this screen, you can enter the artist's name, a name for the performance (venue, date, etc.), and the location of the performance, to help you keep track of various live recordings. If you touch the **Artist**, **Performance**, or **Location** field on the Touch Display, an onscreen keyboard is shown, to let you enter the required information.

在这个图像上，你可以输入艺术家的名字，表演的名称（场地、日期等），以及表演的地点，以帮助你跟踪各种现场录音。在 Touch Display 中触控 **Artist**, **Performance**, 或 **Location** 字段，就会显示一个屏幕键盘，你可以输入所需信息。

When you've entered the artist name, performance name, or location for one Session, it is saved for easy use in future sessions (up to 10 of each category at a time). Saved designators can be easily selected by touching the drop-down menus in the right column of controls on this page. Use the Master Control encoder to scroll through choices.

当你为一个Session的艺术家姓名、演出名称或地点，着手开始后，它会被保存，以便之后的Session中使用（每个类别一次最多可输入10个）。保存的代号可以通过触控本页右列控制的下拉菜单轻松选择。使用Master Control 编码器滚动选择。

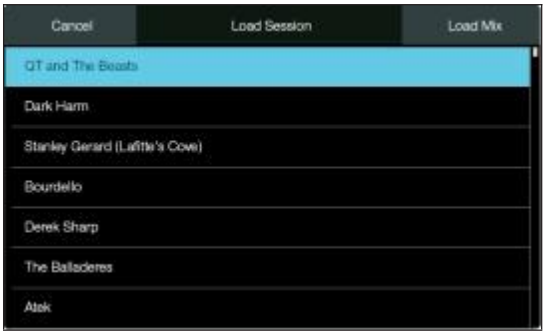
Once you've entered the needed information for your new Session, touch **Create** in the Touch Display to create the new session, or touch **Cancel** to cancel this operation and exit the New Session screen. Once a new Session is created, the Capture screen is shown on the Touch Display, and you can begin recording. For more information, ***see Section 8.3***.

一旦你输入了新会话所需的信息，触控在Touch Display上的 "**Create**"，来创建新Sesstion，或者触控 "**Cancel** "来取消此操作，并退出 "New Session"图像。一旦创建了"New Session"，在Touch Display回显示 "Capture " 图像，你可以开始录制。更多信息，***请参阅第 8.3 节***。

## 8.2 Loading a Session for Playback 加载会话进行播放

When the Live Recording screen is displayed on the Touch Display, you can load a previously recorded Session for playback or Virtual Soundcheck, by touching **Load Session** on the Touch Display. This brings up the Load Session screen.

在 Touch Display 上 ''Live Recording '' 图像时，通过 Touch Display上的 " **Load Session**"，加载先前录制过的Session，可进行播放或虚拟声音检查。这会出现 " Load Session " 图像。




In this screen, you can select from a list of existing live recording Sessions on the currently selected playback medium. Use the encoder below the Touch Display to scroll through the list.

在这个图像中，可以从当前选择的播放媒介中，现有实时Sessions列表中进行选择。使用Touch Display下面的编码器滚动浏览列表。

To load a session for playback: 要加载一个会话进行回放：

- Touch the Session of your choice to select it. The **Recall** button flashes.触控你所选的会话来选择它。**Recall**键会闪烁。
- Press **Recall** to load the Session. 按Recall键，加载 Session 会话。
- Once the Session is loaded, the Capture screen is shown, and you can begin playback of your Session. 一旦加载了会话，会显示 Capture ，可以开始播放你的会话了。

When the Load Mix button is active, the mix Scene stored with the session will also load. The parameters that are loaded are filtered according to the settings in the Scenes screen. For more information on creating and recalling mixer scenes, ***see Section 9.6.2***.

激活 Load Mix 按钮时，存储在会话中的mix Scene 会被加载。加载的参数将根据 Scenes 图像中的设置进行过滤。关于创建和调用混音器场景的更多信息，***请见第9.6.2 节。***

## 8.3 Capture Screen 图像

PreSonus Capture is a multitrack digital-audio recording application designed to make recording with StudioLive mixers quick and easy. This application is built into StudioLive Series III mixers, allowing you to track directly to an SD card using the same high-quality audio engine as PreSonus' ground breaking Studio One DAW. Session files recorded on the SD Card can be opened directly in Studio One and Capture – no conversion or exporting necessary.

PreSonus Capture 是一个多轨数字音频录音应用程序，旨使用StudioLive 调音台的录音，变得快速而简单。这个应用程序内置在StudioLive系列III调音台中，允许你使用与PreSonus Studio One DAW相同的高质量音频引擎，直接track到SD卡。记录在SD卡上的会话文件，可以直接在Studio One和Capture中打开--无需转换或导出。

Capture sessions recorded in Capture 3.0 on a computer using the USB audio interface can be loaded onto an SD Card for playback later. *For more information, please review the* ***Capture™ 3 Software Reference Manual***.


在计算机上使用USB音频接口，用Capture 3.0录制的会话可以加载到SD卡上，以便以后播放。欲了解更多信息，***请查阅《Capture™3软件参考手册》***。

1. **Record Duration.** Shows the total recorded length of the current Session.
2. **Current Position.** Shows the current position of the recording and playback.
   显示录音和回放的当前位置。
3. **Timeline.** Shows the current cursor location in the timeline of the current Session.
   显示当前会话时间线中的当前光标位置。
4. **Arm All Tracks.** Touching this button will arm all 34 tracks for recording. This will record all 32 input channels and your Main mix.
   这个按钮，启动 34 track 音轨进行录音。这将录制所有32 input channels 和你的 Main mix。
5. **Select Arm Tracks.** Press the Select button to enable channel selection mode. In this mode, you can press the Select buttons on each channel in the mixer to arm specific channels for recording. When a channel is selected, its Select button glows steadily. When a channel is not selected, the button flashes.
   按 "Select" 按钮，启用channel selection 模式。你可以按混音器中每个通道上的 "Select"按钮，以配备特定的通道进行录音。当通道被选中时，其"Select"按钮，会发光。当一个通道没有被选中时，该按钮会闪烁。

*A note to StudioLive 64S Users: Because SD recording is limited to 34 tracks, any channel on your StudioLive 64S can be routed to any of the 34 tracks in your Capture SD session. Because of this, it is important to understand that the Select buttons in this mode are arming the Track in the Capture SD session, not selecting a Channel for recording. For more information,* ***please reviewSection 12.3.5****.*

*给StudioLive 64S用户的提示：因为SD录音仅限于34 tracks，你的StudioLive 64S上的任何通道，可以路由到Capture SD会话中34 tracks中的任意一个。正因为如此，重要的是，这种模式下的"Select "按钮，是启动Capture SD会话中的音轨，而不是选择一个通道进行录音。欲了解更多信息，****请查阅第12.3.5节****。*

6. **All Ch to SD Input.** Touch this button to route audio from the Capture Session to the input channels. Touch this button again to go back to the previously established routing.
   此按钮将音频从采集会话路由到输入通道。再次按此键，可返回到先前建立的路由。
7. **Recording Lock.** Touch this button to enable Recording Lock mode. When this mode is enabled, recording cannot be stopped by pressing the Stop button in the Transport controls. To disable this mode, touch the lock button again.
   此按钮可启用 Recording Lock 模式。启用此模式时，按Transport 控制中的"Stop "键，录制无法停止。要禁用此模式，请再次触控锁定按钮。
8. **Jog.** Touch this button to use the Master Control encoder as a jog-wheel, to move the recording/playback cursor.
   此按钮，可将Master Control编码器作为点动轮使用，可以移动记录/播放光标。

9. **Rec. Errors.** This field indicates the number of errors and the potential for errors to occur. ***See Section 8.3.1*** for more information.
   这个字段表示错误的数量和发生错误的可能性。更多信息***见第8.3.1节***。
10. **Status.** Displays the current recording status. ***See Section 8.3.1*** for details.
    显示当前的录音状态。***详见第8.3.1节***。
11. **Current Timeline Position.** Displays the current playback and recording position.
    显示当前的播放和录音位置。
12. **Remaining Time.** Shows the amount of time available for recording on the connected recording medium
    显示连接录制媒介上可用于录制的时间。
13. **Session Name.** Displays the name of the current Session.
    显示当前会话的名称。
14. **Save and Close.** Saves the session and returns to the Live Recording Edit screen.
    保存会话并返回到现场录音Edit 图像。

## 8.3.1 Recording Status Messages 录制状态信息

The following indicators on the Capture screen will help you to keep an eye on how well your recording session is going:
以下Capture 图像上的指示灯，帮助你关注你的录音会话进行得如何：

**Status:**


- **Ready.** SD Card session is loaded, is currently not busy, and is waiting for user input.
  加载SD Card session，当前不繁忙，正在等待用户输入。


- **Recording.** Audio is being recorded to any Track(s) that are currently armed for recording.
  音频正在被录制到目前已装备好进行录制的轨道。


- **Preparing...** The session currently processing an action. This is commonly seen when attempting to play back a long session after it is first loaded or has just finished recording.
  当前正在处理一个动作的会话。这种情况通常出现在试图回放一个刚加载或刚完成录制的长片段时。


- **Playing.** The recorded session audio is currently being played back.
  目前正在回放录制的会话音频。

**Rec Errors: 录音错误：**


- **Green.** The recording session currently has no recording errors and there isn't a chance that an error will occur. The green box will display 0 inside, showing that there are currently no record errors.
  录音环节目前没有录音错误，也没有发生错误的可能。绿色框内将显示0，表明目前没有记录错误。


- **Yellow.** The recording session currently has no record errors, however the SD Card's read/write speed are being stretched to the limit. In this case, it is possible that recording errors can occur. The yellow box will display 0 inside, showing that there are currently no record errors.
  录音会话目前没有记录错误，但是SD卡的读/写速度被拉到了极限。在这种情况下，有可能会发生记录错误。黄色框内将显示0，表明目前没有记录错误。

***Note:*** *As an SD Card's storage space is filled, its read/write speed slows down. Because of this, the Rec Errors indication may turn from green to yellow as the card fills up.*

***注意：*** *随着SD卡的存储空间被填满，其读/写速度会减慢。正因为如此，随着卡的填满，记录错误的指示可能从绿色变成黄色。*


- **Red Square.** As soon as a recording error occurs, this indication will turn red to alert you. The number of errors will be displayed in the box. When errors occur, you will hear a skip or a drop-out in the recorded audio.
  一旦发生录音错误，该指示将变成红色提醒你。错误的数量将显示在方框里。当错误发生时，你会听到录制的音频中，出现跳音或断音。

***Power User Tip:*** *As soon as you see an error display, make a note of the current timeline position. This will help you to isolate the audio dropout more easily.*
一旦看到错误显示，就记下当前的时间线位置。这会有助于你，单独考虑音频掉线。

### 8.3.2 Transport Controls

When a new Session is created or an existing Session is loaded, the Transport buttons give you control over recording, playback, and navigation through the timeline of the current Session. Use these controls in conjunction with those in the Capture screen for total control of your recording and playback needs. The button functions are as follows:
当创建一个新的会话或加载一个现有的会话时，"Transport "按钮能够控制录制、回放和通过当前会话的时间线浏览。将这些控制与 "Capture"图像中的控制结合起来使用，可以完全控制录制和回放需求。这些按钮的功能如下：


1. **Return to Zero.** Press this button to move the recording/playback cursor to the start of the Session timeline. Enable Shift and press Return to Zero for Rewind.
   按这个按钮可以将记录/播放光标移动到会话时间线的起点。启用Shift，并按返回零点进行倒带。
2. **Stop.** Press this button to stop playback or recording.
   按这个按钮可以停止播放或录制
3. **Play.** Press this button to begin playback from the current cursor position in the Session timeline. Enable Shift and press Play for Fast Forward.
   按这个按钮可以从会话时间线的当前光标位置开始播放。启用Shift并按下Play以实现快进。
4. **Record.** Press this button to begin recording from the current cursor position in the Session timeline.
   按这个按钮，从会话时间线的当前光标位置开始录音。

## 8.4 Virtual Sound Check 虚拟声音检测

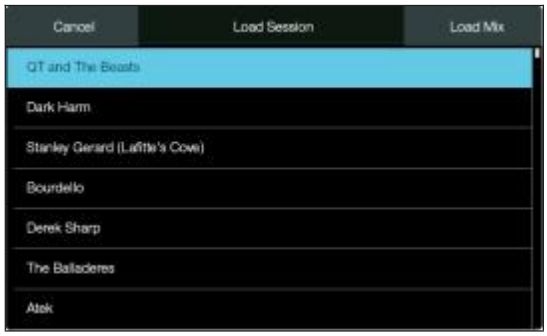
We've all been there. The drummer is stuck in traffic. The guitarist is stuck at work. And you're stuck at front-of-house (FOH) with a hyped up lead singer and bass player and no way to dial in a front-of-house mix, let alone set up the singer's in-ear mix. Don't panic! With Capture's Virtual Soundcheck mode, dialing a good rough mix without the band—or with half the band missing— is quick and simple.

我们都经历过这种情况。鼓手，吉他手被堵在路上或困在工作中。而你在前厅（FOH），有一个主唱和贝斯手，却没有办法拨入front-of-house mix混音，更不用说为主唱设置入耳式混音。 不要惊慌!

1. To begin, create a new Session, press the Soundcheck button on your StudioLive mixer.


要开始，创建一个新的会话，按StudioLive调音台的Soundcheck按钮。

2. This will launch the Load Session screen. Select the previously recorded session you would like to use for your Virtual Soundcheck.
这将启动Load Session。选择先前录制的片段，用于虚拟试音。





3. The Recall button will begin to flash. Press the Recall button to load the saved Session. This will also engage all the SD channel returns.
按Recall键，开始闪烁，加载已保存的会话。使所有的SD 频道返回。


4. Your mixer scene is automatically saved with your Capture session. Enabling the Load Mix function will load the saved StudioLive mix scene as well.
你的混音场景会随着你的 Capture 会话自动保存。启用Load Mix 功能，会加载保存 StudioLive 混音场景。

5. Use the **Transport controls** to playback the recorded audio and dial in your mix.
使用**Transport controls**来回放录制的音频，并拨入你的混音。

6. When you have finished setting up your mix, press the Soundcheck button again to exit. This will close the Capture session and disengage all the SD returns on your StudioLive, leaving the track labels on your mixer.

当你完成混音设置后，再次按下Soundcheck按钮退出。这将关闭Capture会话，并解除 StudioLive 上所有的SD返回，留下混音器上的track labels标签。

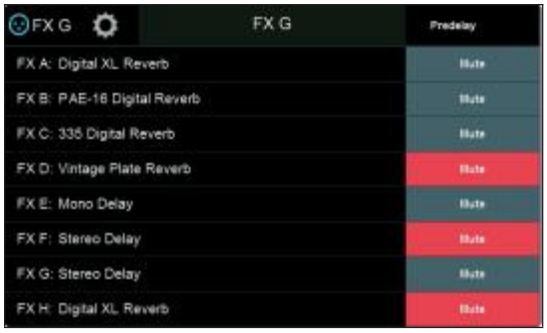
# 9 Master Control 主控


The Master Control area contains an array of controls that give you access to vital functions of the mixer including the StudioLive Series III FX rack, UCNET communication, DAW control, and the scene library. The following section details the use of these controls and the features they bring.
Master Control 包含了一系列的控制，让你可以访问调音台的重要功能，包括StudioLive III系列FX机架，UCNET通讯，DAW控制和场景库。下文将详细介绍这些控制的使用和它们带来的功能。

## 9.1 StudioLive Series III FLEX DSP Rack Effects StudioLive系列III FLEX DSP机架效果


Your StudioLive Series III mixer is equipped with internal effects processors loaded with models of classic reverb units, delays, and modulation effects. Each processor is equipped with its own internal effect bus. Every channel on your StudioLive has a send to each of these buses. Every FlexMix and the Main bus is provided with a return from each effects bus.
你的StudioLive III系列调音台配备了内部效果处理器，装载了经典混响单元、延迟和调制效果的模型。每个处理器都配备了内部效果总线。StudioLive上的每个通道都有一个发送到这些总线的发送。每个FlexMix和主总线都有一个来自每个效果总线的返回。

Press the FX button to open the FX Rack screen on the Touch Display.
按FX键，在Touch Display上打开FX Rack图像。




This screen displays the current effect loaded into each processor. Touching an effect's name will open the Effects Editor for that effects slot.


Each of the effects processors is also equipped with a physical mute button in the Effects Master section on your StudioLive mixer.
这个屏幕显示当前加载到每个处理器的效果。触控一个效果器的名字将打开该效果器插槽的Effects Editor编辑器。
每个效果器在StudioLive调音台效果器的Effects Editor部分，也配备了静音按钮。


32-Channel StudioLive models are also provided with a dedicated Tap Tempo button in this same section. This button controls the tempo for any delay. To synchronize a delay effect to music as you hear it, tap this button in rhythm with the music (in 1/4-note, or one-beat intervals), until the delay effect is synced to your liking.

32 Channel StudioLive型号，还提供了一个专门的Tap Tempo轻敲节奏按钮。这个是控制延迟节奏。使延时效果与你听到的音乐同步，随着音乐的节奏可以轻敲这个按钮（以1/4音符或1拍的间隔），直到延时效果与你的同步。

***Power User Tip:*** *The Tap button also act as a "null" button for parameters in the Fat Channel, Graphic EQ, and FXprocessors. Press and hold* ***Tap*** *and adjust the control of your choice to return that control to its default setting.*

***Power User Tip:*** *轻敲按钮也可以作为Fat Channel、Graphic EQ均衡器和FX处理器中的参数的"null"（归零）按钮。按住"****Tap****"键，调整你所选择的控制，使该控制返回到它的默认设置。*


If you have just one effects slot occupied by a delay effect, this button will set its tempo. If you have more than one delay effect active, you must choose which delay is governed by this button by pressing the Tap Assign button in the Effects Editor for the desired delay.

如果你只有一个延时效果槽，这个按钮会设置它的节奏。如果有一个以上的延时效果，你必须在Effects Editor中，为所需的延时按下Tap Assign键，选择这个按钮所管辖的延时。

StudioLive mixer models that are equipped with User Function buttons can dedicate one or more of these buttons to act as a Tap Tempo control for any delay loaded. For more information on User Function buttons, **see Section 12.1.2**.

配备User Function按钮的StudioLive调音台型号，按钮中的一个或多个专用于作为延迟加载的轻敲节奏控制。关于用户功能按钮的更多信息，**请见12.1.2。**

### 9.1.1 The Effects Editor

As previously mentioned, tapping on any of the slots in the Effects Rack will launch the Effects Editor. At the top of this screen, you will find the Effects Type drop-down menu. Tapping on this menu will allow you select from the following effects:
如前所述，点击 "Effects Rack"中的任何一个插槽，会启动 "Effects Editor"。在这个屏幕的顶部，你会发现Effects Editor的下拉菜单。点击这个菜单，可以从下方效果中进行选择：

- Digital XL Reverb
- PAE- 16 Digital Reverb
- 335 Digital Reverb
- Vintage Plate Reverb
- Mono Delay
- Stereo Delay
- Ping Pong Delay
- Chorus
- Flanger


1. **FX Slot.** Displays the currently selected FX Slot.
显示当前选择的 FX Slot。
2. Effects Type Menu. This drop-down menu allows you to change the active effect currently selected FX Slot.
这个下拉菜单，可以改变当前选择的FX Slot的激活效果。
3. **Presets.** Opens the FX preset screen. See Section 9.1.3 for more information.
打开FX预设。更多信息见第9.1.3节。
4. **Current Parameter.** Displays the parameter currently controlled by the Value Encoder below the Touch Display, as well as its setting.
通过Touch Display下方的Value Encoder数值编码器，显示当前控制的参数，以及其设置。

### 9.1.2 Effects Types 效果类型

#### 9.1.2.1 Digital XL Reverb 数字XL混响装置

This convolution-style reverb emulates an acoustic space to add life and vibrancy and provides the following controls:

这个convolution-style卷积风格（自然的混响类型）的混响，模拟了一个声学空间，增加了生命力和活力，并提供了以下控制：


- **Predelay.** Sets the length of short delay before the onset of reverberation, lending a sense of space to the reflections.
设置混响开始前的短延迟长度，给反射带来空间感。

- **Reflection.** This control allows you to set the level (in decibels) of the early reflections. The louder the early reflections, the smaller the room will seem.
  这个控制，可以设置早期反射的水平（分贝）。早期反射越大，房间越小。

- **Size.** Sets the width of the stereo image.
  设定立体声图像的宽度。

- **LPF Frequency.** Use this control to attenuate low frequencies that can muddy a reverb.

  用这个控制衰减低频，因为低频会影响混响效果。

- **LF Damping Freq.** Use this control with create a warmer sound. This will enhance content at the frequency you set.

  这个控制，可以打造更温暖的声音。这将在你设定的频率上增强内容。

- **LF Damping Gain.** Sets the level at which the damping frequency will be boosted.

  设定阻尼频率的提升水平。

### 9.1.2.2 335 Digital Reverb 数字混响

This reverb mimics the controls and sound of classic 1970s digital reverb and provides the following controls:
这个混响器模仿1970年代经典数字混响器的控制和声音，提供以下控制：


- **Predelay.** Sets the length of short delay before the onset of reverberation, lending a sense of space to the reflections.

  设置混响开始前的短延迟长度，给反射带来空间感。

- **Diffusion.** Sets the amount of diffusion to apply to the reverb tail.

  设定应用于混响尾音的扩散量。

- **Reflection.** This control allows you to set the level (in decibels) of the early reflections. The louder the early reflections, the smaller the room will seem.
  这个控制，设置早期反射的水平（分贝）。早期反射越大，房间越小。

- **Size.** Sets the width of the stereo image.

  设定立体声图像的宽度。

- **Low Pass.** Use this control to attenuate low frequencies that can muddy a reverb.

  这个控制衰减低频，因为低频会影响混响效果。

- **LF Damp Freq.** Use this control with create a warmer sound. This will enhance content at the frequency you set.

  这个控制，可以 打造温暖的声音。这将在你设定的频率上增强内容。

- **LF Damping Gain.** Sets the level at which the damping frequency will be boosted.

  设定阻尼频率的提升水平。

### 9.1.2.3 PAE-16 Digital Reverb 数字混响

This reverb effect is inspired by a classic 80's-era digital reverb unit and provides the following controls:

这个混响效果的灵感，来自于80年代的经典数字混响装置，并提供以下控制：


- **Predelay.** Sets the length of short delay before the onset of reverberation, lending a sense of space to the reflections.

  设置混响开始前的短延迟长度，给反射带来空间感。

- **Diffusion.** Sets the amount of diffusion to apply to the reverb tail.

  设定应用于混响尾音的扩散量。

- **Reflection (Time).** This control allows you to set the level (in decibels) of the early reflections. The louder the early reflections, the smaller the room will seem.

  这个控制，可以设置早期反射的水平（分贝）。早期反射越大，房间越小。

- **Low Pass.** Use this control to attenuate low frequencies that can muddy a reverb.

  这个控制衰减低频，因为低频会影响混响效果。

- **LF Damp Freq.** Use this control with create a warmer sound. This will enhance content at the frequency you set.

  使用这个控制，可以创造更温暖的声音。这将在你设定的频率上增强内容。

- **LF Damping Gain.** Sets the level at which the damping frequency will be boosted.

  设定阻尼频率的提升水平。

### 9.1.2.4 Vintage Plate Reverb（模拟板式）混响

This reverb effect is inspired by a classic mechanical plate reverb unit and provides the following parameters:

这个混响效果的灵感，来自于经典的机械板式混响装置，并提供以下参数：


- **Predelay.** Sets the length of short delay before the onset of reverberation, lending a sense of space to the reflections.

  设置混响开始前的短延迟长度，给反射带来空间感。

- **Reflection.** This control allows you to set the level (in decibels) of the early reflections. The louder the early reflections, the smaller the room will seem.
  这个控制，设置早期反射的水平（分贝）。早期反射越大，房间越小。

- **Low Pass.** Use this control to attenuate low frequencies that can muddy a reverb.

  这个控制衰减低频，因为低频会影响混响效果。

- **LF Damp Freq.** Use this control with create a warmer sound. This will enhance content at the frequency you set.

  使用这个控制，可以创造更温暖的声音。这将在你设定的频率上增强内容。

- **LF Damping Gain.** Sets the level at which the damping frequency will be boosted.

  设定阻尼频率的提升水平。

### 9.1.2.5 Mono Delay 单声道延迟

This delay effect offers a simple, quick-to-use multi-tapped delay arrangement and provides the following parameters:

这个延时效果提供了一个简单、快速使用的多插头延时安排，并提供以下参数：


- **Delay Time.** Sets the length of the delay line.

  设定延迟线的长度。

- **Tap Assign.** Assigns the Tap Tempo to the TAP button.

  为TAP按钮指定Tap Tempo。

- **Feedback.** Sets the amount of delayed signal to be fed back to the input of the effect. Higher settings lead to longer delay tails (and eventually, outright chaos).

设置延迟信号反馈到效果器的输入的量。较高的设置会导致较长的延迟尾音（最终导致彻底的混乱）。

- **LP Filter.** Sets the cutoff frequency for a low-pass filter, applied to the delayed signal.

  设置低通滤波器的截止频率，应用于延迟信号。

- **HP Filter.** Sets the cutoff frequency for a high-pass filter, applied to the delayed signal.

  设置高通滤波器的截止频率，应用于延迟信号。

- **Feedback LPF.** Sets the cutoff frequency for the low-pass filter applied to the feedback signal.

  设置适用于反馈信号的低通滤波器的截止频率。

- **Feedback HPF.** Sets the cutoff frequency for the high-pass filter applied to the feedback signal.

  设置适用于反馈信号的高通滤波器的截止频率。

### 9.1.2.6 Stereo Delay 立体声延迟

This delay effect is inspired by a classic 80's-era dual-delay unit and provides the following controls:

这个延时效果的灵感，来自于80年代的经典双延时装置，提供以下控制：


- **Delay Time A and B.** Sets the length of their respective delay line.
  设置各自的延迟线的长度。
- **Tap Assign A and B.** Assigns the respective Tap Tempo function to the TAP button.
  为TAP按钮指定相应的Tap Tempo功能。
- **Feedback A and B.** Sets the amount of delayed signal to be fed back to their respective inputs of the effect. Higher settings lead to longer delay tails (and eventually, outright chaos).
  设置延迟信号的数量，以反馈到效果器的各自输入端。较高的设置会导致较长的延迟尾音（最终导致彻底的混乱）。
- **Spread.** Sets the width of the stereo image.
  设置立体图像的宽度
- **LP Filter.** Sets the cutoff frequency for a low-pass filter, applied to the delayed signal.
  设置低通滤波器的截止频率，应用于延迟信号。
- **HP Filter.** Sets the cutoff frequency for a high-pass filter, applied to the delayed signal.
  设置高通滤波器的截止频率，应用于延迟信号。
- **Feedback A and B LPF.** Sets the cutoff frequency for the low-pass filter applied to the respective feedback signal.
  设置适用于各反馈信号的低通滤波器的截止频率。
- **Feedback A and B HPF.** Sets the cutoff frequency for the high-pass filter applied to the respective feedback signal.
  设置适用于各反馈信号的高通滤波器的截止频率。

### 9.1.2.7 Pingpong Delay 乒乓延迟

As its name indicates, this stereo delay bounces the signal across the stereo field to create a wider image.

正如其名称所示，这种立体声延迟，将信号反弹到整个立体声场，以创造一个更宽的图像。

- **Tap Assign L and R.** Assigns the respective Tap Tempo function to the TAP button.
  为TAP按钮指定相应的点播节奏功能。
- **Time Left and Right.** Sets the delay time for the left and right side, respectively.
  左和右分别设置延迟时间。
- **Width.** Sets the width of the stereo image.
  设置立体声图像的宽度。
- **Feedback.** Sets the amount of delayed signal fed back into the input of the effect.
  设定延迟信号反馈到效果器的输入量。
- **Fb Time.** Sets the delay offset of the feedback signal.
  设置反馈信号的延迟偏移。
- **LP Filter.** Sets the cutoff frequency for the low-pass filter on the delayed signal.
  设置延迟信号的低通滤波器的截止频率。
- **HP Filter.** Sets the cutoff frequency for the high-pass filter on the delayed signal.
  设置延迟信号的高通滤波器的截止频率。
- **Fb LPF.** Sets the cutoff frequency for the low-pass filter on the feedback signal.
  设置反馈信号的低通滤波器的截止频率。
- **Fb HPF.** Sets the cutoff frequency for the high-pass filter on the feedback signal.
  设置反馈信号的高通滤波器的截止频率。

### 9.1.2.8 Chorus （效果器）

A chorus effect is created by mixing the source signal with one or more pitch-shifted copies of it and then modulating the copies using an LFO.

合唱效果是通过将源信号与一个或多个音高偏移的副本混合，然后用LFO对这些副本进行调制。


- **Rate.** Sets the frequency of the LFO.

设置LFO的频率。

- **Depth.** Sets amplitude of the modulation from 0 to 100%.

设置调制的振幅，从0到100%。

- **Width.** Shifts the phase of the LFO.

改变LFO的相位。

- **LFO Polarity.** Toggles the polarity between positive (off) and bi-polar (on).

在正极（关闭）和双极（开启）之间切换极性。

- **Shape.** Sets the type of wave form for the LFO.

设置LFO的波形类型。

- **Offset.** Sets the time (in milliseconds) between the source signal and the modulated signal.

设置源信号和调制信号之间的时间（以毫秒为单位）。

- **Feedback.** Variable feedback, or regeneration, produces multiple decaying repeats. Increasing the feedback value increases the number of echoes, as well as the resonance that is created as one echo disappears into another.

可变反馈，即再生，产生多个衰减的重复。增加反馈值可以增加回声的数量，也可以增加一个回声消失在另一个回声中时，产生的共鸣。

### 9.1.2.9 Flanger 效果器（一般用在乐器上）

The flanger blends two identical signals together and delays one by a constantly varying time. flanger （镶边）效果器将两个相同的信号混合在一起，通过不断变化的时间，对其中一个信号进行延迟。


- **Rate.** Sets the frequency of the LFO.

设置LFO的频率。

- **Range.** Sets amplitude of the modulation from 0 to 100%.

设置调制的幅度，从0到100%。

- **Width.** Shifts the phase of the LFO.

转移LFO的相位。

- **Offset.** Sets the time (in milliseconds) between the source signal and the modulated signal.

设置源信号和被调制信号之间的时间（以毫秒计）。

- **Feedback.** Variable feedback, or regeneration, produces multiple decaying repeats. Increasing the feedback value increases the number of echoes, as well as the resonance that is created as one echo disappears into another.

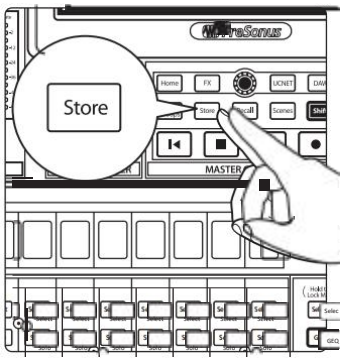
可变的反馈，或称再生，产生多个衰减的重复。增加反馈值可以增加回声的数量，也可以增加一个回声消失在另一个回声中时产生的共鸣。

### 9.1.3 Effects Presets 效果预设


From the Effects Presets screen, you can load factory and custom presets for each Effect Type as well as store your own custom presets.

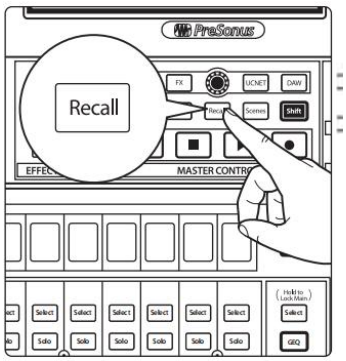
在 "Effects Presets" 上，你可以为每个Effect Type 类型，加载出厂预设和自定义预设，也可以存储你自己的预设。

**To save an Effects Preset:**
**保存效果预设：**



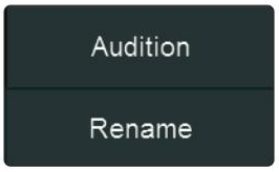

1. Tap the desired location for your new preset. You can select an Empty Location or a previously used location. Selecting a previously stored preset will overwrite the stored settings with the current settings.
   为你的新预设点选所需的位置。你可以选择一个空的位置，或一个以前使用过的位置。选择先前存储的预设，用当前设置覆盖存储的设置。
2. Press the **Store** button in the Master Control area to bring up the onscreen keyboard. Enter your preset name with the keyboard.
   按Master Control 的Store键，调出屏幕上的键盘。用键盘输入你的预置名称。
3. Press the **Store** button again to save your preset, or press the **Cancel** button on the screen to cancel and return to the Preset Library screen.
   再次按 Store 保存你的预设，或者按屏幕上的Cancel键，取消并返回到 Preset Library（预设库）图像。

**To load an Effects Preset:**




Tap the desired preset on the screen and press the **Recall** button in the Master Control area to load it.

在屏幕上点选所需的预设，并按下Master Control 的Recall键来加载它。



You can also momentarily audition the effects of a preset by selecting a preset and pressing the **Audition** button on the Touch Display, or rename it by pressing **Rename** and entering a new name with the onscreen keyboard.

你也可以通过选择预设，按下Touch Display上的**Audition**按钮，瞬间试听预设的效果，或者通过按下 "**Rename**"并用屏幕键盘输入一个新的名字来重命名它。

## 9.4 UCNET


**UCNET** is a special networking protocol that PreSonus created to enable advanced remote control and audio transmission features between various PreSonus hardware and software products. This includes devices running Studio One, Capture, UC Surface, and QMix-UC software.
UCNET是PreSonus创建的特殊网络协议，在各种PreSonus硬件和软件产品之间，用于实现高级远程控制和音频传输功能。这包括运行Studio One、Capture、UC Surface和QMix-UC软件的设备。


**Note:** For more information on networking configuration and setup for UCNET-compatible products, ***please see the respective product manuals.***
***注：****关于UCNET兼容产品的网络配置和设置的更多信息，****请参见各自的产品手册。***

### 9.4.1 Mixer Nickname 调音台名称


At the top of the UCNET screen, you will fix the name of your mixer. You can customize your Mixer's name by tapping on the "Mixer Nickname"field. This will change the mixer's name anywhere it is displayed (UC Surface, QMix-UC, etc.)

