STAGESCAPE M20d

ADVANCED GUIDE

Firmware Version 1.20

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M20d Overview

Welcome to the **StageScape™ M20d Advanced Guide**.

StageScape M20d is the world's first smart mixing system for live sound. Utilizing a ground-breaking touchscreen visual mixing environment, **StageScape M20d** streamlines the way you mix so you can get your sound dialed in quickly and stay in the creative zone.

This M20d Advanced Guide contains in-depth details of your M20d's features and functionality, and includes comprehensive information on the following:

- Setup Mode, Tweak Mode, Record Mode, Monitor Mode, Perform Mode
- Assigning Footswitches
- Managing L6 LINK Devices
- System Settings
- Setup Examples
- Channel Processing
- Global FX
- Preset DSP Types

Before You Begin

Check your M20d's **System Version** to make sure your M20d is running the latest firmware. To do so, tap the **Info** button in the **Main Toolbar**, upper right, then select **Show System Settings**. The **About** page will be displayed by default, with your **System Version** listed at the top of the page.

You can download the latest M20d firmware at http://line6.com/software. You can also find various M20d resources at http://line6.com/stagescape-m20d/resources, including a Quick Start Guide, Wi-Fi Setup info, M20d Specifications and an interactive Quick Start Tutorial.

For onboard **Help**, tap the M20d's **Info** button and select **View Help**. Then select any of the available **Help Topics** for extensive detailed information.

Firmware v1.20 Update

M20d Firmware v1.20 introduces **Fader View**! Fader View enhances the M20d mixing experience by providing full screen faders for Inputs, FX, and Outputs. See **Appendix D: Fader View** for all the details.

Hardware Legend

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Below is an overview of the M20d hardware, with descriptions of inputs, outputs and user interface elements listed on Page 1•3. As you can see, all input and output connections are easily accessible on the front panel.

The primary user interface is software-based, displayed in color on the 7" touchscreen. We'll describe the M20d's user interface in more detail throughout this guide. To get started, please review the hardware legend.

A **Mic/Line Combi Inputs** - Twelve mic or line level inputs (XLR or 1/4 inch).

B **Line Inputs** - Four 1/4 inch line level inputs.

C **Monitor Outputs** - Four XLR outputs for stage monitors.

D **Main Outputs** - Stereo XLR outputs of the Main Mix.

E **Headphones Output** - Stereo headphones out with volume control.

F **Footswitch Jacks** - Jacks for footswitches 1 & 2.

G **USB Out To PC** - USB output to computer.

H **USB Media Port** - USB port for thumb drive or hard disk media.

I **Aux Input** - Stereo 1/8 inch jack for auxiliary audio input.

J **L6 LINK Output** - XLR output to other L6 LINK devices.

K **SD Card Input** - Card slot for SD media.

L **Mode Buttons** - For Setup, Tweak, Record, Monitor & Perform modes.

M **Touchscreen Display** - Interactive touchscreen user interface.

N **Mute Mics Button** - Toggles the mute state of input channels.

O **Mute All Button** - Mutes the mains and monitor outputs.

P **Master Level Encoder** - Adjusts the level to the main stereo outputs.

Q **Rotary Encoders** - Provide control over matching on-screen Controller Strips.

Main Toolbar

The **Main Toolbar** is located at the top of the M20d's touchscreen. It displays various visual elements and buttons depending on the M20d's current mode, which is determined by whichever hardware **Mode Button** is engaged, as described on Page1•3, item **L**.

The following are illustrations of the various states of the Main Toolbar, depending on the currently selected M20d mode. More detail will be provided in subsequent chapters.
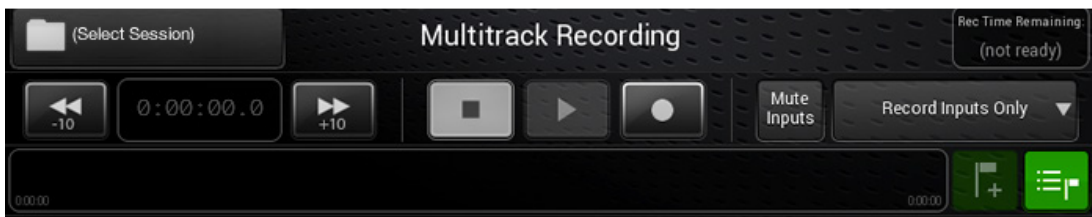
Setup Mode

In Setup Mode, the Main Toolbar includes the I/O Panel plus buttons for Setups, Encoder Assign, Auto Trim, Info and Edit Properties (when a Stage Icon is selected).

Tweak Mode

In Tweak Mode, the Main Toolbar includes a channel level meter, Load Presets folder, plus buttons for Quick Tweak, Deep Tweak, Quick Capture and Info.
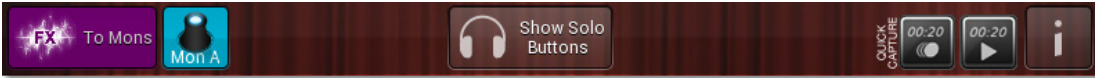
Record Mode

In Record Mode, the expanded Toolbar includes Recording Transport controls, Recording TIme Remaining display, Record/Play Counter, plus buttons for Select Session, Mute Inputs, record Select, Marker Management and 10 second Rewind/Advance.
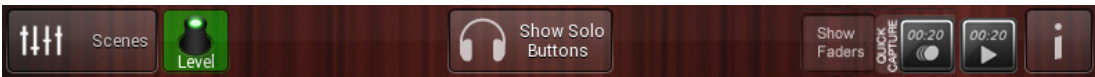
Monitor Mode

In Monitor Mode, the Main Toolbar includes buttons for FX To Monitors, Encoder Assign, Show Solo Buttons, Quick Capture and Info.

Perform Mode

In Perform Mode, the Main Toolbar includes buttons for Scenes, Encoder Assign, Show Solo and Show Faders Buttons, Quick Capture and Info.

Stage Icon Gallery

The **Stage Icon Gallery**, visible in **Setup Mode**, is the horizontal strip of gear icons at the base of the stage. It includes a collection of commonly used gear items, which in addition to providing a visual representation of your onstage gear, establishes powerful audio processing settings for each preset, to ensure each channel will sound as good as if it were mixed by a professional live sound engineer.
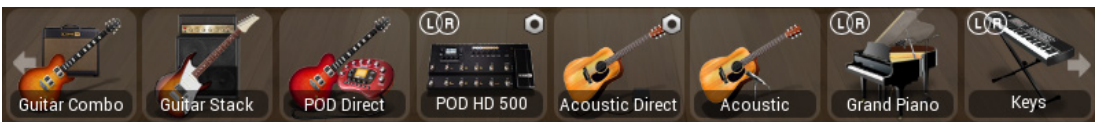
Swipe the Stage Icon Gallery to the left or right to see more Stage Icons. At the far right you'll see a **More** folder icon, which provides access to the complete **Preset Library**.
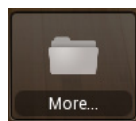
See the **Setup Mode** chapter for more details on the Stage Icon Gallery.

Controller Strips

The Controller Strips are located at the base of the stage. They display individual channel information such as Channel Name, Channel Icon, Fader Level, Output Level and Mute or Solo state, as illustrated below in Perform Mode or Record Mode.

Level Fader

Channel Output Meter

Vocal Keys

Channel Name

Channel Icon

Mute Button

In **Monitor Mode**, the Controller Strips are blue and the **Mute** button is replaced by a **Linked/ Unlinked** button. See the **Monitor Mode** chapter for more details.

In **Setup Mode** the Controller Strips are half height and display only Channel Name, Fader Level and Output Level. Each controller strip is matched to a color-coded M20d hardware encoder, which usually controls level, depending on the current **Encoder Assign** selection.

Contextual Browsers

When various buttons are tapped in the M20d user interface, contextual windows may be displayed on the screen. For example, when a Stage Icon is selected in Setup Mode, the **Edit Selection** buttons will slide into view on the Main Toolbar.

Tap the **Channel Icon** button, and the **Edit Preset Properties** window will be displayed.

Tap the **Icon** image, as indicated below, and the **Select New Icon Image** window will open, where you can browse various icons to replace the current one.

.
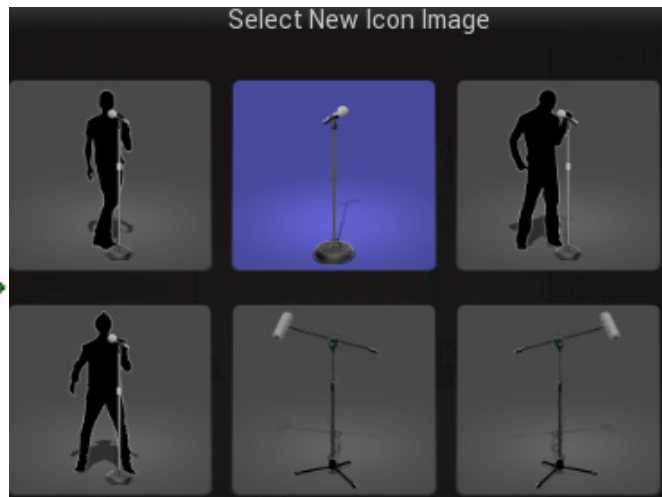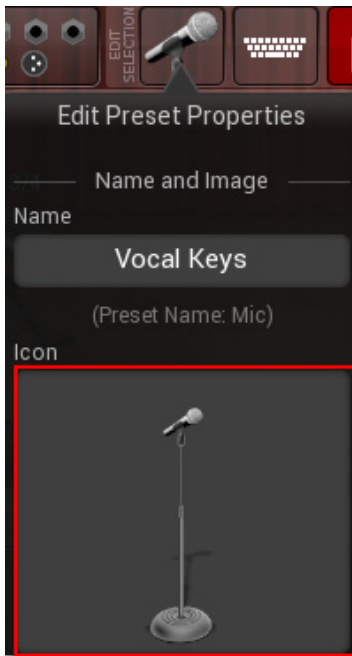
You can also rename the channel from this window by tapping the **Name** field, causing an onscreen text keyboard to appear.

Similar contextual windows will be displayed for Setups and Auto Trim in Setup Mode, Scenes in Perform Mode, Configure Record/Playback in Record Mode, Edit Preset Properties and Load/Save Presets in Tweak Mode, among others.

Hardware Encoders

The 12 Hardware Encoders make it easy to adjust various software parameters displayed on the M20d touchscreen. They are color-coded in each case, and are matched up with specific parameters depending on the current view and encoder assignment.

For example, in **Setup** and **Perform** mode they can control **Channel Level, Trim, Pan or FX Send**. In **Deep Tweak** mode, encoders #1 and #7 control **Pan** and **Level**, and if an EQ processor is selected, for example, several other encoders light up and control EQ **Frequency**, **Q**, **Gain**, etc.

To illustrate, below is a graphic of the 12 encoders as they would be assigned to the **EQ 6** processor in **Deep Tweak** mode, lit up in various colors to match their **EQ 6** parameter assignments.
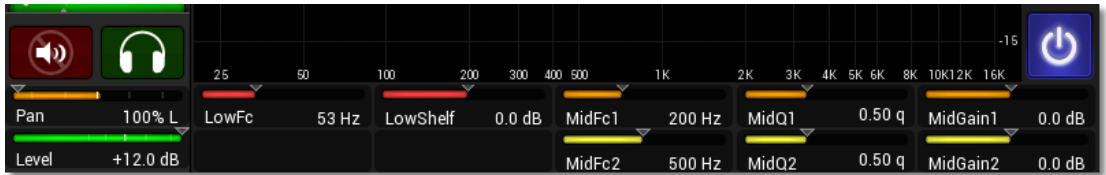
Observe how encoder #2 is red to match up with **Low Frequency**, encoder #7 is green to match up with **Level**, and encoder #10 is yellow to match up with **Mid Frequency 2.** When an encoder is not assigned, it will not light up at all, as with encoders #8 and #9.

As you switch M20d modes, you'll see the encoders changing color in sync with the touchscreen, making for intuitive control of the various parameters in the UI.

Double-click Encoder Features

The following is a list of double-click Encoder features, plus a few other Tips.

Level Encoder - Tweak Mode:
Double-click the Level encoder in Tweak Mode and it sets the Level to 0. This is also true for Global FX Send & Return Level, as well as Monitor Send & Output Level.

Level Encoder - All Other Modes:
Double-click the encoder for any channel in Setup, Record, Monitor or Perform Mode (regardless of Encoder Assignment) and the M20d jumps to Tweak Mode for the selected channel.

Pan Encoder - Tweak Mode:
Double-click the Pan encoder in Tweak Mode and the Pan position is set to center.

Processor Parameter Encoders - Tweak Mode:
Double-click the encoder for any Processor Parameter and the parameter value goes to a default setting (for example, EQ Gain goes to 0dB, HighPass Filter Frequency goes to 75Hz, Comp Output Gain goes to -3dB, etc.).

Perform Button - Hardware:
Double-click the hardware **Perform** button in any mode, regardless of Encoder Assignment (could be assigned to Pan, Monitor, Trim or FX, for example) and the M20d jumps to Perform Mode with encoders assigned to **Leve**l, for instant mixing mode.

Setup Button - Hardware:
Press and hold the hardware **Setup** button to bring up the M20d Startup screen.

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Unassigned Encoder - Create Group:

Double-click an unassigned encoder and the **Select Channels For Group Encoder** window will open, displaying all channels available for grouping. Tap the channel icons you'd like to include in the Group, name the Group, then tap OK. A Group controller strip will appear in the M20d stage view, automatically assigned to the hardware encoder you originally double-clicked.

Setup Mode

When you first power up your StageScape M20d, you will need to set up your inputs, outputs and channel assignments in **Setup Mode**.

The M20d will power up in Setup Mode, or you can enter Setup Mode at any time by pressing the hardware SETUP button. The touchscreen will display the **Stage View**, the **Stage Icon Gallery,** the **Controller Strips**, and the **Main Toolbar**, which includes the **Setups** button, **Encoder Assign** button, **Auto Trim** button, **I/O Panel** and **Info** button.

Below is an illustration of the M20d touchscreen in **Setup Mode**, with one XLR microphone connected to Input #1.

Creating Input Channels

There are 3 main ways to create Input Channels and configure your outputs and channel assignments: **Physical Connections**, the **Stage Icon Gallery** and **Setups**.

Using Physical Connections

Plug in the various cables to connect your mic and line inputs, mains and monitor speakers. The M20d will sense an XLR or 1/4 inch jack has been plugged in, and a graphic connector will be displayed on the I/O Panel for each jack, indicating a valid connection.

A default Stage Icon will appear on the stage for each connected input, and a Controller Strip will automatically be assigned to it. When all your gear has been plugged in, the stage will be populated with various default stage icons associated with the physical gear you have connected.

Above is an illustration of a Duo setup with 2 mics, aux and line inputs, monitors and mains.

The next step when connecting your gear in this way would be to customize your stage icons and channel presets to match your physical gear.

See **Chapter 10: Setup Examples** for more details on setting up your gear using physical connections, using the above Duo setup as an example.

Using The Stage Icon Gallery

Instead of plugging in your gear first, you can create various input channels using the **Stage Icon Gallery**, which is the horizontal strip of icons displayed just above the controller strips.

Swipe the gallery left or right to reveal all the icons, including the **More** folder (see Page 2•15). See the **Channel Presets** section on Page 2•14 for more detail on managing presets.

For each input channel you'd like to create, tap or drag an icon from the Stage Icon Gallery, and a controller strip will automatically be assigned to it. You can also tap an icon in the Gallery to replace a selected icon on the stage.

The channel will be loaded with a default Channel Preset, and if there is no physical input connection yet for the selected icon, the associated input graphic on the I/O Panel will be colored dim amber.

Above is an example of a stage setup created entirely by using the Stage Icon Gallery, with only one XLR cable plugged in for the Female Vocal in Channel #1. Inputs 2 through 8 on the I/O Panel are colored dim amber, as are the monitor and mains jacks.

The next step when configuring your setup using the Stage Icon Gallery would be to plug in the various cables to connect your gear as depicted on the M20d stage, at which time their I/O Panel connectors will be colored green.

Using Setups

The third way to set up your M20d inputs, outputs and channel assignments is to load a **Setup**. A **Setup** is defined as the current configuration of all M20d inputs and outputs, all FX and channel settings, levels, mutes, pans, monitor send levels, footswitch assignments, L6 LINK settings and your stage icon layout.

The most recent Setup is persistent in M20d internal memory, and it will automatically be loaded at power up. So if you've previously configured your M20d, your Setup at power up will be exactly as you left it during your last session.

And if you've previously saved one or more Setups, you can recall and load any one of them by tapping the Setups button in the Main Toolbar. (See Page 2•9 for more details on saving and loading Setups).

All I/O Panel graphic jacks in the Setup will be assigned as you last saved them, and will be displayed as either amber (if not yet connected) or green (if connected). Your previous stage icons and channel names will also be retained.

I/O Panel

The I/O Panel in Setup Mode is essentially a mirror image of the physical M20d's I/O Panel. It displays all your input and output connections and enables you to swap them around, if needed, via the touchscreen UI.

To zoom in on the I/O Panel just tap it in the Main Toolbar. This gives you access to the +48V buttons.

+48 V Buttons

When using condenser microphones, you may need +48V power. The M20d provides this via the +48V power buttons when you zoom in on the I/O Panel. The top +48V button powers the top row of Mic inputs, and the bottom +48V button powers the bottom row.

I/O Reassignment

On occassion you may find that you need to reassign an instrument to a different input, or a stage monitor to a different output. Suppose you have ideal channel settings for Input 1 prior to connecting any microphones or instruments to the M20d, and it happens that the instrument intended for Input 1 has been connected to Input 4. You may be inclined to swap the physical connections of inputs 1 and 4, but that may prove to be impractical in a critical live performance scenario.

In a situation like this the M20d provides I/O Reassignment, using the touchscreen UI. This feature is also accessible remotely using the free StageScape Remote app for iPad®.

To reassign jacks in Setup Mode using the virtual I/O Panel, follow these steps:

1. Select the Stage Icon for the input assignment you wish to reassign.
2. Tap the I/O Panel in the Main Toolbar to zoom in on it.
3. The selected Stage Icon's current input jack will be highlighted.
4. Tap the input jack to which you wish to assign the selected Stage Icon.
5. The selected Stage Icon's input jack is now the jack you tapped in Step 4.

Note: only presets with the 1/4" badge can be swapped or assigned to Inputs 13-16.

Tip: If you tap an input jack to which another channel is already assigned, the inputs of that channel and the currently selected channel will be swapped.

**Tip**: You can also reassign outputs for Monitors A-D using this operation.

Customizing Stage Icons

When you'd like to change the appearance of a stage icon and retain its channel settings, this is easily accomplished by using the **Edit Selection** button in the **Main Toolbar**.

For example, let's say you have a Kick drum stage icon and you'd like it to represent a full drum set. First tap the Kick stage icon to select it. Then tap the **Edit Selection** Icon in the **Main Toolbar**.
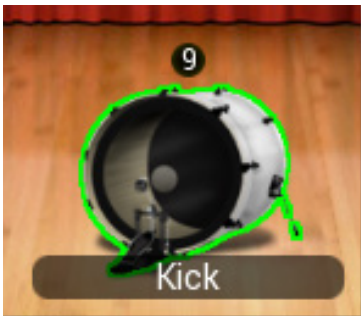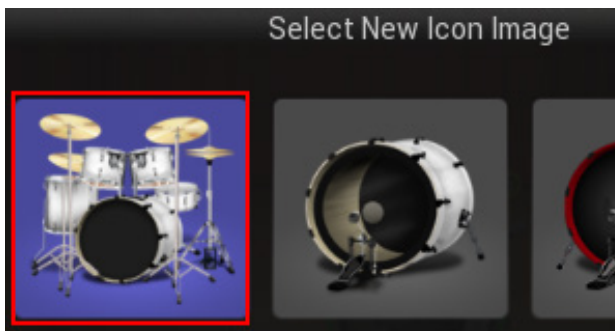

The **Edit Preset Properties** window will open.
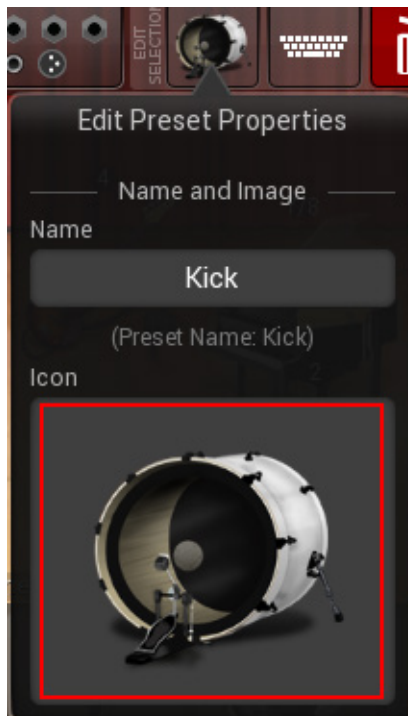
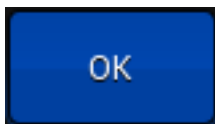Tap the Kick's **Icon** image to select it.

The **Select New Icon Image** browser will open. Select the **Drums** category, then tap the Drum Set icon.
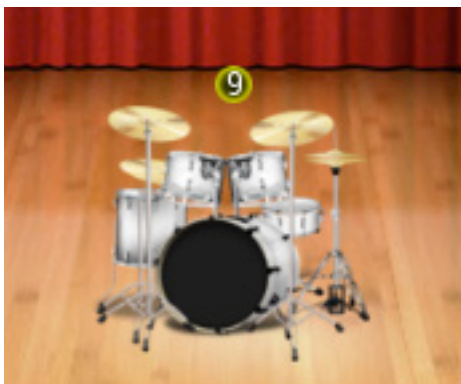
Tap the blue **OK** button.

This replaces the Kick icon with the Drum Set icon, which will now be displayed on the stage.

For more details on customizing Stage Icons, see **Chapter 10: Setup Examples**.

Resizing Stage Icons

If you find that you have quite a few stage icons on your stage, you may want to make them a little smaller. Or if you have a low channel count, you may want to make them a little larger.

With the **Resize Slider**, it's easy to resize your stage icons, as follows.

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To resize a single Stage Icon:

If you'd like to resize your stage icons one at a time, follow these steps:

- In Setup Mode, select the Stage Icon you wish to resize.
- Press the Resize button in the bottom-left of the Stage View.
- Drag the popup Resize Slider left or right to decrease or increase the icon's size.
- Click anywhere on the stage to dismiss the Resize slider.

To resize all Stage Icons simultaneously:
If you'd like to resize all the stage icons on your stage at the same time, follow these steps:

- In Setup Mode, select the Stage View background so that no Stage Icon is selected.
- Press the Resize button in the bottom-left of the Stage View.
- Drag the popup Resize Slider left or right to decrease or increase the size of all Stage Icons.
- Click anywhere on the stage to dismiss the Resize slider.

Auto Trim

The **Auto Trim** feature optimizes a channel's input level by quickly analyzing it, then setting the new trim level automatically. This ensures that you always have the best possible input level while guarding against channel distortion.

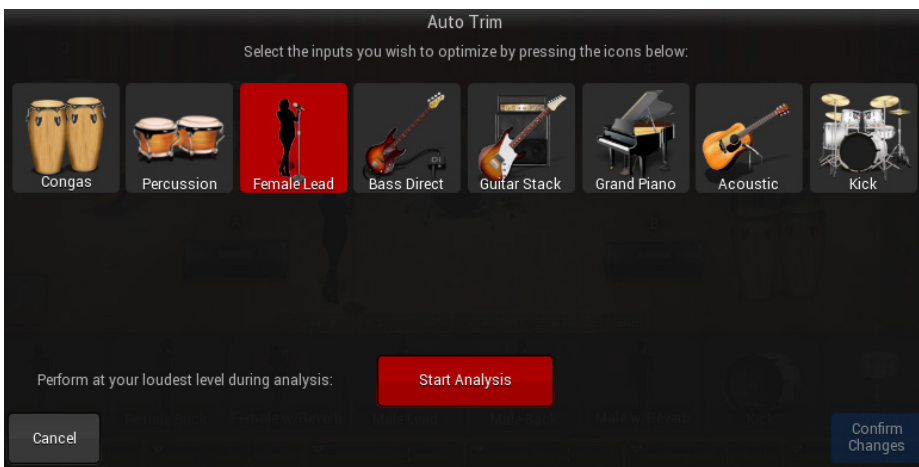To use Auto Trim, tap the **Auto Trim** button in the Main Toolbar.
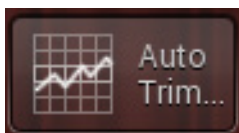
This will cause the Auto Trim window to open.

Tap the icon of the channel you'd like to optimize - in this example, Female Lead is selected.

Tap the **Start Analysis** button while performing at your loudest level. Auto Trim will analyze the input level, displaying an activity graphic over the channel icon. After a few seconds, any needed trim adjustment will be displayed in dB.
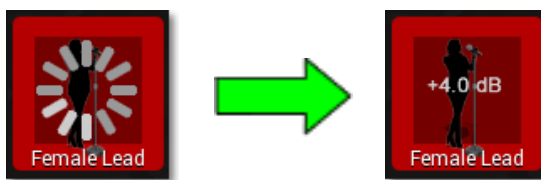
Auto Trim will analyze the input level and display an activity graphic over the channel icon. After a few seconds, any needed trim adjustment will be displayed in dB.

To apply the new optimized trim level to the channel, tap the blue **Confirm Changes** button.

Saving & Loading Setups

A **Setup** is analogous to the collection of gear you would bring to a live show, as well as your M20d's channel information. This may include vocal mics, guitars, a bass rig, drum kit, digital keyboard and perhaps an MP3 player or laptop computer. Additionally, you may be responsible for providing your own stage monitors and front of house speakers.

An M20d **Setup**, as mentioned on **Page 2•4**, is defined as the current configuration of all your inputs and outputs, FX and channel settings, levels, mutes, pans, monitor levels, footswitch assignments, L6 LINK settings and your stage icon layout, which represents your onstage gear.

To save, load, rename, delete or create a new Setup, tap the Setups button in the Main Toolbar. The **Save & Load Setups** window will open, as illustrated below.
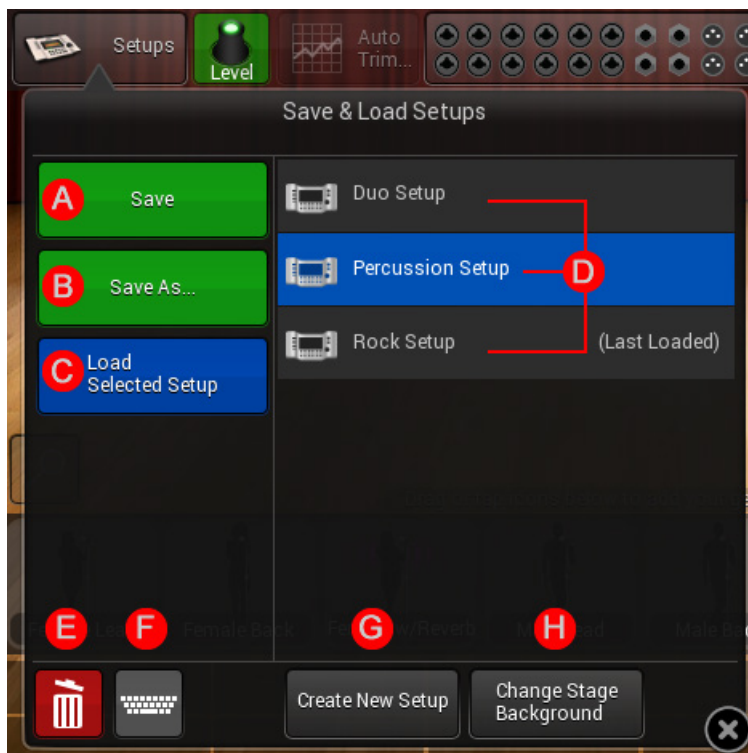
The following page describes the Setup functions that can be performed from this window.

Save & Load Setups Functions

A. Save the current Setup. Tap this button to save the current configuration. Since "Rock Setup" is the last loaded Setup, any changes made will be saved to "Rock Setup".

B. Save the current configuration as a new Setup. Tap this button and the text keyboard window will open. You can then name the current Setup and save it.

C. Load the selected Setup. In this example, the "Percussion Setup" is selected in the Setups list (D), so "Percussion Setup" would be loaded when tapping this button.

D. This is the Setups List. It includes all the Setups you currently have saved in the M20d's internal memory.

E. Delete the selected Setup. When you tap the Delete button, a confirmation dialog will be displayed to confirm deleting the currently selected Setup in the Setups list (D).

F. Rename the selected Setup. Tap the Rename button and the text keyboard window will open. You can then rename the currently selected Setup in the Setups list (D).

G. Create New Setup. Tap this button and a new Setup with no stage icons will be created, replacing the current Setup. You can save changes before you commit.

H. Change Stage Background. Tap this button and the **Change Stage Background** browser will be displayed. Browse to select a new stage background - tap **Load Stage** to display it.
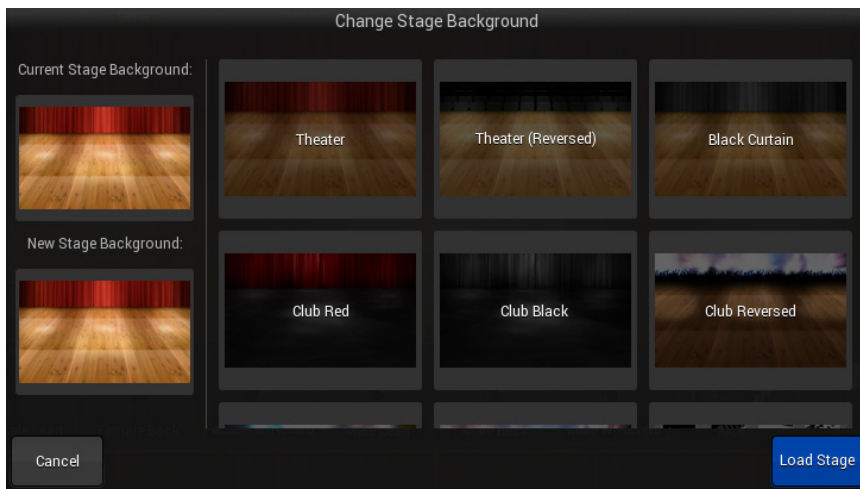
Group Encoders

From time to time it may be useful to create a Group encoder. For example, if you wanted to group three background vocal channels together, or a rhythm section, once you had a good balance it would be convenient to raise or lower all 3 channels with one encoder.

To create a Group encoder, double-press any unassigned hardware encoder.   The **Select Channels For Group Encoder** window will open, displaying all channels available for grouping.
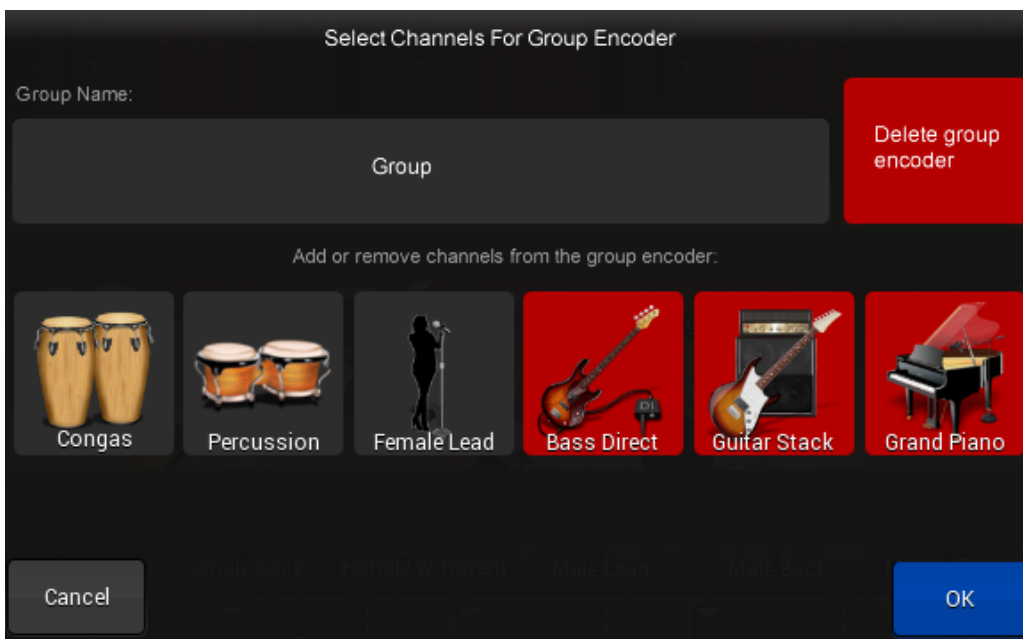
Tap the channel icons you'd like to include in the Group, which would be the Bass, Guitar and Piano in the above example. Name the Group in the **Group Name** field, then tap the blue **OK** button.

A Group controller strip will appear in the M20d stage view, automatically assigned to the hardware encoder you originally double-pressed. Now you can adjust all 3 channels with the one Group encoder.

Channel Presets Overview

The M20d characterizes each input and output connection as a channel. Channels are visually stylized as recognizable gear, referred to as Stage Icons, which you can select from the Stage Icon Gallery.

With the M20d, a Channel Preset is the collection of properties that define a channel. This includes its icon image, name, input or output jack assignment and its signal processing settings. Each item within the Stage Icon Gallery represents a Channel Preset. Note that while the M20d provides hundreds of Channel Presets to meet almost any live sound need, you can customize every aspect of a channel and store your own personalized Channel Presets.

Managing Stage Icons within the Stage Icon Gallery

If you find that the Stage Icon Gallery provides more Stage Icons than you will ever need, you may wish to remove some of them. On the other hand, you may wish to add icons. Additionally, it is possible to mark icons that you use frequently as "Favorites".

To remove an item from the Stage Icon Gallery:

1. In the Stage Icon Gallery, Press+Hold the Stage Icon you wish to remove.

Wait for the item's context menu to appear

2. From the context menu, tap the **Remove from Gallery** button

You will observe that the icon is removed from the gallery.

Note: This operation does not permanently remove the item from StageScape's preset library.

To mark an item as a "Favorite" within the Stage Icon Gallery:

Repeat the above steps, but this time tap the **Mark as Favorite** button in Step 3.

You will observe that a yellow star appears adjacent to the Favorite icon within the gallery.
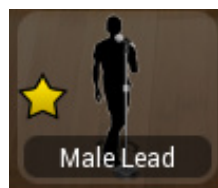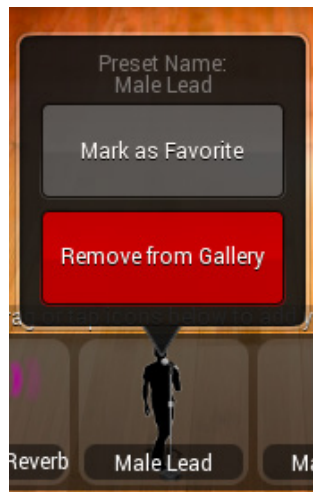
Accessing the complete Preset Library via the 'More...' Icon

The Stage Icon Gallery provides easy access to Channel Presets for the most common types of input and output devices required in live sound. However, presets referenced within the Icon Gallery represent only a fraction of all the presets available to you. The last item in the Stage Icon Gallery is a folder icon labeled, "More...", which contains the entire library of Channel Presets.

To access the complete Channel Preset Library:

Scroll to the end of the Stage Icon Gallery, so that you see the **More...** icon. Tap it.
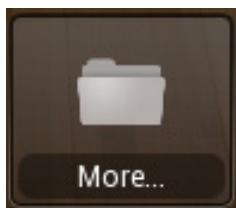
The Preset Library dialog will appear over the Stage View.
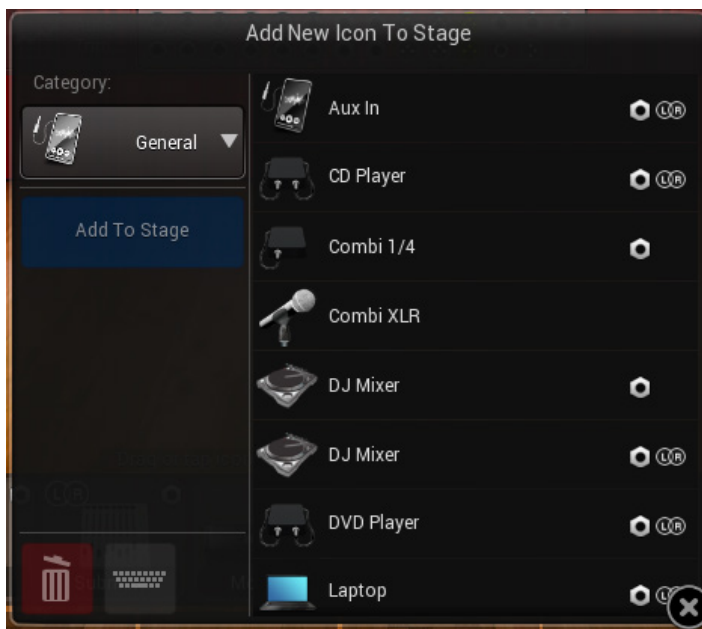
The Preset Library dialog allows you to add any of its presets to the Stage View, as well as replace the preset of any Stage Icon on the stage.

To add a new icon to the Stage View from the Preset Library dialog:

1. Select a preset category using the **Category** menu located in the top-right of the dialog.

2. Select a preset from the preset list in the right side of the dialog.

3. Tap **Add To Stage.**

You will observe that the dialog is dismissed and the Stage Icon for the selected preset appears on the stage.

To replace a Stage Icon's preset from the Preset Library dialog:

1. In the Stage View, select the Stage Icon whose preset you wish to replace.

2. Select a preset category using the **Category** menu located in the top-right of the dialog.

3. Select a preset from the preset list in the right side of the dialog.

4. Tap **Load Selected**.

   Observe that the dialog is dismissed and the selected Stage Icon's channel preset is replaced.

Tip: Note that the M20d retains the channel's image and name if you had modified the image or name prior to selecting a new preset.

Include Master FX

When loading a new preset, the M20d provides the option of including the preset's **Master FX** settings. This is useful for loading Channel Presets that were designed with specific Master FX settings in place, such as "Female w/Reverb" and "Male Doubled".

To include Master FX when replacing a Stage Icon's preset from the Preset Library dialog:

1. Enable the Include Master FX option

2. Select a preset from the preset list

3. Tap Load Selected

Important: Be aware that Master FX are global, meaning their settings affect all channels using Master FX.
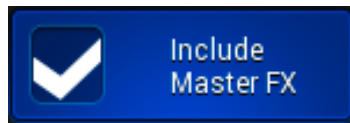
Channel Presets Information
Channel Presets listed in the Preset Library reveal detailed information about themselves:

Icon image
A thumbnail image of the preset's Stage Icon image reference.

Name
The Channel Preset's name.

Favorite badge
If present, indicates that the preset has been marked as a Favorite.

Line-compatible badge
If present, indicates that the preset's channel processing is compatible with Line Inputs 13 - 16.

Stereo badge
If present, indicates that the preset operates in stereo, intended for two adjacent inputs.

Deleting and Renaming Channel Presets in the Library
The M20d allows you to perform housekeeping on your preset library using Delete and Rename operations. These operations can be useful if you amass a large library of custom presets, or discover that many of the presets in your library go unused.

Warning: When you delete a preset, it is permanently removed from the Preset Library as well as from the Stage Icon Gallery. It is advised that you periodically backup your presets and settings so that you can safely restore presets at any time. Please see System Settings for more information.

To delete a preset from the Preset Library dialog:

1. Select the preset in the preset list that you wish to delete.
2. Tap the **Delete** button in the bottom-left of the dialog.
3. Tap OK to confirm deletion.

Observe that the preset is deleted from the Preset Library list view

To rename a preset in the Preset Library:

1. Select the preset in the preset list that you wish to rename.
2. Tap the **Rename** button in the bottom-left of the dialog.
3. Enter the new preset name in the popup keyboard.

Observe that the new name is applied to the preset in the Preset Library list view.

Tweak Mode

TWEAK

To enter **Tweak Mode**, press the M20d hardware TWEAK button on the front panel. Tweak Mode offers 2 levels of adjusting channel parameters: Quick Tweak and Deep Tweak.

Quick Tweak | Deep Tweak

Quick Tweak Overview

Quick Tweak is a fast, intuitive editing environment featuring a 'smart' multi-parameter XY Pad. The XY controller enables you to dial in processing such as EQ, dynamics and modulation with ease. Drag a finger toward common sound descriptors like "bright" or "dark" and multiple parameters adjust simultaneously to achieve the desired sound.

The individual processors available for each channel in Quick Tweak mode are selectable as tabs in the left area of the touchscreen. For example, if a vocal channel is loaded, tabs for Punch, DeEsser and Tone are available, along with a simplified version of Global FX.

Tap one of the processor tabs and its XY Controller UI will be displayed. Then simply drag your finger to the desired location on the touchscreen to tweak your sound. There are a total of 8 XY processor presets available, depending on which DSP channel type is selected. See Page 3•5 thru 3•8 for screenshots of all 8 XY processors plus the Global FX UI.

Quick Tweak | Deep Tweak

Deep Tweak Overview

Deep Tweak enables you to access individual processor parameters to edit your channels in finer detail. Each of the parameters displayed on the touchscreen for the currently selected effect is matched to an M20d hardware encoder. The encoders are color-coded to easily see which effect parameter each encoder will adjust.

The effect tabs for the currently selected channel are located in a row on the left side of the touchscreen. Scroll up or down to see them all. Select an effect tab by tapping it and its UI will be displayed on the touchscreen. The M20d hardware encoders will light up accordingly, matching their associated parameters for fine adjustment.

In addition to fine-tuning your channel processing, Deep Tweak lets you tweak your Global FX and Monitors. A dedicated Tweak button is available for each, providing parameter control of the currently loaded Global FX, plus HiPass Filter, EQ 6 and Limiter for Monitors, plus L6 LINK 31-Band EQ when a **StageSource™** series speaker is connected.

Quick Tweak

After entering Tweak Mode, tap the green Quick Tweak button. As described on Page 3•1, the XY Touch Pad UI is displayed for each processor tab on the left. Simply drag your finger across the screen to get the desired sound. The Punch UI is displayed below.

Punch (controls the Comp; confirm Trim Tracking is on to ensure correct Trim level)
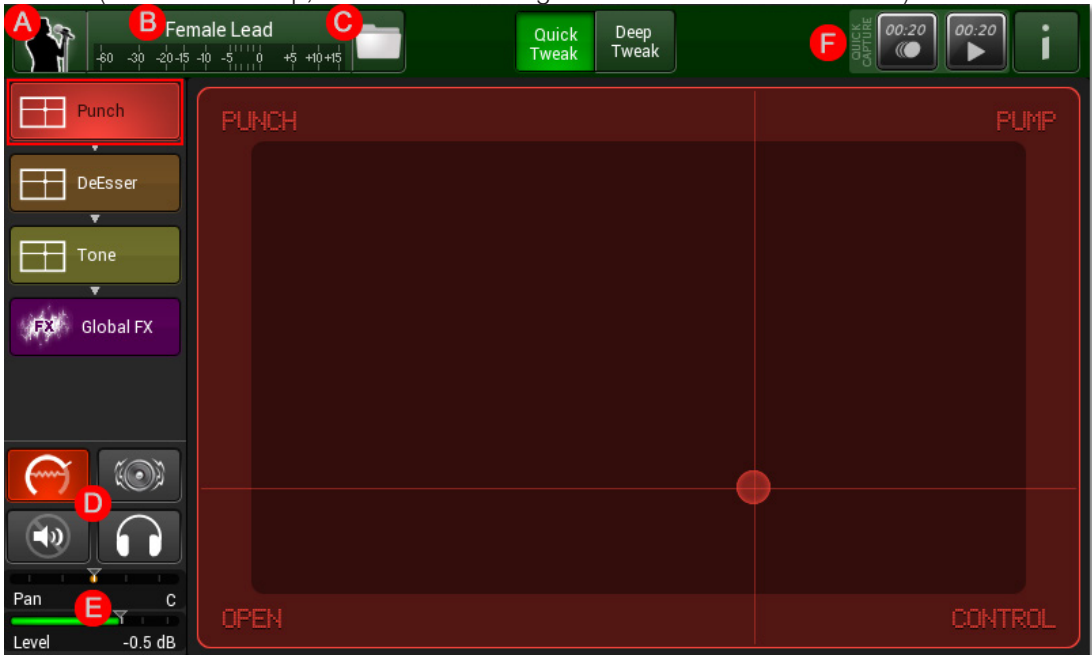
Other Quick Tweak UI functions include the following:

A. Edit Preset Properties

B. Select Channel (to Tweak)

C. Load/Save Preset

D. Trim Tracking, FBS Enable, Mute & Solo Buttons

E. Pan & Level Controls

F. Quick Capture Buttons

A. Edit Preset Properties

Click the Channel Icon in the upper left corner of the Tweak view and the Edit Preset Properties window will open.

In Quick Tweak Mode, this window is exactly the same as the Edit Preset Properties window available in the Main Toolbar in Setup Mode.

Tap the Name field to change the current channel name, or tap the Icon field to change the current channel's icon image.

The same contextual browsers will open as with the Main Toolbar version of the Edit Preset Properties window.
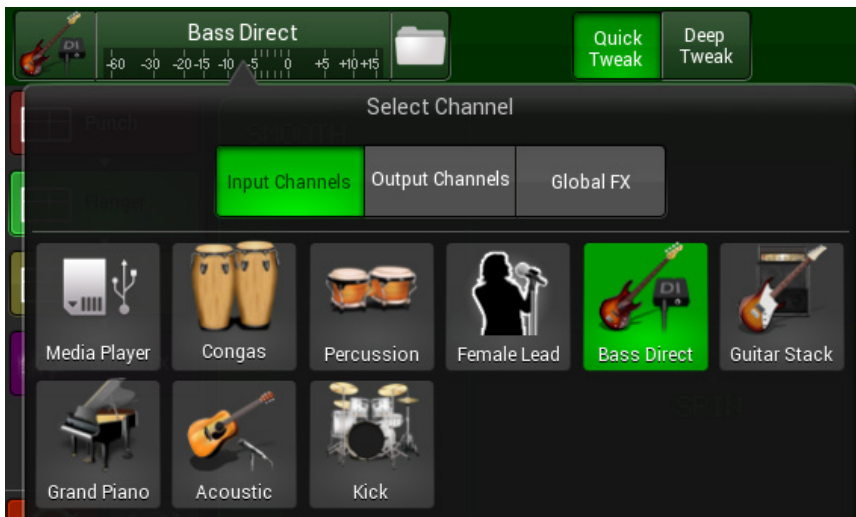
B. Select Channel

Click the name of the currently selected channel above the level meter, as illustrated on the previous page, and the Select Channel browser will open.