在UCNET屏幕的顶部，确定你的混音器的名称。通过点击 "Mixer Nickname "区域，可以定制你的混音器的名称。这将改变在任何地方显示的调音台的名称（UC Surface, QMix-UC等）。

### 9.4.2 Permissions 许可


Your StudioLive can be controlled remotely by networked devices running UC Surface and QMix-UC software.

StudioLive中，可以通过网络设备远程控制UC Surface和QMix-UC运行软件。

Press the Permissions button to set the level of control available to each user. At the top of the screen is a Device/User selector, which lets you choose which of the connected devices for which to set control permissions. Depending on the type of device you choose (QMix-UC or UC Surface), the screen shows different options:

按 "Permissions"键，设置每个用户可用的控制级别。在屏幕的顶部有一个Device/User selector，选择你想要连接设置控制权限的设备。根据你选择的设备类型（QMix-UC或UC Surface），屏幕显示不同的选项：

**QMix- UC Device Permissions 设备许可**

When setting permissions for a device running QMix-UC software, the Mix selector gives you the following modes of control permission to choose from:

当为运行QMix-UC软件的设备设置权限时，Mix 选择器给你以下控制权限模式的选择：

- **None.** Select this to disable remote control on the selected device.

选择这个选项，可以禁用所选设备的远程控制。

- **All Mixes.** Control of every Aux Mix Send level and pan setting.

控制每个Aux Mix Send发送电平和 pan设置。

- **Mix X.** Control of an individual Aux Send level and pan setting.

控制一个单独的Aux Send发送电平和pan设置。

- **Wheel of Me Only Toggle.** Limits access to the Wheel of Me control only.

只限制对 "Wheel of Me "控制的访问。

### UC Surface Device Permissions
### UC Surface设备权限


When setting permissions for UC Surface, you can choose to filter out certain functions. When the button is the off state, the function will not be available for the selected device.
在为 UC Surface 设置权限时，你可以选择过滤掉某些功能。按钮在关闭状态时，该功能对所选设备将不可用。

The following functions can be disabled individually:
以下功能可以单独禁用：

- **Name.** Enables/disables the ability to remotely change channel and bus names.
  启用/禁用远程改变通道和总线名称的能力。
- **Channel Types.** Enables/disables the ability to remotely change the channel type.
  启用/禁用远程改变通道类型的能力。
- **Channel Source.** Enables/disables the ability to remotely change the channel source.
  启用/禁用远程改变通道信号源。
- **EQ & Dynamics.** Enables/disables the ability to remotely change EQ and Dynamics settings for channels and available buses.
  启用/禁用远程改变通道和可用总线的EQ和动态设置。
- **Preamps.** Enables/disables the ability to remotely control the preamp functions.
  启用/禁用远程控制前置放大器功能。
- **GEQ.** Enables/disables the ability to adjust the GEQ for the available buses.
  启用/禁用为可用总线调整GEQ。
- **Assigns.** Enables/disables the ability to assign and unassign channels to the main and subgroup buses.
  启用/禁用，将通道分配和取消分配到主总线和子群总线的功能。
- **FX.** Enables/disables the ability to edit the effects remotely.
  启用/禁用远程编辑效果的功能。
- **Scenes.** Enables/disables the ability to remotely change scenes.
  启用/禁用远程改变场景的功能。
- **Groups.** Enables/disables the ability to remotely create Filter DCA groups.
  启用/禁用远程创建过滤DCA组。
- **Mute Groups.** Enables/disables the ability to remotely control mute groups.
  启用/禁用远程控制静音组。

### 9.4.3 Software Control 软件控制


Your StudioLive Series III mixer can control Studio One in addition to function as a Mackie Control Emulation device for Logic and a HUI emulation device for ProTools.

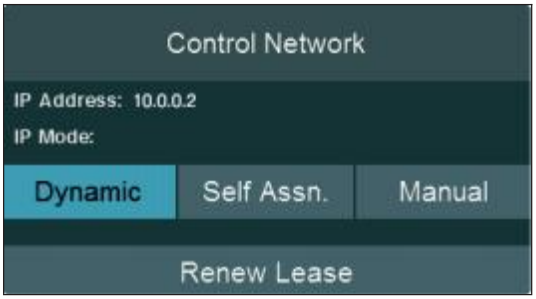
StudioLive III系列调音台除了可以控制Studio One以外，还可以作为Logic的Mackie控制和ProTools HUI的仿真设备。

For more information on using your StudioLive mixer as a controller for your DAW application please review the following addendums:

关于使用StudioLive调音台作为DAW应用的控制器的更多信息，请查看以下附录：

- **StudioLive Series III Studio One DAW Control Addendum**
- **StudioLive Series III MCU for Logic DAW Control Addendum**
- **StudioLive Series III HUI Emulation for ProTools DAW Control Addendum**

### 9.4.4 Control Network IP Address Settings 控制网络IP地址设置

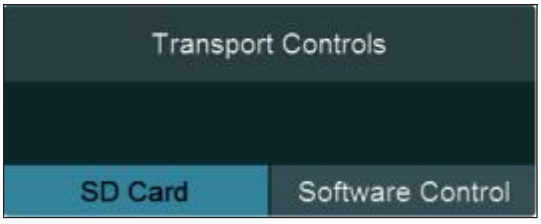



In the Control Network area of the UCNET screen, you'll see the current IP address of your StudioLive. This IP address can be assigned in one of three ways. Select the necessary IP assignment mode by touching one of the following buttons:

UCNET图像上的Control Network区域，可以看到你的StudioLive的当前IP地址。分配这个IP地址，可以通过三种方式之一进行。通过触摸以下按钮之一，选择必要的IP分配模式：

- **Dynamic.** The IP address is assigned automatically upon connection to the network, and can shift to a new address when necessary due to changes in network availability. In this mode, a **Renew** button is shown onscreen. Touch this button to renew the DHCP lease for your StudioLive.
  IP地址连接网络时会自动分配，必要时，因网络可用性的变化会转移到新的地址。这种模式下，屏幕会显示一个**Renew**按钮。按此按钮，为你的StudioLive，可以更新DHCP租约。
- **Static Self (Self-Assigned).** The IP address is assigned automatically, but stays the same thereafter until you need to change it. In this mode, an **Apply** button is shown. Touch this button to auto-assign a new static IP address to your StudioLive.
  自动分配IP地址，直到你需要改变它，它会保持不变。在这种模式下，会显示一个**Apply** 按钮。触摸这个按钮，你的StudioLive会被自动分配一个新的静态IP地址。
- **Static Manual.** The IP address can be set manually, and remains the same until it is changed. In this mode, an **Edit** button is shown. Touch this button to open the Static Manual Edit screen, where you can specify IP address, subnet mask, and gateway settings for your StudioLive as needed for your network configuration. Touch each field in the form to bring up an onscreen keyboard for entry. When you're finished entering the settings, press **Apply** to establish the new settings. To exit without re-setting IP settings, touch the **Cancel** button.
  IP地址可以手动设置，并且改变之前保持不变。在这种模式下，会显示一个**Edit**按钮。触碰这个按钮，可以打开静态手动编辑屏幕，在这里你可以根据网络配置的需要，为你的StudioLive指定IP地址、子网掩码和网关设置。触摸表格中的每个字段，会出现屏幕键盘供你输入。当你完成输入设置后，按 "**Apply**"来建立新的设置。要退出而不重新设置IP设置，触摸 " **Cancel** " 键。

### 9.4.5 Transport Controls 传输控制




While your StudioLive Series III mixer is controlling a DAW, you can chose to have the Transport section control the SD recorder when DAW mode is disabled, or continue to control the Transport in your DAW whether or not DAW mode is active.

当StudioLive系列III调音台，正在控制DAW时，你可以选择让Transport部分在DAW模式被禁用时，控制SD录音机，或者继续在DAW中控制Transport，无论DAW模式是否激活。

For more information on using your StudioLive mixer as a controller for your DAW application please review the following addendums:

关于使用StudioLive调音台作为DAW应用的控制器的更多信息，请查看以下附录：

- **StudioLive Series III Studio One DAW Control Addendum**
- **StudioLive Series III MCU for Logic DAW Control Addendum**
- **StudioLive Series III HUI Emulation for ProTools DAW Control Addendum**

## 9.5 DAW Button 按钮


Your StudioLive can act as a control surface for the mixer functions of a computer running our Studio One, Logic or ProTools software. Press the DAW button to switch between normal mixing functions and DAW control. To return to normal operation, press the DAW button again.

你的StudioLive可以作为运行Studio One、Logic或ProTools软件的计算机的调音台功能的控制面。按DAW键，在正常混音功能和DAW控制之间可以进行切换。要返回到正常操作，请再次按下DAW键。


While operating in DAW control mode, if there are more channels available in the connected DAW or mixer than there are channel strips on your StudioLive, you can press the **Prev** and **Next** buttons in the Bank section to switch between banks of channels.

在DAW控制模式下操作时，如果所连接的DAW或调音台中的可用通道比StudioLive上的通道条多，你可以按Bank部分的Prev和Next按钮，来切换通道库。

For more information on using your StudioLive mixer as a controller for your DAW application please review the following addendums:

关于使用StudioLive调音台作为DAW应用的控制器的更多信息，请查看以下附录：

- **StudioLive Series III Studio One DAW Control Addendum**
- **StudioLive Series III MCU for Logic DAW Control Addendum**
- **StudioLive Series III HUI Emulation for ProTools DAW Control Addendum**

## 9.6 Scenes and Projects 场景和项目


As previously mentioned, every parameter on your StudioLive mixer can be simultaneously stored and recalled later using Projects and Scenes. To access these libraries, press the Scenes button. This will open the Projects library.

如前所述，StudioLive调音台上的每个参数都可以同时存储，以后使用项目和场景，进行调用。要访问这些库，请按 Scenes 键。可以打开项目库。


The Scene library for each Project is also viewable from this screen. The controls on the left side of the screen save and load Projects as well as resets the default routing of your mixer. The controls on the right side on the screen save and load Scenes within the current Project, as well as resets the default state of every currently recallable parameter.

在这个图像中，可以查看每个Project的Scene library场景库。屏幕左侧的控制按钮，可以保存和加载项目，并重设调音台的默认路由。屏幕右侧的控制按钮，可以保存和加载当前项目中的场景，并重置每个当前可调用参数的默认状态。

### 9.6.1 Creating and Recalling Projects 创建和回顾项目

Global System settings and routing are stored within a Project. A Project saves the following Global parameters:

统一系统设置和路由，被存储在一个项目中。一个项目可以保存以下参数：

- **User Function Buttons.** The assignments for all User Function buttons.

所有User Function按钮的分配。

- **GEQ Settings.** All bus assignments and curves.

所有总线分配和曲线。

- **FlexMix Modes.** Aux, Subgroup, Matrix.

辅助，子组，矩阵。

- **Pre/Post Modes.** FlexMix and FX Mix.

FlexMix and FX Mix 混响效果

- **Solo Bus User Settings.** Solo Mode (Radio, Latch, or Control Room), Solo in Place, Solo Selects, Solo PFL, Solo Level.

独奏模式（无线电、闩锁或控制室），原地独奏，独奏选择，独奏PFL，独奏水平。

- **Global Options.** Peak Hold, Link Aux Mute Mode.

峰值保持、Link Aux Mute Mode 连接AUX静音模式。

- **Monitor Options.** Phones Cue Source.

监听提示信号源。

- **Network IP Address Settings.** Dynamic, Self Assign, or Manual.

动态、自行分配或手动。

- **Digital Patching.** Input, Output, AVB, SD, and USB.

输入、输出、AVB、SD和USB。

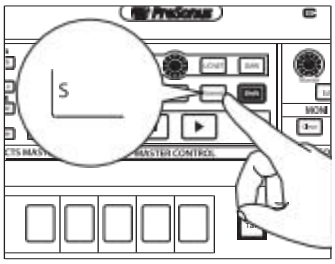
- **AVB Listener Streams.** All AVB streams to which the mixer is listening.

调音台正在监听的所有AVB数据流。

While any of these settings can be changed while a Project is loaded, they will not be saved unless the Project is stored with the new changes. Loading a new scene will not change any of these settings.

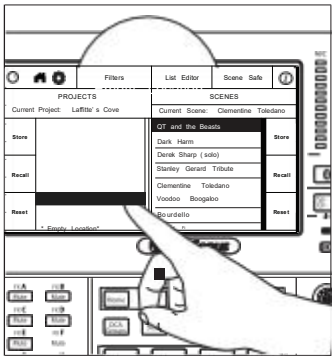
虽然这些设置可以在项目加载时被改变，但它们不会被保存，除非项目以新的变化被存储。加载一个新的场景将不会改变任何这些设置。

### Saving a Project



1. To save a project, press the **Scenes** button.

要保存一个项目，请按 "**Scenes**"按钮。




2. Tap the desired location for your new Project. You can select an Empty Location or a previously used location. Selecting a previously stored Project will overwrite the stored settings with the current settings.

为你的新项目点选所需的位置。你可以选择一个空的位置或一个以前使用过的位置。选择一个以前存储过项目，将用当前的设置覆盖存储的设置。


3. Press the left **Store** button on the Touch Display to bring up the onscreen keyboard. Enter your Project name with the keyboard.

在Touch Display上左边 **Store** 按钮，调出屏幕键盘。用键盘输入你的 Project名称。

4. Press the **Enter** button to save your Project, or press the **Cancel** button on the screen to cancel and return to the Projects Library screen.

按**Enter键**保存你的 Project，或按屏幕上的 "**Cancel**"键取消并返回项目库屏幕。

5. Once saved, the Current Project field will alert you that your Project has been successfully saved and then display your new Project name.

一旦保存，"Current Project"会提醒你，你的项目已成功保存，然后显示你的新项目名称。

6. The Store and Recall buttons will begin to flash. Use these buttons to create a new Scene with your current mix parameters, or to recall a stored Scene (if applicable). For more information on saving and recalling Scenes, ***see Section 9.6.2***.

Store 和 Recall按虐将开始闪烁。使用这些按钮，可以用你当前的混合参数创建一个新的场景，或调用已存储的场景（如果适用）。关于保存和调用场景的更多信息，***见第 9.6.2 节***。

### Loading a Project:
### 加载一个项目：

1. Tap name of the desired Project.
2. Press the left **Recall** button on the Touch Display.
3. Once loaded, the Current Project field will display the Project name.

点选所需项目的名称。

按Touch Display上的左边的Recall按钮。

一旦加载，Current Project 领域将显示Project name名称。

### 9.6.2 Creating and Recalling Scenes 创建和召回场景

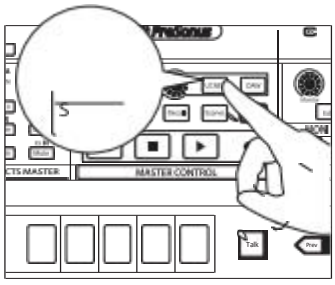
Creating a scene requires simply dialing in a mix that you would like to use at a later date and saving it. This has obvious benefits for both studio and live sound. For example, in the studio, saving and recalling a scene allows you to move to another song and come back to the current mix later. For live shows with multiple bands, you can set up custom mixes for each band at soundcheck and recall the mix when that band goes onstage.

创建一个场景，需要简单地录音一个你想在以后使用的混音，并保存它。这对录音室和现场的声音都有明显的好处。例如，在录音室里，保存和调用一个场景可以让你转到另一首歌曲，然后再回到当前的混音。有多个乐队的现场演出，你可以在试音时，为每个乐队设置自定义混音，并在该乐队上台时调用该混音。

Scenes with the same Global routing and settings should be stored within the same Project. This greatly decreases load time when switching between Scenes.

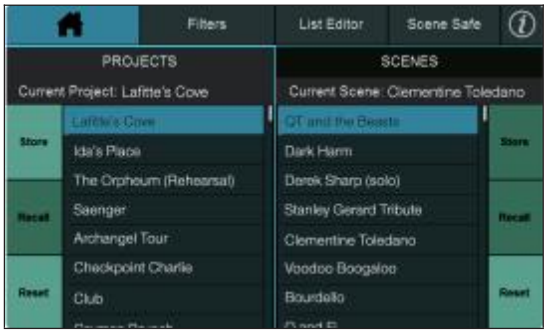
具有相同Global路由和设置的场景，应该存储在同一个Project中。这大大减少在Scenes之间切换的加载时间。

### Saving a Scene
### 保存一个场景

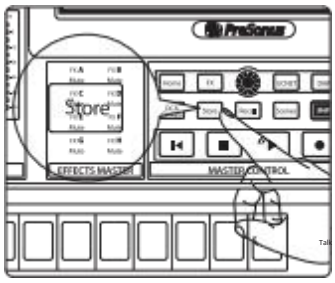


1. To save a scene, press the **Scenes** button.
要保存一个场景，请按 "**Scenes**"按钮

2. This will open the Scenes library menu on the Touch Display. The Store and Recall buttons will begin to flash.
在Touch Display中打开Scenes library场景库菜单。Store和Recall按钮将开始闪烁。



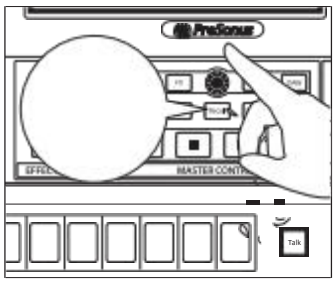

3. Scroll to an empty Scene location and press the **Store** button in the Master Control area or on the right side of the screen to enter a custom name.



滚动空白的Scene位置，在Master Control区域或图像右侧的 **Store**键，输入一个自定义名称。

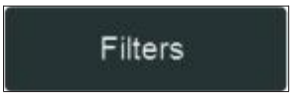
4. Press the **Store** button again or press the Enter button on the screen to save the scene to your mixer's memory.
再次按**Store**键，或按屏幕上的Enter按钮，将场景保存到调音台的存储器中。

### Loading a Scene
### 加载一个Scene



To recall a scene, touch one of the stored scenes in the library list to select it, then press the **Recall** button to recall the scene.
要 recall一个场景，在Library库列表中，触控其中一个已存储场景来选择它，然后按 recall键，来调用该场景。

## 9.6.3 Filters 滤波器




At the top of the Project and Scenes library screen, you will find the Filters button. Tapping this will open the Filters screen. From here you can select the parameters you want to be affected when you recall a Project or a Scene. With the exception of Phantom Power, all filters are enabled by default.

在 Project 和Scenes库图像的顶部，你会找到Filters 按钮。 点击并打开 "Filters"图像。这里可以选择，你希望调用一个项目或场景时所受影响的参数。除去Phantom Power幻象电源外，所有的滤波器，是默认启用的。

**Project Filters 项目滤波器**


The following recallable parameter sets can be omitted when recalling a Project. When omitted, these parameters are still stored with a new Project. Filter affect recall only.

在调用一个项目时，可以省略以下可调用的参数集。当省略时，这些参数仍与新Project项目一起存储。滤波器只影响recall调用。

- **Input Source.** Analog, Network, SD, and USB.
  模拟，网络，SD，和USB。
- **FX Mix Pre/Post Modes.** Pre 1, Pre 2, or Post Settings for all FX Mixes.
  所有FX混音的Pre 1、Pre 2或 Post Settings后设。
- **General Settings.** Peak Hold, Link Aux Mute Mode, Phones Cue Source, Network IP Settings.
  Peak Hold峰值保持，Link Aux Mute Mode 连接Aux静音模式，
  Phones Cue Source 监听提示音源，网络IP设置。
- **Output Patching.**Analog Output Routing set in the Digital Patching menu.
  在Digital Patching数字跳线菜单中设置的Analog Output Routing模拟输出路由。
- **USB Patching.** USB Stream Routing set in the Digital Patching menu.
  在数字配接菜单中，设置的USB流路由。
- **Flex Mix Modes.** The bus mode for each FlexMix (Aux, Subgroup, or Matrix).
  每个FlexMix的总线模式（Aux、Subgroup或Matrix）。
- **Talkback Assignment.** All Talkback assignments.
  所有对Talkback的分配。
- **AVB Stream Routing.** All AVB Streams from external devices to which the mixer is listening. Talker streams are global settings that are not affected by or stored within Project settings.
  调音台正在监听的来自外部设备的所有AVB流。Talker 流是全局设置，不受项目设置的影响，也不存储在项目设置中。
- **AVB Patching.** Internal patching of all AVB streams set in the Digital Patching menu.
  在Digital Patching菜单中，所有AVB流设置内部跳线。

- **GEQ.** GEQ bus assignments and curve settings.
  GEQ总线分配和曲线设置。
- **Flex Mix Pre/Post Modes.** Pre 1, Pre 2, or Post Settings for all FlexMixes.
  所有FlexMixes的Pre 1、Pre 2或Post后设置。
- **Solo Bus User Settings.** Solo Mode (Radio, Latch, or Control Room), Solo in Place, Solo Selects, Solo PFL, Solo Level.
  独奏模式（无线电、闩锁或控制室），原地独奏，独奏选择，独奏PFL，独奏水平。
- **Analog Input Patching.** The Analog Input Patching set in the Digital Patching menu.
  Digital Patching菜单中的Analog Input Patching设置。
- **SD Patching.** The SD Patching set in the Digital Patching menu.
  在Digital Patching菜单中的SD Patching设置。
- **User Functions.** The User Function button assignments as well as User Fader and Fat Channel layer assignments.
  User Function按钮的分配，以及User Fader和Fat Channel layer的分配。

### Scene Filters 场景滤波器

| Filter Name<br>滤波器名称 | Included Parameters<br>包括参数 |
|---|---|
| Channel Info<br>通道信息 | Name<br>Color<br>Type |
| Input Fat Channel<br>输入Fat Channel | Fat Channel Settings for all Inputs:<br><br>High Pass Filter<br>Gate Settings and Key Source<br>Compressor Settings and Key Source<br>EQ Settings<br>Fat Channel Order (EQ<>Comp)<br>Limiter Setting |
| Mutes 静音 | On/Off state for all Mutes |
| Subgroup Assignments<br>子群分配 | The channel assignments to every subgroup |
| FX Type/Settings<br>效果器类型/设置 | The active effect type for each FX Rack slot<br>All associated FX parameter settings |
| Preamp 前置放大器 | Preamp Trim and Digital Gain<br>Phantom Power<br>Polarity |
| Output Fat Channel<br>输出Fat Channel | Fat Channel Settings for all Outputs:<br><br>High Pass / Low Pass Filter<br>Compressor Settings<br>EQ Settings<br>Fat Channel Order (EQ<>Comp)<br>Limiter Setting |
| Main Mix Level 主混音电平 | The Main Mix output level |
| Aux/Matrix Mixes<br>Aux/Matrix 混响 | The mix levels for every FlexMix configured as an Aux or a Matrix:<br><br>Send Levels<br>Send Mutes<br>Send Pans |
| DCA Groups DCA 组 | Name<br>Color<br>Channel Type<br>Channels Assigned<br>Mix Levels (Main, FlexMixes, FX) |
| Channel Strip 通道条 | Solo<br>Pan<br>Stereo Link<br>Link Options<br>Pre/Post Digital Send<br>Digital Send Source<br>Fat Channel A/B state |
| Channel Delay 通道延迟 | Input Delay settings |
| Main Mix Assigns 主混音分配 | The channel and subgroup assignments to the Main Mix |
| FX Mixes FX 混合 | The mix levels for every FX bus:<br><br>Send Levels<br>Send Mutes<br>Send Pans |
| Mute Groups 静音组 | Name<br>Channels Assigned<br>Mute State |

## 9.6.4 List Editor 列表编辑器

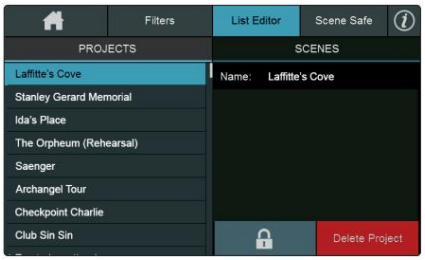
The List Editor allows you to change Project and Scene names, delete them, lock the ability to make changes to them, as well as reorder your Scene library as necessary. Tapping on the List Editor tab opens the editor.

List Editor 编辑器允许你改变Project 和 Scene的名称，删除它们，锁定对它们进行修改的能力，以及根据需要，重新排列你的场景库。 点击 " List Editor"选项卡，可以打开该编辑器。

### Projects 项目

Tap on the Projects list to edit any Project in your library. Once selected you can choose to rename it, lock it or delete it entirely.

点击 Projects list列表，编辑库中的任何项目。一旦选中，你可以选择重命名它，锁定或完全删除它。




To rename a Project, tap the edit field. 要重新命名一个项目，请点击编辑区域。


Tapping on the Lock button will prevent overwriting the stored parameters.

点击Lock键，可以防止覆盖存储的参数。

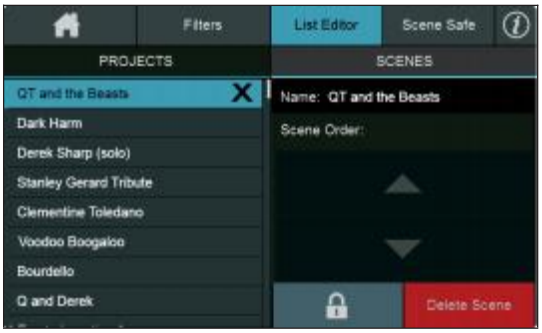

Tap the Delete Project button to remove it from your mixer. This will also delete all the Scenes stored within it.

点击 "Delete Project"键，将其从混音器中删除。这也将删除其中存储的所有场景。

### Scenes 场景

To edit the Scenes within a Project, first select the Project from Project List Editor, then tap on the Scenes tab.

要编辑项目中的场景，首先从Project List Editor中，选择Project 项目，然后点击 Scenes tab场景标签。




To rename a Scene, tap the edit field. 要重新命名一个场景，请点击编辑区域。


Use the arrows to move a Scene up or down in the list.

使用箭头在列表中向上或向下移动场景。

Tapping on the Lock button will prevent overwriting the stored parameters.

点击Lock 键，可以防止覆盖存储的参数。


Tap the Delete Scene button to remove it from the Project.

点击Delete Scene按钮，将其从项目中移除。


You can also tap on the 'X' next to a Scene in the Edit List to remove it from the Project.

***Power User Tip:*** *Your StudioLive mixer will always ask you to confirm your selection before it deletes a Project or a Scene.*

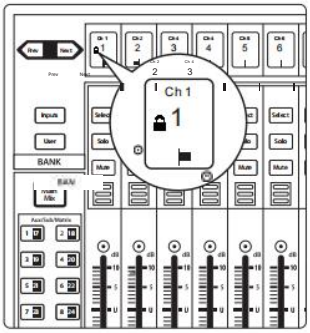
*你也可以点击编辑列表中某个*Scene*场景旁边的"X"，将其从项目中删除。*

***Power User Tip:****在删除项目或场景之前，StudioLive调音台总会要求你确认你的选择。*

## 9.6.5 Scene Safe 安全


In some cases, you may want to protect a channel or bus from being affected when scenes are recalled. To do this, touch the **Scene Safe** button. This opens the Scene Safe screen on the Touch Display.

在某些情况下，你可能想保护一个通道或总线在场景被调用时不被影响。要做到这一点要按 "**Scene Safe**" 键。这将Touch Display上的 "Scene Safe"图像。




This screen shows you a list of all available channels and buses. Touch the channel or bus of your choice to put it into scene safe mode, and protect it from changes when scenes are recalled.

这个屏幕显示所有可用的通道和总线的列表。触控你选择的通道或总线，使其进入scene safe模式，并保护其在调用场景时不被改变。

When a channel is included in the Scene Safe group, a padlock will appear on its scribble strip to alert you that it will be omitted from any Scene that is recalled.

在Scene Safe组中有一个通道时，一个padlock会出现在它的scribble strip条上，提示它将从任意被调用的场景中省略。

## 9.6.6 AutoStore 自动存储

It is not necessary to create a scene for your StudioLive in order to preserve its settings when you power it down. The StudioLive takes continuous snapshots of the current position of every parameter on the mixer and stores them to memory every 3 seconds. This ensures that the next time you turn your StudioLive on, all of your settings will be restored to the same setting they were in when you powered down.

不是必须给你的StudioLive创建一个场景，以便在关闭电源时保留其设置。StudioLive对调音台上的每个参数的当前位置，进行连续快照，每隔3秒会存储到内存中。保证你下次打开StudioLive时，所有的设置都将恢复到你关机时的设置。

The AutoStore to Disk icon will flash in the upper left-hand corner of the Touch Display when an AutoStore snapshot is taken, alerting you that it is safe to power down your mixer.

当 AutoStore自动存储快照时，自动存储到磁盘的图标，将在Touch Display左上角闪烁，提示关闭调音台电源是安全的。

***Note:*** *If you make changes to a stored scene,AutoStore will not save these changes as a permanent part of the scene. Any changes made to a scene in the StudioLive's library must be saved using the Scene menu, as described in the first part of this section.*

***注意：*** *如果你修改了存储的场景，AutoStore不会将这些修改保存为场景的永久部分。对StudioLive库中的场景所做的任何修改，都必须使用Scene menu场景菜单来保存，如本节第一部分所述。*

## 9.6.6 Reset 重置


For both Projects and Scenes, you'll find a Reset button. This button resets the currently loaded Project or Scene to the default state. Because you will potentially lose any changes to your current mix, you will be prompted to confirm this choice.

对于Projects和Scenes，你会发现一个Reset按钮。这个按钮，重置当前加载的Projects或Scenes为默认状态。因为，你可能会丢失对你当前混音的任何改变，所以提示你确认这个选择。

### Project Reset

| Inputs and Buses 输入和总线 | Mode 模式 |
|---|---|
| Input Channels | n/a |
| FlexMix Mode | Aux (All FlexMixes) |
| FlexMix Pre/Post | Pre 1 (All FlexMixes) |
| FX Mix Pre/Post | Post |
| Solo Settings | AFL<br>Radio Solo Mode<br>Solo Level: Unity |
| Phones Cue Source | Solo |
| Peak Hold | Off |
| Sample Rate | 48 kHz |
| Link Aux Mute Mode | Unlinked |
| Network IP Mode | Dynamic |
| Transport Controls | SD Card |
| GEQ | No Assignments |

*Note: See **Section 14.2** for the default Digital Patching menu routing for every mixer model.*

*注意：每个调音台型号的默认 Digital Patching 菜单路由，请见**第 14.2 节**。*

### Scene Reset 场景重置

| Inputs and Buses<br>输入和总线 | Output Level<br>输出电平 | Assign<br>分配 | Pan<br>Pan | Solo<br>独奏 | Mute<br>静音 | Stereo Link<br>立体声连接 | Aux/FX Sends<br>Aux / FX 发送 | Type<br>类型 |
|---|---|---|---|---|---|---|---|---|
| Input Channels (All Mixes) | -∞ | Mains | C | Off | Off | Off | -∞ | n/a |
| FX (All) | Unity | Mains | n/a | n/a | Off | n/a | n/a | Digital XL Reverb |
| Aux In A/B | -∞ | Mains | n/a | n/a | n/a | n/a | -∞ | n/a |
| Tape In | -∞ | n/a | n/a | n/a | n/a | n/a | -∞ | -∞ |

The Fat Channel will be restored to the same setting for every input and output on the StudioLive. Each of the dynamics processors and all EQ bands will be turned off.

在StudioLive的每个输入和输出中，Fat Channel将被恢复到相同的设置。每个动态处理器和所有均衡器频段都将被关闭。

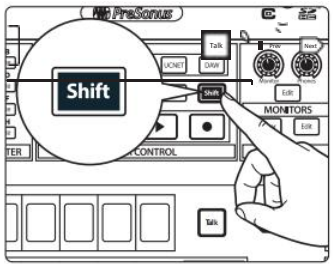
Their parameters will be set as follows: 它们的参数被设置为：

| Fat Channel Parameters<br>Fat Channel 参数 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHANNEL | | HIPASS | NOISE GATE | | LIMIT | | COMPRESSOR | | EQ | LOW | L.MID | H.MID | HIGH |
| GAIN | 0db | OFF | STATE | OFF | STATE | OFF | THRESH | 0 dB | STATE | OFF | OFF | OFF | OFF |
| PAN | <C> | | RANGE | N/A | | | RAT | 2:1 | P/S | PEAK | n/a | n/a | PEAK |
| Source | Analog | | ATK | 5 ms | | | ATK | 20 ms | Q | 0.6 | 0.6 | 0.6 | 0.6 |
| | | | REL | 0.7 ms | | | REL | 150 ms | FREQ | 130 Hz | 320 Hz | 1.4 kHz | 5 kHz |
| | | | Key Src | Off | | | GAIN | 0 dB | GAIN | 0 dB | 0 dB | 0 dB | 0 dB |
| | | | Key Fltr | Off | | | MODE | Standard | MODE | Standard | | | |
| | | | Mode | Expand | | | | | | | | | |

***Power User Tip:*** *Before beginning any new mixing situation, we recommended you reset your scene. This is the easiest way to ensure that there are no lingering parameter settings that could cause you some trouble in your new mix.*

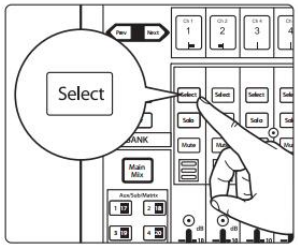
***Power User Tip:****在开始任何新的混音情况之前，我们建议你重置你的场景。这是最简单的方法，可以确保没有遗留的参数设置，在新的混音中会给你带来一些麻烦。*

### 9.6.7 Nulling Parameters 归零参数



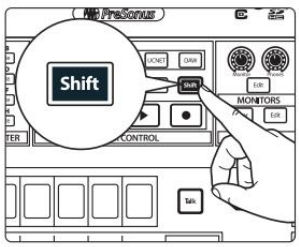

To return any Fat Channel parameter to its default setting, simply press and hold the **Shift** button and turn its encoder.