Tap the channel you'd like to tweak. Input Channels, Output Channels, and Global FX are available via the 3 buttons as illustrated below.
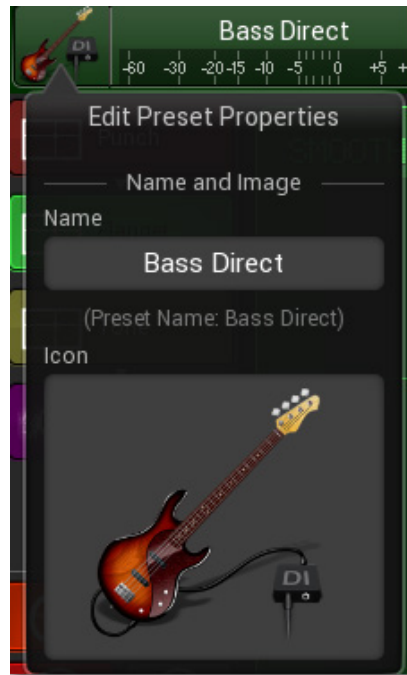
C. Load/Save Preset

Tap the Folder Icon to the right of the Channel Name to open the **Load/Save Presets** window.

Tapping **Load Preset** will open the Load Preset browser, with options to load a Preset from the Preset Library, Delete or Rename the Preset, and other functions described in detail on Page 2•14 in **Chapter 2: Setup Mode** of this Guide.

Tap **Save Preset** to save the current preset to the Preset Library, replacing the Factory Preset on which it is based.

Tap **Save Preset As...** to name and save the current preset to the Preset Library.
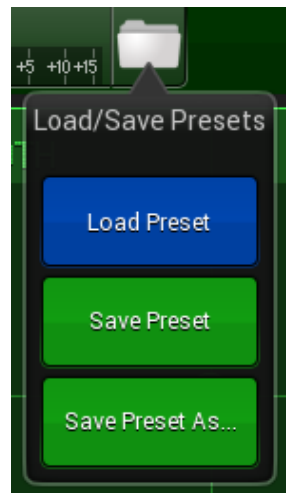
D. Trim Tracking, FBS Enable, Mute & Solo Buttons

These 4 buttons enable Trim Tracking, Feedback Suppression, Mute On/Off, and Solo/On Off. See more details on Trim Tracking and Feedback Suppression in the **Deep Tweak** section of this chapter.

E. Pan & Level Controls

Set Channel Pan position with this control, which is matched to hardware encoder #1, color-coded yellow.

Set Channel Level using encoder #7, color-coded green.

F. Quick Capture Buttons

These buttons are full time Quick Capture transport controls. Tap the Record button at any time to capture 20 seconds of live audio to the M20d's internal memory. Tap the Play button to play it back. Playback will loop continuously until you tap Stop. If your press Record again, the previously captured audio will be replaced by the new recording.

Quick Tweak XY Processors

In addition to **Punch**, illustrated on Page 3•2, the other Quick Tweak processors available via the left row tabs are illustrated on the following pages, beginning with **Tone**. The available processors depend on which Channel Preset/DSP Type is loaded.

Tone (depending on channel type, XY controls a 6 Band, 4 Band, or 3 Band EQ)

DeEsser (removes sibilance frequencies, usually in the 5K-8K range)

Tweak Mode

Flanger (XY controls the channel Flanger)

Chorus (XY controls the channel Chorus)

Megaphone (XY controls the Megaphone effect)

Echo (XY adjusts the Delay Time, Feedback, and Mix for the channel Delay)

SubBass (Sub boosts 60 Hz, Boom boosts 80 Hz, and Thump boosts 90Hz)
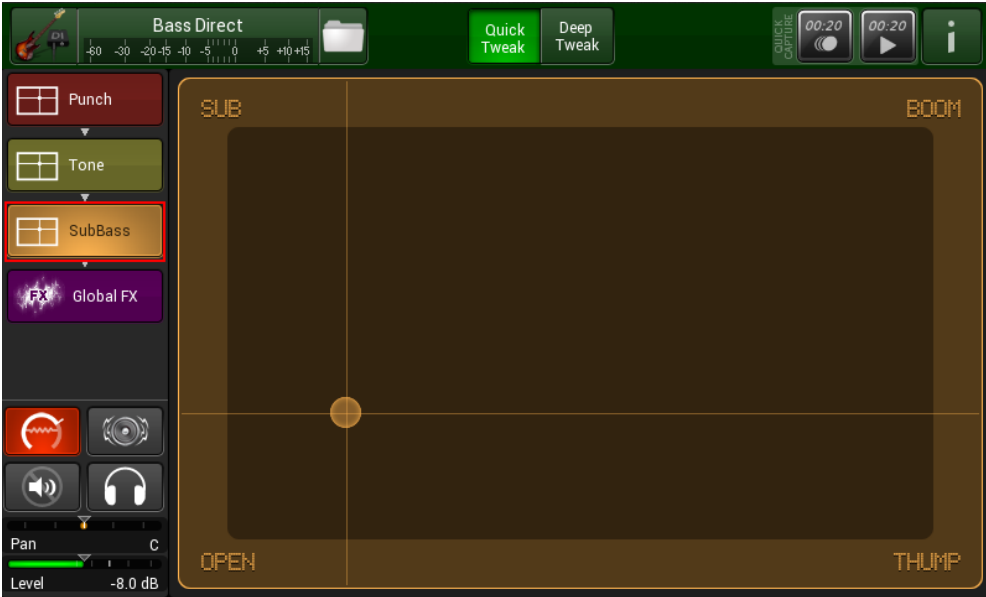
MultiComp (XY morphs between 5 different settings of the MultiBand Compressor)
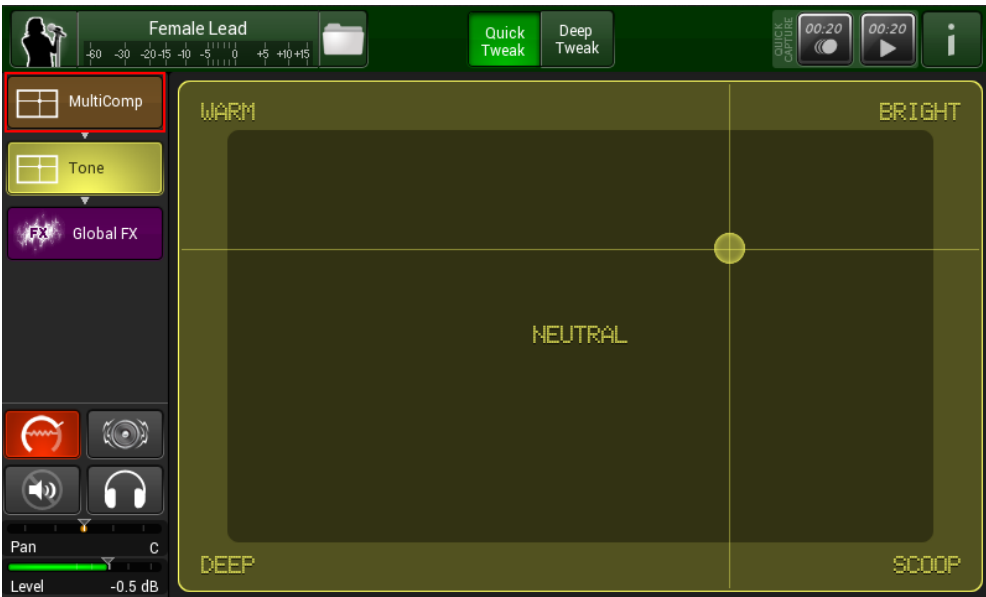
Deep Tweak

When you tap the **Deep Tweak** button in Tweak Mode, you have access to all the parameters of the currently selected processor. Each displayed parameter is assigned to a hardware encoder, which is color-coded to match it. Below is an example featuring the EQ 6 user interface.

To edit any of the processors in the currently selected channel's signal chain, tap its tab in the scrollable left row. Swipe up or down to see all the available tabs.

For a comprehensive list of all M20d Channel Processing available in **Deep Tweak** mode, including all parameters, ranges, and assigned hardware encoders, please see **Appendix A: Channel Processing** in this M20d Advanced Guide.

Edit Preset Properties Window (item **G** from Page 3•9)

When the green Deep Tweak button is selected, tapping the channel icon in the upper left opens an expanded version of the **Edit Preset Properties** window, which includes selection of the **Preset Category**, **Subcategory** and **Preset DSP Type**, as illustrated below.
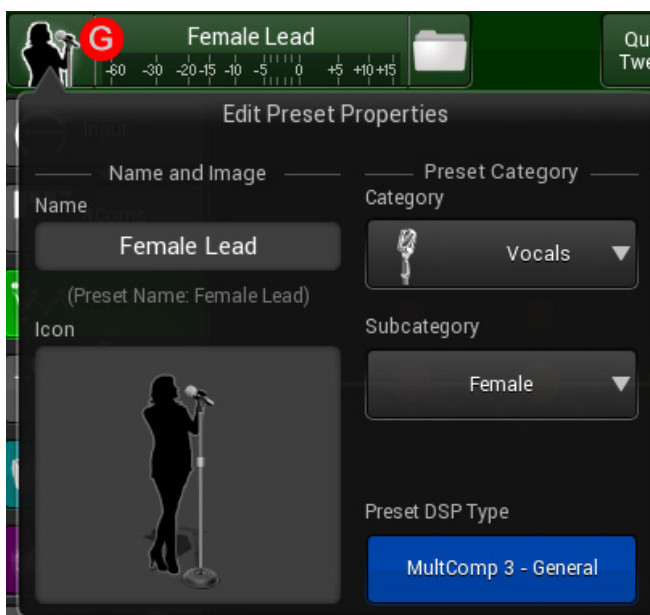
Preset Category and **Subcategory** are selectable via drop down menus. Tapping the blue **Preset DSP Type** button opens the **Change DSP Type** browser, which is described in depth in **Appendix C: Preset DSP Types** in this M20d Advanced Guide.

Regarding changing the Preset Name and Icon image, this window functions the same as the version that appears when the Quick Tweak button is selected (as described on Page 3•3).

Input Settings (item **H** from Page 3•9)

When you tap the **Input** tab in Deep Tweak mode, you have access to the following:
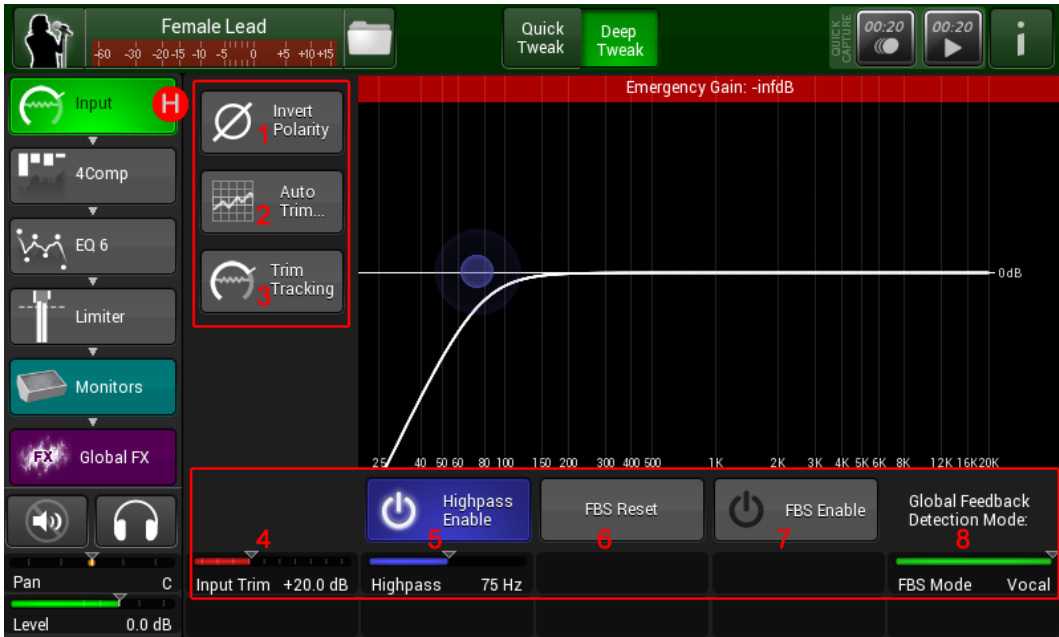
1. Invert Polarity: reverses the phase of the selected channel.

2. Auto Trim: opens the Auto Trim window (see **Setup Mode, Page 2•9** for details).

3. Trim Tracking: when Trim Tracking is on, if the channel's input level is too hot, Input Trim is automatically lowered to prevent clipping. A smart DSP algorithm makes sure that the the perceived and displayed Trim level does not change.

4. Input Trim: this is the manual Input Trim setting, adjustable using encoder #2.

5. Highpass Filter Enable: drag to set the highpass filter frequency, or use encoder #3.

6. FBS Reset: resets the Feedback Suppression settings.

7. FBS Enable: enables Feedback Suppression for this channel.

8. Global Feedback Detection Mode: sets detection mode to Universal or Vocal, using encoder #6.

Monitor Settings (item **I** from Page 3•9)

When you tap the **Monitors** tab in **Deep Tweak** mode, the Monitor settings are displayed.
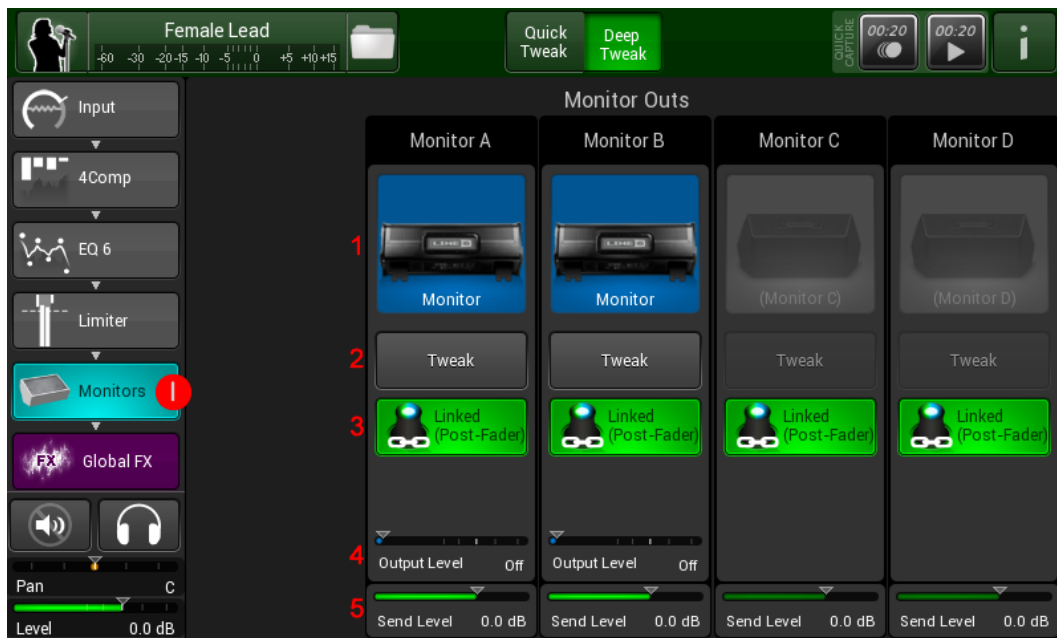
1. Monitor Icon: displays the stage icon for the connected monitor.

2. Tweak Button: click **Tweak** to display the Tweak view for the selected Monitor. See the illustrations on the next page for visual details. In Quick Tweak mode, the Tone XY interface is displayed. In Deep Tweak mode, you can fine tune the processors selectable in the left row of processor tabs, similar to tweaking an input channel.

3. Linked/Unlinked Button: sets the monitor mode to Linked or Unlinked. Linked is Post-fader: when you adjust the channel level up or down, the monitor level is adjusted up or down accordingly. Unlinked is Pre-fader: when you adjust channel level up or down, it has no effect on monitor level.

4. Output Level: adjusts the output level of the selected monitor, using the associated M20d hardware encoder in the top row of the front panel.

5. Send Level: adjusts the level of the channel's audio that is sent to the selected monitor, using the associated M20d hardware encoder in the bottom row of the front panel.

Monitors View (when **Tweak** button is pressed, in **Quick Tweak** mode)

Monitors View (when **Tweak** button is pressed, in **Deep Tweak** mode)
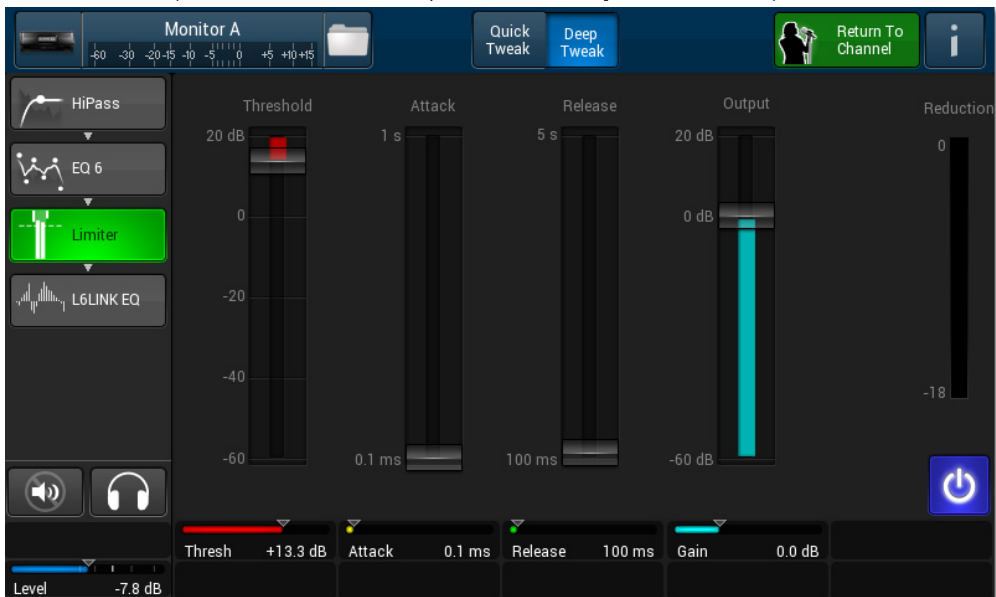
Global FX Settings (item **J** from Page 3•9)

When you tap the **Global FX** tab in Deep Tweak Mode, you have access to the Global FX settings, which are slightly more comprehensive than in Quick Tweak Mode.
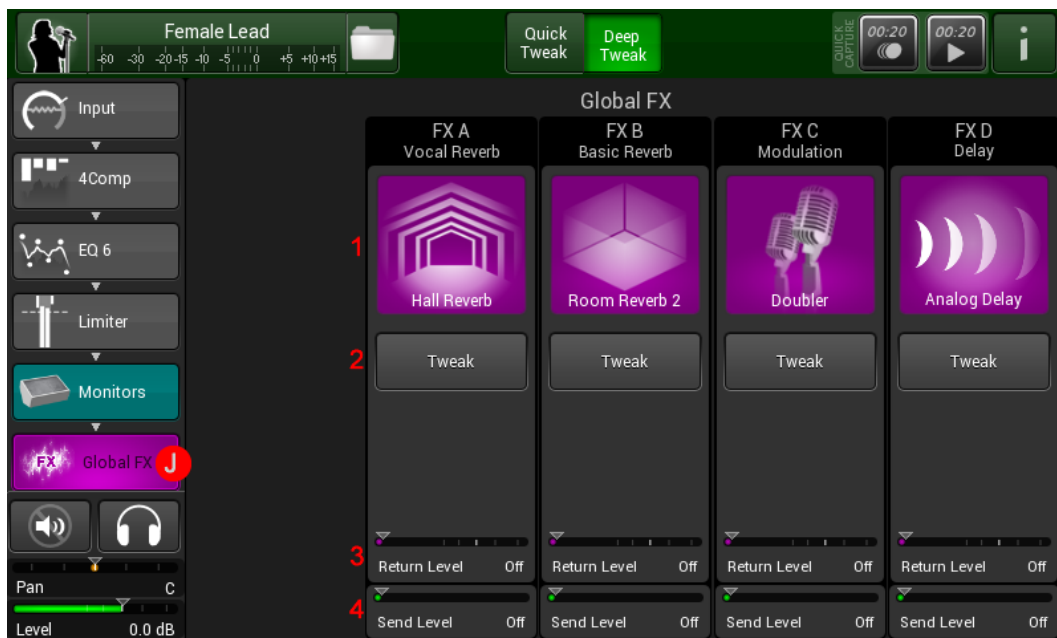
1. Load FX Preset Button: tap to open the Load FX Preset browser. You can then select which effect is loaded into FX A, FX B, FX C or FX D. For more detail and a complete list of all Global FX and their parameters, please see **Appendix D: Global FX** in this M20d Advanced Guide.

2. Tweak Button: click **Tweak** to display the Tweak view for the selected effect. See the illustrations on the next page for visual details. In Quick Tweak mode, the simple XY interface for the loaded effect is displayed. In Deep Tweak mode, you can fine tune the loaded effect's parameters or select the Monitors tab.

3. Return Level: adjusts the global return level of the selected effect, using the associated M20d hardware encoder in the top row of the front panel.

4. Send Level: adjusts the level of the channel's audio that is sent to the selected effect, using the associated M20d hardware encoder in the bottom row of the front panel.

Global FX View (when **Tweak** button is pressed, in **Quick Tweak** mode)

Global FX View (when **Tweak** button is pressed, in **Deep Tweak** mode)
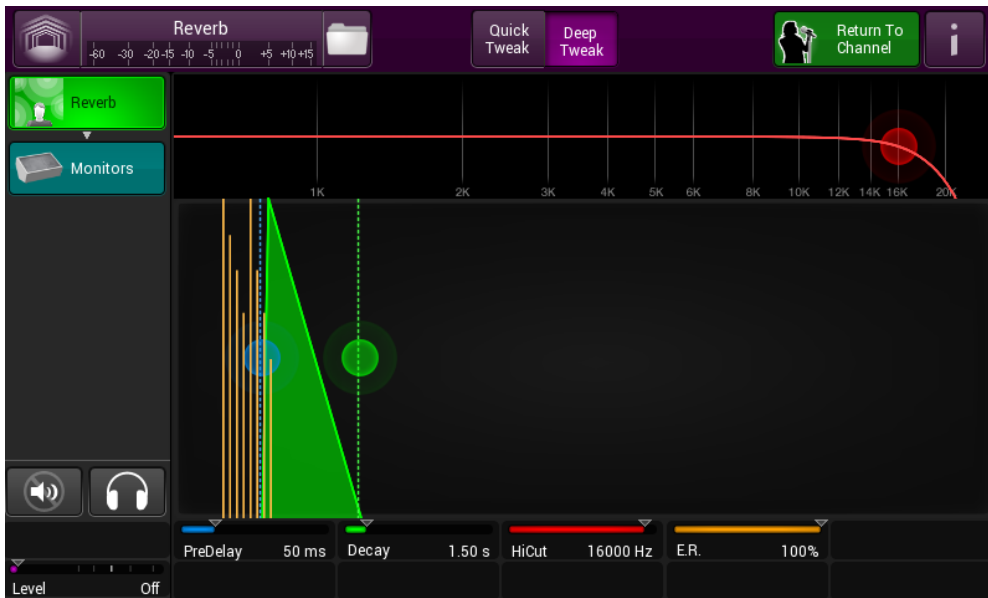
Media Player

When either an SD Card or USB Drive is connected to the M20d I/O Panel, a **Media** icon appears on the stage, and a Media Player controller strip is automatically assigned to it. In all modes the **Media Player** behaves like any other input channel, so you can adjust mix level, monitor level, mute, solo, etc.

There are two ways to access the **Media Player** interface:

1. In **Setup Mode**, select the **Media** stage icon then tap the **Tweak Media Player** button in the Main Toolbar.
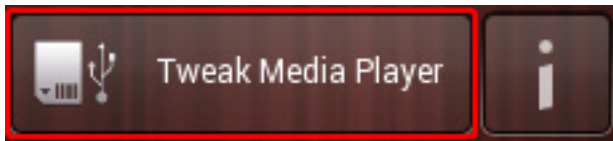
2. In **Tweak Mode**, select the **Media Player** tab in the left column of processor tabs.
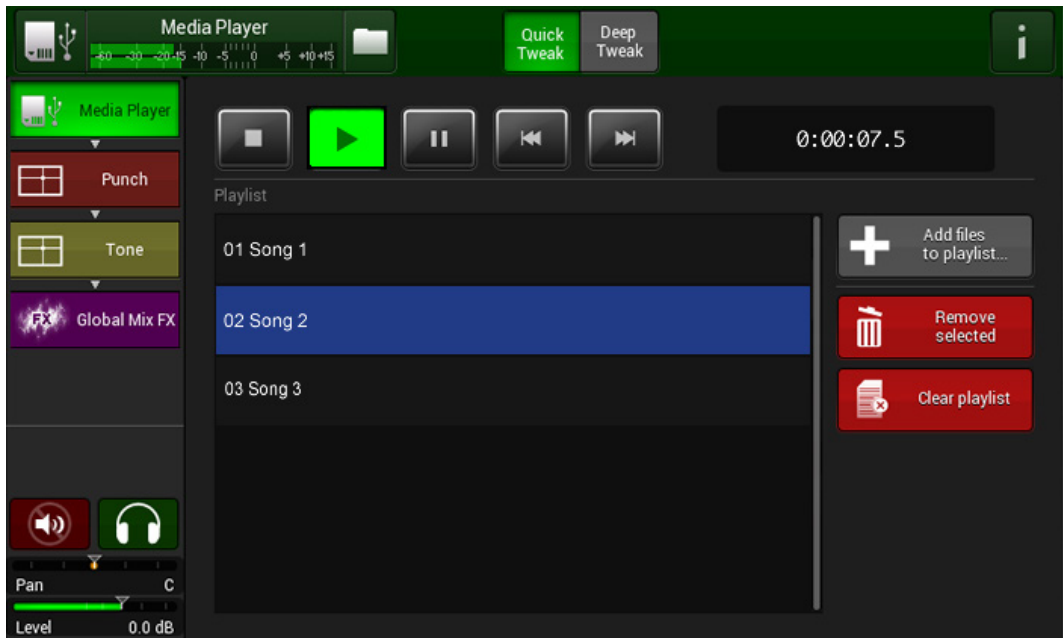
This is the Media Player UI. In this example, Song 2 of the current Playlist is playing back.

Add Files To Playlist

Tap the **Add files to playlist** button to access the **File Browser** for your connected Removable Media. You can then create a Playlist from scratch, or add songs to a current Playlist. Tap the **USB Thumb Drive** icon to 'drill down'.
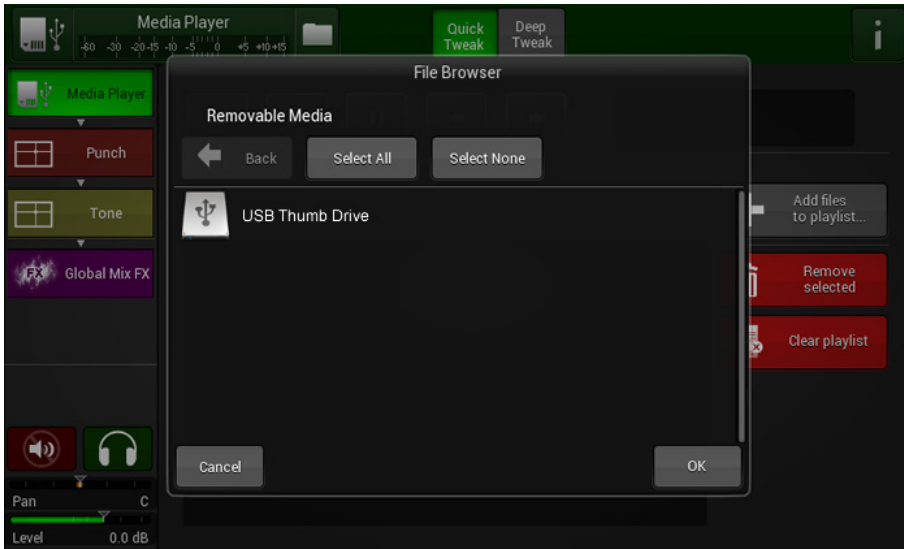
Any stored song files will be displayed in a list, as illustrated below. To add songs to the Playlist, select them, then tap **OK**.

Tweak Mode
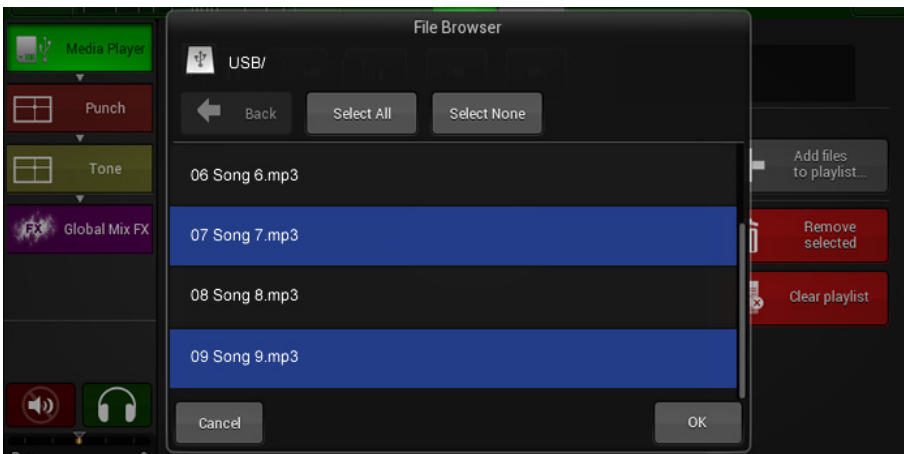
Songs 7 and 9 from the previous step have been added to the Playlist, and Song 7 is playing back. The other transport controls function like any other playback transport.
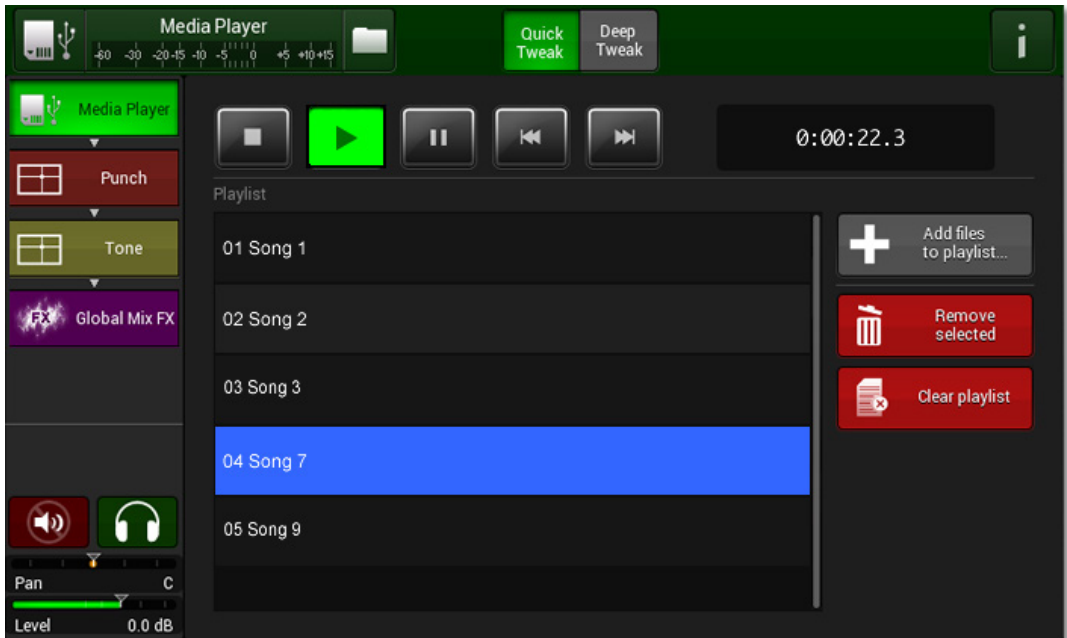
To remove a song from the Playlist, simply select it and tap the **Remove selected** button.

To clear the Playlist, removing all songs, tap the **Clear playlist** button.

Recording

The M20d offers three main record and playback options, as follows:

1.Quick Capture: record up to 20 seconds of 24 bit unprocessed audio at 48kHz to the M20d's internal memory, and play it back. Quick Capture is available in Tweak, Monitor and Perform Modes.

2.Multitrack Recording: When an SD Card or USB Hard Drive is inserted into the M20d SD Card slot or USB port, the M20d's **Record Mode** enables recording and playback of 20 channels of 24 bit unprocessed audio at 48kHz, including the Aux inputs and Main Mix.

RECORD

When you enter **Record Mode,** the M20d tjouchscreen displays the **Multitrack Recording** UI, as illustrated below.
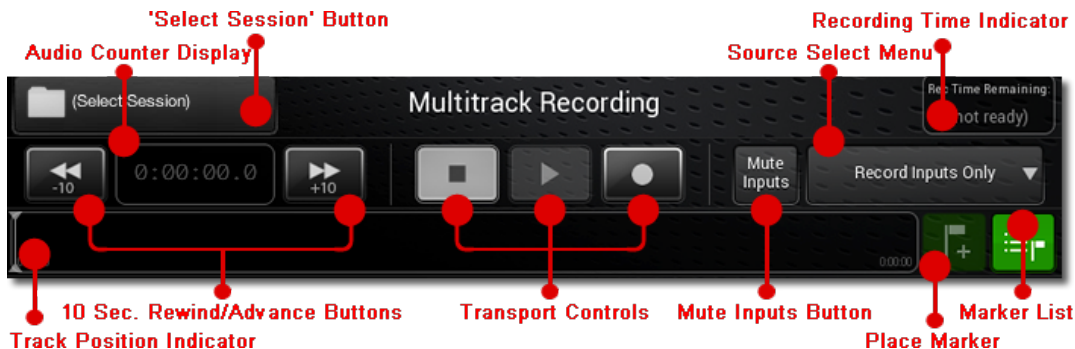
3.Streaming: stream 20 channels of 24 bit unprocessed audio at 48kHz, including the Main Mix, to a computer via USB, with a stereo return stream back to the M20d.

See **Page 4•8** for more details on Streaming.

Quick Capture

With **Quick Capture** you can record up to 20 seconds of live audio to the M20d's internal memory. In **Monitor Mode** and **Perform Mode**, the two **Quick Capture** controls appear in the Main Toolbar, upper right. All tracks are recorded when you tap the Quick Capture **Record** button.

4•2

When you press **Play**, your recorded tracks play back through the channels you have set up on your M20d. Since the tracks are recorded unprocessed, you can adjust channel settings as you listen back. Playback will loop continuously until you press **Stop**.

Quick Capture is useful for recording a live sound check, for example. It enables you to listen to your recorded mix and adjust mix settings as needed. And when using the **StageScape Remote** app with an iPad®, you can listen to your mix from various locations around the room. The recorded audio is replaced each time you tap the Quick Capture **Record** button.

Quick Capture In Tweak Mode

In addition to **Monitor Mode** and **Perform Mode**, **Quick Capture** is also available in **Tweak Mode**. This can be very useful when tweaking your channel settings.

For example, if you're adjusting EQ for a Vocal channel, you can instantly capture the vocalist's live audio by tapping the Quick Capture **Record** button, then experiment with EQ settings.

See the **Tweak Mode** chapter for more info on **Quick Capture** in **Tweak Mode**.
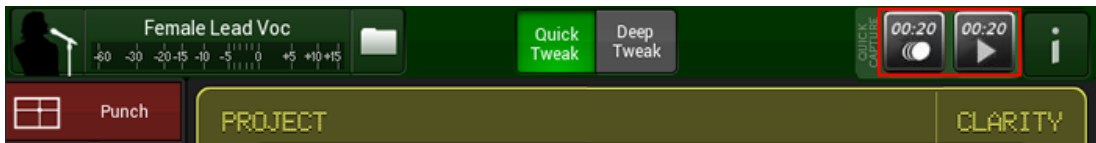
Multitrack Recording

To set up Multitrack recording and playback in Record Mode, plug a Class 10 SD Card or USB drive into the M20d, then tap the **(Select Session)** button in the upper left of the display.
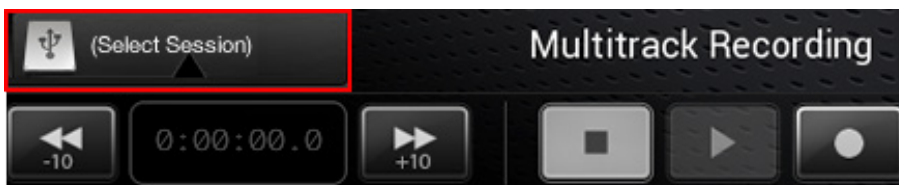
This opens the **Recording Folder Browser** window. Tap the media icon under the 'Recording Folder' text and the **Select Recording Folder** window will open, as illustrated below.
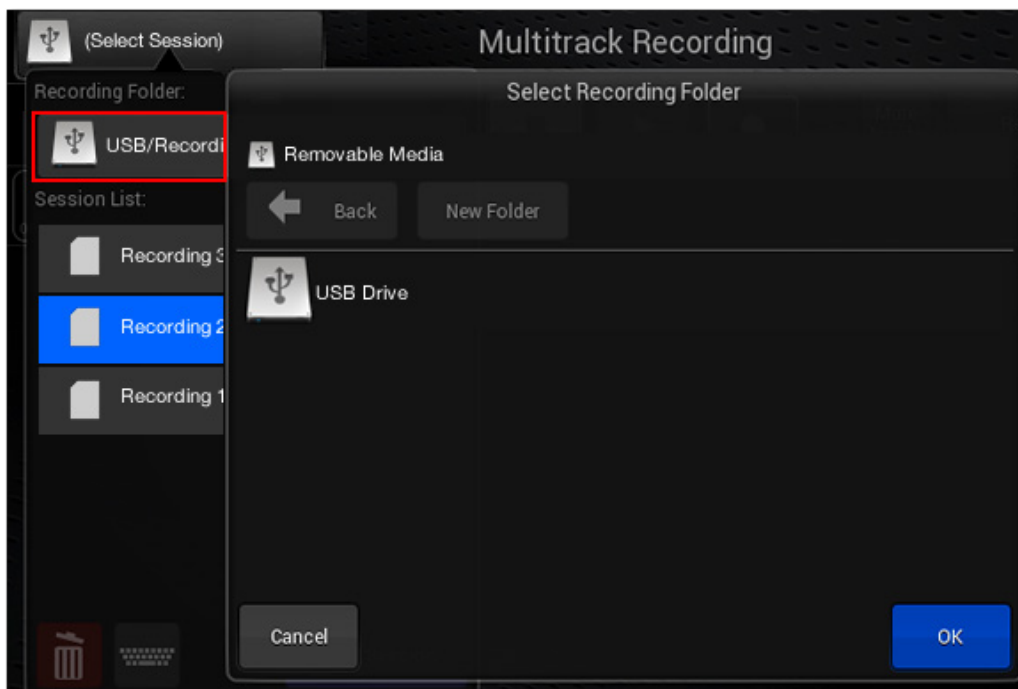
Navigate to your Recording Folder. using the icons displayed above The Recording Folder is where your current session files will be stored. Click the blue **OK** button, then dismiss the **Recording Folder Browser** window. by tapping the (**Select Session)** button again.

Recording

At this point you should select whether you want to record your Inputs only, Main Mix only, or the Main Mix and Inputs. To do so, tap the **Recording Source** button in the upper right, below the **Recording Time Remaining** display. A drop down menu will appear, as illustrated below.
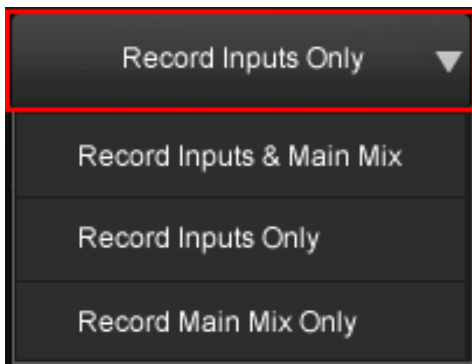
With your recording source selected, you're now ready to record. Simply press the **Record** button and a new Session will automatically be created and saved to your Recording Folder.
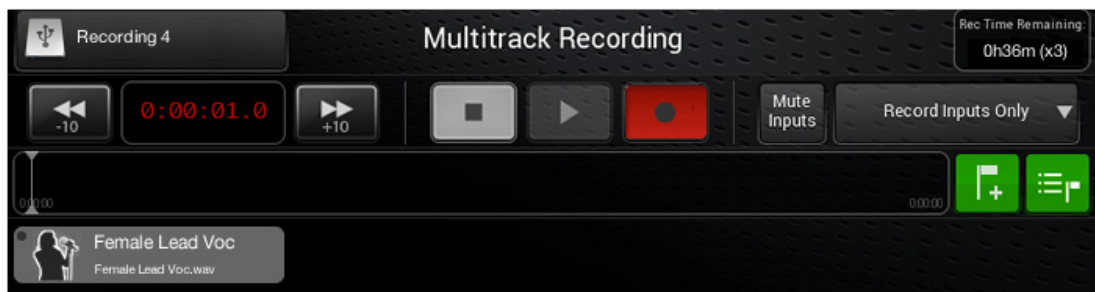
Above is the M20d's Multitrack Recording UI with a recording in progress. Recordings 1, 2 and 3 were pre-existing sessions, so the M20d automatically named this new recording 'Recording 4'.

All of the current Mixer Channels in your M20d Setup will be displayed below the Multitrack Recording Controls, with the Wav file named displayed below the Channel name. This session features only the Female Lead Vocal channel in Channel 1. It's file name is Female Lead Voc.wav.

To stop recording, tap the Stop button. To listen back, press the Play button. To mute live inputs during playback, tap the **Mute Inputs** button. To adjust Channel settings in real time, enter **Perform Mode** whiile the track plays back.

Playback Features

The following are a few of the other features available during playback.
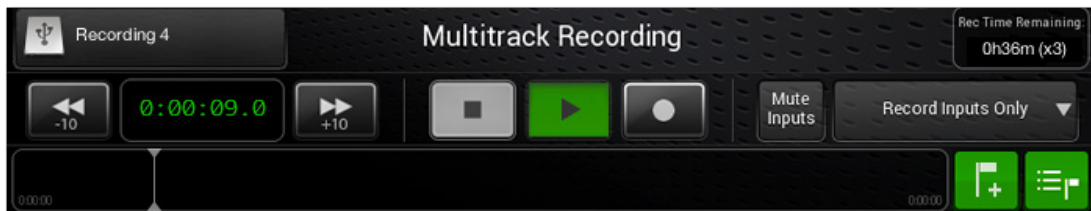
10 Second Rewind/Forward Buttons

Jump back or forward on the track timeline by 10 seconds every time you tap the -10 or +10 buttons. This feature is active when the track is stopped or during playback.

Scrub Playback Position

You can navigate to any playback position on the track timeline by tapping and holding the song position indicator, then dragging it left or right to the desired timeline position.

Place Marker

Place a Marker in your track during playback or when the track is stopped by tapping the **Place Marker** button. A Marker will be placed, as a vertical blue line, in the current location of the **Song Position Indicatior**.

Marker List

Manage your Markers by tapping the Marker List button.

The Marker List window will open, listing all your current Markers and their playback location on the track's timeline.
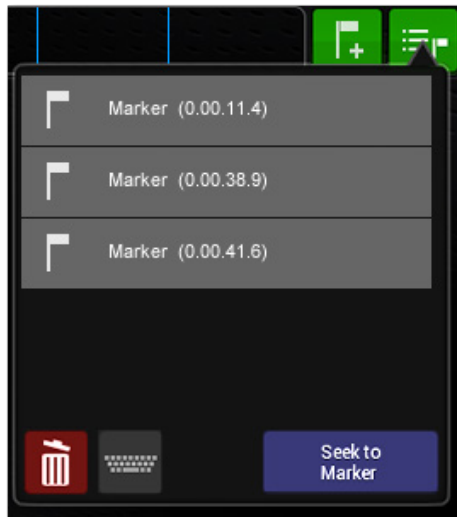
Delete or rename a Marker by selecting it in the list, then tapping the trash or keyboard icon, respectively. If you tap the **Seek To Marker** button, the **Song Position Indicator** will jump to the Marker's location on the track's timeline.

Playing Back A Main Mix Recording

A Main Mix recording can only be played back using the Media Player in **Tweak Mode**. To do so, select the Media Player icon on the stage, then Press the Tweak button. Tap the **Media Player** tab and the **Media Player UI** will be displayed.

Tap the **Add Files To Playlist** button, then navigate the File Browser until you find the Main Mix recording you'd like to play back. Select it, then tap the blue **OK** button. This adds the track to the list. Now just select the track and press the **Play** button. Your track will play back in stereo through channels 17 & 18.

Session List

To listen to an existing rescording, tap the Select Session button. A list of recordings stored on your inserted SD card or Hard Drive will be displayed in the Recording Folder window. Select and Load a session in the list to play it back. All new recordings are automatically added to the list.
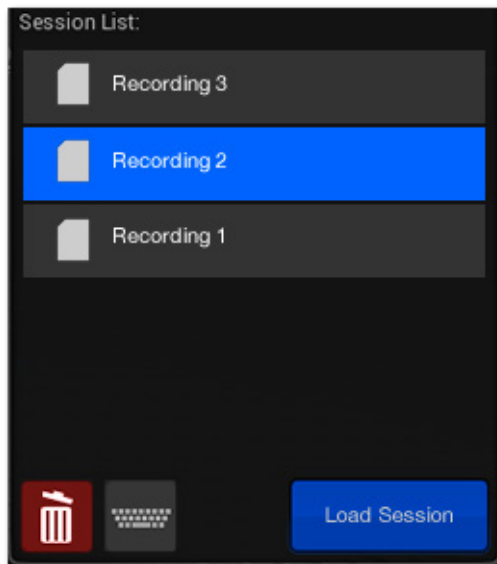
Recording Times

The following table lists the maximum recording times available per SD Card/ Hard Drive capacity.