将Fat Channel参数恢复到其默认设置，只需按住Shift按钮并转动其编码器。

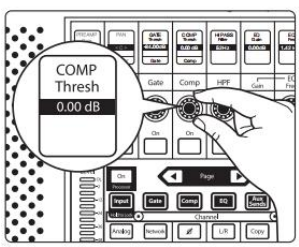



For example, if you want to null the current setting for the Channel 1 pan:
例如，如果你想使 Channel 1 pan的当前设置归零：

1. 选择通道1。
1. Select Channel 1.




2. Press and hold the **Shift** button.
按住Shift键。




3. Simultaneously turn **Encoder 7: Compressor Threshold** in the Fat Channel. The compressor threshold for Channel 1 will return to its default setting.

***Power User Tip:*** *Parameters on 32-channel StudioLive Series III models can also be nulled by holding the TAP button.*

*同时转动***Encoder** *7：*Fat Channel*的压缩器门限。通道1的压缩器门限将恢复到其默认设置。*

***Power User Tip:*** *32 Channel StudioLive系列III型号的参数，也可以通过按住TAP键进行归零。*

# 10 Monitoring Controls 监听控制


In addition to the main outputs, your StudioLive mixer features a set of monitor outputs and a headphone jack, each with its own distinct signal path. While you can use these outputs to listen to the main mix, you can also assign other signals to them, such as Aux mixes, the solo bus, or the tape input. This allows easy monitoring of your choice of signals as you work, while the full mix continues to flow from the main outputs.

除了主输出，你的StudioLive调音台还有一组监听输出和一个耳机插孔，每个都有自己独特的信号路径。虽然你可以使用这些输出来聆听主混音，但你也可以将其他信号分配给它们，如辅助混音、独奏总线或磁带输入。这样就可以在你工作时方便地监听你所选择的信号，而全部的混合信号继续从主输出流过。

The Monitors control section is where you interact with these outputs. Turn the **Monitor** knob to set output level for the monitor outputs. Turn the **Phones** knob to set headphone volume. To get into more advanced monitoring settings, press the **Edit** button. This opens the Monitor screen on the Touch Display.

监听控制部分是你与这些输出互动的地方。转动 Monitor 旋钮，设置监听输出的输出电平。转动Phones旋钮，设置耳机音量。要进入更高级的监听设置，按**Edit**按钮。这将打开Touch Display上的Monitor 图像。


On this screen, you can choose which signals to send to the monitor and headphone outputs. Touch the **Monitor** button to configure signal routing for the monitor outs. Press the **Phones** button to do so for the headphone output. In either case, a grid of available sources is shown (Solo, Main, Tape, FlexMixes). Touching any one of these sources routes it to the currently selected monitoring output.

在这个屏幕上，你所选信号要发送到监听和耳机输出。触控"**Monitor** "键来配置监听输出的信号路由。触控Phones按钮，可以为耳机输出配置信号路由。在任何一种情况下，都会显示一个可用信号源的网格（独奏、主音、磁带、FlexMixes）。触控这些信号源中的任何一个，就可以将其路由到当前选定的监听输出。

***Power User Tip:*** *When the Solo system is in CR (control room) mode, soloing a channel or bus causes that signal to be sent to the monitor outputs, temporarily overriding any preexisting routings to that output. When solo is disengaged, the routings you've chosen in the Monitor screen are restored. For more information on Solo Modes, seeSection 10.1.1.*

***Power User Tip:*** *当Solo 系统处于CR（控制室）模式时，Solo 一个通道或总线，会导致该信号被发送到监听输出，暂时覆盖预先存在的路由到该输出。当Solo 被解除时，你在监听图像中选择的路由恢复。关于Solo 模式的更多信息，请见 10.1.1 节。*

The Delay control allows you to adjust the amount of delay applied to the headphone and control room output signals. Touch the **Delay** knob and turn the **Master Control** encoder to add delay to either output. This is useful for aligning the timing of the Front-of-House monitoring signal with the signal coming from the Front-of-House PA system. The PA sound must traverse the distance from the speakers to your mix position before you can hear it, so a certain amount of delay occurs, which can obscure the finer details of your mix when using the monitor outputs. Adjust this control until the phasing/flamming effects are minimized.

Delay 延迟控制，可以调整应用到耳机和控制室输出信号的延迟量。触控**Delay**旋钮，转动**Master Control**编码器，增加任何一个输出的延时。这非常有用，对调整前厅监听信号，与来自前厅PA系统的信号的时间。在你听到它之前，PA的声音必须穿过从扬声器到你的混音位置的距离，所以会有一定的延迟，在使用监听输出时，这可能会掩盖你的混音的更多细节。调整这个控制，直到相位/发声效果达到最小。

## 10.1 Solo Controls 控制


The StudioLive features an independent Solo bus. This feature is extremely useful in setting levels for monitor mixes, dialing in dynamics processing on each channel, and fixing issues during a live show without interrupting the main mix.

StudioLive有一个独立的Solo bus独奏总线。这个功能很有用，对于设置监听混音的电平，在每个通道上拨动动态处理，以及在不中断主混音的情况下，修复现场演出中的问题。

The Solo bus has three different modes: AFL (default), PFL, and SIP.

Solo总线有三种不同的模式：AFL（默认），PFL，和SIP。

- **AFL (After-Fader Listen).** AFL sends the channel or subgroup signal to the Solo bus post-fader so that you can control the level of the soloed signal with the fader. This is the StudioLive's default setting.

  AFL将通道或子群信号发送到“推子后”的独奏总线上，这样可以用推子来控制独奏信号的电平。这是 StudioLive 的默认设置。

- **PFL (Pre-Fader Listen).** PFL sends the channel or subgroup signal to the Solo bus before it reaches the fader so the fader does not affect the soloed signal.
  PFL在通道或子群信号到达推子之前，将其发送到Solo总线上，这样推子就不会影响独奏信号。

- **SIP (Solo In Place).** This is also known as“destructive solo.”When channels are soloed in this mode, every channel that isn't soloed will be muted, and only the soloed channels will be sent to their assigned outputs. While useful in dialing in dynamics during soundcheck, this mode is dangerous during a live show. We recommend that this mode be turned off when mixing live events.

  这也被称为 "destructive solo"。通道在这种模式下独奏时，每一个没有独奏的通道都会被静音，只有独奏的通道，会被送到他们指定的输出。虽然试音期间对拨入动态很有用，但在现场演出时，这种模式是很有风险。我们建议在现场混音时关闭该模式。

***Power User Tip:*** *To unsolo all channels, press the* ***Clear*** *button in the Solo control section.*

***Power User Tip:*** *要取消所有通道的独奏，请按独奏控制部分的* ***Clear*** *按钮。*

### 10.1.1 Solo Modes 独奏模式


To access the Solo bus controls, press the **Edit** button in the Solo control section. This will make the following controls available in the Touch Display.

要访问独奏总线控制，按Solo control部分的**Edit** 按钮。以下控制在Touch Display上可用。

1. **Exit.** Closes the Solo Edit screen.

   关闭Solo Edit屏幕。

2. **Cue Mix Level Control.** Adjusts the Overall Level of the Solo Bus. Touch this knob to adjust the overall level for the Solo bus with Master Control encoder.
   调整独奏总线的整体电平。按这个旋钮可以用主控编码器调整独奏总线的整体电平。

3. **Solo In Place On/Off Button.** Enables Solo In Place. SIP (Solo In Place), or "destructive soloing," mutes every unsoloed channel on the StudioLive. If one of the muted channels is routed to the mains or a subgroup, it will be muted in those outputs. This also applies to soloed channels: The output routing is still active. Note that while you can manually unmute a channel, this mode should be used with extreme caution during a live performance. Only the input channels can be placed in destructive soloing. The subgroups and aux buses are omitted from SIP mode.
   启用Solo In Place。SIP(Solo In Place)，即destructive soloing，使StudioLive上所有未独奏的通道静音。如果其中一个被静音的通道，被路由到主机或子群，它将在这些输出中被静音。这也适用于独奏的通道：输出路由仍然是激活的。请注意，虽然你可以手动取消一个通道的静音，但在现场演出时，要谨慎地使用。只有输入通道可以被置于destructive soloing 中。子群和辅助总线在SIP模式中被省略了。

***Power User Tip:*** *When SIP is engaged, channel mutes will only apply to the subgroup and main bus assignments. SIP does not mute input channels in aux-bus mixes. Because of this, you can use SIP to dial in a mix in the mains without disturbing the musicians' last-minute rehearsal on stage.*

***Power User Tip:*** *当SIP参与时，通道静音将只适用于子组和主总线的分配。SIP不对辅助总线混音中的输入通道进行静音。正因为如此，你可以在主总线上使用SIP拨出一个混音，不会干扰在舞台上最后一分钟排练的音乐家。*

*Destructive soloing is also a great way to tune each channel's dynamics individually in live-mixing situations or do surgical editing in the studio. SIP mode mutes every channel and bus that is not soloed in the Main bus (that is, if Channel 3 is soloed, you will only hear Channel 3 in your mains). This makes a great fine-tuning tool but it can quickly destroy a live mix. We highly recommend that you drop out of this mode once the show has started.*

*在现场混音时，Destructive soloing也是单独调整每个通道的动态或是录音室编辑的好方法。SIP模式使主总线中，没有独奏的每个通道和总线静音（也就是说，如果独奏通道3，你将只能在主线中听到通道3）。这是个很好的微调工具，但它可以迅速破坏现场混音。我们强烈建议你在演出开始后退出这个模式。*

4. **PFL/AFL Toggle Button.** Enables Pre-Fader Listen (PFL) Soloing. The default setting for the Solo bus is After-Fader Listen (AFL); by pressing PFL, Pre-Fader Listening is enabled. In either mode, pressing Solo on any channel or bus routes that channel to the Solo bus and has no effect on the main or subgroup mixes.

   启用“推子前”聆听（PFL）独奏。独奏总线的默认设置，是“推子后”聆听(AFL)；按下PFL，就可以启用“推子前”聆听。在任何一种模式下，任何通道或总线上按Solo，都会将该通道导向Solo总线，而对主混音或子组混音没有影响。

   - PFL soloing is not available for the subgroups.

   PFL独奏对子群不可用。

   - Aux bus soloing is always PFL, regardless of whether this mode is engaged.

   辅助总线的独奏始终是PFL，不管这个模式是否被激活。

5. **Solo Selects.** When Radio Solo mode is enabled, the Solo Select option will be available. When Solo Select is active, soloing a channel will also select it. This is available for all three solo modes.

   当Radio Solo模式被启用时，独奏选择选项将被使用。当独奏选择激活时，独奏一个通道也将选择它。这适用于所有三种独奏的模式。

6. **Solo Modes.** (Defaults to Radio mode) These buttons let you choose from the following behavioral modes for channel soloing:

   (默认为Radio模式)这些按钮让你从以下行为模式中选择通道独奏：

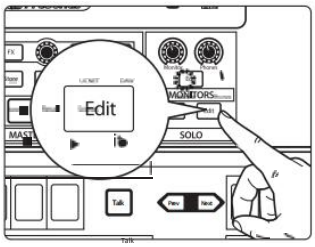
   - **Latch.** In this mode, you can solo multiple channels or buses at once.
   在这种模式下，你可以一次独奏多个通道或总线。

   - **Radio.** In this mode, only one channel or bus can be soloed at a time. When this mode is chosen, the Select Follows Solo button appears. Enabling this option causes channels and buses to be selected for Fat Channel editing when soloed (as though the corresponding Select button had been pressed).
   这种模式下，一次只能独奏一个通道或总线。这种模式所选定时，会出现Select Follows Solo按钮。启用这个选项，会使通道和总线在独奏时被选择用于Fat Channel editing 编辑（就像按下了相应的选择按钮一样）。

   - **CR (Control Room).** In this mode, soloed signals are sent directly to the monitor output bus, temporarily disabling any other signals that are routed to that output. When solo is disengaged, any existing routings to the monitor outs are re-enabled. While CR Mode is active, multiple solo buttons can be engaged simultaneously.
   在这种模式下，独奏的信号被直接送到监听输出总线上，暂时禁用任何其他被路由到该输出的信号。解除独奏时，会重新启用任何现有的路由到监听输出。当CR模式被激活时，多个独奏按钮可以同时进行。

## 10.1.2 Using the Solo Bus for Monitoring 使用 Solo Bus 进行监听

When mixing live, or when recording multiple musicians at once, it is often necessary to quickly listen to just one instrument or group. The Solo and Monitor buses can be used together for this purpose. It is important to note that if you wish to monitor with speakers, rather than with headphones, it is necessary to connect the speakers to the Monitor Outs, rather than to the Main Outputs.

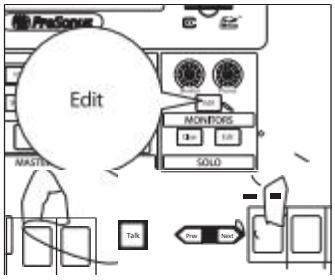



在现场混音，或同时录制多个音乐家时，往往需要快速听取一个乐器或小组的声音。独奏和监听总线，可以一起用于这个。需要注意的是，如果你想用扬声器来监听，而不是用耳机，就必须把扬声器连接到监听输出上，而不是主输出上。

To use the Solo bus for monitoring purposes, do the following:
要使用Solo总线进行监听，请执行以下操作。

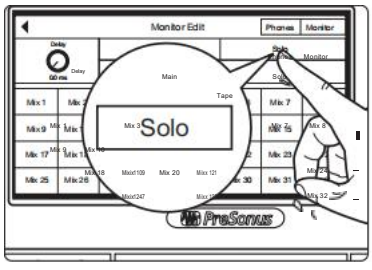
1. Press the **Edit** button in the Solo section to bring up the Solo screen.
   按Solo section 的**Edit** 按钮，调出Solo图像。





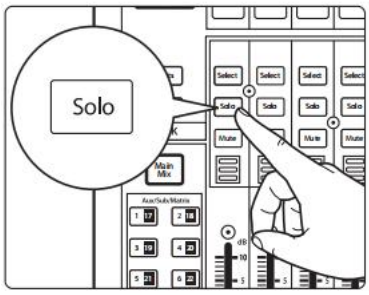

2. Enable the **Pre-Fader Listen** option if you want to hear the soloed channels pre-fader (unaffected by fader level). Disable it if you want channel levels to be affected by fader levels. 如果你想在推子前听到独奏的通道（不受推子电平的影响），请启用**Pre-Fader Listen**选项。如果你想让通道电平受到推子电平的影响，则禁用它。

3. Touch **Latch** in the Solo Mode section of the Touch Display to enable the Latch solo mode. This lets you solo multiple channels at the same time, which is usually desired, in this case. 触控Touch Display上的独奏模式部分的Latch，并启用Latch独奏模式。这可以让你在同一时间独奏多个通道，通常情况是需要的。




4. Press the **Edit** button in the Monitors section to bring up the Monitor screen.
   按监听部分的**Edit** 按钮，调出监听图像。

5. Press **Monitors** if you want to listen on your booth or control room speakers. Press Phones if you want to listen on headphones. This brings up a list of available sources to route to the chosen monitoring system.
如果想在你的控制室的扬声器上收听，请按**Monitors**。如果你想用耳机听，就按 Phones 。这会出现一个可用信号源的列表，以路由到所选的监听系统。



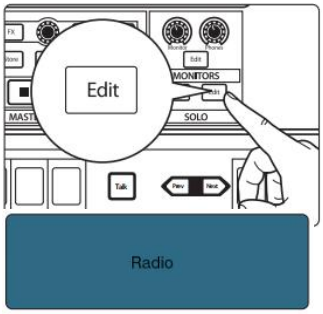

6. Touch **Solo** on the Touch Display to route the Solo bus to the monitor system you've chosen. 按 Touch Display上的Solo，将Solo总线路由到你选择的监听系统。

7. Press **Solo** on the channels or buses you want to monitor. The signal being fed to the Main outputs is unaffected.
   在你想监听的通道或总线上，按下Solo。被送入主输出的信号不受影响。

## 10.1.3 Using Solo in Place to Set Up a Mix 使用 "Solo in Place"来设置混音

We started this manual with a quick and easy way to set up the input levels for your StudioLive, ensuring that you have the highest possible input level without clipping your analog-to-digital converters. The next step is to set up your mix by dialing in the dynamics, EQ, and fader settings for each channel. This is a job for Solo In Place (SIP) mode. As previously mentioned, Solo In Place is a great way to dial in your mix without disturbing your musicians' last minute rehearsal or subjecting your audience to that impromptu jam session on stage. Radio Solo mode is especially useful for this purpose because it allows you to quickly solo just one channel at a time.

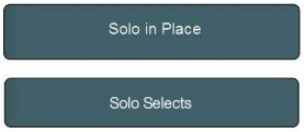
在本手册的开始，介绍一种快速而简单的方法来设置StudioLive的输入电平，确保你有尽可能高的输入电平，而不至于使模数转换器产生削波。下一步设置你的混音，是通过为每个通道拨动动态、均衡器和推子设置。这是一个原地独奏（SIP）模式。正如前面提到的，原地独奏是一个很好的方法，可以在不打扰音乐家情况下拨出你的混音，或让你的观众在舞台上进行即兴演奏。无线电独奏模式，对这个特别有用，因为它允许你一次只快速独奏一个频道。



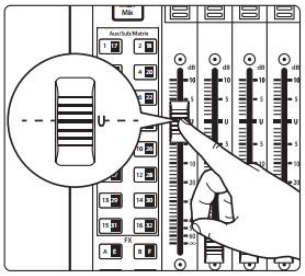

1. Press the Edit button in the Solo section to bring up the Solo screen. 按独奏部分的Edit按钮，调出Solo图像。

2. Touch Radio in the Solo Mode section of the Touch Display to enable Radio Solo mode. 在Touch Display的Solo Mode模式部分，按Radio，启用Radio Solo mode模式。

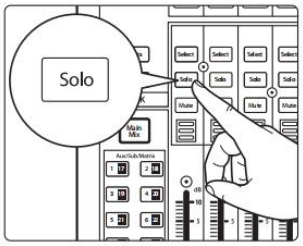
3 Touch Solo in Place on the Touch Display to enable Solo in Place mode. 在 Touch Display上按"Solo in Place"，启用"Solo in Place"模式。



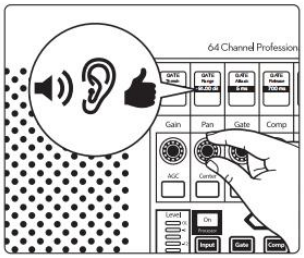

4 Touch Solo Selects on the Touch Display to enable Solo Selects mode. 按Touch Display 上的Solo Selects选择，启用Solo Selects模式。

5 Raise your channel faders and Master fader to unity gain. 把你的通道推子和主推子提高到统一增益。




6 Many engineers start with the drums and work from the bottom up, so press the Solo button on your kick-drum mic channel. Notice that all the other channels on your StudioLive have been muted, and the kick-drum channel is selected.
许多工程师从鼓开始，从下往上工作，所以按踢鼓麦克风通道的 Solo按钮。注意，StudioLive上的所有其他的通道，都被静音了，而会选中踢鼓通道。



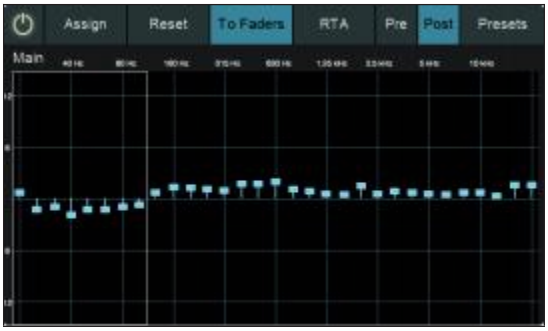

7. The Fat Channel is now focused on the selected channel, giving you access to EQ, dynamics, and effects settings for the kick-drum channel. Set these to your liking. Fat Channel现在集中在选定的通道上，让你可以访问踢鼓通道的EQ、动态和效果设置。把这些设置成你喜欢的样子。

8. Once you're satisfied, press the Solo button on the next channel and repeat step 6. In this way, continue with each channel in your mix.一旦你满意了，在下一个通道上按下Solo按钮，重复步骤6。以这种方式，继续在你的混音中的每一个通道。

9. When you've finished, press the Edit button in the Solo section and touch Solo in Place on the Touch Display to disable it and set up your fader mixer.
当你完成后，按独奏部分的编辑按钮，并在 Touch Display 上按Solo in Place禁用它，并设置你的推子混音器。

**Power User Tip:** While Radio Solo mode is especially useful for setting levels as described above, it is not ideal for soloing during a live show. Because of this, once you have set your levels, go back to the Solo Edit menu and select either Latch or CR Solo Mode.
**Power User Tip:** 虽然对设置上述电平，Radio Solo模式特别有用，但它并不适合在现场演出时独奏。正因为如此，一旦你设置好了电平，就回到独奏编辑菜单，选择Latch或CR独奏模式。

# 11 Graphic EQ 图形均衡器




Your StudioLive comes packed with 31-band graphic EQ processors that can be freely assigned to the Main mix, or your choice of FlexMixes. These can be used for system tuning, subtle tweaks, or wherever you find them useful. StudioLive 64S mixers are equipped with 16 graphic EQs while all other models are equipped with eight.

StudioLive配备了31-band图形均衡器，可以自由分配给主混音或你选择的FlexMixes。这些可以用于系统调整，微调整，或任何你认为有用的地方。StudioLive 64S调音台配备了16个graphic EQs图形均衡器，而所有其他的型号都配备了8个。

Graphic EQs are generally used to fine-tune the overall mix for a particular room. For instance, if you are mixing in a"dead" room, you may want to boost high frequencies and roll off some of the lows. If you are mixing in a"live" room, you might need to lower the high-midrange and highest frequencies. In general, you should not make drastic amplitude adjustments to any particular frequency band. Instead, make smaller, incremental adjustments over a wider spectrum to round out your final mix. To assist you with these adjustments, here is an overview of the way different frequency ranges affect sound characteristics:

图形均衡器，通常用于对特定房间的整体混音进行微调。例如，如果你在一个"dead " 的房间里混音，你可能想提高高频并滚掉一些低频。如果你是在一个"live"的房间里混音，你可能需要降低高中频和最高频率。一般来说，不应该对任何特定的频段，进行大幅度的振幅调整。相反，在更大的频谱范围内，进行较小的、渐进的调整，使最终的混音更加完美。为了帮助你进行这些调整，这里概述了不同频率范围影响声音特性的方式。

**Sub-Bass (16 Hz to 60 Hz).** The lowest of these bass frequencies are felt, rather than heard, as with freeway rumbling or an earthquake. These frequencies give your mix a sense of power, even when they only occur occasionally. However, overemphasizing frequencies in this range will result in a muddy mix.

这些低音频率的最低点是可以感觉到的，而不是听到的，就像高速公路上的隆隆声或地震。这些频率给你的混音带来一种力量感，即使它们只是偶尔出现。然而，过分强调这个范围的频率，会导致混响的浑浊。

**Bass (60 Hz to 250 Hz).** Because this range contains the fundamental notes of the rhythm section, any EQ changes will affect the balance of your mix, making it fat or thin. Too much emphasis will make for a boomy mix.

因为这个范围，包含了节奏部分的基本音符，任何EQ的变化，都会影响你的混音的平衡，使其变得厚或窄。太过强调会使混音变得粗犷。

**Low Mids (250 Hz to 2 kHz).** In general, you will want to emphasize the lower portion of this range and de-emphasize the upper portion. Boosting the range from 250 Hz to 500 Hz will accent ambience in the studio and will add clarity to bass and lower frequency instruments. The range between 500 Hz and 2 kHz can make midrange instruments (guitar, snare, saxophone, etc.)"honky,"and too much boost between 1 kHz and 2 kHz can make your mix sound thin or"tinny."

一般来说，你要强调这个范围的低频部分，不强调高频部分。提升250赫兹到500赫兹的范围，可以突出演播室的氛围，并能增加低音和低频乐器的清晰度

。500赫兹和2千赫之间的范围，中音乐器（吉他、小鼓、萨克斯风等）变得 "很糙"，而1千赫兹和2千赫之间，太多的提升会使你的混音听起来很薄或 "尖"。

**High Mids (2 kHz to 4 kHz).** The attack portion of percussive and rhythm instruments occurs in this range. High mids are also responsible for the projection of midrange instruments.

在这个范围内，会有打击乐和节奏性乐器的Attack部分。高中音也负责中音乐器的投射。

**Presence (4 kHz to 6 kHz).** This frequency range is partly responsible for the clarity of a mix and provides a measure of control over the perception of distance. If you boost this frequency range, the mix will be perceived as closer to the listener. Attenuating around 5 kHz will make the mix sound further away but also more transparent.

这个频率范围，对混音的清晰度负有部分责任，并提供了对距离感的控制措施。如果你提高这个频率范围，混音更接近听众。衰减5kHz左右，会使混音听起来更远，但更清澈。

**Brilliance (6 kHz to 16 kHz).** While this range controls the brilliance and clarity of your mix, boosting it too much can cause some clipping so keep an eye on your main meter. 虽然这个范围控制着你的混音的清晰度，但提升太多可能会导致一些削波，所以要注意你的主表。

## 11.1 Assigning GEQs 分配GEQs


To assign a Graphic EQ to one of the mixes, select the desired mix and press the GEQ button. This will open the GEQ screen. Touching a mix will insert a Graphic EQ on it post-fader.

将图形均衡器分配给其中一个混音，选择所需的混音，并按GEQ，打开GEQ图像。触控一个混音，将在推子后插入一个图形均衡器。


On the upper right hand side of the screen, you will see how many GEQs are available to be assigned.

在屏幕的右上方，你会看到有多少GEQ可以被分配。


You will be alerted when every available GEQ has been assigned.

分配每一个可用的GEQ后，会有提醒。

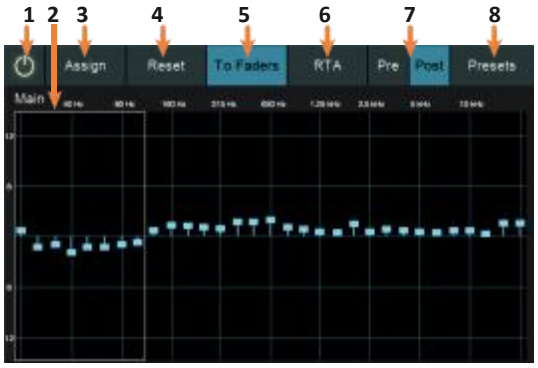
Once assigned, you can access the GEQ at any time by pressing the **GEQ** button on your desired mix:

一旦分配好，按下所需混音上的GEQ按钮，任何时候你都可以访问GEQ：

Use the Fat Channel encoders to control the Graphic EQ in banks of eight. Use the Master Control encoder to scroll to a different bank.

使用 Fat Channel编码器来控制八组得Graphic EQ均衡器。使用Master Control编码器来滚动到不同的库。

## 11.2 Using the GEQ 使用GEQ




1. **On/Off.** Use this button to enable/disable the current GEQ.

   用这个按钮来启用/禁用当前的GEQ。

2. **Current Bank.** By default, the GEQ is controlled from the Fat Channel encoders in banks of eight. This highlights the bank that is currently being controlled from the Fat Channel. Use the value encoder to move to another bank.
   默认情况下，GEQ是由 Fat Channel编码器控制的，每组8个。这里显示当前由 Fat Channel 控制的库。使用数值编码器，可以移动到另一个库。

3. **Assign.** Opens the Assign GEQ screen. ***See Section 11.1***.
   打开 "Assign GEQ " 图像。***见第 11.1 节***。

4. **Reset.** Press this button to flatten the GEQ.

   按这个按钮可以使GEQ平缓。

5. **To Faders.** Enable this button to control your GEQ from your StudioLive faders.

   启用这个按钮，从StudioLive推子上控制 GEQ。

6. **RTA.** Enables the RTA. ***See Section 11.4***.

   启用RTA。***见第 11.4 节***。


***StudioLive 32SX and 32SC Users Power User Tip:*** *For StudioLive 32SXand 32SC users, the RTA can be enabled and disabled from the control surface by pressing the RTA button.*

***StudioLive 32SX和32SC用户 Power User Tip:*** *对于StudioLive 32SX和32SC用户，按RTA键，启用和禁用控制面 的RTA。*

7. **Pre/Post-GEQ.** Enables Pre- or Post-GEQ viewing on the RTA. ***See Section 11.4***.

   启用RTA上的Pre-或Post-GEQ 浏览。***见第 11.4 节***。

8. **Presets.** Opens the GEQ Presets screen. ***See Section 11.3.***

   打开GEQ预设图像。***见第 11.3 节***。

## 11.3 GEQ Presets 预设

To store or load a GEQ preset for the currently selected instance, touch the Presets button while the GEQ screen is active. This loads the GEQ Presets screen. In this screen, to load a preset, scroll through the list of existing presets, and touch the preset of your choice to select it. Press the Recall button to load the selected preset. To store a GEQ preset, press the Store button. A text entry field appears, letting you name your new preset. Touch Save to complete the process. Touch Cancel to cancel the process.

要为当前选定的实例存储或加载GEQ预置，当GEQ屏幕处于激活状态时，按Presets键。这会加载GEQ预置图像。在这里，要加载一个预置，滚动现有的预置列表，并按你选择的预置来选择它。按Recall键，加载所选的预置。存储GEQ预置，按Store按钮。出现一个文本输入区域，为你的新预置命名。按"Save"来完成这一过程。按 "Cancel"键，取消这个过程。


## 11.4 Using the RTA to Ring Out Monitors 使用RTA响铃监听


Every Graphic EQ is equipped with a Real-time analyzer, or RTA, in which x = frequency and y = amplitude. As previously mentioned, an RTA provides a close visual representation of what you are hearing. It provides a view of the long-term spectrum of the signal—for example, the one- third-octave spectrum long-term average of a musical performance.
每个图形均衡器都配备了一个实时分析器，或称RTA，其中x=频率，y=振幅。如前所述，RTA为你的聆听，提供了一个近距离的视觉表现。它提供了一个信号的长期频谱视图——例如，一个音乐表演的三分之一倍频谱的长期平均值。

Feedback is short term for a feedback loop, where a portion of the signal from the speaker returns to the microphone, resulting in a constant tone at the offending frequency. “Ringing out” is a process of attenuating the frequencies that are feeding back to maximize gain before feedback in your floor monitors.

反馈是反馈回路的简称，即扬声器的部分信号返回到麦克风，导致在违规的频率上出现持续的音调。"Ringing out"是对反馈的频率进行衰减的过程，以便在反馈之前，最大限度地提高地面监听的增益。

1. With the mic input gain at an appropriate level, bring the aux- send level up on the mic channel you wish to ring.

   在麦克风输入增益处于适当水平的情况下，会希望麦克风通道的辅助发送电平提高。

***Power User Tip:*** *If you are using one console for stage monitors and another console for front-of-house, set the mic input gain on the front-of-house console. Do not "gain up" the mic signal on the monitor mixer for the sake ofgetting more volume out ofa stage monitor, as you can do that in other places (Mix level for individual channels, Aux Out level for global control, etc.). Gain staging is very important in order to have a feedback-free show.*

***Power User Tip:*** *如果你用一个调音台做舞台监听，用另一个调音台做前厅，在前厅的调音台上设置麦克风输入增益。不要为了获得更多的舞台监听音量，而在监听调音台上"增益"麦克风信号，你可以在其他地方这样做（个别通道的混合电平，全局控制的Aux Out电平等）。为了获得feedback-free表演，增益阶段是非常重要的。*

2. Select the graphic EQ for the Aux Mix output of the stage monitor you are ringing out.

   为你正在响起的舞台监听的Aux Mix output，选择图形均衡器。

3. Open the Graphic EQ by pushing the GEQ button.

   按GEQ键，打开图形均衡器。

4. Slowly bring the aux output level up until you hear (and see) feedback.

   慢慢地把aux output电平提高，直到你听到（和看到）反馈。

***Note:*** *Ringing out stage monitors will produce feedback. Ifyou are not careful, you can produce a lot offeedback. Do not make sudden gain boosts; go slowly and carefully to avoid causing any damage to speakers and ears.*

***注意：*** *Ringing out stage 监听会产生反馈。如果你不小心，就会产生大量的反馈。不要突然进行增益提升，要慢慢地、小心地进行，以免对扬声器和耳朵造成任何损害。*

5. Feedback will show up as a line peak on the RTA.
   反馈将在RTA上显示为一个线状峰值。
6. Lower the GEQ gain control for the offending frequency in 3 dB increments to attenuate it out of your stage monitor.

   以3dB的增量降低违规频率的GEQ增益控制，将其从舞台监听中减弱。

***Power User Tip:*** *Bring back the level on the GEQ slider to the pointjust before feedback so you don't take out too much frequency content and sacrifice overall timbre. Because the speaker is pointed at the mic, stage-monitor feedback typically occurs in the higher frequencies, which also is where intelligibility comes from. Maximizing your intelligibility and gain structure results in clearer-sounding monitors.*

***Power User Tip:*** 把GEQ滑块上的电平调回到反馈之前的位置，这样你就不会拿出太多的频率内容，而牺牲整体的音色了。由于扬声器指向麦克风，舞台监听反馈通常发生在高频率。最大限度地提高你的增益结构，可以使监听的声音更清晰。

You can apply this process to the main system, as well. This is especially useful with applications requiring lavaliere or podium mics. These types of microphones are typically omnidirectional condensers and are very prone to feedback.

你也可以将这个过程应用于主系统。这对需要领夹式麦克风或指挥台麦克风的应用特别有用。这些麦克风通常是全向性的电容，非常容易产生反馈。

You can apply this process to the main system, as well. This is especially useful with applications requiring lavaliere or podium mics. These types of microphones are typically omnidirectional condensers and are very prone to feedback.

你也可以将这个过程应用于主系统。这对需要领夹式或讲台麦克风的应用特别有用。这些类型的麦克风通常是全向性的电容，非常容易产生反馈。

In a main system, feedback is typically in the mid to low range. The frequencies that are regenerating and creating a feedback loop are those frequencies that are wrapping around the main system due to the loss of directional control of lower frequencies.

在一个主系统中，反馈通常是在中低频段。正在再生并形成反馈回路的频率是那些由于低频失去方向控制而缠绕在主系统上的频率。

When you are ringing out a system, and more than two or three feedback loops are happening simultaneously, you have reached the level where stability can no longer be achieved. Try bringing down the overall output level or find a physical solution, such as moving the speaker or microphone.

当你在一个系统中振铃时，同时发生两到三个以上的反馈回路，你已经达到了无法再实现稳定的程度。试着降低整体的输出水平，或找到一个物理解决方案，如移动扬声器或麦克风。

# 12 Home


When you press the Home button, the Home screen opens on the Touch Display. This screen gives you access to settings and functions related to system configuration and troubleshooting.


按下Home按钮时，会在 Touch Display 打开。你可以访问有关系统配置和排除故障的设置和功能。

1. **Channel Source.** Displays currently selected channel's input source. Press to open the Digital Patching screen. For more information, ***seeSection 6.10.3.***
显示当前所选通道的输入源。按下并打开Digital Patching screen。更多信息，***请见第 6.10.3 节***。

2. **Settings.** Opens the Channel or Bus Settings screen. For more information, ***see Section 6.8.2.***
打开 "Channel或是Bus Settings" 图像。更多信息，***请见第 6.8.2 节***。

2. **System.** Lets you adjust the display brightness, and a host of other useful settings and utilities. For more information, ***see Section 12.1***.
可以调整显示器的亮度，以及一系列有用的设置和工具。更多信息，***见第 12.1 节***。

***3.*** **User Profiles.** Lets you create custom profiles and grant access to select feature to certain users while locking others. For more information, ***see Section 12.2.***
可创建自定义配置文件，并授予某些用户对特定功能的访问权，同时锁定其他用户。更多信息，***见第 12.2 节***。

4. **Capture.** Lets you record and play back multi-track audio, recorded to SD card or a connected computer. For more information, ***seeSection 8.3***.
录制和回放多轨音频，录制到 SD卡或连接的电脑上。更多信息，***请见第 8.3 节***。

6. **Utils.** Lets you run a variety of tests, to help locate hardware faults in the occasion of a problem. For more information, ***seeSection 12.4***.
可运行各种测试，出现问题时，帮助你定位硬件故障。更多信息，***见第 12.4 节***。

7. **Soft Power.** Pressing Soft Power automatically engages Autostore to save all your mixer settings prior to powering down. You will also be given the option to log out of the current User Profile. For more information, ***see Section 12.5***.
按下 "Soft Power "会自动启动 "Autostore" 功能，关机前，保存你的所有调音台设置。还可以选择注销当前的用户配置文件。更多信息，***请见第 12.5 节。***

8. **Audio Routing.** Lets you configure audio signal routing for networked audio devices, SD card/USB audio, and signals from compatible AVB networkable devices. For more information, ***see Section 12.3***.
为联网的音频设备、SD卡/USB音频以及来自兼容的AVB联网设备信号，配置音频信号路由。更多信息，***见第 12.3 节***。

9. **Talkback Edit.** Opens the Talkback Edit page. For more information, ***see Section 4.5.1.***

   打开 "Talkback Edit"页面。更多信息***见 4.5.1 节***。

10. **Selected Channel.** Displays currently selected channel or bus.

    显示当前选中的通道或总线。

11. **Current Parameter.** Displays current parameter.

    显示当前参数。

## 12.1 System Screen 系统图像

The System screen gives you access to many useful settings and functions that let you choose how your StudioLive looks and operates. The following functions are available:


在 "System screen"图像上，你可以访问许多有用的设置和功能，选择StudioLive 的外观和操作方式。以下是可用的功能：

1. **Sample Rate.** Sets the mixer's sample rate. StudioLive Series III mixers can operate at 48 kHz or 44.1 kHz.

设置调音台的采样率。StudioLive III系列调音台可以在48kHz或44.1kHz下运行。

2. **Network Clock.** Allows you to select the clock master when configuring complex AVB networks. For most applications, this can be set to Internal. For more information, ***please review the StudioLive Series III AVB Networking Guide***.

配置复杂的AVB网络时，你可以选择clock master时钟主站。对于大多数应用，这可以设置为Internal。了解更多信息，***请查阅StudioLive III 系列AVB网络指南。***

3. **Show Peak Hold.** Toggle this option on to enable peak hold mode for the various meters throughout StudioLive. When enabled, an indicator segment is lit on each meter, showing the highest point in the amplitude scale that the related signal has reached.

切换这个选项，可以为整个StudioLive的各种仪表启用 peak hold模式。启用后，每个仪表上都会有一个指示灯段亮起，显示相关信号达到的振幅最高点。

4. **LED Brightness.** Gives you a range of brightness settings for the LEDs. Choose Low, Mid, or High brightness for each.

为你的LED提供一系列的亮度设置。可以选择低、中、高三种亮度。

5. **Backlight Brightness.** Sets the brightness for the displays on your StudioLive (scribble-strip and touch). Choose between Low of High.

设置StudioLive上的显示器（scribble-strip和touch）的亮度。在低和高之间进行选择。

6. **Pan Mode.** Sets the mode of operation for the Mono bus. For more information, ***see Section 5.6***.

设置Mono bus的操作模式。更多信息***请见第5.6节***。

7. **Link Aux Mutes.** Lets you select a mode of operation for linking mute buttons between channels and aux sends. For more information, ***seeSection 12.1.5***.

在 channels 和aux sends之间，选择连接mute按钮的操作模式。更多信息，***见第12.1.5节***。

8. **Bluetooth Registration.** Click to view important regulatory information regarding your StudioLive's Bluetooth module.

点击查看有关 StudioLive 蓝牙模块的重要法规信息。

9. **Fat Channel Load/Paste Filters.** Lets you choose which parameters are included when you load a Fat Channel preset or copy/paste Fat Channel settings between channels. For more information, ***seeSection 12.1.3.***

加载 Fat Channel 预设或通道之间的复制/粘贴Fat Channel 设置时，你可以选择参数。更多信息，***见第 12.1.3 节***。

10. **Firmware.** Shows the currently installed version of the StudioLive firmware, and offers functions for installing firmware updates. For more information, ***see Section 12.1.4***.

显示当前StudioLive固件的安装版本，并提供安装固件的升级功能。更多信息，***见第 12.1.4 节***。

11. **Permissions.** Lets you configure StudioLive control permissions for any connected compatible controllers. For more information, ***seeSection 12.1.1***.

为连接任何兼容控制器，配置StudioLive的控制权限。更多信息，***见第 12.1.1 节。***

12. **User Button Assigns.** Lets you set the functions of the User Buttons. For more information, ***see Section 12.1.2***. *Note: This feature is not available on the StudioLive 32SC and StudioLive 16.*

设置User Buttons按钮功能。更多信息，***见第 12.1.2 节***。注意：该功能在 StudioLive 32SC 和 StudioLive 16 上不可用。

### 12.1.1 Permissions 权限

Controlling your StudioLive remotely with UC Surface or QMix-UC for mobile devices allows you to move about the venue freely. However, it can also put the full power of the your mixer in multiple hands— some more adept than others. Therefore, your StudioLive enables you to limit each wireless device's access to the mixer features by setting permissions.

控制你的StudioLive，使用UC Surface或移动设备的QMix-UC的远程控制，在会场中，可以随意移动。它还可以把你的调音台的全功率放在多个手中 — 有些人比其他人更善于操作。因此，StudioLive可以通过设置权限，来限制每个无线设备对调音台访问的功能。


From the System menu press the Permissions button to set the level of control available to each user. You can also reach these settings from the UCNET screen. For more information on setting mixer permissions, ***seeSection 9.4.2***.

从System 菜单中，按下Permissions按钮，设置每个用户可用的控制级别。你也可以从UCNET图像上到达这些设置。关于设置混合器权限的更多信息，***见第 9.4.2 节***。

### 12.1.2 User Buttons Assigns 用户按钮的分配


Every StudioLive Series III mixers feature eight user-assignable buttons. These buttons can control the following functions: Mute Groups 1-8, Tap Tempo A-D, Quick Scenes 1-8, Scene Navigation, or DAW Navigation. By default, these buttons are assigned to Mute Groups 1-8.

每个StudioLive III系列调音台都有8个用户可分配按钮。这些按钮可以控制以下功能。静音组1-8，轻敲节奏A-D，快速场景1-8，场景浏览，或DAW浏览。默认情况下，分配这些按钮到静音组1-8。

*Note: Because of their compact form fact, this feature is not available on the StudioLive 32SC and StudioLive 16.*

*注意：由于它们实际的外形，该功能在StudioLive 32SC 和StudioLive 16上不可用。*


From the System menu, touch the **User Assign** button to set custom functions to the User Buttons. When you first see this screen, you see the current assignments of each User Button, each with its own Edit button:

从系统菜单中，按**User Assign**，为User Buttons设置自定义功能。当你首次看到这个图像时，显示每个User Button的当前分配，它们都有自己的Edit按钮。


Press the **Edit** button that corresponds to the User Button you want to edit, and you'll see a function assignment screen.

**按你想编辑**的User Button按钮所对应的**Edit按钮**，你会看到一个分配功能图像。


In this screen, you can choose the function to assign to the chosen button, in the following categories:

你可以在这个图像上，选择要分配给所选按钮的功能。在以下类别中：

- **Mute Groups.** Lets you create stored sets of mute settings that correspond with the current state of the mixer, recallable at the press of the chosen User Button. Once a User Button is configured as a Mute Group, you can edit the Mute Group by pressing and holding the User Button until both it and all the Select buttons flash red. Add or remove channels to the Mute Group by pressing their Select buttons. Release the User Button to store.

  创建与调音台当前状态相对应的、可在按下所选User Button键时，调用的静音设置的存储集。一旦配置User Button按钮为静音组，你可以编辑静音组，直到它和所有的选择按钮，都闪烁为红色。添加或删除通道，通过所选按钮在Mute Group 静音组。松开 "User Button"按钮即可存储。

- **Tap Tempo.** Lets you assign the chosen User Button to act as a tap tempo button for any delay effects currently assigned to the effects buses. Only effects buses with a delay effect assigned are shown. When a User button is assigned to Tap Tempo, it will flash in time with tempo of its assigned delay.

  你指定所选的User Button，可作为当前分配给效果总线的任意延迟效果的 tap tempo 按钮。只有分配了延时效果的效果总线，才会显示出来。指定User Button为 "tap tempo"时，它将随着其指定的延时的节奏而闪光。

- **Quick Scene.** Lets you create stored sets of mixer settings that correspond with the current state of the mixer, recallable at the press of the chosen User Button. Once a User Button is configured as a Quick Scene, you can edit it by pressing and holding the User Button until it begins to flash. This will store the current state of the mixer to the selected Quick Scene.

  创建与调音台当前状态相对应的调音台设置的存储集，按选定的User Button时调用。一旦配置User Button为Quick Scene快速场景，你可以编辑它，直到它开始闪光。这将会把调音台的当前状态存储到选定的快速场景中。

- **Scene Navigation.** Lets you assign a Scene navigation function to the current User Button. The options include Previous Scene, Next Scene, Scene Recall, and Store Scene.

  为当前的User Button，指定一个Scene navigation场景导航功能。这些选项包括上一个Previous Scene、下一个Next Scene、Scene Recall场景调用和Store Scene存储场景。

### 12.1.3 Fat Channel Load/Paste Fat Channel 加载/粘贴


To choose which types of Fat Channel parameter settings are applied when you load a Fat Channel preset or copy and paste Fat Channel settings between channels, touch the **Fat Channel Load/Paste** button from the System menu.

选择加载Fat Channel预设时，应用哪种类型的Fat Channel参数设置，或在通道之间复制和粘贴Fat Channel设置，请从System菜单中，触控 **Fat Channel Load/Paste** 按钮。


Touch **Copy/Paste** to set copy/paste filter settings.
**触控Copy/Paste**可设置复制/粘贴滤波器的设置。

The following categories of settings are available to toggle on or off:
以下类别的设置，可供开启或关闭切换：

- Preamp. (Filtered by default)
- +48V. (Filtered by default)
- Polarity. (Filtered by default)
- Pan.
- Channel Type.
- Channel Name.
- Alt A/B Settings.
- Bus Assignments. (Filtered by default)
- Aux/FX Send/Pan. (Filtered by default)
- Mutes. (Filtered by default)
- Faders. (Filtered by default)

### 12.1.4 Firmware Update 固件升级


From the System menu, you can check the current firmware version and check for firmware updates by pressing the **Firmware** button.

从系统菜单中，你可以检查当前的固件版本，并通过按固件按钮检查固件更新。


Press the **Check for Updates button** to install the latest firmware version. Firmware can be updated from an SD card or UC Surface. To update using an SD Card, log into your My PreSonus account and download the new firmware version. Save the firmware file to an SD card and insert the card into your StudioLive mixer. Touch **Update** to complete the firmware update, or press **Cancel** to cancel the update. For information on updating firmware using UC Surface, ***please review the UC Surface Reference manual.***

安装最新的固件版本**按下 Check for Updates button按钮**。固件可以从SD卡或UC Surface更新。使用SD卡进行更新，请登录你的 My PreSonus 账户并下载新的固件版本。将固件文件保存到SD卡上，并将卡插入StudioLive调音台。触控 "**Update**"来完成固件升级，或者取消升级，按 "**Cancel** "按钮 。关于使用UC Surface固件更新的信息，***请查阅 UC Surface参考手册***。

### 12.1.5 Link Aux Mutes 连接Aux Mutes


Pressing the **Link Aux Mutes** button from the System menu lets you select between four linking modes that choose the way channel mutes and Aux send mutes interact:

按下系统菜单中的 **Link Aux Mutes**静音按钮，你可以选择四种链接模式，选择channel mutes静音和Aux send mutes静音的交互方式：

- **Unlinked.** When this mode is selected, channel mutes can be independently controlled in each Aux Mix and the Main Mix.

当选择这个模式时， channel mutes可以独立控制每个Aux Mix和Main Mix。

- **Main Mute Auxes.** When this mode is selected, muting a channel in the main mix will mute it in every aux mix. However, channels can be muted and unmuted independently from each aux mix.

当选择这种模式时，在Main Mix中静音一个通道，每个aux mix对其进行静音。然而，通道可以在每个aux mix中，被单独静音和解除静音。

- **All Aux Mute Link.** When this mode is select, the channel mutes for every aux mix are linked. In this mode, muting a channel from any aux mix will mute it in every aux mix but not in the Main mix.

选择该模式时，每个aux mix 的通道，静音都被连接。任何aux mix中静音的通道，会在每个aux mix中静音，但不会在Main Mix中静音。

- **Global Mute Link.** When this mode is select, the channel mutes for every aux mix and the Main mix are linked. In this mode, muting a channel from any mix will mute it in every mix.

选择这个模式时，每个辅助混音和主混音的通道静音是连接在一起的。在任何一个混音中静音一个通道，都会在每个混音中给它静音。

## 12.2 User Profiles 用户配置文件


User Profiles allow you to create custom settings limiting access to certain functions. Specific scenes can also be assigned to each Profile so that when the user logs into the mixer, they will have the option to load their preferred Scene.

你可以创建自定义设置，限制对某些功能的访问。特定的场景也可以分配给每个配置文件，这样，当用户登录调音台时，他们就可以选择加载他们喜欢的场景。

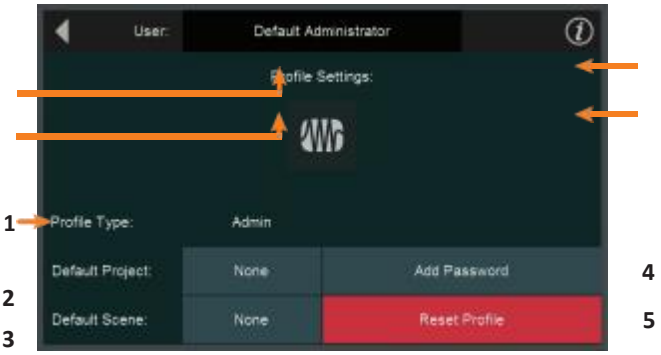
### 12.2.1 Default Administrator 默认管理员


User Profiles must be activated on your mixer. By default, your mixer is logged into the Default Adminitrator profile. This profile has access to every setting and parameter on your mixer.

激活User Profiles，必须在的调音台上。默认情况下，你调音台会登录到Default Adminitrator 配置文件中。这个配置文件，可以访问混音器上的每个设置和参数。


Several customized settings can be added to the Default Administrator profile. Press the Profile Settings button to open these options.

有几个自定义设置，可以添加到Default Administrator profile中。打开这些选项，按Profile Settings按钮。




1. **Profile Type.** This setting cannot be changed for the Default Administrator account. For more information on Profile Types, ***see section 12.2.2***.

对于 Default Administrator账户，这一设置不能改变。关于配置文件类型的更多信息，***请见 12.2.2 节***。

2. **Default Project.** Tap to open a list of all available projects. Once a project is selected, you will be ask if you'd like to load it when you log in as the Default Administrator.

点击打开一个所有可用项目的列表。一旦选择一个项目，会问你是否愿意在你作为默认管理员登录时，加载该项目。

3. **Default Scene.** Tap to open a list of all availble Scenes for the Default Project.

点击打开Default Project的所有可用Scenes的列表。

***Power User Tip:*** *You can set the Default Project and Scene simultaneously, by selecting either option. While any Project can be set as the default, only Scenes within the Default Project can be chosen as the default.*

***Power User Tip:*** *你可以通过选择任一选项，同时设置默认 Project 和Scene。虽然任何项目，都可以被设置为默认，但只有默认项目中的场景，可选择为默认。*

4. **Add Password.** Tap to password protect the Default Administrator profile. If you log out of this profile, you will be prompted to enter the password to log back in. To remove the Default Administrator password, hold the Master Mute button while powering up your mixer. Once the progress bar appears on the screen, the password will be deleted.

Tap password 保护Default Administrator 的配置文件。如果注销了这个配置文件，会提示你输入密码重新登录。要删除Default Administrator password密码，请在开机时，按住Master Mute按钮。一旦图像上出现进度条，密码就会被删除。

5. **Reset Profile.** Resets profile to default state.

将配置文件重置为默认状态。

## 12.2.2 Creating a New Profile 创建一个新的配置文件


You can create up to 10 User Profiles in addition to the Default Administrator profile.


To customize any profile, select it from the list and tap Profile Settings.

除了Default Administrator 配置文件外，你最多可以创建10个用户配置文件。想自定义任何配置文件，从列表中选择它，然后点击配置文件设置。

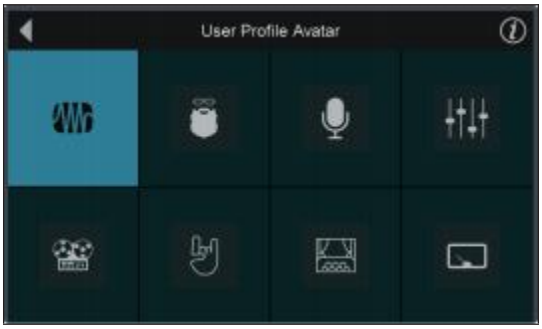
**Select a Name**
**选择一个名称**

***Power User Tip:*** *You must be logged into an administrator (default or custom) to create a new User Profile.*
***Power User Tip:****你必须登录为管理员（默认或自定义）才能创建一个新的 User Profile 用户配置文件。*


Tap on the default name field to enter a custom profile name. The only name that cannot be changed is the Default Administrator.

Touch the **Enter** button when done. Touch **Cancel** to leave the name unchanged.
点击默认名称字段，输入一个自定义的配置文件名称。唯一不能改变的名称是 Default Administrator。
完成后，按 **Enter键**。名称保持不变，可按 **"Cancel"** 键。

**Select an Avatar**
**选择一个Avatar**




By default, the PreSonus logo is the avatar for every user. This can be changed by tapping the default avatar on the profile settings page.

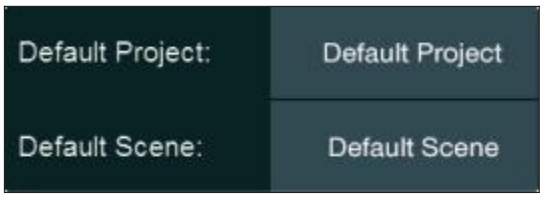
默认情况下，PreSonus的标志为每个用户的默认头像。通过点选个人资料设置页面上的默认头像来改变。

**Profile Type**


You can create two different Profile Types: Admin and User. Admin profiles are given access to every function and parameter. User profiles can have their permissions limited. For more information on setting User Permissions, ***see Section 12.2.3***.

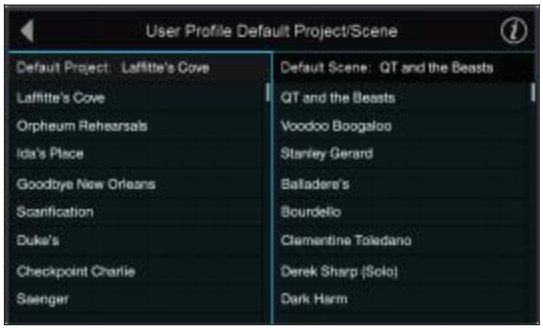
你可以创建两种不同的 Profile Types：Admin和User。赋予Admin profiles配置文件对每个功能和参数的访问权。User profiles配置文件，可限制其权限。关于设置用户权限的更多信息，***见第 12.2.3 节***。

**Default Project and Scene**




Just like for the Default Administrator profile, you can select a Project to be loaded when someone logs into their User Profile. This is especially useful for less experienced users.

就像Default Administrator配置文件一样，你可以选择一个项目，别人登录到他们的用户配置文件时加载。这对经验不足的用户特别有用。




Tapping on either the Default Project or Scene from the Profile Settings screen will open the User Profile Default Project/Scene screen. From here you can select the Default Project and Scene.

在档案设置屏幕上点击默认Default Project or Scene项目或场景，可打开 User Profile Default Project/Scene screen用户配置文件项目/场景图像。从这里你可以选择 Default Project and Scene。

***Note:*** *While any Project can be selected as default, only a Scene that is stored within the designated Default Project can be selected.*

***注意：****虽然可以选择任何项目作为默认，但仅有存储在指定的默认项目中的场景，可以被选择。*

**Level Limit 电平限制**


Use this to set the maximum level for the Main bus.

用它来设置主总线的最大电平。

**Change Password (Optional) 更改密码（可选）。**


5-digit numeric passwords can be set for any User Profile. Administrators can access the settings for any User profile with or without the password simply by logging into an Admin account.

可以为任意用户配置文件设置5-digit的数字密码。管理员只需登录Admin账户，可以访问任何有或无密码的用户资料的设置。


**Reset Profile 重置配置文件**


To reset a profile to factory default, select Reset Profile. You will be prompted to confirm this choice.

要将一个配置文件重置为出厂默认值，选择Reset Profile。会提示你确认这一选择。

## 12.2.3 Edit User Permissions 编辑用户许可


When a User Profile is set to "User," permissions can be granted for certain functions and denied for others.

当User Profile被设置为 "User"时，对某些功能可以授予权限，而对其他功能则予以拒绝。

The following features are only accessible from Administrator Profiles and always locked out in every User Profile:

以下功能只能从 Administrator Profile配置文件中访问，在每个用户配置文件中通常会被锁定：

- System Settings
- Audio Routing Options
- Input Source Patching
- UCNET Options
- Scene Lock / Unlock


From the Edit Permissions screen, you can limit access to the following functions on a per User basis:

在 "Edit Permissions"图像上，基于每个用户，可以限制对以下功能的访问：

- **Channel / Bus Names.** This locks the ability to rename any Channel or Bus.

锁定任何通道或总线重命名。

- **Channel Types.** This locks the ability to change the Channel Type.

锁定Channel Type改变的能力。

- **Input EQ/Dynamics.** This locks the ability to control Gate, Compressor, EQ, and Limiter parameters for every input channel.

锁定控制每个输入通道的门控、压缩器、均衡器和限制器参数的能力。

- **Output EQ/Dynamics.** This locks the ability to control Compressor, EQ, and Limiter parameters for every output bus as well as Output Delay.

锁定控制每个输出总线的压缩器、均衡器和限制器参数以及输出延迟的能力。

- **Preamps.** This locks the ability to adjust the Input trim, Digital Gain, Phantom Power, Polarity, High Pass Filter, and Input Delay.

锁定调整输入微调、数字增益、幻象电源、极性、高通滤波器和输入延迟的能力。

- **GEQ.** This locks the User out of the GEQ menu completely.

将用户完全锁定在GEQ菜单之外。

- **Assigns.** This locks the ability to make any channel assigments to the Main bus or Subgroups.

锁定对主总线或子群，进行任何通道分配的能力。

- **Changing FX Types.** This locks the ability to change the effects types loaded into the StudioLive Series III Effects Rack.

锁定改变加载到StudioLive系列III的Effects Rack的效果类型的能力。

- **Save Scenes.** This locks the ability to save or create new scenes.

锁定保存或创建新的场景。

- **Changing / Adding DCA Filter Groups.** This locks the ability to create or alter DCA Filter Groups.

锁定创建或更改DCA Filter Groups组的能力。


Whenever a User attempts to access a function to which they do not have permission a lock icon will be presented to them either in the upper right hand corner of the Touch Display or on the function itself in the Touch Display.

每当User试图访问他们没有权限的功能时，就会在Touch Display显示的右上角或其功能本身上，出现一个lock icon 锁定图标。

## 12.3 Audio Routing and the Digital Patching Screen 音频路由和Digital Patching图像


Pressing the Audio Routing button in the Home screen will give you access to audio routing options for networked audio devices, USB sources, SD card recordings, and special settings for networked PreSonus devices.

按下Home图像中的Audio Routing按钮，可以访问联网音频设备、USB信号源、SD卡录音的音频路由选项，以及PreSonus设备联网的特殊设置。


- **AVB Input Streams.** Touch to route available network sources to your StudioLive mixer's AVB Inputs. ***See the StudioLive AVB Networking Guide for more information***.

  将可用的网络资源路由到你的StudioLive调音台的AVB输入。***更多信息请参见 StudioLive AVB网络指南。***

- **Stagebox Setup.** Touch to configure NSB-series Network Stage Boxes or StudioLive Series III rack mixers as stage boxes with your StudioLive. S***ee the NSB-series User Manual and StudioLive Series III Rack Mixer Stage Box Addendum for more information***.

  配置NSB-系列Network Stage Boxes网络舞台箱或StudioLive III系列机架式调音台作为你的StudioLive舞台箱。***更多信息请参见 NSB-系列用户手册和 StudioLive III系列机架式混音器舞台箱附录。***

- **EarMix Setup.** Touch to add an EarMix 16M Personal Monitor Mixer to your StudioLive. ***See the EarMix 16M User Manual for more information***.

  触控添加 EarMix 16M 个人监听调音台到你的StudioLive。***更多信息请见 EarMix 16M用户手册。***

- **Digital Patching.** Touch to open the Digital Patching screen. ***Note: The rest of this section will provide information on Digital Patching.***

  触控打开 "Digital Patching" 图像。***注意：本节的其余部分，将提供有关 Digital Patching数字配线的信息。***

Digital patching allows you to route any analog or digital input to any channel and any mix to any output. This can save you hours of frustration having to rewire and repatch your physical inputs and outputs, especially in a fixed installation. Digital patching also allows you freely route audio to your AVB network and record anything you'd like via USB.

Digital patching数字配接，可以将任何模拟或数字输入路由到任意通道，并将任何混音路由到任意输出。这样省去重新布线和重新分配物理输入和输出的麻烦，特别是在固定的安装中。Digital patching还可以将音频路由到你的AVB网络，任何你想要的东西，可通过USB录制。


Press Master Reset to revert all Digital patching for the entire mixer to the default settings.

按Master Reset（主复位），将整个调音台的所有Digital patching恢复到默认设置。

Use the Reset button to revert an individual patch.

*使用*"Reset"*按钮恢复单个的*patch。

***Power User Tip:*** *Both Master Reset and Reset Sources provide you with the opportunity to confirm the change. Resetting an individual patch to default does not.*

***Power User Tip:*** *Master Reset和Reset Sources都为你提供了确认改变的机会。将单个配接点，恢复为默认值则不会。*

### 12.3.1 Digital Patching: Input Source 数字配接：输入源


Selecting the Input Source menu will allow you to patch any source to any channel. From the Assigned Source menu, select the type of source you would like routed to a channel: 选择Input Source菜单，你可以将任何源配接到任意通道。从 "Assigned Source"菜单中，选择你希望路由到一个通道的源的类型：

- **Analog.** Analog Inputs. 模拟输入

- **Network.** AVB Returns. AVB返回。

- **USB.** USB Playback Returns. USB播放的返回。

- **SD Card.** SD Multitrack Playback Returns. SD多轨制播放返回。

Whatever source type you've selected, a corresponding list of inputs will open in the Available Source menu. From this menu, you can, for example, route Analog Input 10 to Channel 1.

无论你选择什么信号源类型，都会在 "Available Source menu"菜单中打开一个相应的输入列表。比如说，从这个菜单中，你可将模拟输入10路由到通道1。

Pressing the reset button will reset the default routing for the currently selected input type.

按 reset按钮，将重置当前所选输入类型的默认路由。

***Power User Tip:*** *The routing you select for each source type is saved. In this way, you can switch between custom Analog, Network, and USB routings just as you can with the default routings.*

*会保存起来为每个信号源类型所选的路由。通过这种方式，你可以在自定义模拟、网络和USB路由之间进行切换，就像你使用默认路由一样。*


Press Reset Sources while Input Source is active to revert to the default settings.

当输入源处于活动状态时，按 "Reset Sources"可以恢复到默认设置。

### 12.3.2 Digital Patching: Analog Sends 数字配接：模拟发送


Selecting the Analog Sends menu will allow you to patch any mix to any FlexMix output. Select the output to which you'd like to route your mix first. Then select the mix from the Available Source list to the right.

选择 "Analog Sends"菜单，你就可以将任何混音跳接到任意的FlexMix输出。首先选择你想路由混合的输出。然后从右边的Available Source list列表中选择混音。

Press the reset button to repatch the default routing.

按reset按钮，重新配接默认路由。

You can route any of the following mixes to physical mix outputs on your StudioLive mixer:

你可以将以下任何一种混音，路由到StudioLive调音台的混音输出中。

- FlexMixes
- FX Send Mixes (pre-effects processor)
- Subgroups A-D (32-channel models only)
- Main L/R Mix
- Main Mono/Center bus (StudioLive 64S only)
- Solo L/R Bus


Press Reset Sends while Analog Sends is active to revert to the default settings.

激活Reset Sends 时，按Reset Sends可以恢复到默认设置。

### 12.3.3 Digital Patching: AVB Sends 数字配线：AVB 发送


Selecting the AVB Sends menu will allow you to patch any channel send or mix to any AVB send. Select the send to which you'd like to route your audio first. Then select the channel or mix from the Available Source list to the right.

选择AVB Sends menu 菜单，可以将任何通道发送或混音到任意AVB send发送。首先选择你想传送音频的发送。然后从右边 Available Source可用列表中，选择通道或混音。

Press the reset button to repatch the default routing.

按reset按钮，重新配接默认路由。

The following local StudioLive sources can be sent out to the AVB Network:

下列本地StudioLive信号源可以被发送到AVB网络。

- Inputs
- Aux In A L and R
- Aux In B L and R
- Tape In L and R
- Talkback
- FlexMixes
- FX Send Mixes (pre-effects processor)
- Subgroups A-D (32-channel models only)
- Main Mix L and R
- Mono bus (StudioLive 64S only)
- Solo L and R


Press Reset Sends while AVB Sends is active to revert to the default settings.

当AVB发送处于活动状态时，按重置发送可以恢复到默认设置。

### 12.3.4 Digital Patching: USB Sends 数字配接: USB发送


Selecting the USB Sends menu will allow you to patch any channel send or mix to any USB driver send. Select the USB driver send to which you'd like to route your audio first. Then select the channel or mix from the Available Source list to the right.

Press the reset button to repatch the default routing.

选择 USB Sends menu菜单，将任何通道发送或混音到任何USB driver send发送。首先选择你想传送音频的USB driver send。然后从右边的Available Source list可用源列表中，选择通道或混音。

按reset 键，重新配接默认路由。

The following local StudioLive sources can be sent to the USB bus to be recorded in your favorite DAW application:

下列本地 StudioLive 信号源，可以发送到USB bus总线上，以便你在最喜欢的DAW应用程序中，进行录音。

- Inputs
- Aux In A L and R
- Aux In B L and R
- Tape In L and R
- Talkback
- FlexMixes
- FX Send Mixes (pre-effects processor)
- Subgroups A-D (32-channel models only)
- Main Mix L and R
- Mono bus (StudioLive 64S only)
- Solo L and R


Press Reset Sends while USB Sends is active to revert to the default settings.

当USB Sends处于激活状态时，按Reset Sends可以恢复到默认设置。

### 12.3.5 Digital Patching: SD Card 数字配接：SD 卡


**StudioLive 64S users**. Selecting the SD Card menu will allow you to patch any input or mix to any of the 34 SD Card recording inputs. Select the SD Card recording input to which you'd like to route your audio first. Then select the channel or mix from the Available Source list to the right.