	Inputs & Main Mix	Inputs Only	Main Mix Only
Capacity	20 Channels	18 Channels	2 Channels
4 GB	24:54	27:36	248:36*
8 GB	49:42	55:12	248:36
16 GB	99:24	110:30	248:36
32 GB	198:48	220:54	248:36

Recording times are listed in minutes:seconds.

*248:36 is the M20d's maximum recording time.

M20d will not record if SD card/hard drive has less than 64 MB of free space available

Streaming

The M20d will stream 20 channels of audio to your computer via USB, and receive a stereo return stream back from your computer. The use case for this would be when you'd like to record M20d unprocessed channels for editing in your DAW. Whenever a USB cable is connected to the M20d PC port, the following alert will be displayed in the Multitrack Recording window:

"Multitrack recording to SD/USB storage is not available while connected to a computer."

Input Streaming Configuration
The M20d streams 20 inputs to your computer and a stereo stream back to the M20d as follows:

- Channels 1-16: M20d Mic/Line Inputs 1-16, pre-processing / pre fader
- Channels 17-18: M20d stereo Aux Input, pre-processing / pre-fader
- Channels 19-20: M20d stereo Main Outs, post-processing / post-fader

USB Stereo Return Stream:
The stereo return is streamed to the M20d's stereo Aux Input (channels 17/18).

Note: In order to hear the stereo return, a **Stage Icon Preset** must be assigned to the Aux Input using the M20d touchscreen UI. The **Laptop** preset is ideally suited for this purpose, and can be found in the **Stage Icon Gallery**.

For USB audio streaming, you must download and install the **Line 6 StageScape M20d Driver** at http://line6.com/software.

On that page you will find 3 drop down menus. On the All Products drop down menu select StageScape M20d. On the All Software drop down menu select Drivers.

Select the OS of the computer you wish to use with your M20d. Once the download has completed, find and run the StageScape M20d Drivers Installer, following the onscreen instructions.

In your DAW you will need to change your audio interface to ASIO StageScape M20d. Then create new audio tracks in your DAW with inputs that correspond to the inputs on the M20d. Note: If you are using the StageScape DX/MME driver, make sure that StageScape is selected as the default audio device in Windows. Also, know that you will only get audio from inputs 1-2 if you are recording with DX/MME.

The Windows StageScape M20d USB 2.0 audio driver uses WDM and ASIO, supported on 32 and 64 bit OS configurations. The Mac OS X StageScape M20d USB 2.0 audio driver uses Core Audio, supported on 32 and 64 bit OS configurations.

Monitor Mode

In most live performance setups it's common to route audio from select channels to onstage monitor speakers, so the performers can hear themselves and specific elements of the mix. With the M20d, when you want to route audio from your input channels or global FX to your monitor speakers, you have two options:

Option 1: when adjusting a single channel's processing in **Deep Tweak** mode, tap the **Monitors** tab to adjust monitor Send Level and Output Level for that particular channel.

Option 2: to adjust Monitor levels for all of the channels in your setup on one screen, press the hardware **Monitor** button and enter **Monitor Mode**. Your display will look something like this (using a **Duo** stage setup example):

5•1
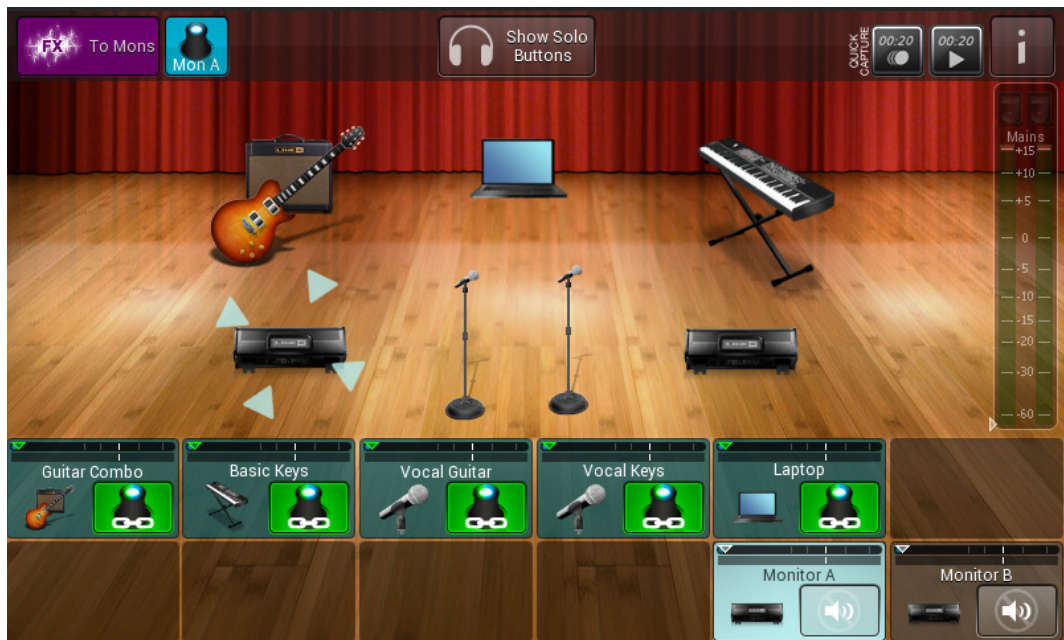
In **Monitor Mode**, all channel and global FX monitor levels are available in one screen view, so monitor level adjustments can be made quickly and easily. In the above illustration the selected monitor's controller strip and target triangles pulsate in blue.

Channel Monitor Levels

In **Monitor Mode**, all channel controller strips are dedicated to monitor functions. They're colored blue, as are their assigned hardware encoders. Also, the controller strips' Mute/Solo buttons that are displayed in **Record Mode** and **Perform Mode** are replaced by Linked/Unlinked buttons.

Linked/Unlinked Buttons

When a channel is in Linked mode, channel level is displayed along with monitor level, and the two levels maintain their relative settings when channel level is adjusted. When a channel is in Unlinked mode, its monitor level is independent of its channel level, so when its monitor level is set to a particular value, that setting won't change when you increase or decrease its channel level.

An easy way to think of the Linked/Unlinked concept is that Linked is post-fader and Unlinked is pre-fader. In other words, when a channel is Linked, its monitor level is relative to its channel level, so a baseline monitor mix can easily be established, since it will be the same as the main mix. Incremental adjustments can then be made quickly, i.e. just turn up the vocals a little more, and the monitor mix will replicate the main mix.

Most input channels are in Linked mode by default, but channels such as guitar amps, that are usually loud on stage, default to Unlinked mode.
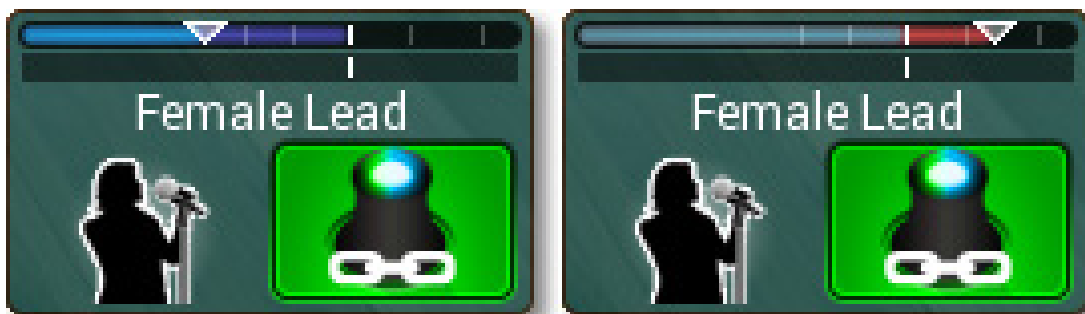
Graphically, when in **Linked** mode, channel level is displayed as a secondary horizontal band (set to -0.1 dB in the above left illustration). In this example, it extends to the right of the small triangle that indicates monitor level.

When monitor level is set higher than channel level (above right), a red band will be displayed between the blue channel level band and the triangle monitor level indicator. When channel level and monitor level are equal, the triangle indicator will be colored green. If monitor level is turned off while the channel level is up, the monitor level stays off until it is turned up again.

In **Unlinked** mode, only monitor level will be displayed as a blue horizontal band, without channel level, as illustrated below. In either mode, live audio level will always be displayed in the horizontal strip below the monitor level band.

Routing Channel Audio To A Target Monitor

In **Monitor Mode** there are 3 easy steps involved in sending a channel's audio to a target monitor, as follows:

1. Select the target monitor on the stage by tapping it.
2. Set the source channel's Linked/Unlinked mode as desired by tapping its button.
3. Turn the source channel's assigned encoder to the desired monitor level.

As you adjust each channel's monitor level, you'll see an animated signal flow displayed from the source channel to the target monitor.

To route audio to a different target monitor, simply tap the monitor's icon on the stage and you'll see its controller strip pulsate bright blue, along with the target triangles that rotate around the monitor's stage icon (see Page 5•1). Then adjust the source channel's monitor level as desired by turning its assigned hardware encoder.

Routing Media Player Audio To A Target Monitor

If you're using a Media Player in your M20d setup and would like to route its audio to the monitors, it can be treated exactly the same as any other channel. Select the target monitor, set the media player's Linked/Unlinked mode on its controller strip, then adjust its monitor level as desired by turning its assigned hardware encoder.

FX Monitor Levels

In **Monitor Mode**, you can also route audio from any of the 4 global FX to your monitors.

To do so, tap the **FX To Mons** button located in the upper left of the **Main Toolbar.** The 4 global FX controller strips will appear, as illustrated below.
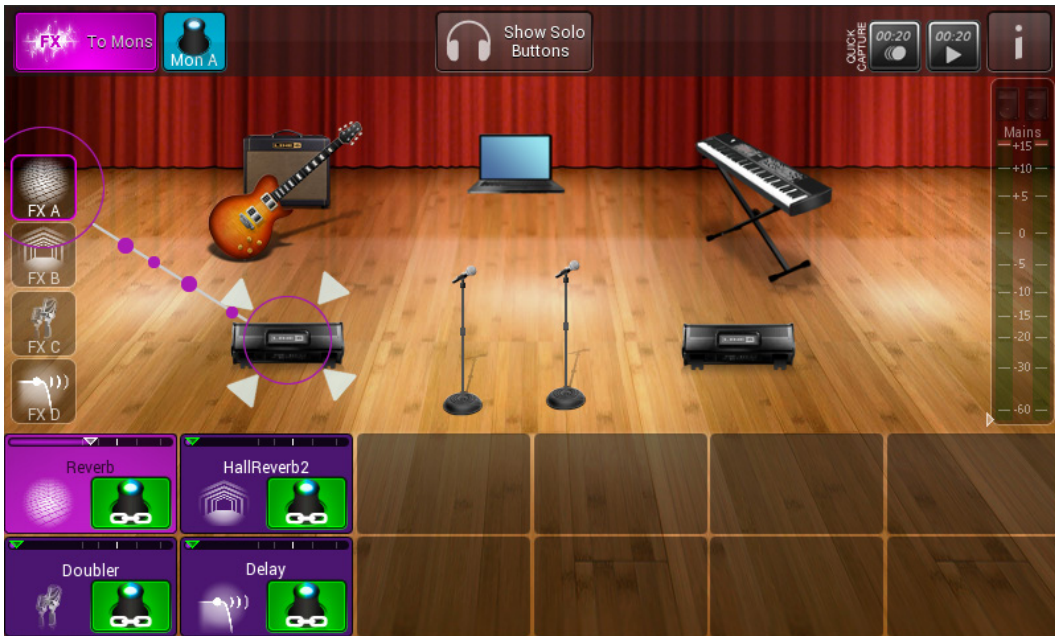
Now follow the same 3 basic steps previously outlined for Channel Monitor Levels:

1. Select the target monitor on stage by tapping it.
2. Set the source effect's Linked/Unlinked mode as desired by tapping its button.
3. Turn the source effect's assigned encoder to the desired monitor level.

As you turn each effect's hardware encoder, which will be color-coded purple, you'll see the animated signal flow from the source effect to the target monitor, as illustrated in the above screenshot for FX A.

Perform Mode

PERFORM

Press the M20d hardware PERFORM button to enter **Perform Mode**.

In **Perform Mode** the focus is on performance mixing. Stage icons are locked into position, so you can't move them around or perform other setup functions such as creating channels, replacing, resizing or renaming stage icons, or accessing the I/O Panel.
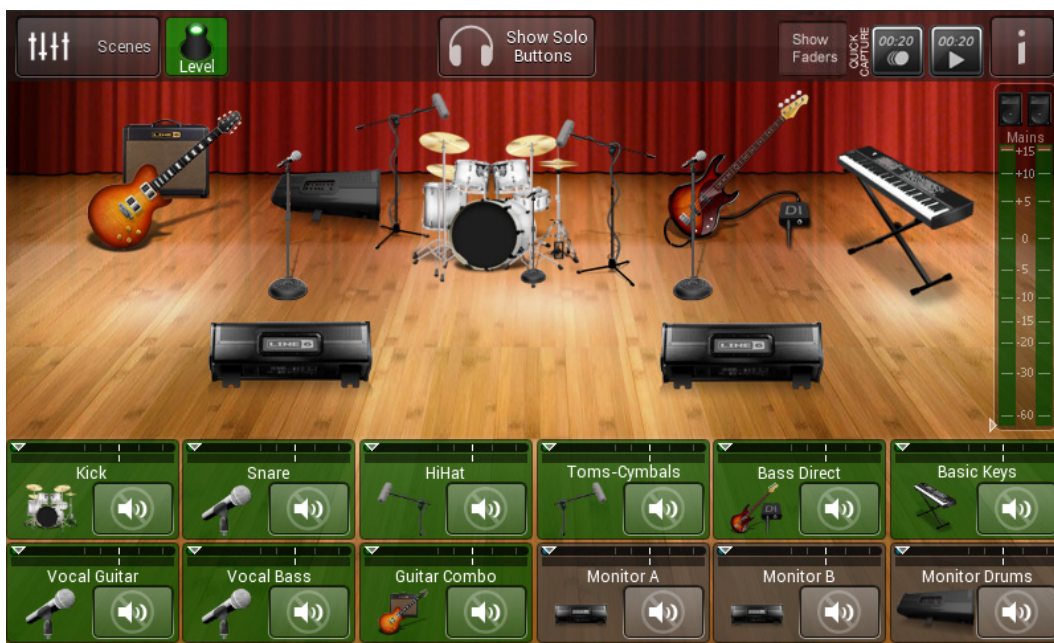
The general M20d workflow would be to set up all your channels in Setup Mode, tweak individual parameters and FX processing in Tweak Mode, adjust monitor levels in Monitor Mode, then mix your live performance in Perform Mode. *Introduced with Firmware v1.20, tap the **Show Faders** button to mix using the full screen **Fader View** UI. See **Appendix D: Fader View** for more details.

The basic functions available in **Perform Mode** are as follows:

- Saving & Loading Scenes (including deleting and renaming them)
- Encoder Assignments (control of Channel Level, Pan, Trim, and Global FX levels)
- Mute & Solo (Mute on/off; Solo on/off)

You still have access to the **Info View** in the **Main Toolbar**, from which you can select **Help**, **Footswitch Assign**, **L6 LINK Device Management** and **System Settings**. And you still have the ability to select **Channels**, **Stage Icons**, the **Mains Meter** and **Media Player** if you'd like to edit your selection in **Tweak Mode**. **Quick Capture** is also available.

Tip: to re-position any controller strip, tap and hold it for a few seconds - its image will pulsate, indicating you can then drag it to rearrange its order (its assigned encoder will track its position).

Saving & Loading Scenes

The **Scenes** button is located in the upper left corner of the **Main Toolbar** in **Perform Mode**, replacing the **Setups** button featured in **Setup Mode**. A **Scene** is essentially a snapshot of all your settings within the current Setup. These include settings for processor and FX parameters, channel levels, mute, solo, pan position and monitor send levels. You can store up to 32 Scenes within a Setup.

To save a Scene, tap the **Scenes** button. The **Save & Load Scenes** window will open. If no Scene has yet been saved, tap the **Save** button and you'll be able to name the current Scene. After typing in the Scene name, tap the **Enter** button and your Scene will be saved for future recall.

One scenario for using multiple Scenes in a live performance scenario would be to save a separate Scene for each song in your set. You may want to change only the vocal reverb level for one song, for example, or mute the drums for a song that features only vocals and acoustic guitar.

Each Scene could be named after the song it represents, and if you assign a footswitch to advance your Scenes one at a time, you could step through an entire set of custom mixes by tapping the footswitch before each song.
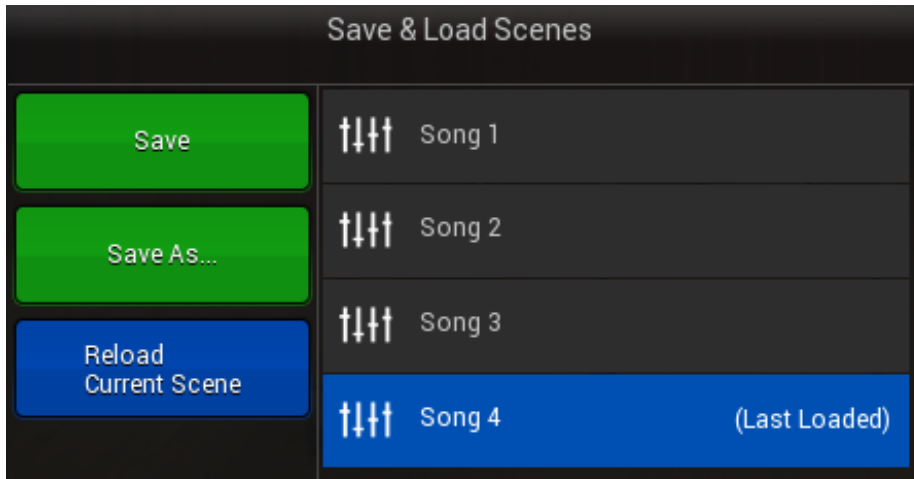
6•3

In the **Save & Load Scenes** window you can **Save** the current Scene, **Save As**, or **Reload Current Scene**.

You can also delete the selected Scene, which calls up a **Confirm** dialog, or tap the keyboard icon to rename the selected scene, which calls up a text keyboard.

Tap to delete Scene   Tap to rename Scene

Encoder Assignments

Once a Scene is loaded, or if you're using the current settings as your default Scene, you'll be in mix mode. During a live performance you'll most likely be tweaking encoder levels. The M20d makes it easy to switch encoder assignments, giving you quick access to the following via the **Encoder Assign** button in the **Main Toolbar**:

- Channel Level
- Channel Pan
- Channel Trim
- Global FXA Send Level
- Global FXB Send Level
- Global FXC Send Level
- Global FXD Send Level

Tap the **Encoder Assign** button and this drop down menu will appear. Select the desired assignment for the channel you're working on and the encoder for that channel will instantly control the parameter you've selected.

Switch to another assignment for any channel and adjust its level using the same encoder. All channels will follow the current encoder assignment. In other words, if Pan Position is selected, all encoders will control Pan Position for their assigned channels. The exception would be for channels for which a particular assignment is not applicable.

An example would be the Media Player or the stereo Aux Input channel, which have no Trim controls. In this case, the Media Player and Aux Input controller strips would default to Channel Level.

Mute & Solo

To toggle the Mute/Unmute state for any channel, tap the **Mute** button on its controller strip. Tap **Show Solo Buttons** in the **Main Toolbar** to convert the **Mute** buttons to **Solo** buttons. Tap the **Clear Solo** button to defeat Solo, and tap **Hide Solo Buttons** to toggle the **Solo** buttons on the controller strips back to **Mute** buttons.

Footswitches

The M20d provides two footswitch jacks, **Footswitch 1** and **Footswitch 2**, which support momentary types of footswitches.

Footswitch assignment options for both footswitches can be configured via the **Footswitch View**, which is accessible from the following two places:

1. The Info menu (tap the **Assign Footswitches** menu item).
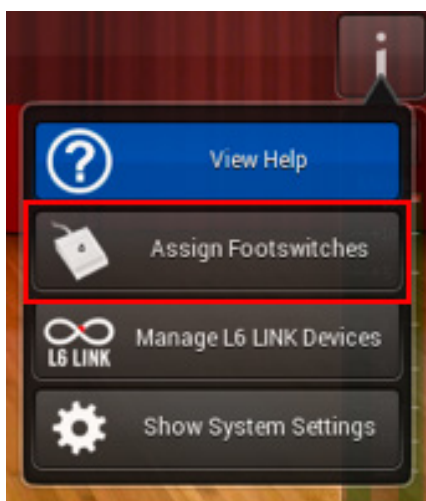
2. The I/O Panel (zoom in on the I/O Panel in Setup Mode by tapping it, then tap the **F1 F2** jack area, upper-right).
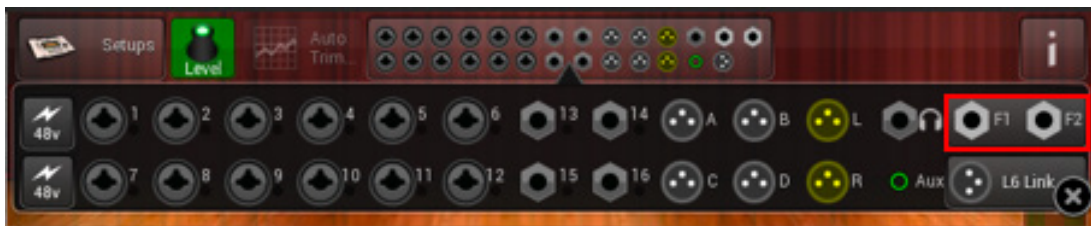
Footswitch View

The **Footswitch View** provides a list of assignment options for each footswitch. Assign footswitch control to the designated footswitch by selecting one of its assignment options.

Assignment Options

Tap the appropriate button for Footswitch 1 or Footswitch 2 to configure each of the following **Assignment Options**.

- FX Mute
- Scene
- Media Player
- Quick Capture
- Momentary Option

FX Mute

The **FX Mute** assignment toggles mute ON and OFF for the designated Global FX. You can select one or more Global FX for this assignment option. This is useful for quickly muting FX between songs when addressing your audience, for example.
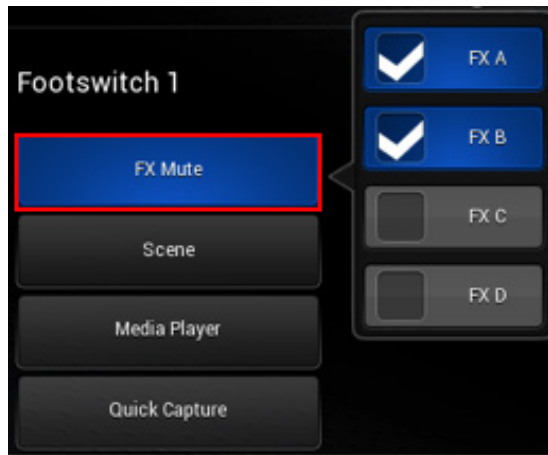
Scene

The **Scene** assignment enables you to load the **Next Scene** or **Previous Scene**, if using Scenes in the current Setup. An application for this could be to quickly load the next Scene prior to playing the next song in your set.