**StudioLive 64S** 的用户，选择SD Card菜单，可把配接任何输入或混音到34 SD Card录音输入中的任意一个。首先选择你要路由音频的SD Card录音输入。然后从右边的Available Source列表中，选择通道或混音。

**All other users**. Selecting the SD Card menu will allow you to patch any mix to the last stereo pair of SD Card recording inputs (33-34).

选择SD Card菜单，可以将任何混音配接到最后立体声组的SD Card recording inputs 输入（33-34）。

Press the reset button to repatch the default routing.

按reset键，重新配接默认路由。

### 12.3.6 Digital Patching: AES 数字配接：AES


Selecting the AES menu will allow you to patch any mix to the AES Output.

Press the reset button to repatch the default routing.

选择AES菜单，将配接任何混音信号到AES Output输出。按下reset按钮，可以重新配接默认的路由。

## 12.4 Utilities 应用程序


Your StudioLive is equipped with a variety of utilities that allow you to test the functionality of your mixer. Pressing the **Utility** button from the Home screen will open this menu.

你的StudioLive配备了各种实用工具，可以测试你调音台的功能。按下


Home screen的 "**Utility**"按钮，可以打开这个菜单。

The following test modes are available:

有以下测试模式：

- **Mardi Gras.** Causes all faders, LEDs, and displays to cycle through their ranges of motion, color, and brightness.

引导所有推子、LED和显示器在它们的运行范围、颜色和亮度之间循环。

- **All Buttons.** Causes all meters and button LEDs to cycle through their ranges of color and brightness.

引导所有仪表和按钮的LED，在其颜色和亮度范围内循环。

- **RGB Buttons.** Causes all color-changing buttons to cycle through their ranges of color and brightness.

引导所有变色按钮，在其颜色和亮度范围内循环。

- **Scribble Strip.** Causes all scribble strip displays to cycle through a range of color test patterns.

引导所有的scribble strip显示在一系列的颜色测试模式中循环。

- **Master Control Screen.** Causes the Touch Display to cycle through a range of color test patterns.

触控监听，在一系列的颜色测试模式中循环。

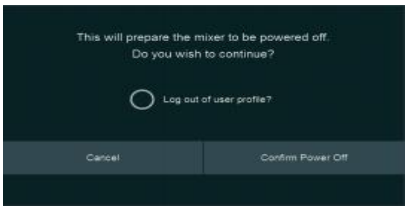
When you are done with a particular test mode, press anywhere on the Touch Display to return to the Test Modes screen.

当你完成一个特定的测试模式后，按触控监听中的任意地方，可以返回到测试模式图像。

## 12.5 Soft Power


When powering down your mixer, you have the option to engage Soft Power. This will automatically engage Autostore to save all your mixer settings prior to powering down when"Confirm Power Off" is selected.. You will also be given the option to log out of the current User Profile .

当关闭调音台电源时，可以启用Soft Power。当选择 "Confirm Power Off" 时，将自动启动Autostor功能，在关机前，保存所有的调音台设置。还可以选择注销当前的User Profile用户配置文件。



# 13 Resources 信号源

## 13.1 Networking Overview 网络概况

Networking your StudioLive Series III mixer involves both hardware and software components. The entire installation and configuration procedure is given in this manual, but before beginning, you must download and install UC Surface touch-control software onto a macOS or Windows computer or an iPad, as described in the StudioLive Software Library Reference Manual.

联网你的StudioLive III系列调音台涉及到硬件和软件两个部分。在本手册中给出整个安装和配置过程，但在开始之前，必须下载并安装UC Surface控制软件到你的macOS或Windows电脑或iPad上，如 StudioLive Software Library Reference Manual软件库参考手册中所述。

### Computer Control and Audio Data Connections

### 电脑控制和音频数据连接

Two types of data flow between your Series III mixer and your computer. We will describe them first, then show you different scenarios for connecting the Series III mixer to a computer.

在III系列调音台和计算机之间，有两种类型的数据流。首先我们会描述它们，然后向你展示，将III系列调音台连接到电脑的不同方案。

**Control:** This is the primary connection between your StudioLive, your computer, your mobile device, and your iPad. From these external device, you can use UC Surface or QMix-UC (iOS and Android) to mix remotely and control most of your mixer settings or add a second screen to your system.

More information on Control Networking options can be found in ***Section 9.4***.

这是你的StudioLive、你的电脑、你的移动设备和你的iPad之间的主要连接。从这些外部设备中，你可以使用UC Surface或QMix-UC（iOS和Android）进行远程混音，控制大部分调音台设置，或为你的系统添加第二个屏幕。

关于控制网络选项的更多信息，***在第 9.4 节***可以找到。

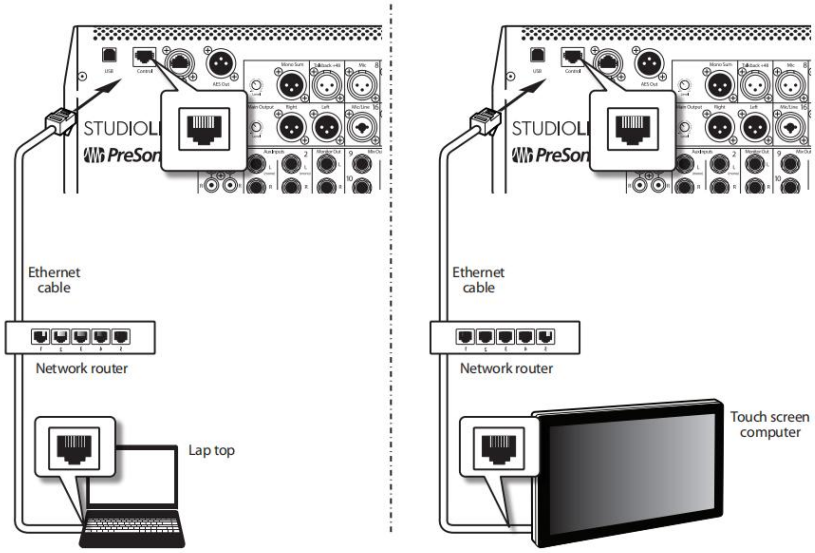
**Audio:** Using the AVB connection on your StudioLive mixer allows you to record and playback audio from your Mac running macOS 10.11 or later. This connection is not necessary for mixing live sound. A single computer can be used both to control and to record from the StudioLive, or separate computers can be used for control and audio.

Most of the networking discussion in this manual concerns the control data connection, as this is most common application for networking your StudioLive.

***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 and StudioLive 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. So while the guitarist is flirting with the bartender, take a quick moment to get your iPad, iPhone, computer, and StudioLive happily communicating with each other.*

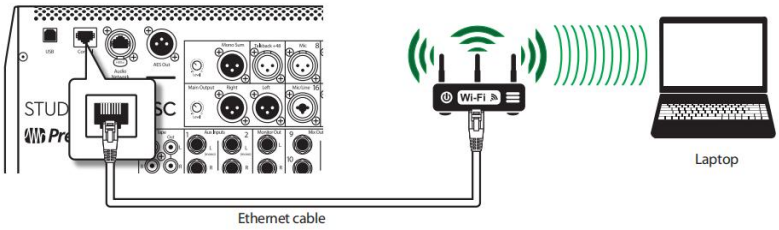
### 13.1.1 Wired Ethernet Control Setup 互联网控制设置

A wired Ethernet setup is the simplest:




1. Connect standard CAT5e or CAT6 Ethernet cables from your computer's Ethernet port to an Ethernet router, and from the router to the Control port on the StudioLive's rear panel.
   将标准的CAT5e或CAT6互联网连接线，从电脑的端口连接到路由器，再从路由器连接到StudioLive后面板的控制端口。
2. Launch Universal Control on the computer (macOS or Windows) that is connected to the router.
   连接到路由器的电脑（macOS或Windows）中，启动 Universal Control通用控制。
3. When Universal Control launch window appears. Tap on your mixer's icon to launch UC Surface.
   当Universal Control启动窗口出现时，点选调音台的图标，启动UC Surface。

For more information on UC Surface, ***see the UC Surface Reference Manual.***
关于UC Surface的更多信息，***请看 UC Surface参考手册***。




Using a wireless router, you can also connect your computer wirelessly:

使用无线路由器，可以用无线方式连接你的电脑：

**Windows 7+**

1. Click on the network icon in the notification area to open the Connect to Network Control Panel.
   点击通知区的network icon网络图标，打开 "Connect to Network Control Panel" 连接网络控制面板。
2. Select the name of the wireless network you set for your wireless router.
   选择你的无线路由器设置的无线网络名称。
3. Enter the password.

输入密码。

4. Click Connect.

点击 "连接"。

**macOS 10.8 and later**

1. On the Menu bar click on the Wireless Status icon.

在Menu 栏上，点击Wireless Status图标。

2. Select the name of the wireless network you set for your wireless router.

选择你的无线路由器设置的无线网络的名称。

3. Enter the password.

输入密码。

4. Click Join.

点击“加入”。

*Note: Information on connecting your iOS device to the wireless network can be found in the **Networking for StudioLive Remote Control Reference Guide**.*

*注意：关于将iOS设备连接到无线网络的信息，可以在《**StudioLive 远程控制参考指南**》的联网中找到。*

***See Section 9.4.4*** for information on customizing IP settings.

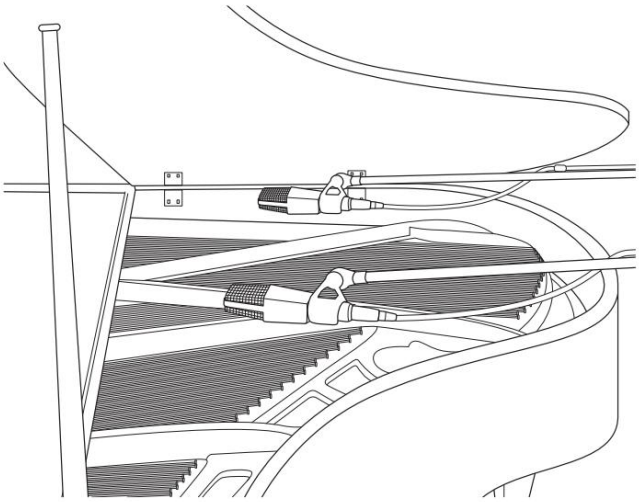
关于定制IP设置的信息，***请参见第9.4.4节***。

## 13.2 Stereo Microphone Placement 立体声传声器的摆放

The following are a few recording applications to help you get started with your StudioLive. These are by no means the only ways to record these instruments. Microphone selection and placement is an art. For more information, visit your library or local bookstore, as there are many books and magazines about recording techniques. The Internet is also a great source of recording information, as are instructional videos. Some of these microphone-placement suggestions can be used in live applications, as well as for studio recording.

以下是一些录音应用程序，可以帮助你开始使用StudioLive。这绝不是录制这些乐器的唯一方法。麦克风的选择和摆放是一门艺术。要想了解更多的信息，请到图书馆或当地书店，那里有很多关于录音技术的书籍和杂志。互联网也是录音信息的一个重要资源，教学视频也是如此。其中一些麦克风位置的建议，可以用于现场应用，也可以用于录音室录音。

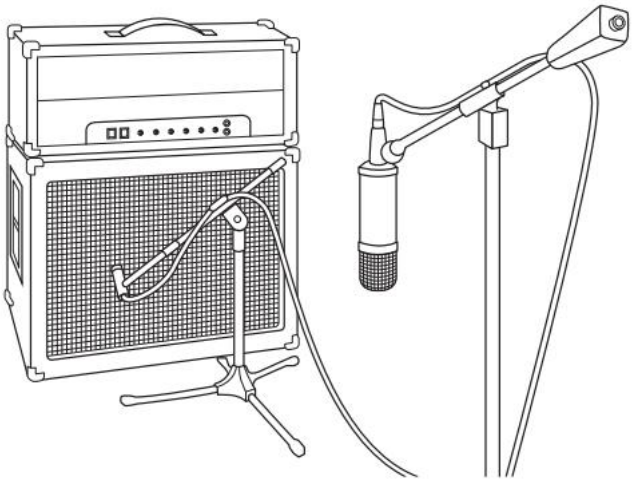
### 13.2.1 Grand Piano 大钢琴



Place one microphone above the high strings and one microphone above the low strings. Experiment with distance (the farther back the more room you will capture). This technique can be used for live and studio applications.

将一个麦克风放在高弦的上方，另一个放在低弦的上方。测试一下距离（越往后，将捕获到更多的空间）。这种技术可以用于现场和录音室的应用。

### 13.2.2 Electric Guitar 电吉他



Place a dynamic microphone an inch or two away from the speaker of the guitar amplifier. Experiment with exact location. If you are recording an amp with multiple speakers, experiment with each one to see if one sounds better than the others. Place a condenser microphone approximately six feet away, pointed at the amp. Experiment with distance. Also experiment with inverting the phase of the room microphone to check for phase cancellation and reinforcement. (Select the "fuller"-sounding position.) To use this technique in a live application, omit the condenser microphone.

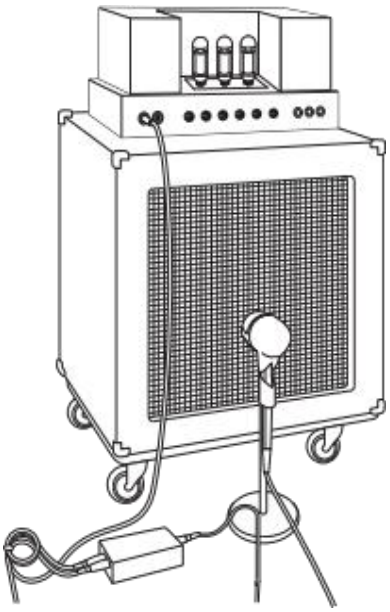
将动圈麦克风放在离吉他放大器扬声器一两英寸的地方。测试准确的位置。如果录制一个有多个扬声器的放大器，可以在每个扬声器上，进行实验，看看是否有一个扬声器比其他的更好听。将电容式麦克风放在大约六英尺外，对准放大器。实验一下距离。还可以试试颠倒室内麦克风的相位，以检查相位取消和加强的情况。(要在现场使用这种技术，可以省略电容麦克风）。

### 13.2.3 Acoustic Guitar 原声吉他

Point a small-diaphragm condenser microphone at the 12th fret, approximately 8 inches away. Point a large-diaphragm condenser microphone at the bridge of the guitar, approximately 12 inches from the guitar. Experiment with distances and microphone placement. Another popular method is using an XY microphone placement with two small-diaphragm condenser microphones. (See drum-overheads picture on the next page.)

将一个小振膜电容式麦克风对准第12品（吉他等絃乐器指板上定音的），大约8英寸远。将大振膜电容式麦克风指向吉他的琴桥，距离吉他大约12英寸。测试距离和麦克风的位置。另一种流行的方法，是用两个小振膜电容式麦克风进行XY麦克风放置。(见下页的鼓头图片）。

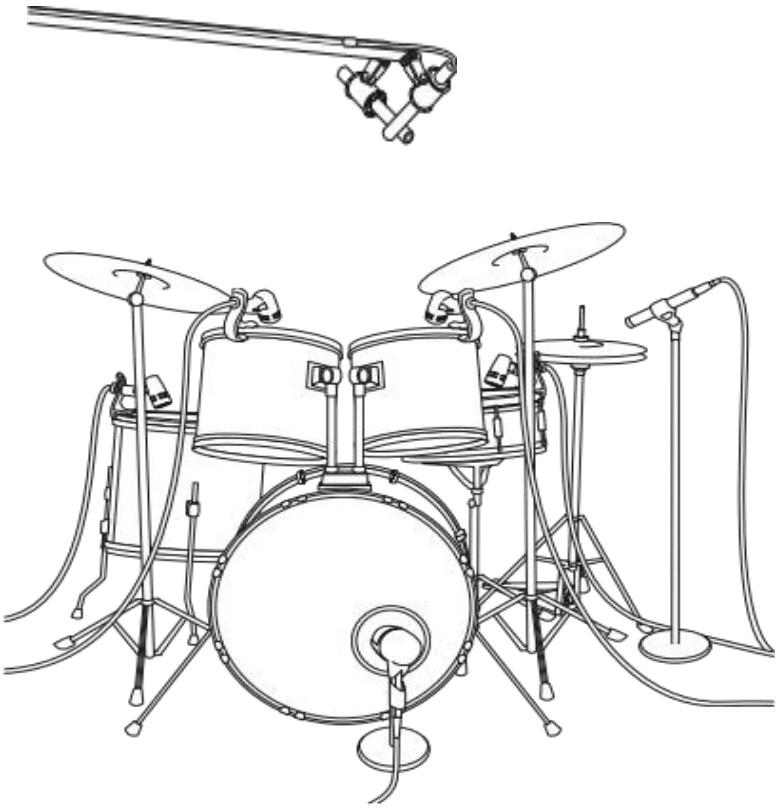
### 13.2.4 Bass Guitar (Direct and Speaker) 低音吉他(直接和扬声器)



Plug the electric bass guitar into a passive direct box. Connect the instrument output from the passive direct box to a bass amplifier. Place a dynamic microphone an inch or two away from the speaker and connect it to a StudioLive microphone input. Connect the line output from the passive direct box to a line input on a different channel of the StudioLive. For recording, place these signals on separate tracks. During mixing, you can blend the direct and amplifier signal to taste. This technique can also be used in live applications.

将电吉他插入一个无源直达箱。将无源直达箱的乐器输出，连接到低音放大器上。将动圈麦克风放在离音箱一两英寸远的地方，并将其连接到StudioLive麦克风输入。将无源直达箱的线路输出，连接到StudioLive不同通道的线路输入上。在录音时，将这些信号放在不同的轨道上。在混音过程中，可根据自己喜好，尝试混音直放和功放信号。这种技术在现场应用中也可以使用。

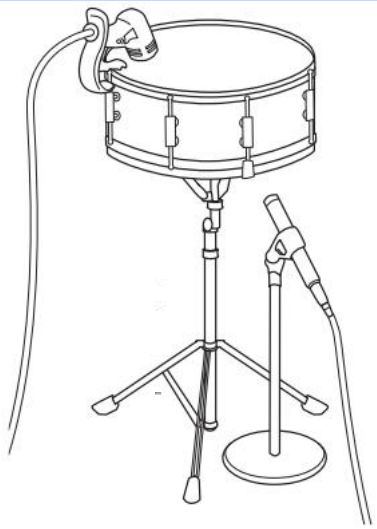
### 13.2.5 Drum Overheads (XY example) 鼓上方（XY示例）



Place two small-diaphragm condenser microphones on an XY stereo-microphone holder (bar). Position the microphones so that each one is at a 45-degree angle, pointed down at the drum kit, approximately 7 or 8 feet above the floor or drum riser. Experiment with height. This technique can be used in live applications as well.

将两个小振膜电容式麦克风放在XY立体声麦克风支架（棒）上。 将麦克风摆放好，呈45度角，对准离地面或鼓架约7或8英尺的套鼓。实验一下高度。这种技术在现场应用中也可以使用。

### 13.2.6 Snare Drum (top and bottom) 小军鼓（顶部和底部）



Point a dynamic microphone at the center of the snare, making sure it is placed so that the drummer will not hit it. Place a small-diaphragm condenser microphone under the drum, pointed at the snares. Experiment with the placement of both microphones. Also experiment with inverting the phase of the bottom microphone. This technique can be used in live applications.

将动圈麦克风对准小军鼓的中心，确保它的位置不会被鼓手击中。在鼓下放置一个小振膜电容麦克风，对准小军鼓。实验一下两个麦克风的位置。还可以试试颠倒底部麦克风的相位。这种技术在现场应用中可以使用。

## 13.3 Compression Setting Suggestions 压缩设置的建议

The following are the compression presets that were used in the PreSonus BlueMax. We have included them as a jumping-off point for setting up compression on the StudioLive.

以下是在PreSonus BlueMax中使用的压缩预置。把它们作为在StudioLive上设置压缩的一个跳板。

### 13.3.1 Vocals 人声方面

**Soft.** This is an easy compression with a low ratio setting for ballads, allowing a wider dynamic range. It's good for live use. This setting helps the vocal"sit in the track."

**Soft.** 这是一个简单的压缩器，为民谣设置了低比率，允许更宽的动态范围。它很适合现场使用。这个设置有助于人声 "陷入音轨中"。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -8.2 dB | 1.8:1 | 0.002 ms | 38 ms |

**Medium.** This setting has more limiting than the Soft compression setting, producing a narrower dynamic range. It moves the vocal more up front in the mix.

**Medium.** 这个设置比Soft压缩设置有更多的限制性，产生更窄的动态范围。它使人声在混音中更加靠前。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -3.3 dB | 2.8:1 | 0.002 ms | 38 ms |

**Screamer.** This setting is for loud vocals. It is a fairly hard compression setting for a vocalist who is on and off the microphone a lot. It puts the voice "in your face."

**Screamer.** 这个设置是为大音量的人声准备的。这是一个相当hard（硬拐点）的压缩设置，适用于经常使用和离开麦克风的主唱。声音 "就在你的面前"。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -1.1 dB | 3.8:1 | 0.002 ms | 38 ms |

### 13.3.2 Percussion 打击乐

**Snare/Kick.** This setting allows the first transient through and compresses the rest of the signal, giving a hard"snap" up front and a longer release.

这个设置，允许第一个瞬态通过，并压缩其余的信号，使前面有一个硬的 "snap"（啪），而释放的时间更长。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -2.1 dB | 3.5:1 | 78 ms | 300 ms |

**Left/Right (Stereo) Overheads.** The low ratio and threshold in this setting gives a "fat" contour to even out the sound from overhead drum mics. Low end is increased, and the overall sound is more present and less ambient. You get more"boom"and less"room."

这个设置中的低比率和阈值，给出了一个 "fat"的轮廓，使来自顶置鼓麦克风的声音变得均匀。低音增加了，整体的声音更有存在感，不是氛围感。你会得到更多的 "boom"，更少的 "room"。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -13.7 dB | 1.3:1 | 27 ms | 128 ms |
| | | | |

### 13.3.3 Fretted Instruments 指挥乐器

**Electric Bass.** The fast attack and slow release in this setting will tighten up the electric bass and give you control for a more consistent level.

**Electric Bass.** 在这个设置中的fast attack 和slow release，会收紧电吉他，让你的控制力更加稳定。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -4.4 dB | 2.6:1 | 45.7 ms | 189 ms |

**Acoustic Guitar.** This setting accentuates the attack of the acoustic guitar and helps maintain an even signal level, keeping the acoustic guitar from disappearing in the track.

**Acoustic Guitar** 这个设置突出了原声吉他的attack，有助于保持均匀的信号水平，使原声吉他不至于在轨道中消失。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -6.3 dB | 3.4:1 | 188 ms | 400 ms |

**Electric Guitar.** This is a setting for“crunch”electric rhythm guitar. A slow attack helps to get the electric rhythm guitar “up close and personal” and gives punch to your crunch.
**Electric Guitar.** 这是一个针对 "crunch"（音色）电声节奏吉他的设置。slow attack有助于使电节奏吉他 "近距离接触"，并给你的 crunch 带来冲击。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -0.1 dB | 2.4:1 | 26 ms | 193 ms |

### 13.3.4 Keyboards 键盘

**Piano.** This is a special setting for an even level across the keyboard. It is designed to help even up the top and bottom of an acoustic piano. In other words, it helps the left hand to be heard along with the right hand.

这是一个特殊的设置，可以使整个键盘达到均匀的水平。它被设计用来帮助平衡原声钢琴的顶部和底部。换句话说，它可以帮助左手和右手一起被听到。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -10.8 dB | 1.9:1 | 108 ms | 112 ms |

**Synth.** The fast attack and release on this setting can be used for synthesizer horn stabs or for bass lines played on a synthesizer.
这个设置的fast attack和release可以用于喇叭合成器的冲击或合成器上演奏的低音线。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -11.9 dB | 1.8:1 | 0.002 ms | 85 ms |

**Orchestral.** Use this setting for string pads and other types of synthesized orchestra parts. It will decrease the overall dynamic range for easier placement in the mix.

弦乐垫和其他类型的合成管弦乐部分使用这个设置。它将减少整体的动态范围，以便在混音中更容易放置。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| 3.3 dB | 2.5:1 | 1.8 ms | 50 ms |

### 13.3.5 Stereo Mix 立体声混音

**Stereo Limiter.** Just as the name implies, this is a hard limiter, or“brickwall,”setting—ideal for controlling the level to a two-track mixdown deck or stereo output.

正如其名那样，这是hard limiter硬限幅器，或是”brickwall”（限制效果器）设置——是控制双轨混音台或立体声输出电平的理想选择。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| 5.5 dB | 7.1:1 | 0.001 ms | 98 ms |

**Contour.** This setting fattens up the main mix.

这个设置使主混音更加饱满。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -13.4 dB | 1.2:1 | 0.002 ms | 182 ms |

### 13.3.6 Effects 效果

**Squeeze.** This is dynamic compression for solo work, especially electric guitar. It gives you that glassy“Tele/Strat” sound. It is a true classic.

这是用于独奏的动态压缩，特别是电吉他。它给你带来玻璃般的"Tele/Strat "声音。它是真正的经典。

| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| -4.6 dB | 2.4:1 | 7.2 ms | 93 ms |

**Pump.** This is a setting for making the compressor“pump” in a desirable way. This effect is good for snare drums to increase the length of the transient by bringing the signal up after the initial spike.

这是一个使压缩器以理想的方式 "泵 "的设置。这种效果对小军鼓来说是很好的，可以在最初的尖峰之后使信号上升，从而增加瞬态的长度。

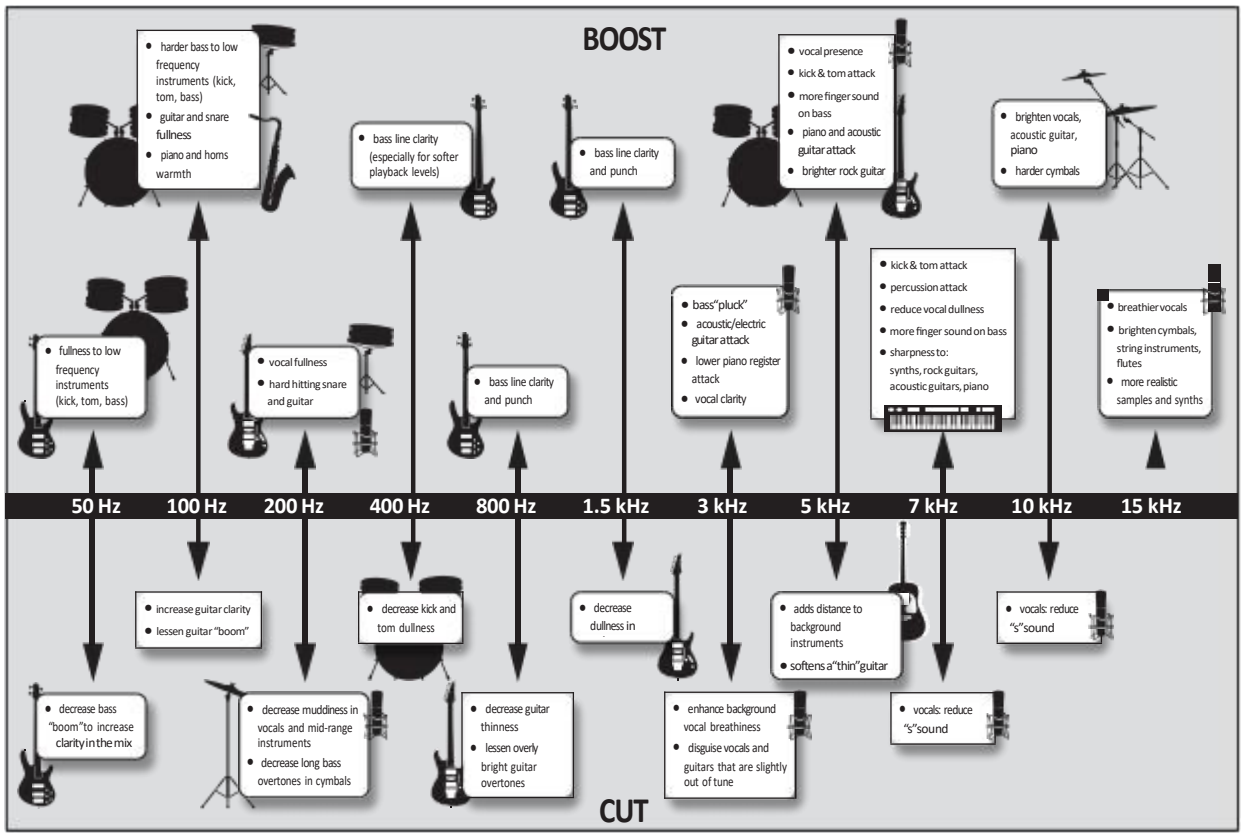
| THRESHOLD | RATIO | ATTACK | RELEASE |
|---|---|---|---|
| 0 dB | 1.9:1 | 1 ms | 0.001 ms |

## 13.4 EQ Frequency Guides EQ频率指导

### 13.4.1 What Frequencies to Cut and Boost 频率削减与提升

| Instrument 乐器 | What to Cut 削减 | Why to Cut 削减 | What to Boost 提升 | Why to Boost 提升 |
|---|---|---|---|---|
| Human Voice 人声 | 7 kHz | Sibilance 咝咝声 | 8 kHz | Big sound 巨大声 |
| | 2 kHz | Shrill 刺耳的 | 3 kHz and above | Clarity 清晰度 |
| | 1 kHz | Nasal 鼻音 | 200-400 Hz | Body 良好声音 |
| | 80 Hz and below | Popping P's P声 | | |
| Piano 钢琴 | 1-2 kHz | Tinny 尖细 | 5 kHz | More presence 更有存在感 |
| | 300 Hz | Boomy 隆隆声 | 100 Hz | Bottom end 底音 |
| Electric Guitar 电吉他 | 1-2 kHz | Shrill 刺耳的 | 3 kHz | Clarity 清晰度 |
| | 80 Hz and below | Muddy 浑浊 | 125 Hz | Bottom end 底音 |
| Acoustic Guitar 原声吉他 | 2-3 kHz | Tinny 尖细 | 5 kHz and above | Sparkle 生动 |
| | 200 Hz | Boomy 隆隆声 | 125 Hz | Full 饱满度 |
| Electric Bass 电音贝司 | 1 kHz | Thin 微弱的 | 600 Hz | Growl 咆哮 |
| | 125 Hz | Boomy 隆隆声 | 80 Hz and below | Bottom end 底音 |
| String Bass 弦乐低音 | 600 Hz | Hollow 空挡回响 | 2-5 kHz | Sharp attack 果断快速 |
| | 200 Hz | Boomy 隆隆声 | 125 Hz and below | Bottom end 底音 |
| Snare Drum 小军鼓 | 1 kHz | Annoying 干扰 | 2 kHz | Crisp 清晰 |
| | | | 150-200 Hz | Full 饱满度 |
| | | | 80 Hz | Deep 延伸 |
| Kick Drum 踢鼓 | 400 Hz | Muddy 浑浊 | 2-5 kHz | Sharp attack 果断快速 |
| | 80 Hz and below | Boomy 隆隆声 | 60-125 Hz | Bottom end 底音 |
| Toms 鼓 | 300 Hz | Boomy 隆隆声 | 2-5 kHz | Sharp attack 果断快速 |
| | | | 80-200 Hz | Bottom end 底音 |
| Cymbals 镲 | 1 kHz | Annoying 干扰 | 7-8 kHz | Sizzle 嘶嘶 |
| | | | 8-12 kHz | Brilliance 声亮度 |
| | | | 15 kHz | Air 曲调 |
| Horns 圆号 | 1 kHz | Honky 号筒声 | 8-12 kHz | Big sound 巨大声音 |
| | 120 Hz and below | Muddy 浑浊声 | 2 kHz | Clarity 清晰 |
| String section 弦乐部分 | 3 kHz | Shrill 刺耳声 | 2 kHz | Clarity 清晰 |
| | 120 Hz and below | Muddy 浑浊声 | 400-600 Hz | Lush and full 推满 |

### 13.4.2 Instrument Ranges 乐器范围




## 13.5 EQ Setting Suggestions EQ设置的建议

Included with your StudioLive is a library of Fat Channel presets. ***Section 6.1.2*** discusses how to load these presets onto a channel or bus and how to create your own presets. For an idea of where to start, check out the following generic EQ settings for several different instruments. As with the compression settings in ***Section 13.3***, the right EQ setting for any given instrument will depend upon the room and the tonality of the instrument.

StudioLive包含了一个Fat Channel预置库。***第 6.1.2 节***讨论了如何将这些预置加载到通道或总线上，以及如何创建你自己的预置。要想知道从哪里开始，请看以下几种不同乐器的通用EQ设置。与***第 13.3 节 中***的压缩设置一样，任何指定乐器的正确EQ设置，取决于房间和乐器的音调。

### 13.5.1 Vocals 人声

**Pop Female Vocals 流行乐女声**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | OFF | 130 | 0.6 | -2 | ON | 465 | 0.6 | -2 |
| **HIGH MID ON/ OFF** | **HI MID FREQ (kHz)** | **HIGH MID Q** | **HIGH MID GAIN** | **HIGH ON/OFF** | **HIGH SHELF** | **HIGH FREQ (kHz)** | **HIGHQ** | **HIGH GAIN** |
| ON | 2.4 | 0.4 | +2 | ON | OFF | 6.0 | 0.3 | +8 |

**Rock Female Vocals 摇滚乐女声**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | ON | 155 | N/A | +4 | ON | 465 | 0.4 | +6 |
| **HIGH MID ON/ OFF** | **HI MID FREQ (kHz)** | **HIGH MID Q** | **HIGH MID GAIN** | **HIGH ON/OFF** | **HIGH SHELF** | **HIGH FREQ (kHz)** | **HIGHQ** | **HIGH GAIN** |
| ON | 1.4 | 0.6 | +6 | ON | OFF | 4.2 | 0.5 | +2 |

**Pop Male Vocals 流行乐男声**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | OFF | 225 | 0.3 | -2 | ON | 960 | 0.3 | 0 |
| HIGH MID ON/ OFF | HI MID FREQ (kHz) | HIGH MID Q | HIGH MID GAIN | HIGH ON/OFF | HIGH SHELF | HIGH FREQ (kHz) | HIGHQ | HIGH GAIN |
| ON | 2.0 | 0.6 | +2 | ON | OFF | 7.2 | 0.5 | +4 |

**Rock Male Vocals 摇滚乐男声**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | OFF | 155 | 0.5 | +2 | ON | 265 | 0.3 | -6 |
| HIGH MID ON/ OFF | HI MID FREQ (kHz) | HIGH MID Q | HIGH MID GAIN | HIGH ON/OFF | HIGH SHELF | HIGH FREQ (kHz) | HIGHQ | HIGH GAIN |
| ON | 2.4 | 0.6 | -2 | ON | ON | 7.2 | 0.6 | +4 |

### 13.5.2 Percussion

**Snare 小鼓，军鼓**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | OFF | 130 | 0.6 | -4 | ON | 665 | 0.5 | +4 |
| HIGH MID ON/ OFF | HI MID FREQ (kHz) | HIGH MID Q | HIGH MID GAIN | HIGH ON/OFF | HIGH SHELF | HIGH FREQ (kHz) | HIGHQ | HIGH GAIN |
| ON | 1.6 | 0.3 | +4 | ON | ON | 4.2 | N/A | +4 |

**Left/Right (Stereo) Overheads 左/右（立体声）头顶**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | OFF | 108 | 0.6 | -2 | ON | 385 | 0.6 | -2 |
| HIGH MID ON/ OFF | HI MID FREQ (kHz) | HIGH MID Q | HIGH MID GAIN | HIGH ON/OFF | HIGH SHELF | HIGH FREQ (kHz) | HIGHQ | HIGH GAIN |
| ON | 2.9 | 0.3 | 0 | ON | ON | 8.0 | N/A | +4 |

**Kick Drum 踢鼓**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | OFF | 108 | 0.4 | +4 | ON | 265 | 2.0 | -4 |
| HIGH MID ON/ OFF | HI MID FREQ (kHz) | HIGH MID Q | HIGH MID GAIN | HIGH ON/OFF | HIGH SHELF | HIGH FREQ (kHz) | HIGHQ | HIGH GAIN |
| ON | 1.6 | 0.6 | 0 | ON | OFF | 6.0 | 2.0 | +4 |

### 13.5.3 Fretted Instruments 指挥乐器

**Electric Bass 电吉他**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | ON | 36 | N/A | -8 | ON | 130 | 0.4 | +4 |
| **HIGH MID ON/ OFF** | **HI MID FREQ (kHz)** | **HIGH MID Q** | **HIGH MID GAIN** | **HIGH ON/OFF** | **HIGH SHELF** | **HIGH FREQ (kHz)** | **HIGH Q** | **HIGH GAIN** |
| ON | 2.0 | 0.6 | +4 | ON | ON | 4.2 | N/A | +1 |

**Acoustic Guitar 原声吉他**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | OFF | 155 | 0.4 | +4 | ON | 665 | 2.0 | +2 |
| **HIGH MID ON/ OFF** | **HI MID FREQ (kHz)** | **HIGH MID Q** | **HIGH MID GAIN** | **HIGH ON/OFF** | **HIGH SHELF** | **HIGH FREQ (kHz)** | **HIGH Q** | **HIGH GAIN** |
| ON | 2.0 | 0.3 | 0 | ON | ON | 6.0 | N/A | +4 |

**Distorted Electric Guitar 失真电吉他**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | OFF | 320 | 0.5 | +6 | ON | 960 | 0.4 | 0 |
| **HIGH MID ON/ OFF** | **HI MID FREQ (kHz)** | **HIGH MID Q** | **HIGH MID GAIN** | **HIGH ON/OFF** | **HIGH SHELF** | **HIGH FREQ (kHz)** | **HIGH Q** | **HIGH GAIN** |
| ON | 3.5 | 1.0 | +4 | ON | ON | 12 | N/A | 0 |

### 13.5.4 Keyboards 键盘

**Piano 钢琴**

| LOW ON/OFF | LOW SHELF | LOW FREQ (Hz) | LOW Q | LOW GAIN | LOW MID ON/OFF | LOW MID FREQ (Hz) | LOW MID Q | LOW MID GAIN |
|---|---|---|---|---|---|---|---|---|
| ON | ON | 108 | N/A | -2 | ON | 665 | 0.2 | +2 |
| **HIGH MID ON/ OFF** | **HI MID FREQ (kHz)** | **HIGH MID Q** | **HIGH MID GAIN** | **HIGH ON/OFF** | **HIGH SHELF** | **HIGH FREQ (kHz)** | **HIGH Q** | **HIGH GAIN** |
| ON | 2.9 | 0.4 | +2 | ON | OFF | 7.2 | 0.6 | +4 |

## 13.6 Using Input Delay 使用输入延时

When one of the input channels is selected, you can set an input delay up to 85 ms in 0.1 ms increments. An input delay has many uses.

当选择输入通道时，你可以设置一个输入延迟，以0.1毫秒为增量，最高可达85毫秒。输入延迟有很多用途。

On small stages where the guitar amp and the kick and snare mics can be clearly heard in the vocal mic, an input delay can"move up"the backline. Delaying the backline so that the close mic'd signals and the bleed in the vocal mic align with one another at the mixer will decrease comb filtering that blurs in the mix. This will tighten the overall mix and give it more clarity and punch.

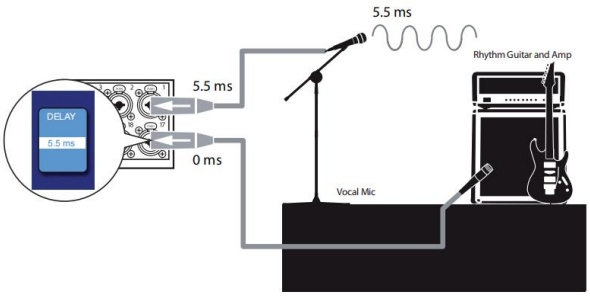
在小型舞台上，吉他音箱、踢鼓和小鼓麦克风，可以清楚地听到人声麦克风的声音，输入延迟可以 "提高"延迟线的速度。延迟线，使近距离的麦克风信号与渗入调音台另一支人声麦克风相对齐，可以减少混合中的梳状滤波现象。这将收紧整体混音，使其更加清晰和有力。

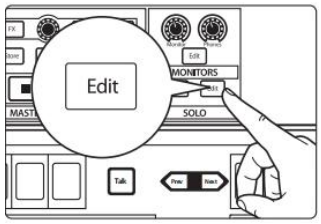
In large venues, the bottom snare mic can be aligned with the top mic, or the bass-cabinet mic can be aligned with the direct signal to create a more coherent signal. This is especially useful to prevent phasing problems.

在大型场所，底部小军鼓的麦克风，可以与顶部的麦克风对齐，或者低音柜的麦克风可以与直接信号对齐，以创造持续的信号。这对防止相位问题特别有用。

### 13.6.1 Aligning the Backline with Vocal Mic 将延时线与人声话筒对齐

In this example, we will delay the guitar amp's close mic to its arrival at the vocal mic. In general, snare drums and guitar amps are the most common culprits of backline bleed. Depending on where your vocalist is standing, either one or both could need to be delayed to compensate for whatever amount of comb filtering is present.

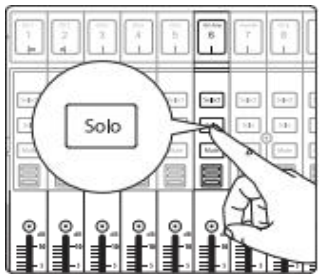



1. To begin, press the **Solo edit** button. 要想开始，请按下 **Solo edit** 按钮。


2. On the Touch Display, select **Solo In Place** and **Latching Solo** mode.

在Touch Display上，选择 **Solo In Place和Latching Solo**模式。

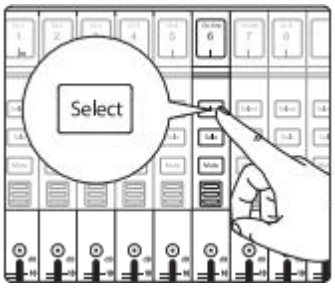



3. Solo the guitar and vocal channels; notice that all other channels are muted.

对吉他和人声通道进行独奏；注意所有其他通道都是静音的。

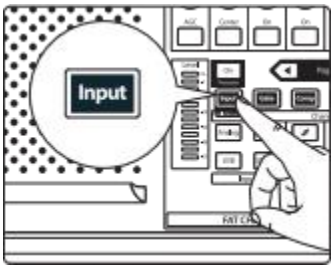
4.Measure the distance from the guitar cabinet to the vocal mic. Sound travels at a rate of 1,130 feet per second. This means you need to set 1.1 ms of delay for every foot of distance. For our example, let's say the guitar amp is 5 feet from the vocal mic.

测量从吉他箱体到人声麦克风的距离。声音的传播速度为1130英尺/秒。这意味着，你需要为每一英尺的距离设置1.1ms的延迟。我们的例子，假设吉他离人声麦克风有5英尺。



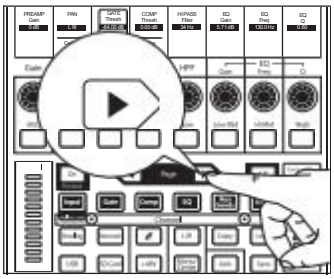

5. Press the guitar channel's **Select** button.

按吉他通道的 "**Select**"按钮。




6. Press the **Input** button in the Fat Channel.

按Fat Channel中的 **Input** 按钮。

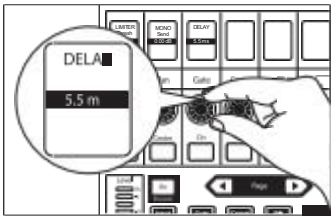


7. Press the **Next Page** button in the Fat Channel to move to the second page of the Fat Channel Input layer.

***Note:*** *StudioLive 32SXand 32SC users must set the Input Delay from the Touch Display.*

按 Fat Channel中的 Next Page按钮，移到Fat Channel Input层的第二页。

***注意：*** *StudioLive 32SX和32SC用户，必须从Touch Display上设置 Input Delay。*



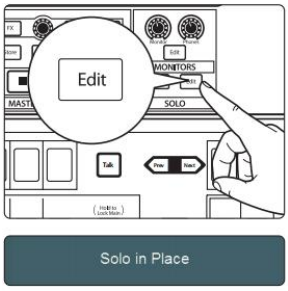

8. Use the third encoder to the input delay to 5.5 ms.
使用第三个编码器，将输入延迟改为 5.5ms。

9. Ask your guitarist to play a staccato pulse and listen for any remaining flamming. Move up or down 0.1 ms until you hear the tightest sound.
请吉他手弹奏断音弹奏，听一听是否有剩余的颤音。向上或向下移动0.1毫秒，直到你听到最结实的声音。

## 13.6.2 Aligning Direct and Mic'd Signals

When combining a direct input signal with a mic'd signal from a single source, the direct sound will arrive earlier than the microphone's signal because the latter's source has to travel some distance through the air before reaching the microphone. This results in the two signals being out of phase with respect to each other. This problem can sometimes be corrected by alternatively flipping polarity on the direct and microphone channels to find which combination of the two signals provides the desired result. However, by using input delay it is possible to achieve a closer, more accurate phase relationship.

当把直接输入信号和来自单一的麦克风信号结合起来时，会比麦克风信号更早到达，因为后者的信号源在到达麦克风之前，要在空气中走一段距离。 这就导致了两个信号之间的相位不一致。这个问题有时可以通过交替翻转直达和麦克风通道的极性来纠正，以找到这两个信号的组合提供所需的结果。然而，通过使用输入延迟，有可能实现更接近、更准确的相位关系。




1 To begin, press the **Solo edit** button.

要想开始，请按下**Solo edit**按钮。

2 On the , select **Solo In Place** and Latching Solo Mode.

选择Touch Display 上的**Solo In Place** 和 Latching Solo Mode模式。

3. Solo both the Direct Input channel and the microphone channel.

Direct Input channel 通道和麦克风通道都要独奏。

4. Set the pan position of both channels to the center. This will sum both signals mono and allow you to better hear the phase differences between the channels.

将两个通道的pan位置设置为中心。这将使两个信号都是单声道，并使你能更好地听到各通道之间的相位差异。

5. Press the Direct Input Channel's **Select** button.

按Direct Input Channe通道的 "**Select** "按钮。

6. Press the **Input** Button in the Fat Channel.

按 Fat Channel的 " **Input**"按钮。

7. Increase the delay time on the Direct Input channel. This is the easiest way to hear the change in phase between the two signals. Listen to both till you find a happy medium between the combined signals.

增加Direct Input channel的延迟时间。这是最容易听到两个信号之间相位变化的方法。听听这两个信号，直到你找到组合信号之间的一个满意的方法。

***Power User Tip:*** *The final result may not be perfectly in time but this is not necessarily your goal. Adjusting the phase relationship between the direct and mic'd signals can help to create space in a mix and keep the sounds coherent.*

***Power User Tip:*** *最后的结果可能不是完美的时间，但这不一定是你的目标。调整直达信号和麦克风信号之间的相位关系，可以帮助在混音中创造空间，并保持声音的一致性。*

## 13.7 Using Output Delay 使用输出延迟

When one of the output buses is selected, you can set an output delay up to 170 ms in 0.1 ms increments. When speakers are placed apart from one another, listeners will hear the sound from the closest source before they will hear it from the furthest. This is because electricity travels much faster to each loudspeaker than the acoustic waves travel from each loudspeaker to the listener. This can also be an issue when the acoustic level of an instrument or amplifier on stage can be heard over the same instrument or amplifier being reproduced by a loudspeaker. This can dampen the attack and intelligibility of the sound and create an unpleasant phasing effect. To compensate, you need to delay the signal going to the speakers closest to the listener.

当选择了其中一个输出总线时，你可以设置一个输出延迟，以0.1毫秒为增量，最高可达170毫秒。当扬声器彼此分开放置时，听众会先听到最近的声源的声音，然后才会听到最远的。因为电流到每个扬声器的速度，比声波从每个扬声器到听众的速度快得多。当舞台上的乐器或放大器的声学水平，可以在扬声器再现的同一乐器或放大器上听到时，有可能是一个问题。这会抑制声音的attack和清晰度，并产生令人不快的相位效应。为了弥补这一点，你需要延迟进入最接近听众的扬声器的信号。

In small venues where the guitar amp and the drum kit can be clearly heard over the Main Front-of-House system, an output delay can“move back” the Front-of-House system to the backline. This will sharpen the attack of the instruments and prevent phasing issues.

在小型场地中，吉他音箱和鼓组可以通过主前厅系统清楚地听到，输出延迟可以将前厅系统 "移回 "到后线。这将加强乐器的攻击，防止相位问题。

In large venues that push the limits of the Front-of-House system’s coverage, using delay speakers distributed throughout the room, each delayed to the main system, allows you to create listening zones for more even coverage and better intelligibility.

在大型场馆中，如果将前厅系统的覆盖范围推向极限，使用分布在整个房间的延迟扬声器，每个延迟到主系统，可以让你创建聆听区域，以实现更均匀的覆盖和更好的可懂性。

Sound travels at a rate of 1,130 feet per second (with some variation due to temperature, humidity, and elevation). Therefore, it takes 1.1 ms for sound to travel one foot. For example, it takes about 11 ms for sound to travel 10 feet. So if you are aligning your Front-of-House system is 10 feet from your drum kit, you need to delay the signal going to that system by 11 ms.

声音以每秒1130英尺的速度传播（由于温度、湿度和海拔的不同，会有一些变化）。因此，声音传播一英尺需要1.1毫秒。例如，声音传播10英尺需要大约11毫秒。如果你要把前厅系统对准离你的鼓组10英尺的地方，你需要把进入该系统的信号延迟11毫秒。

There are professional software products that can calculate the exact alignment times, but with a little math and little careful listening, this can be dialed in without extra accessories.

有专业的软件产品可以计算出准确的对准时间，但只要稍加计算和仔细聆听，就可以拨出这个时间，不需要额外的配件。

### 13.7.1 Front-of-House 观众席

In a small venue with a relatively small stage, both the main speaker system and the acoustic level of guitar amps and the drum kit on stage can be heard by listeners in the audience. This can reduce the intelligibility of the speaker system because, for example, the mic’d snare signal and the acoustic snare signal are arriving at the listener’s ear at different times. This is where output delays come in.

在一个舞台相对较小的场地，主扬声器系统和舞台上的吉他放大器和鼓组的声学水平都可以被观众听到。这可能会降低扬声器系统的清晰度，因为，例如，麦克风的小鼓信号和原声小鼓信号在不同的时间到达听众的耳朵。这就是输出延时的作用。

The first thing you will need to do is to find the loudest instrument on the stage. In general, this is the snare drum, but it could be the guitar amp, so let your ears do the deciding.

你需要做的第一件事是找到舞台上最响的乐器。一般来说，这是小鼓，但也可能是吉他音箱，所以让你的耳朵来决定。

1. Measure the distance from the snare drum to the mid-frequency drivers of your main Front-of-House system and divide it by 1.1 (if measured in feet) or 0.34 (if measured in meters).
   测量从小鼓到主观众席系统的中频驱动器的距离，然后除以1.1（如果以英尺计算）或0.34（如果以米计算）。
2. On your StudioLive mixer, select the Main mix and set the Output delay to the result of your calculation.
   在StudioLive混音器上，选择主混音，将输出延迟设置为计算结果。
3. Bring up the level of the snare channel on your mixer to unity and have your drummer play single hits on the snare, about one hit every second. Make sure he or she plays at the level they will play during the performance.

   将调音台上的小鼓通道的电平调到统一，让你的鼓手在小鼓上进行单击，大约每秒钟击打一次。确保他或她的演奏水平，与他们在演出时的水平一致。

4. Use your Main mix level to set the level on the Front-of-house system as closely to the acoustic level of the snare drum as possible.

   使用Main mix level电平，将观众席系统的电平，设置得尽可能接近小军鼓的声学电平。

5. Listen closely to the speakers and the snare and make minor adjustments to the output delay until the attack times sound as coherent as possible.

   仔细聆听扬声器和小鼓的声音，对输出延迟进行细微的调整，直到attack时间听起来尽可能的一致。

### 13.7.2 Delay Systems 延迟系统

In most situations, a PA system relies on a main speaker system, positioned at the front of the room, to reproduce audio for the entire performance space. As a result, the level of the system is considerably louder at the front of the room then it is at the mix position.

在大多数情况下，扩声系统依靠位于房间前部的主扬声器系统，为整个表演空间再现音频。因此，系统在房间前部的音量要比在混音位置的音量大得多。

In situations where sound must be reproduced outside of the main system's optimum range, well-placed delay systems can extend the intelligibility of the front-of-house system. By creating listening zones throughout the room, your front-of-house system only needs to be loud enough to cover the front of the room. As a result, you can lower the mains level, give the front-row listeners'ears a break, and get better fidelity from your speakers.

必须在主系统的最佳范围之外，重现声音的情况下，精心布置的延迟系统，可以扩展观众席系统的清晰度。通过在整个房间创建聆听区，观众席系统只需要有足够的音量来覆盖房间的前面。因此，你可以降低主音量，让前排听众的耳朵休息一下，并从你的扬声器获得更好的保真度。

When placing delay systems, place delay systems where the main system's intelligibility falls apart as it is overcome by environmental obstacles:
放置延迟系统时，由于受到环境障碍的影响，主系统的可理解性就会崩溃：

**Inside.** Indoors, you are trying to overcome the direct-to-reverberant reflections. Your goal is to find where the direct signal-to-reverberation ratio has reached about 50/50. At this point, the reflections in the room are at an equal level to the direct sound of the P.A., and vocal intelligibility is lost.

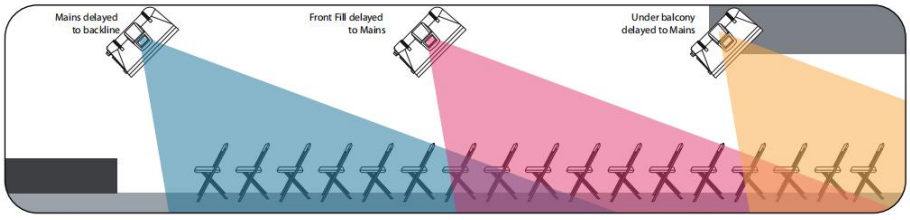
在室内，尽可能克服直接反射到混响反射的问题。你的目标是找到直接信号与混响比例达到约50/50的地方。在这一点上，房间里的反射与P.A.的直达声处于同等水平，而人声的可理解性就会丧失。

**Outside.** Outdoors, you are trying to maintain level as the noise floor of the crowd begins to be at equal level to the P.A. in the intelligibility range. At this point, the main system needs more support in order to deliver the same perceived loudness as you get further from the source.

户外人群的噪音底限，开始与P.A.在可理解范围内处于同等水平时，你要尝试保持水平。在这一点上，主系统需要更多的支持，以提供相同的感知响度，因为你离源头越来越远。

The goal of distributed sound is for the people in the back row have the same listening experience as the people in the front, but it isn't as easy as just bringing an extra pair of speakers. To create a distributed sound system, you need to delay the signal going to the additional speakers.

分布式音响的目标，是让后排的人拥有与前排的人一样的听觉体验，但这并不像多带一对扬声器那么简单。要创建一个分布式音响系统，你需要延迟信号进入额外的扬声器。




1. Once you have positioned your delay systems, measure the distance from the left front-of-house speaker to the closest delay speaker (most likely, the left side delay speaker). Divide the distance by 1.1 (if measured in feet) or 0.34 (if measured in meters).

一旦你定位延时系统，测量从左前方的扬声器到最近的延时扬声器（很可能是左侧的延时扬声器）的距离。用这个距离除以1.1（如果以英尺计算）或0.34（如果以米计算）。

2. On your StudioLive mixer, select the FlexMix driving the output connected to your left side delay speaker and configure it as a Subgroup.

在StudioLive混音器上，选择驱动连接到左侧延迟扬声器输出的FlexMix，并将其配置为子群。

3. Set the Output delay on your newly created subgroup to the result of your calculation.

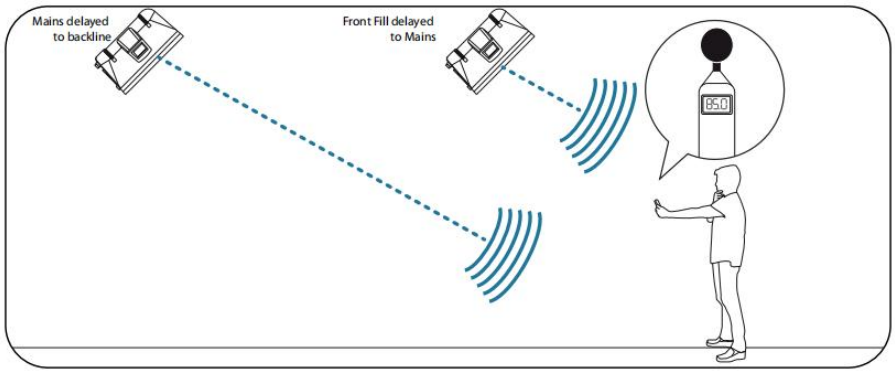
将新创建的subgroup 输出延迟设置为计算结果。

4. Repeat steps 1-3 with the right side of the system.

在系统的右边重复步骤1-3。

5. Once you have positioned and delayed your satellite system, use an SPL meter to match the output of the main and delay systems at the measurement point. For example, if you are standing 30 feet from the left side of the main system and 10 feet from the left side of the delay system, and the output of the main system is 85 dB, then the output of the delay system should also be 85 dB.

一旦你已经定位和延迟你的卫星系统，使用SPL计来匹配主系统和延迟系统在测量点的输出。例如，如果你站在离主系统左侧30英尺，离延迟系统左侧10英尺，主系统的输出是85分贝，那么延迟系统的输出也应该是85分贝。




It should be noted that frequencies in the sub-bass range of a delay system do not require distribution. In fact, a delay system's high pass filter should be rolled up as high as 300 to 400 Hz to avoid sound going back toward the stage as low frequencies become omnidirectional.

应该注意的是，延迟系统的次低音范围内的频率不需要分配。事实上，延时系统的高通滤波器，应该卷起到300到400赫兹，以避免声音在低频变得全向的时候，向舞台回流。

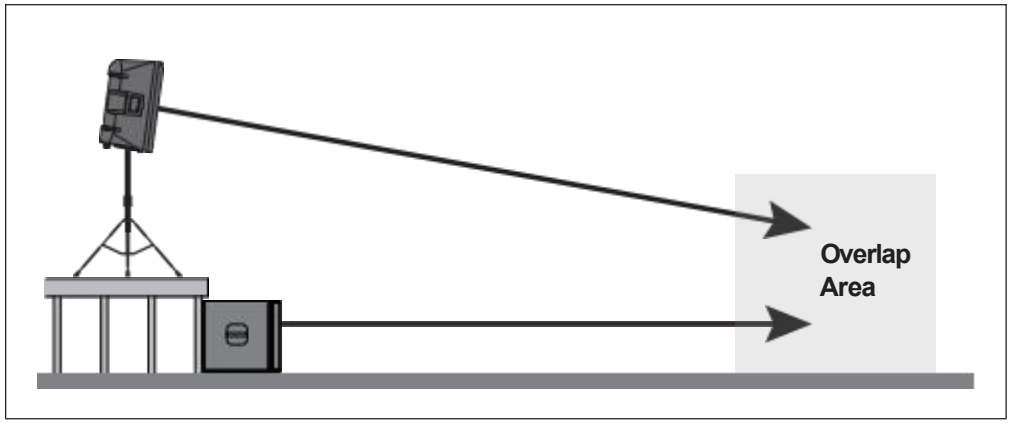
### 13.7.3 Aligning Subs to Mains 将子系统与主系统对准

When your subwoofer and your full-range loudspeaker are placed some distance apart, low-frequency cancellation or reinforcement can occur when the same frequencies are reproduced by both systems. Using an alignment delay on your subwoofer system will compensate for this. To set the correct delay for a custom installation, you will need to do some calculating:

超低频扬声器和全频扬声器相隔一定距离，两个系统重现相同的频率时，就会出现低频抵消或加强的现象。低音炮系统使用对准延迟，可以补偿这种情况。要为定制安装设置正确的延迟，你需要做一些计算：

1. Find the spot in the room where coverage from the main speakers and the subwoofers overlap.

   找到房间里主扬声器和低音炮的覆盖范围重叠的地方。




2. Measure the distance from the overlap area to each speaker location.

   测量从重叠区到每个扬声器位置的距离。

3. Subtract the smaller distance (the distance to the subwoofer) from the larger distance (the distance to the full-range loudspeaker).

   用较大的距离（到全频扬声器的距离）减去较小的距离（到超重低音扬声器的距离）。

4. Divide the distance by 1.1 (if measured in feet) or 0.34 (if measured in meters) and apply that delay value to the Aux mix driving the subwoofer. Keep in mind that the overlap area may be behind front-of-house.

   将该距离除以1.1（如果以英尺为单位）或0.34（如果以米为单位），然后，将该延迟值应用于驱动低音炮的Aux混音。请记住，重叠的区域可能在观众席的后面。

## 13.8 Side chaining 侧链

Both the Compressor and the Gate on the Input channels can be triggered from another channel. Sidechaining has many uses. This section will explain how sidechaining can help to solve many common mixing problems.

输入通道的压缩器和噪声门，都可以从另一个通道触发。侧链有很多用途。本节将解释侧链，如何解决常见的混音问题。

### 13.8.1 Side chaining the Gate 噪声门侧链功能

As previously mentioned, the Gate's key filter can be sidechained to another channel. This allows you to select a different channel as the trigger source for your StudioLive Gate's Key Filter. Sidechaining has many uses:

如前所述，Gate 的key filter滤波器可以被侧链到另一个通道。你可以选择一个不同的通道，将它作为StudioLive Gate的Key Filter的启动源。侧链有很多用途。

**Tighten up a Rhythm Section.** You can use a sidechained key filter to tighten up a rhythm section by sidechaining the kick drum channel to the bass channel and setting the gate to open at the frequency of the kick drum. This, combined with a fast attack and release, will make your rhythm section more cohesive. Increase the release time to loosen the feel.

你可以使用侧链的按键key filter 来收紧节奏部分，方法是将踢鼓通道侧链到低音通道，并将噪声门，在踢鼓频率上设置为打开。这样与fast attack 和 release相结合，节奏部分会更有凝聚力。增加release时间，感觉上更宽松。

**Rhythmic Effect.** Another great use for a sidechain is as an effect in EDM production. Try sidechaining a drum loop to a sustained source, like pads or strings. By doing this, every time a drum hit triggers the key filter, your sustained source will be heard. Between hits, this source will be silenced. Playing with the attack and release will transform this effect from a rhythmic pulse all the way to a chopped-up stutter.

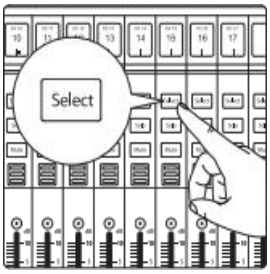
侧链的另一个绝佳用途，将它在EDM制作中作为一种效果。试着将一个鼓的循环与一个持续的音源，比如，PAD或弦乐，进行侧链。通过这样做，每当鼓声触发key filter时，持续音源会被听到。在两次敲击之间，这个音源将会静止。通过处理 attack 和 release，这种效果会从一个有节奏的脉冲，一直转化为一个断断续续的效果。

This tutorial will guide you through the first use case. Please note, that while sidechaining the kick drum to the bass channel can tighten up a good rhythm section and make them sound even better, it will not correct timing issues and will actually exaggerate them if your bass player and drummer aren't in the pocket.

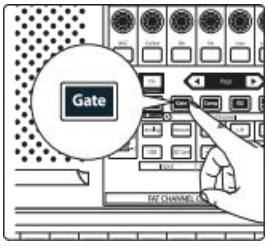
本教程将指导你完成第一个使用案例。请注意，虽然踢鼓侧链到低音通道，可以收紧一个好的节奏，听起来会更好，但它不会纠正时间问题，如果你的贝司手和鼓手不在状态，实际上会夸大它们。

For this purposes of this tutorial, we'll use the dynamics of the kick drum on Channel 1 to trigger the gate for the bass on Channel 15.

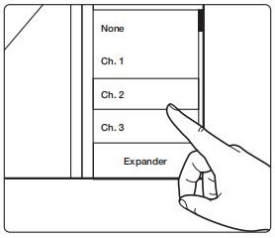
在本教程中，我们将使用通道1上的踢鼓的动态，来启动通道15上的低音门。




1. Press the **Select** button on the bass channel, to bring it into focus in the Fat Channel.在低音通道上按下 " **Select**"按钮，使其在Fat Channel中成为焦点。




2. Press the **Gate** button in the Fat Channel, to access gate/expander controls for the bass channel. 在Fat Channel上按下 "**Gate**"按钮，可访问低音通道的 gate/expander 控制。




3. Select the kick drum channel as the Key Source or by using the Key Source selector on the Touch Display.
选择kick drum通道作为Key Source，或者使用Touch Display上的Key Source选择器来选择。

4. Adjust the **Threshold**, **Attack**, and **Release** controls to create the gating effect you're looking for.
调整 **Threshold**、**Attack** 和 **Release** 控制，以创造你所寻找的门控效果。

If you want to break the sidechain connection, set Key Source for the gate back to "None."
如果你想中断侧链的连接，把门的Key Source设置回 "None"。

### 13.8.2 Sidechaining the Compressor 压缩器的侧链功能

Sidechaining a compressor allows you to reduce the level of one input source to make room for another. This is especially useful in live broadcast or application where music and commentary are happening simultaneously. In recording applications, this is generally accomplished with careful level automation. Compressor sidechaining allows you to achieve a similar result without having to ride the faders.

侧链压缩器可以降低一个输入源的电平，以便为另一个输入源腾出空间。这在现场广播或音乐，以及评论同时进行的应用中，特别有用。在录音应用中，这通常要很小心来自动化完成。压缩侧链可以让你达到类似的效果，而不需要操作推子。

Below are two of the most common uses:

以下是两个最常见的用途：

**Dialogue Ducking.** This is probably the most well-known compressor sidechaining application. Consider a common House of Worship situation where the pastor is leading a meditation while the piano or pre-recorded music is being played. Apply a compressor on the stereo music track with a fairly low threshold, high ratio, a fast attack and a long release time, using the pastor's microphone channel as the key source for the compressor. Now the compressor will react to level fluctuations from the pastor's microphone, allowing the music to naturally rise and fall in counterpoint to the speech pattern.

这可能是最著名的压缩器侧链应用。考虑到一个常见House of Worship情况，即牧师正在带领默想，正在播放钢琴或预先录制的音乐。在立体声音乐轨道上，应用一个相当低的门限、高比率、快速attack、release时间长的压缩器，把牧师的麦克风通道，作为压缩器的key source 。压缩器将对来自牧师麦克风的电平波动作出反应，让音乐自然而然地与语言模式相呼应，上升和下降。

**Bringing Out the Kick Drum.** In some instances, a synth bass line, or a busy bass guitar part interferes with the kick drum presence and punch in the mix. For this application, you will apply a compressor to the bass channel, using the kick drum channel as the key source, allowing your kick drum to punch through the bass line.