7•3
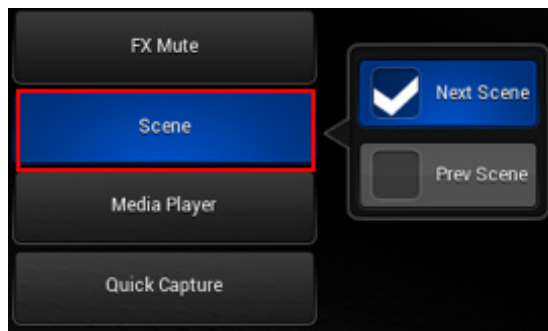
Media Player

The **Media Player** assignment provides audio playback control of songs within a playlist. The **Next Track** option will advance playback to the next track in the current Playlist. The **Play/Stop** option toggles playback off and on for the current track in a playlist.

Please refer to the **Media Player** topic for more information regarding playlists.
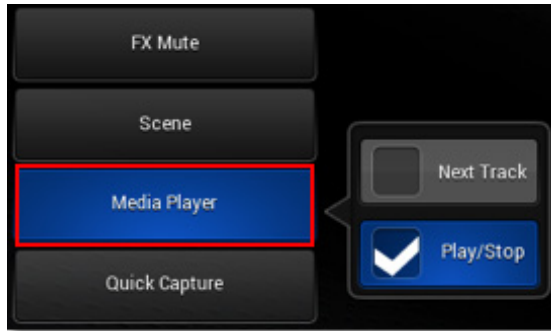
Quick Capture

When assigned to **Quick Capture**, the footswitch controls audio recording and playback when the M20d is in Quick Capture mode. The footswitch performs a sequence of operations, beginning with a record operation by default.
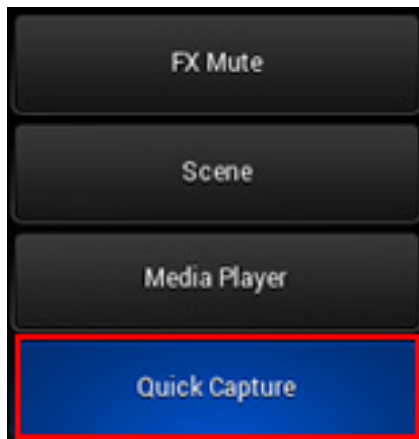
The Quick Capture Footswitch Table on the following page provides an example of this sequence.

Quick Capture Footswitch Table

Step	Footswitch Action	Operation
1	Press	Start Quick Capture recording
2	Press	Stop Quick Capture recording
3	Press	Start Quick Capture playback
4	Press	Stop Quick Capture playback
5	Press	Start Quick Capture playback
6	Press	Stop Quick Capture playback
7	Press+Hold (about 2 seconds)	Reset the footswitch sequence, so that Step 1 occurs on the next press

*Note: Steps 3 - 6 will repeat indefinitely until you Press+Hold the footswitch, as indicated in Step 7.

Momentary Option
The **Momentary** button selects the desired behavior of the footswitch. This setting is recommended for muting Global FX.

7•5
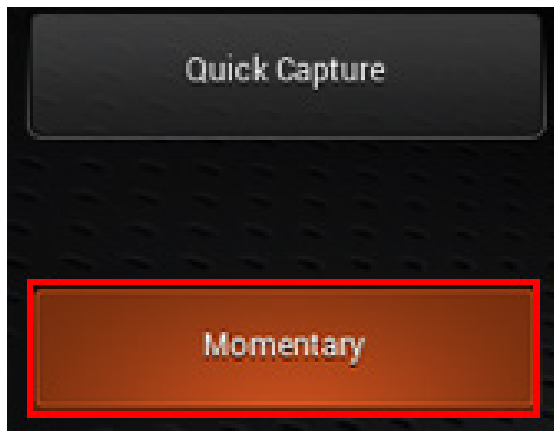
If **Momentary** is enabled, the mute will only be applied when the switch is down.

If **Momentary** is not enabled, each press of the footswitch will toggle the mute state.

Managing L6 LINK Devices

If you're using Line 6 **StageSource™ series** speakers with your M20d, you'll want to connect via **L6 LINK** for a totally digital system. The M20d supports L6 LINK configurations of up to 18 speakers, which can include 9 main speakers and 9 monitors.

Each L6 LINK connected speaker can be assigned to any of the M20d's 6 outputs. This means, for example, that an L6 LINK connected speaker assigned to Monitor A would transmit the same audio that the M20d is transmitting to the Monitor A output.

Note: When a StageSource series speaker is assigned to an M20d output, the audio from the speaker's analog input is mixed with and transmitted through the speaker.

8•1
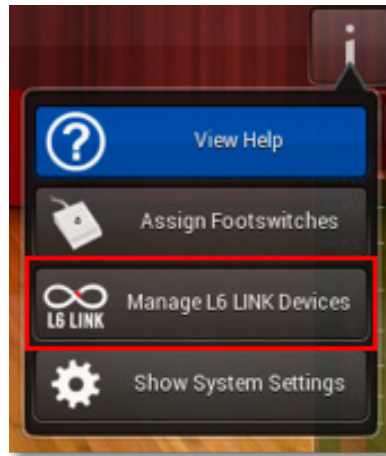
To configure your L6 LINK settings, tap the **Info** button in the **Main Toolbar**, then select the **Manage L6 LINK Devices** tab. This will display the **Configure L6 LINK** window.
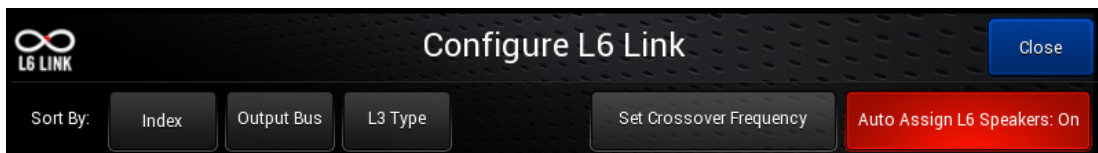
By default, **Auto Assign L6 Link Speakers** will be set to ON.

Auto Assign L6 Speakers: ON

Auto Assign L6 Speakers: On

When **Auto Assign L6 Link Speakers** is set to ON, the M20d assigns L6 LINK connected speakers to its outputs based on the type of speakers, the number of speakers connected, and their position.

For Example, if only one L3t vertically oriented speaker is connected, the M20d will assign it to L+R (Main Left + Main Right). If it is horizontally oriented, the M20d will assign it to Aux A. If only one L3s (Sub) is connected, the M20d will assign it to L+R (Main Left + Main Right).

When a vertically oriented speaker's position is inverted, vertically tilted, vertical or unknown, it is assigned to M20d outputs according to Table 1 (see Page 8•3).

When a vertically oriented speaker's position is 0° horizontal, 30° horizontal or 60° horizontal, it is assigned to M20d outputs according to Table 2 (see Page 8•4). *Speaker tilt angle refers to its flat orientation (0°) or leaning back on its handle or tilt stands.

8•2

StageSource L3s speakers (Subs) are assigned to M20d outputs according to Table 1.

Note: If a speaker's orientation changes while **Auto Assign L6 LINK Speakers** is set to ON, its orientation will not change within this view. In order to indicate any orientation changes that may have occurred while **Auto Assign L6 LINK Speakers** is set to ON, you must toggle the Auto Assign button OFF, then ON again. This is useful because it allows you to change your intended orientations without changing your assignments.

Table 1: Default Output Assignments for Vertically Oriented L3t and L3m Speakers

Number Of Speakers	Default Output Assignment								
	Speaker 1	Speaker 2	Speaker 3	Speaker 4	Speaker 5	Speaker 6	Speaker 7	Speaker 8	Speaker 9
1	Mains L+R								
2	Mains L	Mains R							
3	Mains L	Mains L+R	Mains R						
4	Mains L	Mains L	Mains R	Mains R					
5	Mains L	Mains L	Mains L+R	Mains R	Mains R				
6	Mains L	Mains L	Mains L	Mains R	Mains R	Mains R			
7	Mains L	Mains L	Mains L	Mains L+R	Mains R	Mains R	Mains R		
8	Mains L	Mains L	Mains L	Mains L	Mains R	Mains R	Mains R	Mains R	
9	Mains L	Mains L	Mains L	Mains L	Mains L+R	Mains R	Mains R	Mains R	Mains R

8•3

Table 2: Default Output Assignments for Horizontally Oriented L3t and L3m Speakers

Number Of Speakers	Default Output Assignment								
	Speaker 1	Speaker 2	Speaker 3	Speaker 4	Speaker 5	Speaker 6	Speaker 7	Speaker 8	Speaker 9
1	Aux A								
2	Aux A	Aux B							
3	Aux A	Aux B	Aux C						
4	Aux A	Aux B	Aux C	Aux D					
5	Aux A	Aux A	Aux B	Aux C	Aux D				
6	Aux A	Aux A	Aux B	Aux B	Aux C	Aux D			
7	Aux A	Aux A	Aux B	Aux B	Aux C	Aux C	Aux D		
8	Aux A	Aux A	Aux B	Aux B	Aux C	Aux C	Aux D	Aux D	
9	Aux A	Aux A	Aux A	Aux B	Aux B	Aux C	Aux C	Aux D	Aux D

8•4

Auto Assign L6 Speakers: OFF
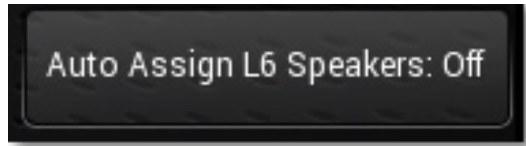
You can toggle **Auto Assign L6 Speakers** to OFF by tapping the button. Doing this allows you to freely set output assignments.

Disconnecting/Reconnecting L6 LINK System Speakers (with Auto Assign **OFF**)

When Auto Assign is OFF, the M20d attempts to preserve the audio bus assignments of disconnected speakers. This is useful for recalling your intended L6 LINK speaker configuration when reconnecting speakers or recalling a saved Setup within the M20d, which stores your L6 LINK speaker configuration data.

8•5

Disconnected speakers are referenced within the view as disabled speaker list items. These list items are restored upon reconnection of the speakers.

Note: Setting **Auto Assign L6 LINK Speakers** to ON will revert to automatic output assignment and the disconnected speaker references will be discarded.

Speaker Controls

Each speaker list item provides the following **Speaker Controls**:

1. Ping
2. Speaker Description
3. Speaker Icon
4. Speaker ID
5. Audio Bus Assignment
6. Detach

Ping

Each speaker provides a **Ping** button, which allows you to identify the physical speaker on your stage. When you press Ping, the button begins to flash synchronously with the speaker's front-panel LED. The speaker's LED will flash white and blue when it is being pinged by the M20d. To disable pinging, just press the Ping button again.

Speaker Description

A shorthand text description of the speaker is provided to identify the speaker's index, model and physical orientation. The M20d sets these names automatically, based on the information it receives from the speaker.

The index is always unique, registering the position within the L6 LINK chain connected to the M20d. For example, "#1" would designate the first speaker connected to the M20d.

The name that follows designates the speaker model and its physical orientation. For example, "L3T" identifies the speaker as a StageSource L3t. "L3T-Mon_30" identifies the speaker as a StageSource L3t in a horizontal position, angled upward at 30 degrees. "L3S" identifies the speaker as a StageSource L3s (sub woofer).

Speaker Icon

The **Speaker Icon** provides a visual reference of the speaker, based on the speaker model and physical orientation. The M20d sets this icon automatically, based on the information it receives from the speaker.

Speaker ID

The **Speaker ID** shows the number displayed by the 7-segment LED display on the StageSource speaker's control panel. In addition to pinging the speaker (see **Ping** on Page 8•6), this provides a useful means of identifying the physical speaker. The numerical sequence runs from 1-9 and is initialized at the first instance of a unique StageSource speaker type. For example, L3t and L3s speakers would each belong to their own numerical sequence. Therefore it is possible to see duplicate Speaker IDs within the list, but never for speakers of the same model type.

Output Assignment

The M20d supports L6 LINK configurations of up to 18 speakers. Each L6 LINK connected speaker can be assigned to any one of the M20d's 6 outputs, as well as a combination of Main Left and Main Right.

Output assignment references are as follows:

L+R	Mains Left + Right (summed; useful if you have only one speaker available for the main mix)
L	Mains Left
R	Mains Right
A	Monitor A
B	Monitor B
C	Monitor C
D	Monitor D

Detach

The **Detach** button removes the M20d output assignment from the L6 LINK connected speaker. This provides a means of effectively muting the L6 LINK connected speaker, which may be useful during setup for speaker isolation or troubleshooting.

Sorting

At times it may be useful to sort your L6 LINK connected speakers by different attributes, especially when using a large number of speakers. Tapping the **Sort** buttons will sort L6 LINK connected speakers in this view as follows:

Index	Sort by the speaker list item's index number (see Speaker Description above)
Output Bus	Sort by the speaker list item's assigned output (see Output Assignment above)
L3 Type	Sort by the speaker list item's model type (see Speaker Description above)

Note: Changing Sort setting does not alter speaker's properties or output assignment.

8•8

Set Crossover Frequency
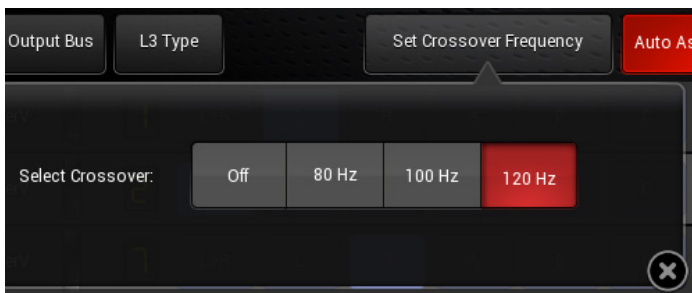
Set Crossover Frequency sets the crossover frequency for all StageSource speakers assigned to Mains L, R, or L+R within the L6 LINK configuration. The default is 120 Hz.

There are two ways to set the L6 LINK crossover frequency. One is via the UI interface shown above; the other is to use the L3s speaker's crossover button. The last change wins.

Note: The selected crossover frequency will affect all speakers assigned to Mains L, Mains R, or Mains L+R. If no L3s speakers are connected, the selection is disabled, and the M20d will turn off the crossover frequency for all connected L3t speakers.

System Settings

This chapter describes the various M20d System Settings operations, which include Wi-Fi Remote Setup, Backup and Restore procedures, and Firmware Updates for M20d and L6 LINK Devices.

To access System Settings, tap the **i** button in the upper right corner of the **Main Toolbar.**
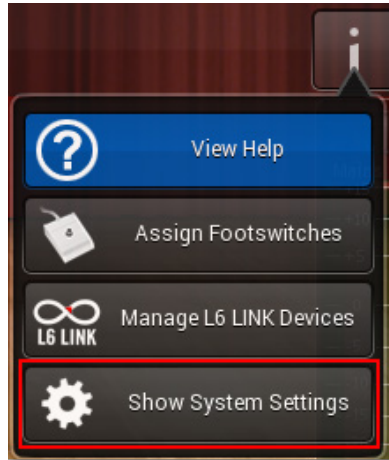
Tap the **Show System Settings** tab to display the tabs for the System Settings pages. The **About** page will be displayed by default, as illustrated below.
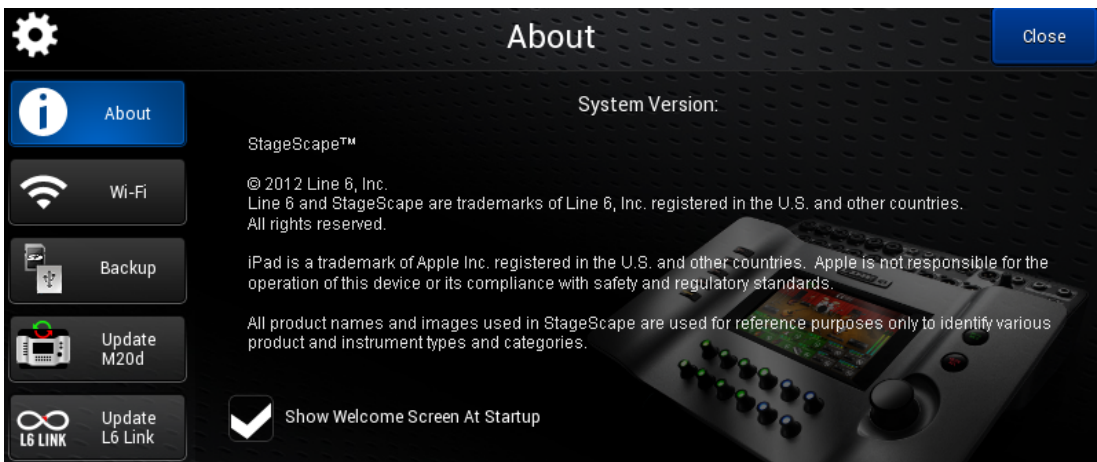
About

The **About** page provides:

- System Version information
- Copyright and Trademark disclaimers
- Show Welcome Screen At Startup option (via checkbox)

The System Version of your M20d references the currently installed firmware version. You should keep your system updated to the latest available firmware version, available at http://www.line6.com. Please see Update M20d for information on updating your system firmware.

Wi-Fi Remote Setup

M20d's **Wi-Fi** support allows you to connect one or more iPad® devices simultaneously, for complete remote control over all M20d mixer functions via the **StageScape Remote** app, which is available for free from the iTunes App Store. Each iPad® can control different screens or different parameters independently of the touchscreen on the M20d itself.

A USB Wi-Fi adapter is required, to be connected to the M20d's USB port. Recommended adapters include the EnGenius EUB9801, LinkSys AE1000 and Samsung WIS10ABGN.

It is also possible to use Apple's USB to Ethernet adapter (available worldwide from Apple) and a Wi-Fi Ethernet router.

See http://line6.com/support/community/support/mixer?view=documents for the latest available info on Wi-Fi adapters.

Configuring M20d for remote control is easy. Just follow these four steps:

1. Connect a USB Wi-Fi Device to the M20d

This is the most important step. A USB Wi-Fi device must be plugged into the M20d's USB port to enable the **StageScape Remote** app to connect with the M20d.

2. Customize the Unit Name (optional)

The **Unit Name** is the name the M20d broadcasts as a network name, also referred to as a network SSID. By default, the M20d will set its Unit Name to "StageScapeM20d".

You can edit the Unit Name by tapping the name field and entering new text. When entering text for the SSID, some alphanumeric characters are disabled.

Use Stagescape:		Use Stagescape:	
Standalone	With an existing Wi-Fi Network	Standalone	**With an existing Wi-Fi Network**
Wireless Channel		Network	
1 (2.412 GHz) ▼		Network 1	
Unit Name		Unit Name	
Stagescape M20d		Stagescape M20d	
Security PIN#		Security PIN#	
1 2 3 4		1 2 3 4	
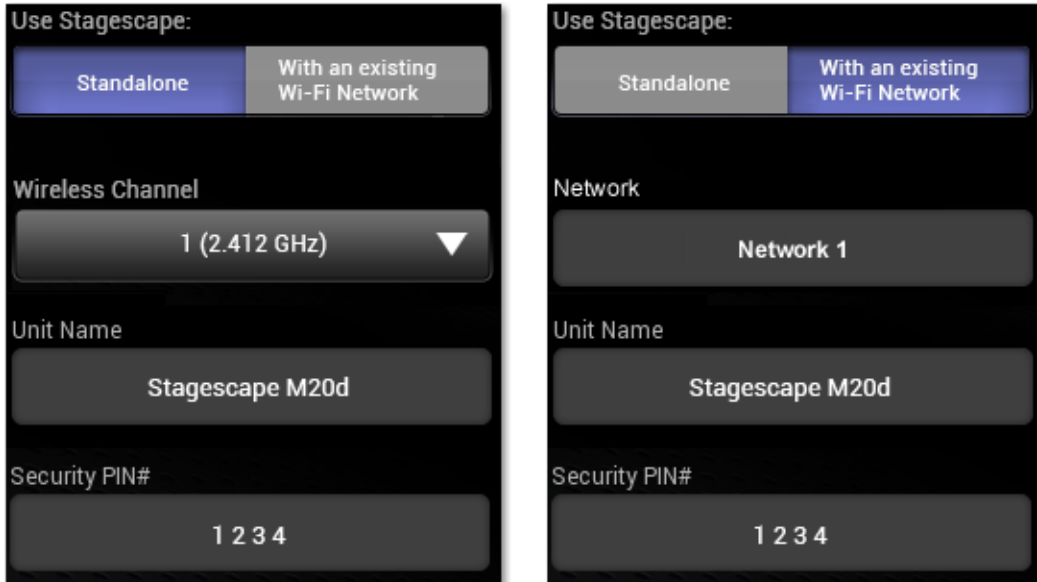
3. Select a Wiireless Channel (if **Standalone** is selected)

Select a Wi-Fi Channel from the **Wireless Channel** dropdown menu.

9•3

4. Select a Wi-Fi Network (if **With an existing Wi-Fi Network** is selected)

Select a local Wi-Fi Network if you'd like to join one. Tap the **Network** field and a window will open to enable you to select a network and enter your password.

5. Security PIN

Make a note of the four-digit **Security PIN**. The **StageScape Remote** app requires you to enter these digits when connecting to your M20d. Note: The M20d automatically generates the four-digit Security PIN specific to your device. The PIN cannot be customized.

Now you're ready to configure Wi-Fi settings on your iPad®.

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How to Configure Wi-Fi Settings on iPad
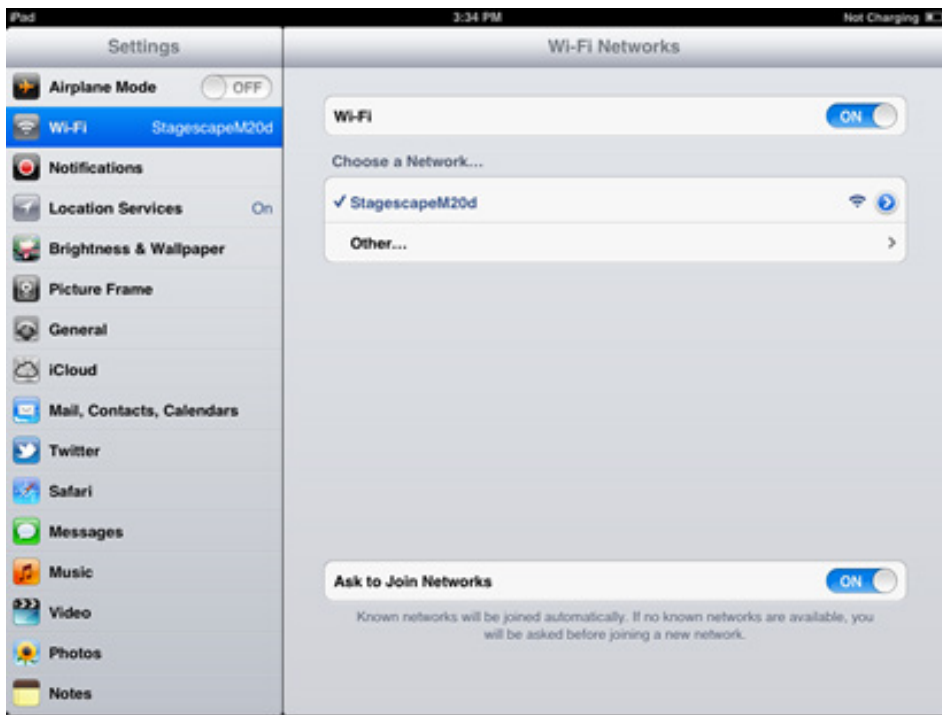
1. Enable Wi-Fi

On the iPad®, go to Settings > Wi-Fi and make sure that Wi-Fi is **ON**.

2. In the Network List, select your M20d, or if you have joined a network, select the network.

The Unit Name (SSID) or the Network name that you set on the M20d should appear in the iPad's Network list. Select the M20d or the Network name in this list as your network. Within the **Network Details** for your M20d network, set **Auto-Join** to ON.

3. On the iPad®, open the **StageScape Remote** app

Be sure you have the latest available version of the **StageScape Remote** app that is compatible with the System Version of the M20d.

4. Select the Unit Name

The StageScape **Unit Name** will appear in the app's list of available M20d devices.
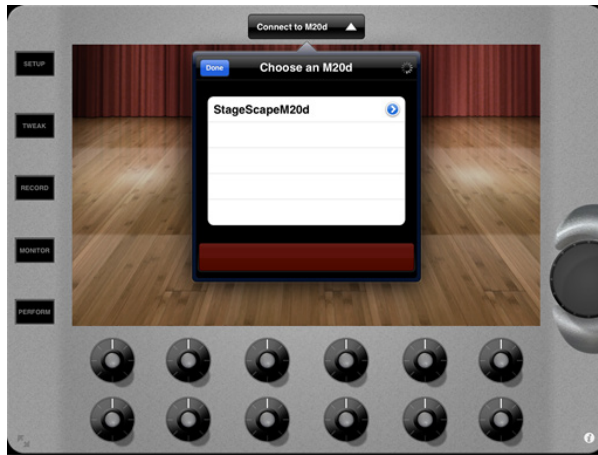
5. Enter the Security PIN

You will be prompted to enter the four-digit **Security PIN** (as noted on Page 3).

You're done! **StageScape Remote** should now be connected to your M20d.

Backup & Restore

This page enables you to backup and restore your preset settings.
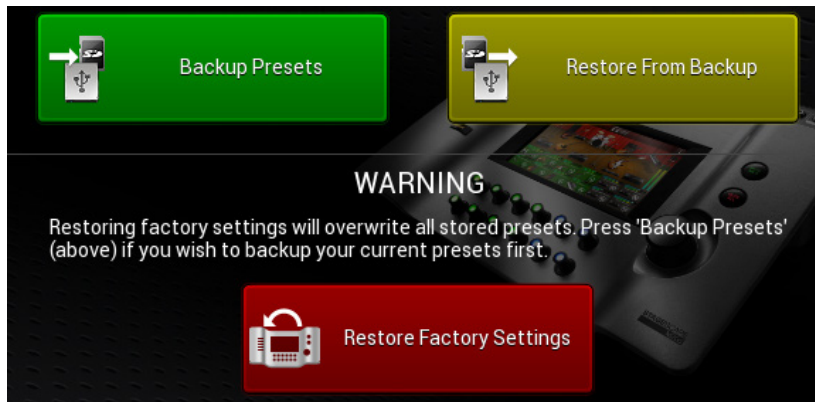
The **Backup Presets** operation creates a backup file that includes your Setups, Scenes, Stage Icon Presets.

A **Restore From Backup** function allows you to load the presets from a backup file into your system. This can also be useful for loading the presets of one M20d into a different M20d.

Each of these operations requires the use of external media, such as a USB storage device or SD card.

Additionally, you can restore your preset library to its original factory settings. This operation does not require external media, as the original factory settings are stored inside the M20d.

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Backup Presets
Tap the green button to create a backup of your presets: follow onscreen instructions.

Restore From Backup
Tap the yellow button to restore your presets from a backup file: follow onscreen instructions.

Restore Factory Settings
Erases ALL stored presets on the unit and reverts to the factory presets provided by Line 6 in the latest installed firmware. (The Backup Presets option is highly recommended).

Firmware Updates

Update M20d

Selecting the **Update M20d** tab enables you to backup your presets or update your firmware.

Backup Presets

Allows you to backup your presets to external media for later recall before you update your firmware, or to take your presets to a different StageScape M20d unit.

Update System Firmware

Download the latest StageScape M20d firmware from www.line6.com and place the .ssf file onto a USB Hard Drive, Flash Drive, or SD Card and plug it into your M20d.

You will be prompted that the update process will overwrite any stored presets on the unit. To retain your presets across firmware updates, begin by using the **Backup Presets** option, then **Update System Firmware** and finally, **Restore From Backup**.

*Note: Some presets may sound different due to system changes, and may require adjustment.

Update L6 LINK

The **Update L6 Link** tab enables you to update the firmware of StageSource speakers through your StageScape M20d. An L6 LINK or 110 ohm cable is required for making the connection. To update your StageSource Speaker's firmware, follow these steps:

1. Download the latest **StageSource Speaker** firmware update file from http://www.line6.com.

2. Copy the downloaded update file onto a USB storage device or SD Card and insert it into the M20d.

3. Connect the StageSource Speakers to your M20d via L6 LINK (L6 LINK-connected speakers will be listed on the right side of the screen).

4. Select the speaker you wish to update (this can be done at any time prior to applying the firmware update).

5. Tap the button labeled "Locate Firmware File" and select the update file from the file browser dialog, then press OK.
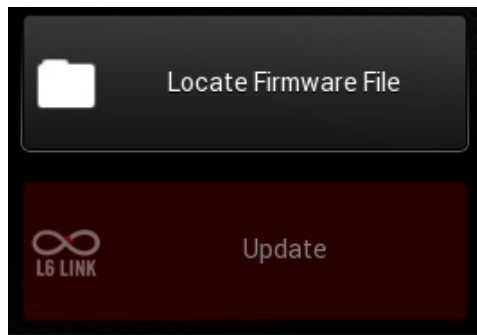
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The selected file's firmware version information will be displayed on-screen.

6. Confirm that you've selected the desired firmware version, then tap the button labeled "Update".

A progress bar at the bottom of the screen will indicate the firmware update progress, which can take several minutes.

Important: Do not power off the M20d or L6 LINK-connected speakers, nor disconnect any cables during the update process.

Setup Examples

This chapter describes three different M20d live performance setup examples: a duo performing with pre-recorded backing tracks, a rock band with vocals and an announcer, and an electronic music artist with a vocalist.

These examples will provide you with some workflow guidelines and a few tips to make your M20d setup a straightforward, hassle-free experience. Let's start with the pop duo who sing and play live instruments with pre-recorded backing tracks.

Duo With Backing Tracks

This duo plays guitar (using a mic'd combo amp) and keyboards (going direct). Since both musicians sing, we'll set up 2 vocal mics, 2 floor monitors and 2 powered PA speakers. They use a laptop for their stereo backing tracks.

Here's what the M20d stage view will look like in **Setup Mode** after everything is set up and arranged on the stage.

Stage Setup (Duo)

To begin, set up the guitar amp and mic, keyboards, vocal mics, laptop and powered monitors on the venue stage as usual. Add the left and right PA speakers (unless using the house PA) and plug everything into the M20d I/O Panel as follows:

- Dynamic mic for the guitar amp into Mic/Line Input 1 (XLR).
- Stereo keyboards out into Mic/Line Inputs 3 and 4 (1/4 inch).
- Dynamic mics for vocals into Mic/Line Inputs 5 and 6 (XLR).
- Laptop stereo out into Aux In stereo jack.
- Stage monitors into Monitor Outs A and B.
- Stereo PA speakers into Main Outs Left and Right.

With all your gear connected, power up the M20d (it will default to **Setup Mode**).

SETUP

Your stage view should look something like this.

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M20d Setup (Duo)

Create a new **Setup** by tapping the **Setups** button in the **Main Toolbar,** tapping **Save**, then naming the Setup. For this example, name it "Duo Setup". From now on, as you build your stage view and create **Channel Presets**, all your settings will be saved as Duo Setup for future recall.

Tap the Mic (1) stage icon to select it. Scroll the **Stage Icon Gallery** by swiping it to the left until you see the **Guitar Combo** icon, then tap it. The **Guitar Combo** preset will be loaded into channel 1, and its icon will replace the Mic (1) icon on the stage.
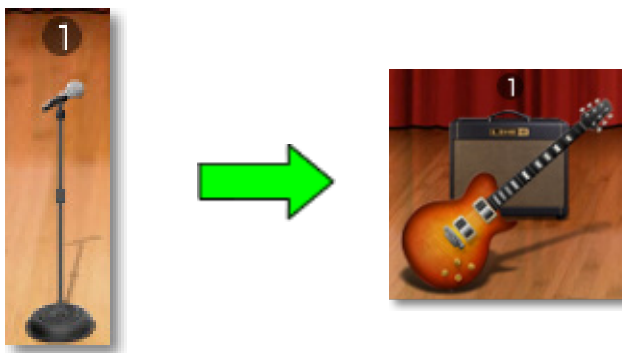
Tap the Line (3) stage icon to select it. Since a 1/4 inch jack is plugged into the adjacent input (4), a **Make stereo pair** button will slide into view on the M20d display.
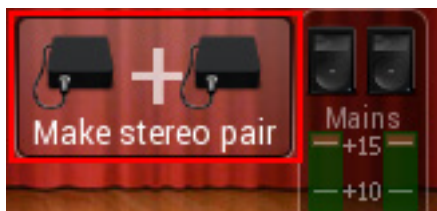
Tip: You can also create a stereo monitor pair in the same way. If two monitors are plugged into two Aux inputs, when you select one of the monitor icons a Make stereo button will appear.

Setup Examples

Tap the **Make stereo pair** button - the Line 3 and Line 4 stage icons will be replaced by a single stereo Line icon for Channel 3 (inputs 3 & 4).
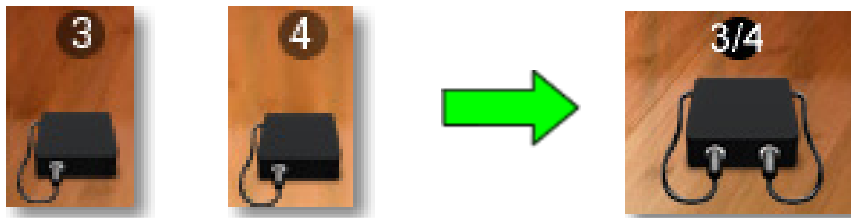
You'll also see the Channel 3 controller strip convert to stereo, and the mono controller strip for Channel 4 will disappear.

Select the stereo Line (3/4) icon and scroll the **Stage Icon Gallery** until you see the **Basic Keys** stereo icon (with the **L/R** label). Tap the **Basic Keys** icon - it will replace the Line (3/4) icon on the stage and the **Basic Keys** preset will load into channel 3.
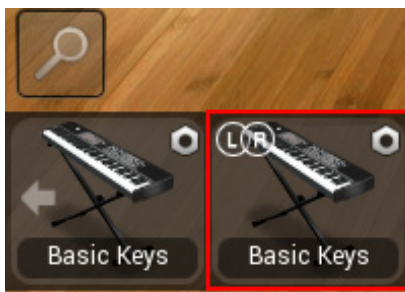
To continue customizing the stage view, let's replace the Aux In (17/18) icon with a laptop image. To do this, select the Aux In icon, scroll the **Stage Icon Gallery** until you see the stereo **Laptop** icon, then tap it. The **Laptop** image will replace the Aux In (17/18) image on the stage, and the stereo **Laptop** preset will be loaded.
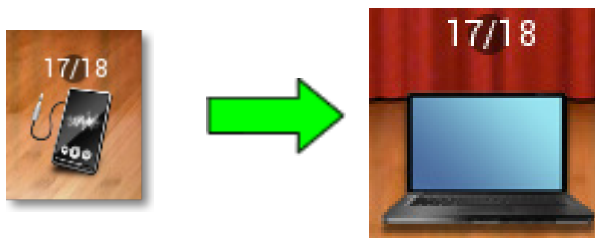
Now let's load vocal presets for the 2 vocal channels and rename them.

Tap the Mic (5) stage icon to select it, then scroll the **Stage Icon Gallery** until you see the **Male Lead** icon and tap it. This will load the **Male Vocal** preset into mic channel 5. The **Male Lead** icon will replace the Mic icon on the stage, but we'll change that, since our guitarist will be the vocalist. We'll also change the channel name to "Vocal Guitar".

To make the changes, tap the **Male Lead** stage icon to select it, then tap the **Edit Selection** button in the **Main Toolbar**, to the left of the **Rename** keyboard icon.

The **Edit Preset Properties** window will open. Here you can change the channel's icon and name by selecting the **Icon** image and **Name** field respectively.

Tap the **Icon** image - the **Select New Icon Image** browser will be displayed. Tap the generic **Mic** icon in the browser then tap the blue **OK** button.

Now tap the **Name** field (Male Lead) and the **Rename** keyboard window will pop up. Type **Vocal Guitar** as the new channel name, then tap the **Enter** button.

To dismiss the **Edit Preset Properties** window, tap the small channel icon in the **Main Toolbar** (to the left of the **Rename** Keyboard icon).
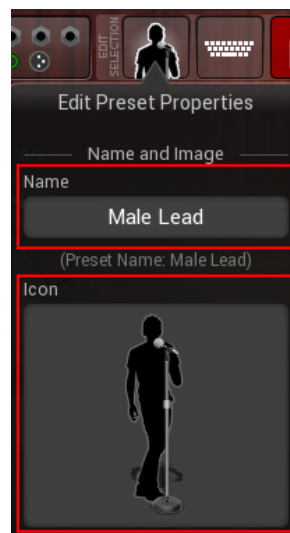
Repeat the above process for the Mic (6) channel. Load the **Male Lead** vocal preset, change its icon to a generic mic image, then rename it **Vocal Keys**.

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Finally, to tidy up the stage view, arrange the stage icons to resemble the screenshot on Page 10•1. Ultimately you'd want your stage view to reflect your actual stage setup.

For more details on other M20d setup procedures, please review the **Example Setups** for **Rock Band** and **Electronic Artist** in this chapter, as well as the **Setup Tips** section on Page 10•17 & 10•18.

Rock Band

Setup Example 2 is a 4-piece rock band featuring bass (direct), drums (4 mics), guitar (combo amp mic'd), and keyboards (direct). The bass player and guitar player sing, so we'll set up 2 vocal mics, plus 3 floor monitors and 2 powered PA speakers.

Here's what the M20d stage will look like in **Perform Mode** with everything set up.

Stage Setup (Rock Band)

Set up all your band gear on the venue stage as usual, including 3 powered floor monitors, 2 dynamic vocal mics, 2 dynamic mics for kick and snare, 2 condenser mics for hihat and overhead toms/cymbals, 1 mic for the guitar amp, plus your main PA speakers.

M20d Setup (Rock Band)

Next, power up the M20d. In **Setup Mode**, create a new **Setup**. Tap the **Setups** button in the **Main Toolbar**, tap **Save**, then name this **Setup** "Rock Band Setup". All adjustments you make from now on will be saved as "Rock Band Setup" for future recall.

Now connect all your gear to the M20d I/O Panel as follows:

• Drum mics into Mic Inputs 1 through 4 (4 mic icons appear on the stage, plus 4 mic controller strips).

• Bass direct box 1/4 inch out into Input 5 (1 line icon appears on the stage, plus 1 line controller strip).

• Keyboards 1/4 inch mono out into Input 6 (1 line icon appears on the stage, plus 1 line controller strip).

• Vocal mic XLRs into Inputs 7 and 8 (2 mic icons appear on the stage, plus 2 mic controller strips).

• Dynamic mic for the guitar amp (XLR) into Input 9 (1 mic icon appears on the stage, plus 1 mic controller strip).

• The 3 floor monitors connect to Monitor Outs A, B and C (3 monitor icons appear on the stage, plus 3 monitor controller strips).

• Main speakers connect to Main Outs Left and Right.

Since we're using 2 condenser mics for the drums (hihat and overhead toms/cymbals), we'll need phantom power. To turn it on, tap the M20d I/O Panel graphic - it will zoom to a larger view.

Tap the top row's "48v" button - it will highlight amber - this provides phantom power to the top row mics, which include Inputs 3 & 4 for the hihat and overhead mics.

Now let's create Input Channels for all our instruments and mics. We'll remain in **Setup Mode** for the process.

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SETUP

Setup Examples

Starting with the drum inputs, select Mic 1 on the stage (when selected, stage icons are highlighted green). Tap the **Edit Selection** button in the **Main Toolbar**, to the left of the **Rename** keyboard icon. This will open the **Edit Preset Properties** window. In the **Icon** field, select the Mic icon image. The **Select New Icon Image** browser will open.
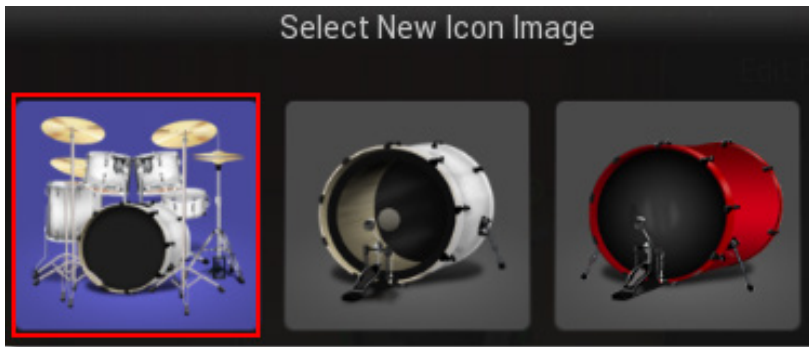
Select the Drums category, then tap the Drum Set icon and tap the blue **OK** button. This replaces the Mic icon with the Drum Set icon. With the **Edit Preset Properties** window still open, tap the **Name** field and rename this channel **Kick**. Tap **OK** then dismiss the window. This will result in Channel 1 being named **Kick**, and the Drum Set stage icon will be displayed on the stage.

Continuing on with Channels 2, 3 and 4, repeat the above process using the **Edit Preset Properties** window and **Select New Icon Image** browser as follows: Rename Channel 2 **Snare**; rename Channel 3 **Hihat** and change its icon image to an overhead mic; then rename Channel 4 **Toms-Cymbals** and change its icon image to an overhead mic.

Arrange the drums stage icons as illustrated here, to represent a drum set on stage.

Channel 5 is the bass direct box, so let's select a bass preset for this channel. To do so, tap the Line (5) stage icon to select it, then scroll the **Stage Icon Gallery** until you see the **Bass Direct** preset icon. Tap it and it will replace the Line (5) stage icon, automatically loading the **Bass Direct** preset into Channel 5.
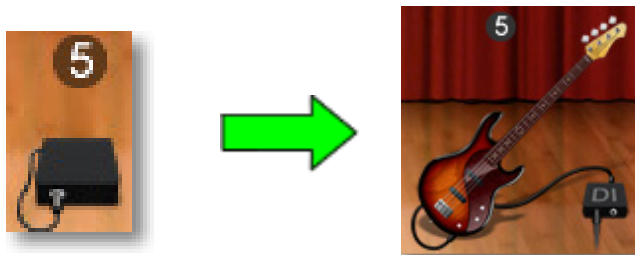
Repeat the above process for Channel 6, the keyboards channel, by replacing the Line (6) stage icon with the **Basic Keys** mono preset image from the **Stage Icon Gallery**. To do so, tap the Line (6) stage icon to select it, scroll the **Stage Icon Gallery** until you see the **Basic Keys** preset icon and tap it. You should now see the **Basic Keys** icon on the stage, and the **Basic Keys** preset will be loaded into Channel 6.
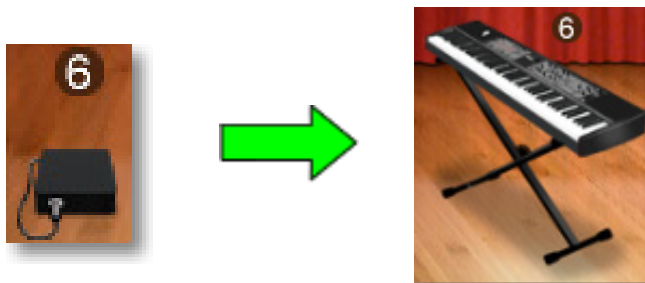
 Moving on to vocal channels 7 and 8, we'll want to load a **Male Lead** vocal preset for each input, along with a generic mic icon image. We'll do this in 2 easy steps per channel, beginning with Channel 7.

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First tap the Mic (7) stage icon to select it, then scroll the **Stage Icon Gallery** until you see the **Male Lead** preset icon. Tap it and it will replace the Mic (7) stage icon, loading the **Male Lead** preset into Channel 7.

Now rename Channel 7 and change its stage icon image using the **Edit Preset Properties** feature. Tap the **Edit Selection** button in the **Main Toolbar** (to the left of the **Rename** keyboard icon), and the **Edit Preset Properties** window will open.

Setup Examples
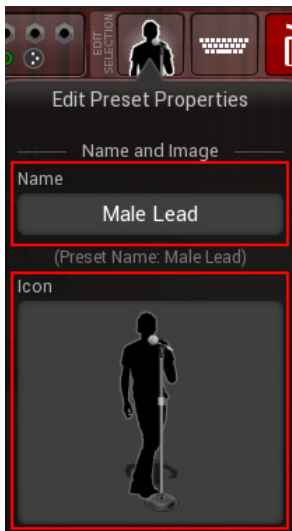
In this window you can easily change channel 7's icon and name as follows:

Tap the **Icon** image - the **Select New Icon Image** browser will open. Select the generic **Mic** icon, replacing the Male Lead image, then tap the **OK** button.

Now tap the **Name** field (Male Lead) and the **Rename** keyboard window will pop up. Type **Vocal Guitar** as the new channel name, then tap **Enter**.

To dismiss the **Edit Preset Properties** window, tap the small channel icon in the **Main Toolbar** (to the left of the **Rename** keyboard icon).

Repeat the above steps for Channel 8, loading the **Male Vocal** preset, renaming it **Vocal Bass,** and replacing its stage icon with a generic mic image.

To complete our stage setup, we'll assign a **Guitar Combo** preset to Channel 8, the mic for the guitar amp. Select the Mic (8) icon by tapping it, then scroll the **Stage Icon Gallery** until you see the **Guitar Combo** preset icon.

Tap the **Guitar Combo** icon and it will replace the Mic (8) stage icon, loading the **Guitar Combo** preset into channel 8 and renaming it accordingly.

As a final step, arrange all your stage icons to reflect your live band's setup, similar to what we've done in the illustration on Page 10•6. Now you're ready to tweak your mix setup.

Electronic Artist

Setup Example 3 is an electronic artist who uses a drum machine, laptop computer (4 channels of audio playback via audio interface), and an outboard FX processor.

There's also a female vocalist, so we'll set up 1 vocal mic. For monitors and mains, we'll use 2 floor monitors and 2 powered main speakers.   If using the house PA system, the main mix stereo outputs can be sent to the house PA instead of the main speakers.

Here's what our M20d stage will look like in **Perform Mode** when we're all set up.