在某些情况下，合成器的低音线或繁忙的低音吉他部分，会干扰踢鼓在混音中的存在感和冲击力。这种情况下，在低音通道上应用一个压缩器，把踢鼓通道作为key source关键源，让你的踢鼓在低音线中冲出。

## 13.9 Effect Types 效果类型

Your StudioLive mixer is equipped with four stereo effects processors. Each of these processors has its own aux bus, allowing you to independently control the mix of channels feeding them. This section will guide you through the basics of several common effect types.

你的StudioLive调音台配备了四个立体声效果处理器。每个处理器都有自己的aux bus，向它们提供的通道混音可单独控制。本节将指导你了解几种常见的效果类型的基础知识。

### 13.9.1 Reverb and its Parameters 混响和它的参数

Reverberation—or reverb, as it is more commonly known— is perhaps the most widely used effect. Natural reverb is created by sound waves reflecting off of a surface or many surfaces. For example, when you walk across the wooden stage in a large hall, thousands of reflections are generated almost instantaneously as the sound waves bounce off the floor, walls, and ceilings. These are known as early reflections, and their pattern provides psycho-acoustic indications as to the nature of the space that you are in, even if you can't see it. As each reflection is then reflected off of more surfaces, the complexity of the sound increases, while the reverb slowly decays.

混响--也就是通常所说 reverb--可能是使用最广泛的效果。自然混响是由声波，在一个或多个表面上的反射产生的。例如，当你走过大礼堂的木质舞台，声波从地板、墙壁和天花板上反弹时，几乎瞬间就会产生成千上万的反射。这些被称为早期反射，它们的模式为你所处空间的性质提供了心理-声学指示，即使你看不到它。当每个反射被更多的表面反射后，声音的复杂性就会增加，同时混响也会慢慢衰减。

The reason for the widespread use of reverb in audio recording is fairly self-evident: human beings don't live in a vacuum. Because our brains receive cues about the nature of the space around us based partially on audio reflections, a sense of space makes an audio recording sound more natural and, therefore, more pleasing.

混响在音频录制中广泛使用的原因是不言而喻的：人类不是生活在真空中。因为我们的大脑接收到关于我们周围空间性质的提示，部分是基于音频反射，空间感使音频录音听起来更自然，更令人愉悦。

Below are some of the most common reverb parameters for the reverb effects:

下面是一些最常见的混响效果的混响参数：

**Decay.** Decay is the time (in seconds) required for the reflections (reverberation) to die away. In most modern music production, reverb decay times of between one and three seconds are prevalent. A reverb setting with strong early reflections and a quick decay are a great way to create a stereo effect from a mono source.

衰减是指反射（混响）消失所需的时间（以秒计）。在大多数现代音乐制作中，混响衰减时间在1-3秒之间是很普遍的。一个具有强烈的早期反射和快速衰减的混响设置，是从单声道音源创造立体声效果的好方法。

**Predelay.** Predelay is the time (in milliseconds) between the end of the initial sound and the moment when the first reflections become audible. Imagine you're back on that stage in a large music hall. This time you stand on the very edge of the stage and shout "Hello world!" toward the center of the hall. There will be a brief pause before you hear the first noticeable reflections of your voice, because the sound waves can travel much further before encountering a surface and bouncing back. (There are closer surfaces, of course— notably the floor and the ceiling just in front of the stage— but only a small part of the direct sound will go there, so those reflections will be much less noticeable.) Adjusting the predelay parameter on a reverb allows you to change the apparent size of the room without having to change the overall decay time. This will give your mix a little more transparency by leaving some space between the original sound and its reverb.

Predelay 是指从最初的声音结束，到第一个反射变得可听瞬间之间的时间（以毫秒为单位）。想象一下，你回到了大型音乐厅的舞台上。站在舞台的最边缘，朝着大厅的中心大喊 "世界你好！"。听到你声音的第一个明显的反射之前，会有一个短暂的停顿，因为声波在遇到一个表面并反弹回来之前可以走得更远。(当然，还有更近的表面--特别是地板和舞台前面的天花板--但只有一小部分直达声会到那里，所以这些反射会更不明显）。调整混响器上的预延时参数，可以改变房间的明显大小，而不必改变整体的衰减时间。这将使你的混音更加透明，在原声和混响之间留下一些空间。

**Early Reflections.** Early reflections are those that reach the listener a few milliseconds after the direct signal arrives. Your brain uses them to identify the size of the room you're in. If you are trying to simulate a specific type of room, this control will be extremely important. This control allows you to set the level (in decibels) of the early reflections. The louder the early reflections, the smaller the room will seem.

早期反射是直接信号几毫秒内到达听众的反射。你的大脑利用它们来识别你所处房间的大小。如果你试图模拟一个特定类型的房间，这个控制将是非常重要的。这个控制可以设置早期反射的水平（分贝）。早期反射越大，房间看起来就越小。

### 13.9.2 Delay and its Parameters 延迟及其参数

A delay essentially creates an echo, although you can often use delays to create more complex time-based effects. The source signal is delayed so that it is heard later than it actually occurred.

基本上延迟是创造一个回声，尽管经常可以用延迟来创造更复杂的，基于时间的效果。延迟源信号，听到的时间比实际发生的时间晚。

Below are some of the most common reverb parameters for the delay effects:

下面是一些最常见的延迟效果的混响参数：

**Time.** This is the time (in milliseconds) between the source signal and its echo. The simplest delay effect is a single repeat. A short delay between 30 and 100 ms can be used to create slap-back echo, while longer delay times produce a more distant echo. Delay times that are too short to hear as distinct echoes can be used to create thickening effects. Whether these echoes are timed with the tempo is a matter of stylistic choice.

这是源信号和它的回声之间的时间（以毫秒为单位）。最简单的延迟效果是单一的重复。30至100毫秒之间的短延迟，可以用来产生拍打式回声，而较长的延迟时间，则产生更远的回声。延迟时间太短，听不到明显的回声，可以用来制造增厚效果。这些回声是否与节奏同步，是个人风格上的选择问题。

This is the parameter that is controlled by the Tap Tempo button. Using the Tap button on the StudioLive, you can speed up or slow down these repeats or, more commonly, time the repeats to occur with the tempo of the music.

这是由Tap Tempo按钮控制的参数。使用StudioLive上的 "Tap Tempo "按钮，你可以加快或减慢这些重复的速度，或更常见的是将重复的时间与音乐的节奏结合起来。

***Power User Tip:*** *While you have to select the Time parameter in order to use the Tap button, you only have to do this the first time you use the Tap button for that effect. Once the Tap button has been used to control the Time parameter, it will always control the time of that particular delay, no matter what page you are currently viewing. To assign the Tap button to control another delay, simply navigate to that delay's Time parameter and use the button to enter the desired delay time.*

***Power User Tip:*** *虽然你必须选择 Time parameter 参数，才能使用 "Tap"按钮，但你只需要在第一次使用 该按钮实现该效果时，才需要。一旦 "Tap"按钮被用来控制时间参数，它将始终控制该特定延时的时间，无论你正在查看哪一页。要指定 "Tap"按钮控制另一个延时，只需导航到该延时的时间参数，使用按钮输入所需的延时时间。*

**Time X.** Time X is the value of the beat you are using as a reference for the tempo. The basic unit of measure is a quarter note, so for example, if the beats you are tapping represent quarter notes in the music, you would set Time X to 1.00. If they are eighth notes, you would set Time X to 0.50; half notes would be 2.00; and so on. In this way, you can precisely synchronize or syncopate the delay echoes to the music in real time.

时间X是指你用来作为速度参考的拍子的数值。基本的度量单位是四分音符，例如，如果你敲击的节拍代表音乐中的四分音符，你可以将时间X设置为1.00。如果它们是八分音符，你将把Time X设置为0.50；半音符为2.00；以此类推。通过这种方式，你可以精确地使延迟回声与音乐实时同步或切分。

**Variable Feedback.** Variable feedback, or regeneration, produces multiple decaying repeats. Increasing the feedback value increases the number of echoes, as well as the resonance that is created as one echo disappears into another.

Variable feedback，或称再生，产生多个衰减的重复。增加反馈值可以增加回声的数量，也可以增加一个回声消失在另一个回声中时，产生的共鸣。

**F_Frequency.** Sets the center frequency in Hz for the Filter Delay. F_Gain. Sets the boost at the center frequency for the Filter Delay.

设定Filter Delay滤波器延迟的中心频率，单位为Hz。F_Gain. 设置滤波延时的中心频率的提升。

**F_Q.** Sets the Q for the Filter Delay. The Q is the ratio of the center frequency to the bandwidth. When the center frequency is constant, the bandwidth is inversely proportional to the Q, so as you raise the Q, you narrow the bandwidth.

设定Filter Delay的Q值。Q值是中心频率与带宽的比率。当中心频率不变时，带宽与Q值成反比，所以当你提高Q值时，就会缩小带宽。

### 13.9.3 Chorus and Flange （效果音频）

Close relatives of delay effects, modulation effects change the pitch and time of a delayed signal using a Low Frequency Oscillator or LFO. Two of the most common modulation effects are chorus and flange.

调制效果是延迟效果的近亲，利用Low Frequency Oscillator或LFO改变延迟信号的音高和时间。两个最常见的效果音频是 chorus 和 flange 。

Created by mixing two identical signals together and delaying one of the signals by a constantly varying time, the flanger is perhaps the simplest of modulation effects. The resulting effect creates a kind of whooshing sound as the delay signal rises and falls in varying parts of the frequency spectrum.

通过将两个相同的信号混合在一起，并将其中一个信号，以不断变化的时间进行延迟而产生的， flanger效果音频可能是最简单的方法。当延迟信号在频谱的不同部分上升和下降时，产生的效果会产生一种嗖嗖的声音。

The modulation effect is a close relative of the delay effect and uses a low frequency oscillator or LFO to vary the pitch and timing of the delay signal. The two most common modulation effects are chorus and modulation.

调制效果是延迟效果的近亲，使用low frequency oscillator或LFO，改变延迟信号的音高和时间。两个最常见的调制效果是chorus 和 modulation。

Similar to a flanger, a chorus effect is created by mixing the source signal with one or more pitch-shifted copies of it. Each copy is then modulated by an LFO. A chorus is different from a flanger in several ways. First, the time between the modulated delay signal and the original source signal is longer in a chorus than it is in a flanger. Also, a flanger only has one delayed signal, whereas a chorus may have two or more. And finally, choruses do not feed any of the processed signal back into the processor.
与flanger相似， chorus效果是通过将源信号与一个或多个音高偏移的副本先混合而产生的。然后LFO调制每个副本。chorus在几个方面不同于flanger。在chorus中，被调制的延迟信号和原始的源信号之间的时间，要比在flanger中长。另外，flanger只有一个延迟信号，而合唱可能有两个或更多。最后，合唱并不把任何处理过的信号反馈给处理器。

Below are some of the most common parameters for the flanger and chorus effects:

下面是一些最常见的flanger 和 chorus 的参数：

- **Rate.** Sets the frequency of the LFO modulating the delayed signal.
  设定LFO调制延迟信号的频率。
- **Width.** Shifts the phase of the LFO modulating the delayed signal.
  转移调制延迟信号的LFO的相位。
- **Shape.** Sets the type of wave form the LFO will use to modulate the delayed signal.
  设置LFO用来调制延迟信号的波形类型。
- **Delay Offset.** This is the time (in milliseconds) between the source signal and the delayed signal.
  这是源信号和延迟信号之间的时间（以毫秒计）。
- **Delay Modulation Amplitude.** Sets the amplitude of the LFO modulating the delayed signal.
  设定LFO调制延迟信号的幅度。

- **Delay Feedback.** Variable feedback, or regeneration, produces multiple decaying repeats. Increasing the feedback value increases the number of echoes, as well as the resonance that is created as one echo disappears into another.
  可变反馈，即再生，产生多个衰减的重复。增加反馈值可以增加回声的数量，也可以增加一个回声消失在另一个回声中时,产生的共鸣。

## 13.10 Using the RTA While Mixing 混音时使用RTA


The Standard EQ is equipped with a Real-time analyzer, or RTA, in which x = frequency and y = amplitude. An RTA provides a close visual representation of what you are hearing because it is a view of amplitude and frequency content over a specified plane in real time. It provides a view of the long-term spectrum of the signal—for example, the one- third-octave spectrum long-term average of a musical performance.

标准均衡器配备了一个实时分析器，即RTA，其中x=频率，y=振幅。RTA 提供你所听到近距离的视觉表现，因为它是在一个指定的平面上，实时查看振幅和频率内容。它提供一个信号的长期频谱视图--比如，一个音乐表演的三分之一倍频谱的长期平均值。

The ability to analyze frequency content—specifically, being able to visualize the exact frequencies you are hearing in order to hone in on problem areas— makes the RTA a secret weapon for many a mix engineer. The RTA also lends itself very well to ear training and gives you confidence that you are choosing the right frequencies when making adjustments.

分析频率内容的能力--具体而言，能够想象出你听到的确切频率，以重复出问题所在--RTA成为许多混音工程师的秘密武器。RTA还可以很好地用于耳朵训练，使你有信心在调整时，选择正确的频率。

Because the RTA is analyzing the channel or bus signal digitally, room and speaker anomalies are taken out of the equation. This provides a pure measurement of your mix because you are measuring what is happening inside your StudioLive.

由于RTA是以数字方式分析通道或总线信号，房间和扬声器的异常情况被排除在方程式之外。这为你的混音，提供纯粹的测量，因为你正在测量StudioLive内部发生的事情。

For example, let's say you are mixing a particularly edgy-sounding lead guitar that is competing with the male vocal and distracting from the overall good tone of the instrument. By using the RTA in the Fat Channel, you can quickly identify the offending frequency by looking for spikes in the RTA. This saves time and frustration by taking some of the guesswork out of equalization.

举例，假设你正在混合特别前卫的主吉他，它与男声竞争，分散了乐器的整体良好音调的注意力。通过在Fat Channel中使用RTA，你可以通过寻找它的峰值来快速识别违规的频率。这可以节省时间和挫败感，因为在均衡中，可以省去一些猜测的工作。

***Power User Tip:*** *It should be noted that an RTA cannot be used as a substitute for careful listening. While these tools provide a great visual analysis of your mix, critical listening must always be your main guide.*

***Power User Tip:*** *应该注意的是，RTA不能替代细微的聆听。这些工具，虽然为混音提供了一个很好的视觉分析，但聆听，必须始终是你的主要指导。*

## 14.1 Specifications 技术规格

### Microphone Preamplifier 麦克风前置放弃

| | |
|---|---|
| Input Type输入类型 | XLR Female, balanced |
| Frequency Response to Main Output (at unity gain)<br>对主输出的频率响应（统一增益时） | 20-20 kHz, ±0.5 dBu |
| Input Impedance 输入阻抗 | 1 kΩ |
| THD to Main Output 主输出的THD | <0.005%, +4 dBu, 20-20 kHz, unity gain, unwtd |
| S/N Ratio to Main Output (Ref = +4 dB, 20 kHz BW, unity gain, A-wtd)<br>对主输出的信噪比（参考 = +4 dB, 20 kHz BW, unity gain, A-wtd) | 94 dB |
| Common Mode Rejection Ratio (1 kHz at unity gain)<br>共模抑制率（1kHz，统一增益时） | 65 dB |
| Gain Control Range (±1 dB) 增益控制范围（±1dB） | 0 dB to +60 dB |
| Maximum Input Level (unity gain) 最大输入电平（统一增益） | +12 dBu |
| Phantom Power (±2 VDC) 幻象电源（±2 VDC） | 48 VDC, switchable per channel |

### Line Inputs 线路输入

| | |
|---|---|
| Type 类型 | ¼"TRS Female, balanced |
| Frequency Response to Main Output (at unity gain)<br>对主输出的频率响应（统一增益时） | 20-20 kHz, ±0.5 dBu |
| Input Impedance 输入阻抗 | 10 kΩ |
| THD to Main Output 主输出的THD | <0.005%, +4 dBu, 20-20 kHz, unity gain, unwtd |
| S/N Ratio to Main Output (Ref = +4 dB, 20 kHz BW, unity gain, A-wtd)<br>主输出的信噪比（参考 = +4 dB, 20 kHz BW, unity gain, A-wtd) | 94 dB |
| Maximum Input Level 最大输入电平 | +18 dBu |

### Tape Inputs 录音带输入

| | |
|---|---|
| Type 类型 | RCA Female, unbalanced (stereo pair) |
| Maximum Input Level 最大输入电平 | +12 dBu, ±0.5 dBu |

### XLR Outputs XLR输出

| | |
|---|---|
| Type 类型 | XLR Male, balanced |
| Maximum Output Level 最大输出电平 | +24 dBu, ±0.5 dBu |
| Output Impedance 输出阻抗 | 100Ω |

### Line Outputs 线路输出

| | |
|---|---|
| Type 类型 | ¼"TRS Female, balanced |
| Maximum Output Level 最大输出电平 | +18 dBu, ±0.5 dBu |
| Output Impedance 输出阻抗 | 100Ω |

### Tape Outputs 录音带输出

| | |
|---|---|
| Type 类型 | RCA Female, unbalanced (stereo pair) |
| Maximum Output Level 最大输出电平 | +18 dBu, ±0.5 dBu |
| Output Impedance 输出阻抗 | 100Ω |

### Headphone Output 耳机输出

| | |
|---|---|
| Type 类型 | ¼"TRS Female, active stereo |
| Maximum Output 最大输出电平 | 100 mW/ch. @ 60Ω load |
| Frequency Response 输出阻抗 | 20 Hz – 20 kHz (± 0.5 dB) |
| THD+N | 0.01%, 1 kHz, max gain, 20 kHz BW, unwtd |
| S/N Ratio 信噪比 | 96 dB, 1 kHz, max gain, 20 kHz BW, unwtd |

## System Crosstalk 系统串扰

| | |
|---|---|
| Input to Output 输入到输出 | -90 dB (Ref = +4 dBu, 20 Hz-20 kHz, unwtd) |
| Adjacent Channels 相邻通道 | -87 dB (Ref = +4 dBu, 20 Hz-20 kHz, unwtd) |

## Digital Audio and Control 数字音频与控制

| | |
|---|---|
| ADC Dynamic Range ADC动态范围 | 115 dB (A-wtd, 48 kHz) |
| DAC Dynamic Range DAC动态范围 | 115 dB (A-wtd, 48 kHz) |
| USB Recording Port USB录音端口 | USB 2.0, Type-B |
| Bluetooth™ Input 蓝牙™输入 | 4.1, stereo |
| AES/EBU Output AES/EBU输出 | XLR Male |
| Network Control Port 网络控制端口 | RJ45 |
| AVB Audio Network Port AVB音频网络端口 | Ethercon |
| Internal Processing 内部处理 | 32-bit, floating point |
| Sampling Rate 采样率 | 48 kHz |
| A/D/A Bit Depth A/D/A比特深度 | 24 |
| Reference Level for 0 dBFS 0dBFS的参考电平 | +18 dBu |
| Total System Latency 系统总延时 | 1.9 ms (local routing, analog in-analog out, all processing active) |

## Clock 时钟

| | |
|---|---|
| Jitter | <20 ps RMS (20 Hz - 20 kHz) |
| Jitter Attenuation Jitter衰减 | >60 dB (1 ns in, 1 ps out) |

## Power / Environmental 电力/环保

| | |
|---|---|
| Connector 连接器 | IEC |
| Input-Voltage Range 输入电压范围 | 90 to 230 VAC (±10%) |
| Power Requirements (continuous) 电源要求(连续) | 85W |
| Recommended Ambient Operating Temperature 建议环境工作温度 | 0° to 40° Celsius / 32° to 104° Fahrenheit |

## Physical 物理方面

| | |
|---|---|
| Height 高度 | 7"(179 mm) |
| Width 宽度 | StudioLive 32SC: 18"(457 mm); StudioLive 32SX: 25.6"(650 mm); StudioLive 32S and 64S: 32.5"(826 mm) |
| Depth 深度 | 23"(584 mm) |
| Weight 重量 | StudioLive 32SC: 23 lbs. (10.5 kg); StudioLive 32SX: 30 lbs. (13.6 kg); StudioLive 32S and 64S: 37.2 lbs. (16.9 kg) |

## 14.2 Default Routing 默认路由

### 14.2.1 Input Source 输入信号源

| Input | StudioLive 64S | StudioLive 32S | StudioLive 32SX | StudioLive 32SC | StudioLive 32 | StudioLive 24 | StudioLive 16 |
|---|---|---|---|---|---|---|---|
| Channel 1 | Analog 1 | Analog 1 | Analog 1 | Analog 1 | Analog 1 | Analog 1 | Analog 1 |
| Channel 2 | Analog 2 | Analog 2 | Analog 2 | Analog 2 | Analog 2 | Analog 2 | Analog 2 |
| Channel 3 | Analog 3 | Analog 3 | Analog 3 | Analog 3 | Analog 3 | Analog 3 | Analog 3 |
| Channel 4 | Analog 4 | Analog 4 | Analog 4 | Analog 4 | Analog 4 | Analog 4 | Analog 4 |
| Channel 5 | Analog 5 | Analog 5 | Analog 5 | Analog 5 | Analog 5 | Analog 5 | Analog 5 |
| Channel 6 | Analog 6 | Analog 6 | Analog 6 | Analog 6 | Analog 6 | Analog 6 | Analog 6 |
| Channel 7 | Analog 7 | Analog 7 | Analog 7 | Analog 7 | Analog 7 | Analog 7 | Analog 7 |
| Channel 8 | Analog 8 | Analog 8 | Analog 8 | Analog 8 | Analog 8 | Analog 8 | Analog 8 |
| Channel 9 | Analog 9 | Analog 9 | Analog 9 | Analog 9 | Analog 9 | Analog 9 | Analog 9 |
| Channel 10 | Analog 10 | Analog 10 | Analog 10 | Analog 10 | Analog 10 | Analog 10 | Analog 10 |
| Channel 11 | Analog 11 | Analog 11 | Analog 11 | Analog 11 | Analog 11 | Analog 11 | Analog 11 |
| Channel 12 | Analog 12 | Analog 12 | Analog 12 | Analog 12 | Analog 12 | Analog 12 | Analog 12 |
| Channel 13 | Analog 13 | Analog 13 | Analog 13 | Analog 13 | Analog 13 | Analog 13 | Analog 13 |
| Channel 14 | Analog 14 | Analog 14 | Analog 14 | Analog 14 | Analog 14 | Analog 14 | Analog 14 |
| Channel 15 | Analog 15 | Analog 15 | Analog 15 | Analog 15 | Analog 15 | Analog 15 | Analog 15 |
| Channel 16 | Analog 16 | Analog 16 | Analog 16 | Analog 16 | Analog 16 | Analog 16 | Analog 16 |
| Channel 17 | Analog 17 | Analog 17 | Analog 17 | AVB 17 | Analog 17 | Analog 17 | AVB 17 |
| Channel 18 | Analog 18 | Analog 18 | Analog 18 | AVB 18 | Analog 18 | Analog 18 | AVB 18 |
| Channel 19 | Analog 19 | Analog 19 | Analog 19 | AVB 19 | Analog 19 | Analog 19 | AVB 19 |
| Channel 20 | Analog 20 | Analog 20 | Analog 20 | AVB 20 | Analog 20 | Analog 20 | AVB 20 |
| Channel 21 | Analog 21 | Analog 21 | Analog 21 | AVB 21 | Analog 21 | Analog 21 | AVB 21 |
| Channel 22 | Analog 22 | Analog 22 | Analog 22 | AVB 22 | Analog 22 | Analog 22 | AVB 22 |
| Channel 23 | Analog 23 | Analog 23 | Analog 23 | AVB 23 | Analog 23 | Analog 23 | AVB 23 |
| Channel 24 | Analog 24 | Analog 24 | Analog 24 | AVB 24 | Analog 24 | Analog 24 | AVB 24 |
| Channel 25 | Analog 25 | Analog 25 | Analog 25 | AVB 25 | Analog 25 | AVB 25 | AVB 25 |
| Channel 26 | Analog 26 | Analog 26 | Analog 26 | AVB 26 | Analog 26 | AVB 26 | AVB 26 |
| Channel 27 | Analog 27 | Analog 27 | Analog 27 | AVB 27 | Analog 27 | AVB 27 | AVB 27 |
| Channel 28 | Analog 28 | Analog 28 | Analog 28 | AVB 28 | Analog 28 | AVB 28 | AVB 28 |
| Channel 29 | Analog 29 | Analog 29 | Analog 29 | AVB 29 | Analog 29 | AVB 29 | AVB 29 |
| Channel 30 | Analog 30 | Analog 30 | Analog 30 | AVB 30 | Analog 30 | AVB 30 | AVB 30 |
| Channel 31 | Analog 31 | Analog 31 | Analog 31 | AVB 31 | Analog 31 | AVB 31 | AVB 31 |
| Channel 32 | Analog 32 | Analog 32 | Analog 32 | AVB 32 | Analog 32 | AVB 32 | AVB 32 |
| Channel 33 | AVB 33 | --- | --- | --- | --- | --- | --- |
| Channel 34 | AVB 34 | --- | --- | --- | --- | --- | --- |
| Channel 35 | AVB 35 | --- | --- | --- | --- | --- | --- |
| Channel 36 | AVB 36 | --- | --- | --- | --- | --- | --- |
| Channel 37 | AVB 37 | --- | --- | --- | --- | --- | --- |
| Channel 38 | AVB 38 | --- | --- | --- | --- | --- | --- |
| Channel 39 | AVB 39 | --- | --- | --- | --- | --- | --- |
| Channel 40 | AVB 40 | --- | --- | --- | --- | --- | --- |
| Channel 41 | AVB 41 | --- | --- | --- | --- | --- | --- |
| Channel 42 | AVB 42 | --- | --- | --- | --- | --- | --- |
| Channel 43 | AVB 43 | --- | --- | --- | --- | --- | --- |
| Channel 44 | AVB 44 | --- | --- | --- | --- | --- | --- |

| Input (continued) | StudioLive 64S (continued) | StudioLive 32S (continued) | StudioLive 32SX (continued) | StudioLive 32SC (continued) | StudioLive 32 (continued) | StudioLive 24 (continued) | StudioLIve 16 (continued) |
|---|---|---|---|---|---|---|---|
| Channel 45 | AVB 45 | --- | --- | --- | --- | --- | --- |
| Channel 46 | AVB 46 | --- | --- | --- | --- | --- | --- |
| Channel 47 | AVB 47 | --- | --- | --- | --- | --- | --- |
| Channel 48 | AVB 48 | --- | --- | --- | --- | --- | --- |
| Channel 49 | AVB 49 | --- | --- | --- | --- | --- | --- |
| Channel 50 | AVB 50 | --- | --- | --- | --- | --- | --- |
| Channel 51 | AVB 51 | --- | --- | --- | --- | --- | --- |
| Channel 52 | AVB 52 | --- | --- | --- | --- | --- | --- |
| Channel 53 | AVB 53 | --- | --- | --- | --- | --- | --- |
| Channel 54 | AVB 54 | --- | --- | --- | --- | --- | --- |
| Channel 55 | AVB 55 | --- | --- | --- | --- | --- | --- |
| Channel 56 | AVB 56 | --- | --- | --- | --- | --- | --- |
| Channel 57 | AVB 57 | --- | --- | --- | --- | --- | --- |
| Channel 58 | AVB 58 | --- | --- | --- | --- | --- | --- |
| Channel 59 | AVB 59 | --- | --- | --- | --- | --- | --- |
| Channel 60 | AVB 60 | --- | --- | --- | --- | --- | --- |
| Channel 61 | AVB 61 | --- | --- | --- | --- | --- | --- |
| Channel 62 | AVB 62 | --- | --- | --- | --- | --- | --- |
| Channel 63 | AVB 63 | --- | --- | --- | --- | --- | --- |
| Channel 64 | AVB 64 | --- | --- | --- | --- | --- | --- |
| Aux In 1 L/R | Aux In 1 L/R | Aux In 1 L/R | Aux In 1 L/R | Aux In 1 L/R | Aux In 1 L/R | Aux In 1 L/R | Aux In 1 L/R |
| Aux In 2 L/R | Aux In 2 L/R | Aux In 2 L/R | Aux In 2 L/R | Aux In 2 L/R | Aux In 2 L/R | Aux In 2 L/R | Aux In 2 L/R |
| Tape In L/R | Tape In L/R | Tape In L/R | Tape In L/R | Tape In L/R | Tape In L/R | Tape In L/R | Tape In L/R |
| Talkback | Talkback | Talkback | Talkback | Talkback | Talkback | Talkback | Talkback |
| FX Return A L/R | FX Return A L/R | FX Return A L/R | FX Return A L/R | FX Return A L/R | FX Return A L/R | FX Return A L/R | FX Return A L/R |
| FX Return B L/R | FX Return B L/R | FX Return B L/R | FX Return B L/R | FX Return B L/R | FX Return B L/R | FX Return B L/R | FX Return B L/R |
| FX Return C L/R | FX Return C L/R | FX Return C L/R | FX Return C L/R | FX Return C L/R | FX Return C L/R | FX Return C L/R | FX Return C L/R |
| FX Return D L/R | FX Return D L/R | FX Return D L/R | FX Return D L/R | FX Return D L/R | FX Return D L/R | FX Return D L/R | FX Return D L/R |
| FX Return E L/R | FX Return E L/R | --- | --- | --- | --- | --- | --- |
| FX Return F L/R | FX Return F L/R | --- | --- | --- | --- | --- | --- |
| FX Return G L/R | FX Return G L/R | --- | --- | --- | --- | --- | --- |
| FX Return H L/R | FX Return H L/R | --- | --- | --- | --- | --- | --- |
| FlexMix 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 |
| FlexMix 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 |
| FlexMix 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 |
| FlexMix 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 |
| FlexMix 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 |
| FlexMix 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 |
| FlexMix 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 |
| FlexMix 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 |
| FlexMix 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 |
| FlexMix 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 |
| FlexMix 11 | FlexMix 11 | FlexMix 11 | FlexMix 11 | FlexMix 11 | FlexMix 11 | FlexMix 11 | FlexMix 11 |
| FlexMix 12 | FlexMix 12 | FlexMix 12 | FlexMix 12 | FlexMix 12 | FlexMix 12 | FlexMix 12 | FlexMix 12 |
| FlexMix 13 | FlexMix 13 | FlexMix 13 | FlexMix 13 | FlexMix 13 | FlexMix 13 | FlexMix 13 | FlexMix 13 |
| FlexMix 14 | FlexMix 14 | FlexMix 14 | FlexMix 14 | FlexMix 14 | FlexMix 14 | FlexMix 14 | FlexMix 14 |
| FlexMix 15 | FlexMix 15 | FlexMix 15 | FlexMix 15 | FlexMix 15 | FlexMix 15 | FlexMix 15 | FlexMix 15 |

| Input (continued) | StudioLive 64S (continued) | StudioLive 32S (continued) | StudioLive 32SX (continued) | StudioLive 32SC (continued) | StudioLive 32 (continued) | StudioLive 24 (continued) | StudioLIve 16 (continued) |
|---|---|---|---|---|---|---|---|
| FlexMix 16 | FlexMix 16 | FlexMix 16 | --- | --- | --- | --- | --- |
| FlexMix 17 | FlexMix 17 | --- | --- | --- | --- | --- | --- |
| FlexMix 18 | FlexMix 18 | --- | --- | --- | --- | --- | --- |
| FlexMix 19 | FlexMix 19 | --- | --- | --- | --- | --- | --- |
| FlexMix 20 | FlexMix 20 | --- | --- | --- | --- | --- | --- |
| FlexMix 21 | FlexMix 21 | --- | --- | --- | --- | --- | --- |
| FlexMix 22 | FlexMix 22 | --- | --- | --- | --- | --- | --- |
| FlexMix 23 | FlexMix 23 | --- | --- | --- | --- | --- | --- |
| FlexMix 24 | FlexMix 24 | --- | --- | --- | --- | --- | --- |
| FlexMix 25 | FlexMix 25 | --- | --- | --- | --- | --- | --- |
| FlexMix 26 | FlexMix 26 | --- | --- | --- | --- | --- | --- |
| FlexMix 27 | FlexMix 27 | --- | --- | --- | --- | --- | --- |
| FlexMix 28 | FlexMix 28 | --- | --- | --- | --- | --- | --- |
| FlexMix 29 | FlexMix 29 | --- | --- | --- | --- | --- | --- |
| FlexMix 30 | FlexMix 30 | --- | --- | --- | --- | --- | --- |
| FlexMix 31 | FlexMix 31 | --- | --- | --- | --- | --- | --- |
| FlexMix 32 | FlexMix 32 | --- | --- | --- | --- | --- | --- |
| Main L/R | Main L/R | Main L/R | Main L/R | Main L/R | Main L/R | Main L/R | Main L/R |

### 14.2.2 Analog Sends

| Output | StudioLive 64S | StudioLive 32S | StudioLive 32SX | StudioLive 32SC | StudioLive 32 | StudioLive 24 | StudioLIve 16 |
|---|---|---|---|---|---|---|---|
| Mix Out 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 | FlexMix 1 |
| Mix Out 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 | FlexMix 2 |
| Mix Out 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 | FlexMix 3 |
| Mix Out 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 | FlexMix 4 |
| Mix Out 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 | FlexMix 5 |
| Mix Out 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 | FlexMix 6 |
| Mix Out 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 | FlexMix 7 |
| Mix Out 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 | FlexMix 8 |
| Mix Out 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 | FlexMix 9 |
| Mix Out 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 | FlexMix 10 |
| Mix Out 11 | FlexMix 11 | FlexMix 11 | FlexMix 11 | --- | FlexMix 11 | FlexMix 11 | --- |
| Mix Out 12 | FlexMix 12 | FlexMix 12 | FlexMix 12 | --- | FlexMix 12 | FlexMix 12 | --- |
| Mix Out 13 | FlexMix 13 | FlexMix 13 | FlexMix 13 | --- | FlexMix 13 | FlexMix 13 | --- |
| Mix Out 14 | FlexMix 14 | FlexMix 14 | FlexMix 14 | --- | FlexMix 14 | FlexMix 14 | --- |
| Mix Out 15 | FlexMix 15 | FlexMix 15 | FlexMix 15 | --- | FlexMix 15 | FlexMix 15 | --- |
| Mix Out 16 | FlexMix 16 | FlexMix 16 | FlexMix 16 | --- | FlexMix 16 | FlexMix 16 | --- |
| Subgroup Out 1 | Subgroup A | Subgroup A | Subgroup A | --- | Subgroup A | --- | --- |
| Subgroup Out 2 | Subgroup B | Subgroup B | Subgroup B | --- | Subgroup B | --- | --- |
| Subgroup Out 3 | Subgroup C | Subgroup C | Subgroup C | --- | Subgroup C | --- | --- |
| Subgroup Out 4 | Subgroup D | Subgroup D | Subgroup D | --- | Subgroup D | --- | --- |

### 14.2.3 AVB Sends （AVB发送）

| AVB Send | StudioLive 64S | StudioLive 32S | StudioLive 32SX | StudioLive 32SC | StudioLive 32 | StudioLive 24 | StudioLive 16 |
|---|---|---|---|---|---|---|---|
| AVB Send 1 | Channel 1 | Channel 1 | Channel 1 | Channel 1 | Channel 1 | Channel 1 | Channel 1 |
| AVB Send 2 | Channel 2 | Channel 2 | Channel 2 | Channel 2 | Channel 2 | Channel 2 | Channel 2 |
| AVB Send 3 | Channel 3 | Channel 3 | Channel 3 | Channel 3 | Channel 3 | Channel 3 | Channel 3 |
| AVB Send 4 | Channel 4 | Channel 4 | Channel 4 | Channel 4 | Channel 4 | Channel 4 | Channel 4 |
| AVB Send 5 | Channel 5 | Channel 5 | Channel 5 | Channel 5 | Channel 5 | Channel 5 | Channel 5 |
| AVB Send 6 | Channel 6 | Channel 6 | Channel 6 | Channel 6 | Channel 6 | Channel 6 | Channel 6 |
| AVB Send 7 | Channel 7 | Channel 7 | Channel 7 | Channel 7 | Channel 7 | Channel 7 | Channel 7 |
| AVB Send 8 | Channel 8 | Channel 8 | Channel 8 | Channel 8 | Channel 8 | Channel 8 | Channel 8 |
| AVB Send 9 | Channel 9 | Channel 9 | Channel 9 | Channel 9 | Channel 9 | Channel 9 | Channel 9 |
| AVB Send 10 | Channel 10 | Channel 10 | Channel 10 | Channel 10 | Channel 10 | Channel 10 | Channel 10 |
| AVB Send 11 | Channel 11 | Channel 11 | Channel 11 | Channel 11 | Channel 11 | Channel 11 | Channel 11 |
| AVB Send 12 | Channel 12 | Channel 12 | Channel 12 | Channel 12 | Channel 12 | Channel 12 | Channel 12 |
| AVB Send 13 | Channel 13 | Channel 13 | Channel 13 | Channel 13 | Channel 13 | Channel 13 | Channel 13 |
| AVB Send 14 | Channel 14 | Channel 14 | Channel 14 | Channel 14 | Channel 14 | Channel 14 | Channel 14 |
| AVB Send 15 | Channel 15 | Channel 15 | Channel 15 | Channel 15 | Channel 15 | Channel 15 | Channel 15 |
| AVB Send 16 | Channel 16 | Channel 16 | Channel 16 | Channel 16 | Channel 16 | Channel 16 | Channel 16 |
| AVB Send 17 | Channel 17 | Channel 17 | Channel 17 | Channel 17 | Channel 17 | Channel 17 | Channel 17 |
| AVB Send 18 | Channel 18 | Channel 18 | Channel 18 | Channel 18 | Channel 18 | Channel 18 | Channel 18 |
| AVB Send 19 | Channel 19 | Channel 19 | Channel 19 | Channel 19 | Channel 19 | Channel 19 | Channel 19 |
| AVB Send 20 | Channel 20 | Channel 20 | Channel 20 | Channel 20 | Channel 20 | Channel 20 | Channel 20 |
| AVB Send 21 | Channel 21 | Channel 21 | Channel 21 | Channel 21 | Channel 21 | Channel 21 | Channel 21 |
| AVB Send 22 | Channel 22 | Channel 22 | Channel 22 | Channel 22 | Channel 22 | Channel 22 | Channel 22 |
| AVB Send 23 | Channel 23 | Channel 23 | Channel 23 | Channel 23 | Channel 23 | Channel 23 | Channel 23 |
| AVB Send 24 | Channel 24 | Channel 24 | Channel 24 | Channel 24 | Channel 24 | Channel 24 | Channel 24 |
| AVB Send 25 | Channel 25 | Channel 25 | Channel 25 | Channel 25 | Channel 25 | Channel 25 | Channel 25 |
| AVB Send 26 | Channel 26 | Channel 26 | Channel 26 | Channel 26 | Channel 26 | Channel 26 | Channel 26 |
| AVB Send 27 | Channel 27 | Channel 27 | Channel 27 | Channel 27 | Channel 27 | Channel 27 | Channel 27 |
| AVB Send 28 | Channel 28 | Channel 28 | Channel 28 | Channel 28 | Channel 28 | Channel 28 | Channel 28 |
| AVB Send 29 | Channel 29 | Channel 29 | Channel 29 | Channel 29 | Channel 29 | Channel 29 | Channel 29 |
| AVB Send 30 | Channel 30 | Channel 30 | Channel 30 | Channel 30 | Channel 30 | Channel 30 | Channel 30 |
| AVB Send 31 | Channel 31 | Channel 31 | Channel 31 | Channel 31 | Channel 31 | Channel 31 | Channel 31 |
| AVB Send 32 | Channel 32 | Channel 32 | Channel 32 | Channel 32 | Channel 32 | Channel 32 | Channel 32 |
| AVB Send 33 | Channel 33 | Aux In 1 Left | Aux In 1 Left | Aux In 1 Left | Aux In 1 Left | Aux In 1 Left | Aux In 1 Left |
| AVB Send 34 | Channel 34 | Aux In 1 Right | Aux In 1 Right | Aux In 1 Right | Aux In 1 Right | Aux In 1 Right | Aux In 1 Right |
| AVB Send 35 | Channel 35 | Aux In 2 Left | Aux In 2 Left | Aux In 2 Left | Aux In 2 Left | Aux In 2 Left | Aux In 2 Left |
| AVB Send 36 | Channel 36 | Aux In 2 Right | Aux In 2 Right | Aux In 2 Right | Aux In 2 Right | Aux In 2 Right | Aux In 2 Right |
| AVB Send 37 | Channel 37 | Tape In Left | Tape In Left | Tape In Left | Tape In Left | Tape In Left | Tape In Left |
| AVB Send 38 | Channel 38 | Tape In Right | Tape In Right | Tape In Right | Tape In Right | Tape In Right | Tape In Right |
| AVB Send 39 | Channel 39 | Main Left | Main Left | Main Left | Main Left | Main Left | Main Left |
| AVB Send 40 | Channel 40 | Main Right | Main Right | Main Right | Main Right | Main Right | Main Right |
| AVB Send 41 | Channel 41 | Mix 1 | Mix 1 | Mix 1 | Mix 1 | Mix 1 | Mix 1 |
| AVB Send 42 | Channel 42 | Mix 2 | Mix 2 | Mix 2 | Mix 2 | Mix 2 | Mix 2 |
| AVB Send 43 | Channel 43 | Mix 3 | Mix 3 | Mix 3 | Mix 3 | Mix 3 | Mix 3 |
| AVB Send 44 | Channel 44 | Mix 4 | Mix 4 | Mix 4 | Mix 4 | Mix 4 | Mix 4 |

| AVB Send (continued) | StudioLive 64S (continued) | StudioLive 32S (continued) | StudioLive 32SX (continued) | StudioLive 32SC (continued) | StudioLive 32 (continued) | StudioLive 24 (continued) | StudioLIve 16 (continued) |
|---|---|---|---|---|---|---|---|
| AVB Send 45 | Channel 45 | Mix 5 | Mix 5 | Mix 5 | Mix 5 | Mix 5 | Mix 5 |
| AVB Send 46 | Channel 46 | Mix 6 | Mix 6 | Mix 6 | Mix 6 | Mix 6 | Mix 6 |
| AVB Send 47 | Channel 47 | Mix 7 | Mix 7 | Mix 7 | Mix 7 | Mix 7 | Mix 7 |
| AVB Send 48 | Channel 48 | Mix 8 | Mix 8 | Mix 8 | Mix 8 | Mix 8 | Mix 8 |
| AVB Send 49 | Channel 49 | Mix 9 | Mix 9 | Mix 9 | Mix 9 | Mix 9 | Mix 9 |
| AVB Send 50 | Channel 50 | Mix 10 | Mix 10 | Mix 10 | Mix 10 | Mix 10 | Mix 10 |
| AVB Send 51 | Channel 51 | Mix 11 | Mix 11 | Mix 11 | Mix 11 | Mix 11 | Mix 11 |
| AVB Send 52 | Channel 52 | Mix 12 | Mix 12 | Mix 12 | Mix 12 | Mix 12 | Mix 12 |
| AVB Send 53 | Channel 53 | Mix 13 | Mix 13 | Mix 13 | Mix 13 | Mix 13 | Mix 13 |
| AVB Send 54 | Channel 54 | Mix 14 | Mix 14 | Mix 14 | Mix 14 | Mix 14 | Mix 14 |
| AVB Send 55 | Channel 55 | Mix 15 | Mix 15 | Mix 15 | Mix 15 | Mix 15 | Mix 15 |
| AVB Send 56 | Channel 56 | Mix 16 | Mix 16 | Mix 16 | Mix 16 | Mix 16 | Mix 16 |
| AVB Send 57 | Channel 57 | --- | --- | --- | --- | --- | --- |
| AVB Send 58 | Channel 58 | --- | --- | --- | --- | --- | --- |
| AVB Send 59 | Channel 59 | --- | --- | --- | --- | --- | --- |
| AVB Send 60 | Channel 60 | --- | --- | --- | --- | --- | --- |
| AVB Send 61 | Channel 61 | --- | --- | --- | --- | --- | --- |
| AVB Send 62 | Channel 62 | --- | --- | --- | --- | --- | --- |
| AVB Send 63 | Channel 63 | --- | --- | --- | --- | --- | --- |
| AVB Send 64 | Channel 64 | --- | --- | --- | --- | --- | --- |

### 14.2.4 USB Sends

| USB Send | StudioLive 64S | StudioLive 32S | StudioLive 32SX | StudioLive 32SC | StudioLive 32 | StudioLive 24 | StudioLIve 16 |
|---|---|---|---|---|---|---|---|
| USB Send 1 | Channel 1 | Channel 1 | Channel 1 | Channel 1 | Channel 1 | Channel 1 | Channel 1 |
| USB Send 2 | Channel 2 | Channel 2 | Channel 2 | Channel 2 | Channel 2 | Channel 2 | Channel 2 |
| USB Send 3 | Channel 3 | Channel 3 | Channel 3 | Channel 3 | Channel 3 | Channel 3 | Channel 3 |
| USB Send 4 | Channel 4 | Channel 4 | Channel 4 | Channel 4 | Channel 4 | Channel 4 | Channel 4 |
| USB Send 5 | Channel 5 | Channel 5 | Channel 5 | Channel 5 | Channel 5 | Channel 5 | Channel 5 |
| USB Send 6 | Channel 6 | Channel 6 | Channel 6 | Channel 6 | Channel 6 | Channel 6 | Channel 6 |
| USB Send 7 | Channel 7 | Channel 7 | Channel 7 | Channel 7 | Channel 7 | Channel 7 | Channel 7 |
| USB Send 8 | Channel 8 | Channel 8 | Channel 8 | Channel 8 | Channel 8 | Channel 8 | Channel 8 |
| USB Send 9 | Channel 9 | Channel 9 | Channel 9 | Channel 9 | Channel 9 | Channel 9 | Channel 9 |
| USB Send 10 | Channel 10 | Channel 10 | Channel 10 | Channel 10 | Channel 10 | Channel 10 | Channel 10 |
| USB Send 11 | Channel 11 | Channel 11 | Channel 11 | Channel 11 | Channel 11 | Channel 11 | Channel 11 |
| USB Send 12 | Channel 12 | Channel 12 | Channel 12 | Channel 12 | Channel 12 | Channel 12 | Channel 12 |
| USB Send 13 | Channel 13 | Channel 13 | Channel 13 | Channel 13 | Channel 13 | Channel 13 | Channel 13 |
| USB Send 14 | Channel 14 | Channel 14 | Channel 14 | Channel 14 | Channel 14 | Channel 14 | Channel 14 |
| USB Send 15 | Channel 15 | Channel 15 | Channel 15 | Channel 15 | Channel 15 | Channel 15 | Channel 15 |
| USB Send 16 | Channel 16 | Channel 16 | Channel 16 | Channel 16 | Channel 16 | Channel 16 | Channel 16 |
| USB Send 17 | Channel 17 | Channel 17 | Channel 17 | Channel 17 | Channel 17 | Channel 17 | Channel 17 |
| USB Send 18 | Channel 18 | Channel 18 | Channel 18 | Channel 18 | Channel 18 | Channel 18 | Channel 18 |
| USB Send 19 | Channel 19 | Channel 19 | Channel 19 | Channel 19 | Channel 19 | Channel 19 | Channel 19 |
| USB Send 20 | Channel 20 | Channel 20 | Channel 20 | Channel 20 | Channel 20 | Channel 20 | Channel 20 |
| USB Send 21 | Channel 21 | Channel 21 | Channel 21 | Channel 21 | Channel 21 | Channel 21 | Channel 21 |
| USB Send 22 | Channel 22 | Channel 22 | Channel 22 | Channel 22 | Channel 22 | Channel 22 | Channel 22 |
| USB Send 23 | Channel 23 | Channel 23 | Channel 23 | Channel 23 | Channel 23 | Channel 23 | Channel 23 |

| USB Send (continued) | StudioLive 64S (continued) | StudioLive 32S (continued) | StudioLive 32SX (continued) | StudioLive 32SC (continued) | StudioLive 32 (continued) | StudioLive 24 (continued) | StudioLive 16 (continued) |
|---|---|---|---|---|---|---|---|
| USB Send 24 | Channel 24 | Channel 24 | Channel 24 | Channel 24 | Channel 24 | Channel 24 | Channel 24 |
| USB Send 25 | Channel 25 | Channel 25 | Channel 25 | Channel 25 | Channel 25 | Channel 25 | Channel 25 |
| USB Send 26 | Channel 26 | Channel 26 | Channel 26 | Channel 26 | Channel 26 | Channel 26 | Channel 26 |
| USB Send 27 | Channel 27 | Channel 27 | Channel 27 | Channel 27 | Channel 27 | Channel 27 | Channel 27 |
| USB Send 28 | Channel 28 | Channel 28 | Channel 28 | Channel 28 | Channel 28 | Channel 28 | Channel 28 |
| USB Send 29 | Channel 29 | Channel 29 | Channel 29 | Channel 29 | Channel 29 | Channel 29 | Channel 29 |
| USB Send 30 | Channel 30 | Channel 30 | Channel 30 | Channel 30 | Channel 30 | Channel 30 | Channel 30 |
| USB Send 31 | Channel 31 | Channel 31 | Channel 31 | Channel 31 | Channel 31 | Channel 31 | Channel 31 |
| USB Send 32 | Channel 32 | Channel 32 | Channel 32 | Channel 32 | Channel 32 | Channel 32 | Channel 32 |
| USB Send 33 | Channel 33 | Aux In 1 Left | Aux In 1 Left | Aux In 1 Left | Aux In 1 Left | Aux In 1 Left | Aux In 1 Left |
| USB Send 34 | Channel 34 | Aux In 1 Right | Aux In 1 Right | Aux In 1 Right | Aux In 1 Right | Aux In 1 Right | Aux In 1 Right |
| USB Send 35 | Channel 35 | Aux In 2 Left | Aux In 2 Left | Aux In 2 Left | Aux In 2 Left | Aux In 2 Left | Aux In 2 Left |
| USB Send 36 | Channel 36 | Aux In 2 Right | Aux In 2 Right | Aux In 2 Right | Aux In 2 Right | Aux In 2 Right | Aux In 2 Right |
| USB Send 37 | Channel 37 | Tape In Left | Tape In Left | Tape In Left | Tape In Left | Tape In Left | Tape In Left |
| USB Send 38 | Channel 38 | Tape In Right | Tape In Right | Tape In Right | Tape In Right | Tape In Right | Tape In Right |
| USB Send 39 | Channel 39 | Main Left | Main Left | Main Left | Main Left | Main Left | Main Left |
| USB Send 40 | Channel 40 | Main Right | Main Right | Main Right | Main Right | Main Right | Main Right |
| USB Send 41 | Channel 41 | --- | --- | --- | --- | --- | --- |
| USB Send 42 | Channel 42 | --- | --- | --- | --- | --- | --- |
| USB Send 43 | Channel 43 | --- | --- | --- | --- | --- | --- |
| USB Send 44 | Channel 44 | --- | --- | --- | --- | --- | --- |
| USB Send 45 | Channel 45 | --- | --- | --- | --- | --- | --- |
| USB Send 46 | Channel 46 | --- | --- | --- | --- | --- | --- |
| USB Send 47 | Channel 47 | --- | --- | --- | --- | --- | --- |
| USB Send 48 | Channel 48 | --- | --- | --- | --- | --- | --- |
| USB Send 49 | Channel 49 | --- | --- | --- | --- | --- | --- |
| USB Send 50 | Channel 50 | --- | --- | --- | --- | --- | --- |
| USB Send 51 | Channel 51 | --- | --- | --- | --- | --- | --- |
| USB Send 52 | Channel 52 | --- | --- | --- | --- | --- | --- |
| USB Send 53 | Channel 53 | --- | --- | --- | --- | --- | --- |
| USB Send 54 | Channel 54 | --- | --- | --- | --- | --- | --- |
| USB Send 55 | Channel 55 | --- | --- | --- | --- | --- | --- |
| USB Send 56 | Channel 56 | --- | --- | --- | --- | --- | --- |
| USB Send 57 | Channel 57 | --- | --- | --- | --- | --- | --- |
| USB Send 58 | Channel 58 | --- | --- | --- | --- | --- | --- |
| USB Send 59 | Channel 59 | --- | --- | --- | --- | --- | --- |
| USB Send 60 | Channel 60 | --- | --- | --- | --- | --- | --- |
| USB Send 61 | Channel 61 | --- | --- | --- | --- | --- | --- |
| USB Send 62 | Channel 62 | --- | --- | --- | --- | --- | --- |
| USB Send 63 | Channel 63 | --- | --- | --- | --- | --- | --- |
| USB Send 64 | Channel 64 | --- | --- | --- | --- | --- | --- |

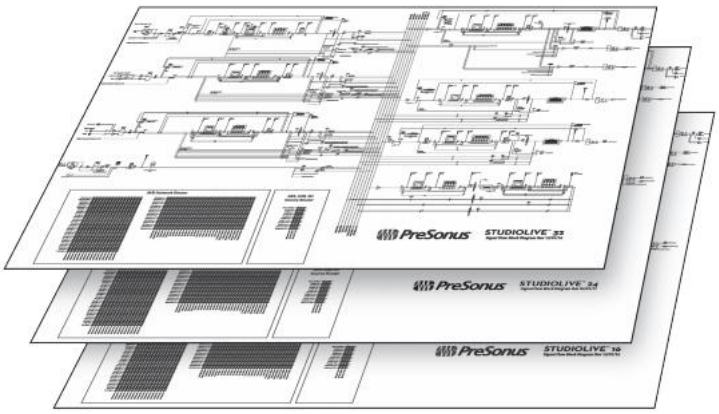
### 14.2.5 SD Card （SD卡）

| SD Card Send | StudioLive 64S | StudioLive 32S | StudioLive 32SX | StudioLive 32SC | StudioLive 32 | StudioLive 24 | StudioLive 16 |
|---|---|---|---|---|---|---|---|
| SD Track 1 | Channel 1 | Ch. 1 (Fixed) | Ch. 1 (Fixed) | Ch. 1 (Fixed) | Ch. 1 (Fixed) | Ch. 1 (Fixed) | Ch. 1 (Fixed) |
| SD Track 2 | Channel 2 | Ch. 2 (Fixed) | Ch. 2 (Fixed) | Ch. 2 (Fixed) | Ch. 2 (Fixed) | Ch. 2 (Fixed) | Ch. 2 (Fixed) |
| SD Track 3 | Channel 3 | Ch. 3 (Fixed) | Ch. 3 (Fixed) | Ch. 3 (Fixed) | Ch. 3 (Fixed) | Ch. 3 (Fixed) | Ch. 3 (Fixed) |
| SD Track 4 | Channel 4 | Ch. 4 (Fixed) | Ch. 4 (Fixed) | Ch. 4 (Fixed) | Ch. 4 (Fixed) | Ch. 4 (Fixed) | Ch. 4 (Fixed) |
| SD Track 5 | Channel 5 | Ch. 5 (Fixed) | Ch. 5 (Fixed) | Ch. 5 (Fixed) | Ch. 5 (Fixed) | Ch. 5 (Fixed) | Ch. 5 (Fixed) |
| SD Track 6 | Channel 6 | Ch. 6 (Fixed) | Ch. 6 (Fixed) | Ch. 6 (Fixed) | Ch. 6 (Fixed) | Ch. 6 (Fixed) | Ch. 6 (Fixed) |
| SD Track 7 | Channel 7 | Ch. 7 (Fixed) | Ch. 7 (Fixed) | Ch. 7 (Fixed) | Ch. 7 (Fixed) | Ch. 7 (Fixed) | Ch. 7 (Fixed) |
| SD Track 8 | Channel 8 | Ch. 8 (Fixed) | Ch. 8 (Fixed) | Ch. 8 (Fixed) | Ch. 8 (Fixed) | Ch. 8 (Fixed) | Ch. 8 (Fixed) |
| SD Track 9 | Channel 9 | Ch. 9 (Fixed) | Ch. 9 (Fixed) | Ch. 9 (Fixed) | Ch. 9 (Fixed) | Ch. 9 (Fixed) | Ch. 9 (Fixed) |
| SD Track 10 | Channel 10 | Ch. 10 (Fixed) | Ch. 10 (Fixed) | Ch. 10 (Fixed) | Ch. 10 (Fixed) | Ch. 10 (Fixed) | Ch. 10 (Fixed) |
| SD Track 11 | Channel 11 | Ch. 11 (Fixed) | Ch. 11 (Fixed) | Ch. 11 (Fixed) | Ch. 11 (Fixed) | Ch. 11 (Fixed) | Ch. 11 (Fixed) |
| SD Track 12 | Channel 12 | Ch. 12 (Fixed) | Ch. 12 (Fixed) | Ch. 12 (Fixed) | Ch. 12 (Fixed) | Ch. 12 (Fixed) | Ch. 12 (Fixed) |
| SD Track 13 | Channel 13 | Ch. 13 (Fixed) | Ch. 13 (Fixed) | Ch. 13 (Fixed) | Ch. 13 (Fixed) | Ch. 13 (Fixed) | Ch. 13 (Fixed) |
| SD Track 14 | Channel 14 | Ch. 14 (Fixed) | Ch. 14 (Fixed) | Ch. 14 (Fixed) | Ch. 14 (Fixed) | Ch. 14 (Fixed) | Ch. 14 (Fixed) |
| SD Track 15 | Channel 15 | Ch. 15 (Fixed) | Ch. 15 (Fixed) | Ch. 15 (Fixed) | Ch. 15 (Fixed) | Ch. 15 (Fixed) | Ch. 15 (Fixed) |
| SD Track 16 | Channel 16 | Ch. 16 (Fixed) | Ch. 16 (Fixed) | Ch. 16 (Fixed) | Ch. 16 (Fixed) | Ch. 16 (Fixed) | Ch. 16 (Fixed) |
| SD Track 17 | Channel 17 | Ch. 17 (Fixed) | Ch. 17 (Fixed) | Ch. 17 (Fixed) | Ch. 17 (Fixed) | Ch. 17 (Fixed) | Ch. 17 (Fixed) |
| SD Track 18 | Channel 18 | Ch. 18 (Fixed) | Ch. 18 (Fixed) | Ch. 18 (Fixed) | Ch. 18 (Fixed) | Ch. 18 (Fixed) | Ch. 18 (Fixed) |
| SD Track 19 | Channel 19 | Ch. 19 (Fixed) | Ch. 19 (Fixed) | Ch. 19 (Fixed) | Ch. 19 (Fixed) | Ch. 19 (Fixed) | Ch. 19 (Fixed) |
| SD Track 20 | Channel 20 | Ch. 20 (Fixed) | Ch. 20 (Fixed) | Ch. 20 (Fixed) | Ch. 20 (Fixed) | Ch. 20 (Fixed) | Ch. 20 (Fixed) |
| SD Track 21 | Channel 21 | Ch. 21 (Fixed) | Ch. 21 (Fixed) | Ch. 21 (Fixed) | Ch. 21 (Fixed) | Ch. 21 (Fixed) | Ch. 21 (Fixed) |
| SD Track 22 | Channel 22 | Ch. 22 (Fixed) | Ch. 22 (Fixed) | Ch. 22 (Fixed) | Ch. 22 (Fixed) | Ch. 22 (Fixed) | Ch. 22 (Fixed) |
| SD Track 23 | Channel 23 | Ch. 23 (Fixed) | Ch. 23 (Fixed) | Ch. 23 (Fixed) | Ch. 23 (Fixed) | Ch. 23 (Fixed) | Ch. 23 (Fixed) |
| SD Track 24 | Channel 24 | Ch. 24 (Fixed) | Ch. 24 (Fixed) | Ch. 24 (Fixed) | Ch. 24 (Fixed) | Ch. 24 (Fixed) | Ch. 24 (Fixed) |
| SD Track 25 | Channel 25 | Ch. 25 (Fixed) | Ch. 25 (Fixed) | Ch. 25 (Fixed) | Ch. 25 (Fixed) | Ch. 25 (Fixed) | Ch. 25 (Fixed) |
| SD Track 26 | Channel 26 | Ch. 26 (Fixed) | Ch. 26 (Fixed) | Ch. 26 (Fixed) | Ch. 26 (Fixed) | Ch. 26 (Fixed) | Ch. 26 (Fixed) |
| SD Track 27 | Channel 27 | Ch. 27 (Fixed) | Ch. 27 (Fixed) | Ch. 27 (Fixed) | Ch. 27 (Fixed) | Ch. 27 (Fixed) | Ch. 27 (Fixed) |
| SD Track 28 | Channel 28 | Ch. 28 (Fixed) | Ch. 28 (Fixed) | Ch. 28 (Fixed) | Ch. 28 (Fixed) | Ch. 28 (Fixed) | Ch. 28 (Fixed) |
| SD Track 29 | Channel 29 | Ch. 29 (Fixed) | Ch. 29 (Fixed) | Ch. 29 (Fixed) | Ch. 29 (Fixed) | Ch. 29 (Fixed) | Ch. 29 (Fixed) |
| SD Track 30 | Channel 30 | Ch. 30 (Fixed) | Ch. 30 (Fixed) | Ch. 30 (Fixed) | Ch. 30 (Fixed) | Ch. 30 (Fixed) | Ch. 30 (Fixed) |
| SD Track 31 | Channel 31 | Ch. 31 (Fixed) | Ch. 31 (Fixed) | Ch. 31 (Fixed) | Ch. 31 (Fixed) | Ch. 31 (Fixed) | Ch. 31 (Fixed) |
| SD Track 32 | Channel 32 | Ch. 32 (Fixed) | Ch. 32 (Fixed) | Ch. 32 (Fixed) | Ch. 32 (Fixed) | Ch. 32 (Fixed) | Ch. 32 (Fixed) |
| SD Track 33 | Channel 33 | Main Left | Main Left | Main Left | Main Left | Main Left | Main Left |
| SD Track 34 | Channel 34 | Main Right | Main Right | Main Right | Main Right | Main Right | Main Right |

## 14.3 Block Diagrams 块状图

The block diagrams for our StudioLive Series III mixers are too large to be included in this manual. Please visit our website for the latest Series III block diagrams in Adobe PDF format.

我们的StudioLive III系列调音台的方框图太大，无法包含在本手册中。请访问我们的网站获取最新的Adobe PDF格式的III系列方框图。



## 14.4 Trouble shooting Information 排除故障信息

Please check the PreSonus Web site (www.presonus.com) regularly for software information and updates, firmware updates, and support documentation, including frequently asked questions.

请定期查看PreSonus网站（www.presonus.com），了解软件信息和更新、固件升级以及支持文件，包括常见问题。

Online technical support is available to registered users through your My PreSonus account. Visit my.presonus.com to register.

注册用户可通过 "My PreSonus "账户，获得在线技术支持。注册请访问 my.presonus.com 。

**Fader Movements Have No Effect on Audio.** Press the **Main Mix** button in the Mix Select section, then try moving channel faders up and down, to see if their movement affects the overall output volume, as shown by the main output meter. If not, make sure that your channels are assigned to the Main bus.

按Mix Select section部分的Main Mix按钮，试着上下移动通道推子，看看它们的移动，是否会影响整体的输出音量，如主输出表所示。如果没有，请确保你的通道被分配到Main bus上。

**No Internal Effects in the Main Bus.** Press the Aux button in the Metering section and verify the output levels of the internal FX buses. If the level is too low, use the effect return channel to increase the master level for the effects mix. Press the Select button for each FX bus and make sure it is assigned to the main output in the Assign section of the Fat Channel.

按下Metering section部分的Aux按钮，确认内部FX总线的输出电平。如果电平太低，使用effect return通道来增加主电平的效果混响。 按每个FX总线的Select按钮，确保它被分配到Fat Channel的Assign部分的主输出。

**No Output on the Solo Bus While Monitoring.** Verify that both the Solo volume and the headphone, or monitor, volume is at a reasonable level for comfortable listening. Make sure that you only have Solo selected in the Monitor section of your StudioLive.

确认Solo的音量和耳机或监听的音量都在合理的水平上，以便舒适地聆听。确保你在StudioLive的监听部分，仅选择了独奏。

**Can’t Hear Main Mix in Headphones.** Verify that the Main mix is enabled as the source for the headphones and that the headphone output control is at a sufficient level.

确认Main mix被启用为耳机的信号源，并且耳机输出控制在一个足够的电平上。

**Monitor Bus Controls Not Changing Routing.** Verify that your monitors are connected to the Control Room outputs on the rear panel of your StudioLive, not the Main outputs.

确认你的监听连接到StudioLive后面板上的Control Room outputs输出，而不是主输出。

**Main Fader Doesn’t Control Mix Level.** Verify that your monitors are connected to the Main outputs on the rear panel of your StudioLive, not the Control Room outputs.

确认你的监听连接到StudioLive后面板的Main outputs输出，而不是 Control Room outputs。

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

# 额外的奖励：以前PreSonus的绝密配方

# Garfish Balls 雀鳝鱼丸

**Ingredients: 食 材 :**

- 5 lbs ground garfish 5磅碎石鱼
- 4 white potatoes 4个白薯
- 1 large onion 1个大洋葱
- 2 celery stalks 2根芹菜茎
- 1 bunch parsley 1束欧芹
- 6 green onions 6根葱
- 1 tsp cayenne pepper 1茶匙卡宴辣椒
- 1 tsp black pepper 1茶匙黑胡椒
- 2 tsp salt 2茶匙盐
- Flour 面粉

**Cooking Instructions 烹饪指南:**

1. Peel potatoes and boil until tender. Set aside to cool. 马铃薯去皮，煮至变软。放在一边冷却。
2. Finely dice onion and celery and sauté in butter until tender. Set aside to cool. 将洋葱和芹菜切成细丁，在黄油中翻炒至软。放在一边冷却。
3. Grind garfish in a meat grinder or food processor. 用绞肉机或食品加工机磨碎石斑鱼。
4. Mash potatoes with cooked vegetables. 将土豆和煮熟的蔬菜捣碎。
5. Finely chop green onions and parsley. 将葱和香菜切成细末。
6. Combine ground garfish with potato mixture, parsley, green onions, pepper, and salt. Mix well. 将加吉鱼粉与土豆混合物、欧芹、葱、胡椒和盐混合。搅拌均匀。
7. Form baseball-sized balls and set on a chilled cookie sheet. 形成棒球大小的球，放在冰冻的饼干板上。
8. Roll each ball in flour. 将每个球用面粉滚动。
9. Heat 1/2-inch of cooking oil in skillet. 在平底锅中加热1/2英寸的食用油。
10. Set balls in cooking oil and flatten into patties with a spatula. 将球放在食用油中，用铲子压平成饼。
11. Cook for approximately 1-2 minutes and flip. Cook for another minute until cooked through. 煮大约1-2分钟，然后翻面。再煮一分钟直到熟透。
12. Remove from oil and set aside to drain. 从油中取出，放在一边沥干。
13. Serve with brown gravy over rice. 与棕色肉汁一起放在米饭上食用。

**Serves 12**

This recipe will make approximately 24 garfish balls. Balls can be frozen at step 8. Do not freeze cooked patties.
这个配方可以制作大约24个雀鳝鱼丸。丸子可以在步骤8冷冻。不要冷冻煮好的丸子。

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.
雀鳝有很多骨头，可能很难去除。如果可能的话，建议要求处理生鲜的人将其去骨。也可以用鳕鱼或白鲑鱼代替……但雀鳝更好。




# StudioLive™ Series III

## Digital Mix Console / Recorder with Motorized Faders
## 数字调音台/带电动推子的录音机

## Owner's Manual 用户手册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Part# 70-22000045-F