10•11
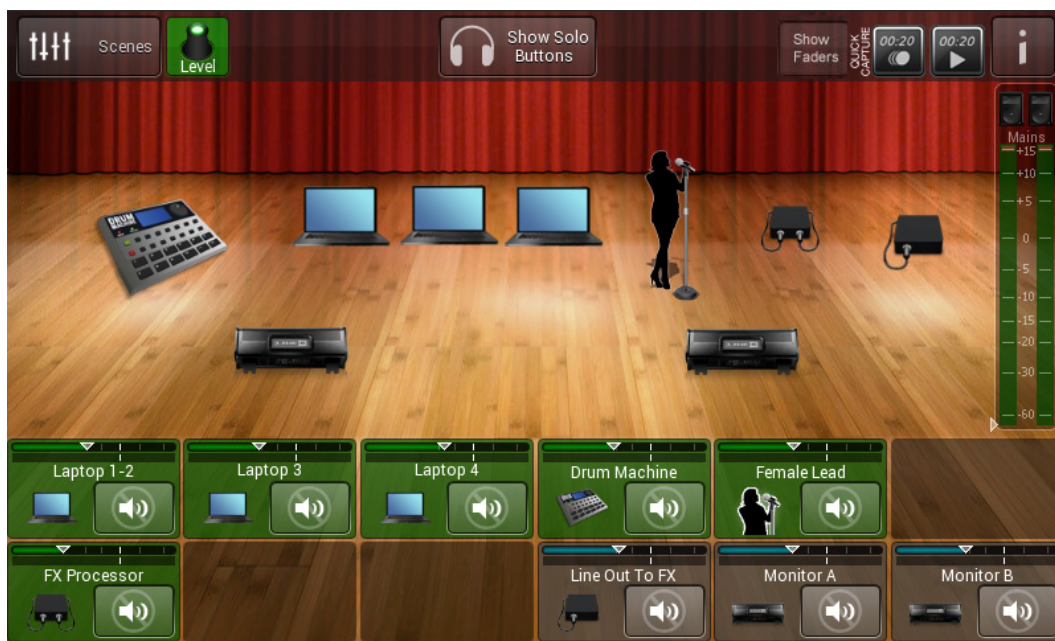
Stage Setup (Electronic)
Set up all the gear on the venue stage, including the laptop, 2 powered floor monitors, 1 dynamic vocal mic, drum machine, outboard FX processor and stereo PA speakers (or optionally send the main outs to the house PA).

We'll plug it all into the M20d in 2 phases, to illustrate setting up various Input Channels.

M20d Setup (Electronic - Phase 1)

Power up the M20d in **Setup Mode** then connect the following to the M20d hardware I/O Panel:

- Laptop 1/4 inch audio interface outputs 1-4 into M20d Combi Inputs 1-4 (4 'Line' stage icons will appear on the stage, along with 4 Line controller strips).

- Floor monitors A and B into Monitor Outs A and B (2 Monitor stage icons will appear on the stage, along with controller strips for Monitors A and B).

- If used, your powered PA monitors plug into Main Outs Left and Right.

Before we go any further, let's create a new M20d **Setup** by tapping the **Setups** button in the **Main Toolbar**, tapping **Save**, then naming the **Setup** "Electronic Setup". All settings from this point forward will be saved as "Electronic Setup" for future recall.

Now let's create a stereo channel for the laptop Inputs 1 and 2, as follows:

- Select the Line 1 stage icon - a **Make stereo pair** button will appear in the upper right of the display, as illustrated below.
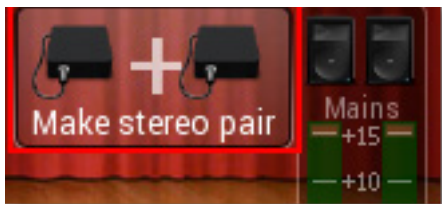
- Tap the **Make stereo pair** button - the Line 1 and Line 2 stage icons will be replaced by a stereo Line icon (1/2).
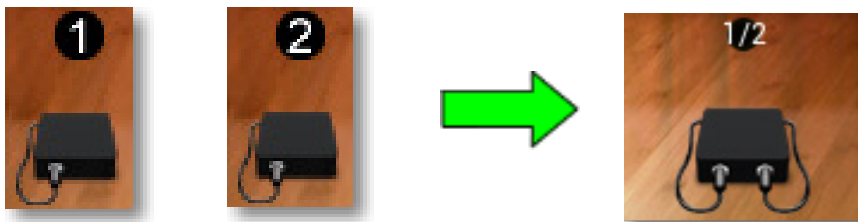
You'll probably want to customize your stage icons, so let's run through the process. We'll use laptop presets for the 3 Laptop channels, then rename the channels accordingly.

• With the stereo Line (1/2) stage icon selected, tap the **More** folder in the **Stage Icon Gallery**. The **Load Preset** window will open. In the **General** category, scroll until you see the Laptop (L/R) image and select it.

• Now tap the blue **Load Selected** button. This will load the Laptop preset. A stereo Laptop (1/2) will appear on the stage, replacing the stereo Line (1/2) icon

10•13
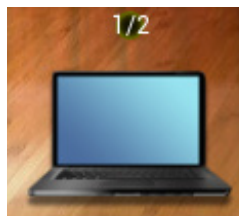
Tip: drag the Laptop 1-2 icon to the Stage Icon Gallery to save it as a new Preset. Do this for any Preset you've customized, for future recall.

Setup Examples

To customize the stage icon images for Line 3 and Line 4, we'll use the **Edit Preset Properties** feature. This can be used for any stage icon in your setup, as follows:

• Select the Line (3) stage icon, then tap the **Edit Selection** button to the left of the **Rename** keyboard button in the **Main Toolbar**.
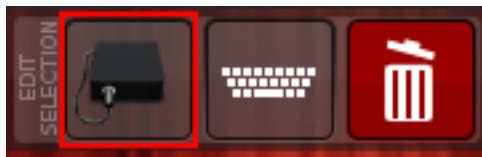
• Tap the **Icon** image in the **Edit Preset Properties** window that pops up.

• Scroll down until you see the Laptop image then select it. Tap OK and the Laptop image will replace the Line 3 image on the stage. Repeat this process for the Line 4 stage icon.

You should now have 3 Laptop icon images on stage, similar to the illustration on Page 10•11. Rename them Laptop 1-2, Laptop 3 and Laptop 4 by tapping the **Rename** keyboard button in the **Main Toolbar** for each icon and typing in their new names.

M20d Setup (Electronic - Phase 2)

To finish setting up our gear, connect the following to the M20d hardware I/O Panel:

• Drum machine 1/4 inch mono output into M20d Combi Input 5 (1 Line stage icon will appear on the stage, along with a Line controller strip).

• Vocal mic XLR into Input 6 (1 Mic stage icon will appear on the stage, along with a Mic controller strip).

• FX processor 1/4 inch returns plug into Inputs 7 and 8 (2 Line stage icons will appear on the stage, along with 2 Line controller strips).

• The FX processor mono input plugs into M20d Monitor Outs D via XLR cable (1 Line stage icon will appear on the stage).

To customize the drum machine stage icon, select the Line (5) stage icon by tapping it, then tap the **Edit Selection** button to the left of the **Rename** keyboard button in the **Main Toolbar**.

Follow the same procedure outlined on Page 10•14, this time selecting the **Drums** category and scrolling until you see the Drum Machine image. Select the Drum Machine image then tap the blue **OK** button.

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The Drum Machine icon will replace the Line (5) icon on the stage.

Setup Examples

For the Channel 6 vocal mic, we'll load the **Female Lead** vocal preset. To do this, tap the Mic stage icon to select it (it will be highlighted green), then scroll the **Stage Icon Gallery** until you see the **Female Lead** icon. Tap it and the **Female Lead** preset will load into Channel 6, replacing the generic Mic (6) preset and its stage icon.
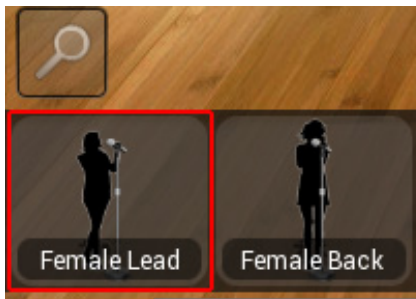
Regarding the FX processor: it will be fed by Monitor Outs D, so when plugging into the M20d I/O Panel, it may initially be represented by a floor monitor stage icon. We'll replace it with a Line Out icon as follows:

• Tap the Monitor icon to select it (it will be highlighted green).

Scroll the **Stage Icon Gallery** until you see the **More** folder, then tap it.

Tap the **Line Out** Preset icon in the **More** folder, then tap the blue **Load Selected** button. The Line Out icon will replace the Monitor icon on the stage.
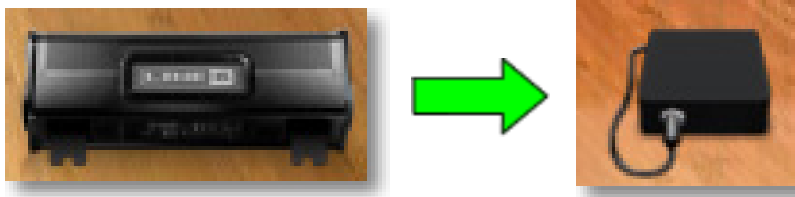
A note about the FX processor: any channels that use it should be adjusted to send their audio to the Monitor D output in Monitor Mode. This is done using the same procedure as used for sending channel audio to stage monitors A or B.

For your final setup step, rearrange all the stage icons to resemble the layout illustrated on Page 10•11. And be sure to review Page10•17 & 10•18 for more setup tips.

Setup Tips

In this section we'll list a few setup tips you might find useful when configuring your M20d.

Applying Auto Trim to Inputs:
In **Setup Mode**, tap the **Auto Trim** button in the **Main Toolbar,** then select the channels you'd like to **Auto Trim**. Sing and play at performance level. **Auto Trim** will set optimal levels for those channels. Tap the **Confirm Changes** button to save the new trim levels.

Trim Tracking:
When a channel's input is too hot, enter **Deep Tweak Mode**, tap the **Input** tab, then engage **Trim Tracking** to avoid distortion without changing the channel's overall volume.

Encoder Assign:
Tap the **Encoder Assign** button in the **Main Toolbar** to toggle encoder modes for the currently selected channel. The modes are **Level**, **Pan**, **Trim** and the 4 **Global FX**.

Auditioning Channel Presets:
Select a channel, enter **Tweak Mode**, then tap the **Folder** icon in the **Toolbar** to the right of the **Channel Level Meter**. This opens the **Load Preset** browser, where you can load various **Channel Presets** that are appropriate to the current channel type.

Changing Channel DSP Preset Types:
In **Deep Tweak Mode**, tap the **Channel Icon** in the upper left corner of the **Toolbar** to open the **Edit Preset Properties** browser. Tap the blue button in the lower right corner of the browser to select various **Preset DSP Types** (see **Appendix C** for more details).

Copy/Paste Channel Settings:
When you've tweaked a channel to your liking, such as a vocal channel, and you'd like to use the same settings for 1 or 2 more vocal channels, drag the channel's stage icon to the **Stage Icon Gallery** to save it as a new **Preset**, then drag the new preset from the **Icon Gallery** to the stage to duplicate the original channel's settings.

Applying Feedback Suppression To A Vocal Mic:
Select the vocal mic channel then enter **Tweak Mode**. Tap the **Deep Tweak** button then select the **Input** tab. Tap the **FBS Enable** button and set the **FBS Mode** to **Vocal.** Have the singer sing at performance level. **FBS** will automatically detect the troublesome frequency and filter out the feedback. Repeat steps for other channels.

Creating Channel Groups:

To create a Group encoder, double-press any unassigned hardware encoder. The **Select Channels For Group Encoder** window will open, displaying all channels available for grouping. Tap the channel icons you'd like to include in the Group, name the Group in the **Group Name** field, then click the blue **OK** button. A Group controller strip will appear. One use case would be to control all **Global FX** returns with one encoder.

Customizing Stage Icons:

There are 2 ways to customize stage icons. Select the icon you'd like to customize, then either tap an icon in the **Stage Icon Gallery** to replace it or tap the **Edit Selection** button in the **Main Toolbar** to open the **Edit Preset Properties** browser. Then select the icon to be replaced, browse to select a new icon, then tap **OK**.

Using Mute Mics Mode:

Create a mute group to use for an announcer during breaks, or for a song where most channels are muted. To do this, engage the hardware **Mute Mics** button, then tap the **Mute** button for every channel you'd like to mute. This state will be stored in memory. Next time you engage the **Mute Mics** button, only the unmuted channels will be heard.

Quick Capture For Sound Check:

Enter **Perform Mode** after you've set up all your input channels, then tap the **Quick Capture Record** button and have the band perform. 20 seconds of their performance will be recorded. Tap the **Quick Capture Play** button and check out their recorded performance from the audience.

Recording Your Set To Media:

As in the **Quick Capture** example above, open the **Record/Playback Configuration** window and select a connected **SD/USB Media** destination for your recording. Name the set, dismiss the window, then press the **Record** button when ready to begin recording.

Tuning Your Room With The XY Pad:

When performing in a room with undesirable resonant frequencies, tap the **Main Meter** then enter **Quick Tweak Mode**. The **Tone XY Pad** is tailored to deal with these problems by moving the cursor left or right in the lower **Cut** section of the display.

Note: If you're using an **L6 LINK** speaker system with your M20d, you can use the onboard **31 Band EQ** to tune your room.

Channel Processing

This chapter documents the parameters and ranges of the M20d's **Channel Processing** blocks. For each processor block a brief description will be provided, along with a screenshot of the touchscreen UI.

Individual parameters and ranges will be noted for each processor, along with a graphic representation of the 12 hardware encoders that control the various parameters.

For example, below is a screenshot of the parameter controller strips for the **DeEsser**.
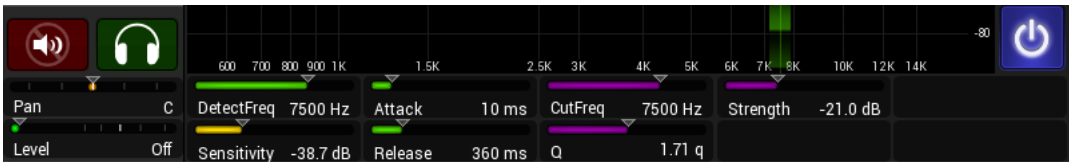
Each parameter setting is displayed in a specific color. The hardware encoder associated with each setting is color-coded to match, making for quick and easy adjustments.

Above each encoder graphic will be its assigned parameter's name, with the parameter's range displayed below it. Text labels may be expanded for clarity.

Pan	DetectorFreq	Attack	Cut Freq	Strength	
100%L ~ 100%R	2500Hz ~ 12kHz	1ms ~ 100ms	2500Hz ~ 12kHz	-30dB ~ 0dB	

Level	Sensitivity	Release	Filter Q		
Off ~ +12dB	-60dB ~ +20dB	50ms ~ 2.00s	0.40q ~ 8.00q		
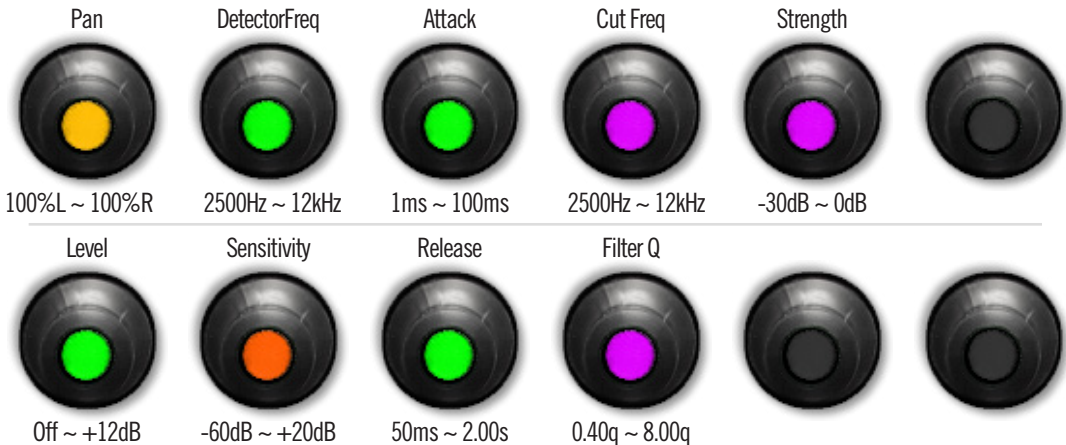
When an encoder is not assigned to control a parameter in the UI, such as the 3 encoders illustrated above, far right, its LED will be dark gray and it will have no text labels.

Comp

Comp is a basic Compressor with adjustable parameters for Threshold, Ratio, Attack, Release and Output Gain. Below is a screenshot of the Comp UI, with parameter ranges listed below the color-coded hardware encoders.

Pan	Threshold	Attack	Output Gain		
100%L ~ 100%R	-60dB ~ +20dB	1ms ~ 1.00s	-20dB ~ +20dB		

Level	Ratio	Release			
Off ~ +12dB	1.0:1 ~ 60.0:1	10ms ~ 4.00s			
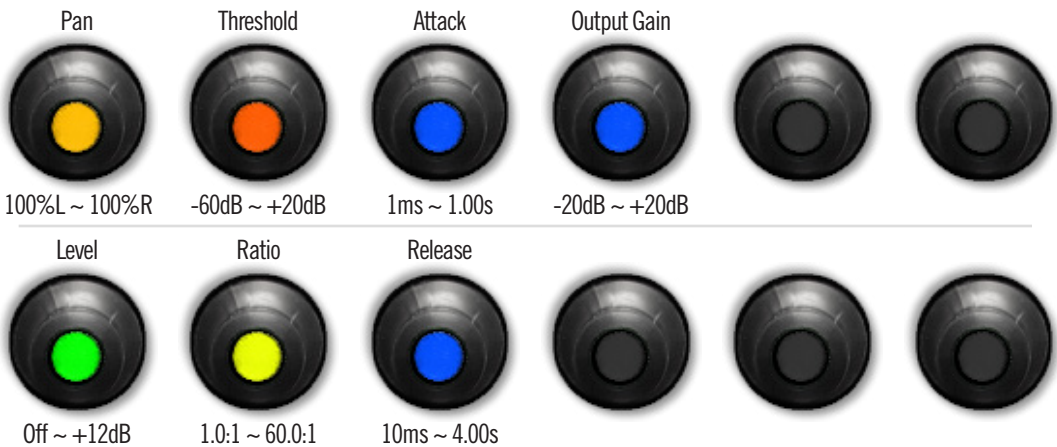
4 Comp (page 1)

The 4 Comp is a 4 band compressor with 4 pages of parameter controls. To adjust a band, tap its range on the touchscreen. Its parameters will slide into view. Below is page 1.

Pan	Threshold	Ratio	Attack	Release	Gain
100%L ~ 100%R	-60dB ~ +20dB	1.0:1 ~ 40.0:1	0.5ms ~ 500ms	10ms ~ 10.00s	-20dB ~ +20dB

Level					Xover High
Off ~ +12dB					40Hz~250Hz
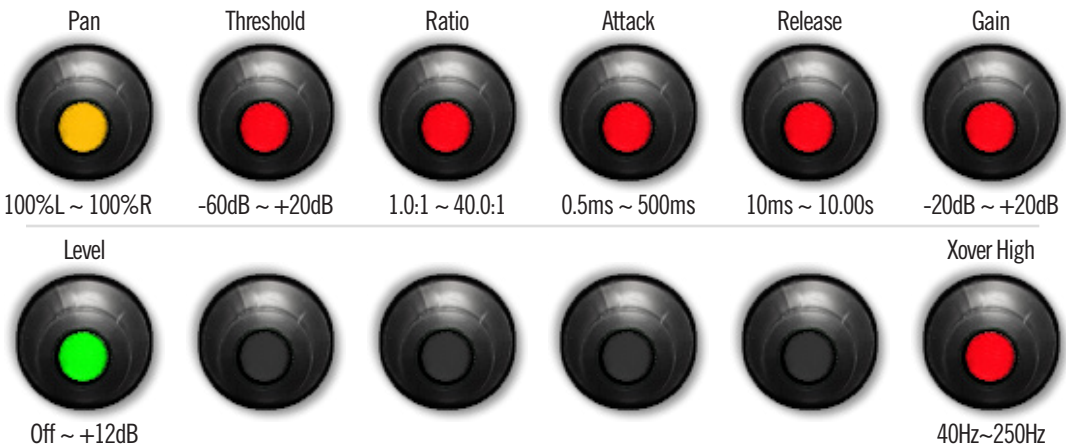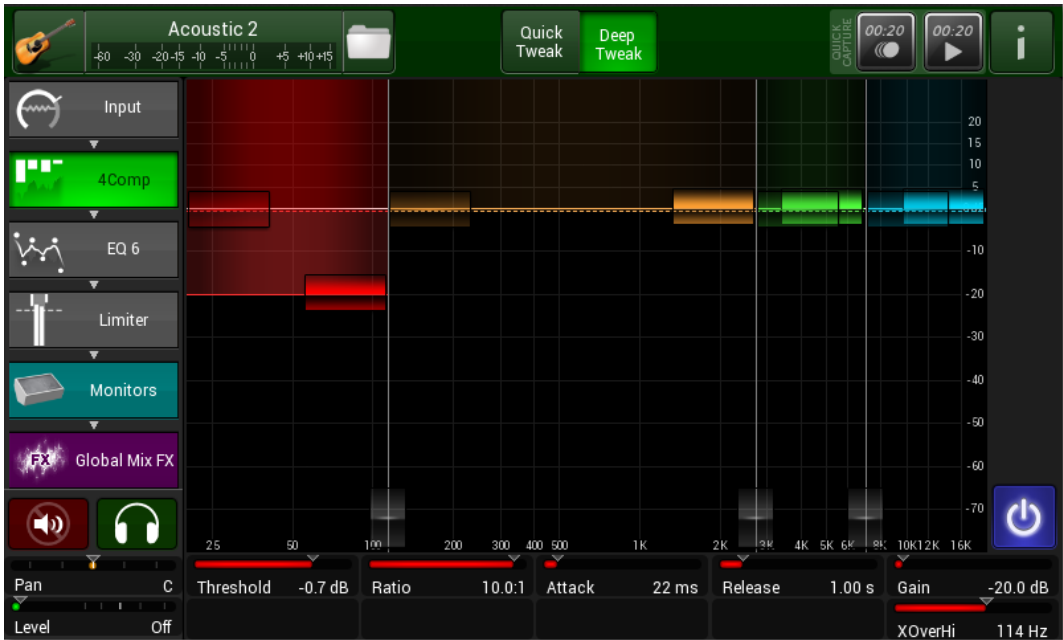
4 Comp (page 2)

This is page 2 of the 4 Comp compressor, displaying the parameter controls for band 2. To display this page, simply tap band 2 in the touchscreen UI (highlighted in amber).

Pan	Threshold	Ratio	Attack	Release	Gain
100%L ~ 100%R	-60dB ~ +20dB	1.0:1 ~ 40.0:1	0.5ms ~ 500ms	10ms ~ 10.00s	-20dB ~ +20dB

Level	Xover Low				Xover High
Off ~ +12dB	40Hz ~ 250Hz				100Hz~6kHz
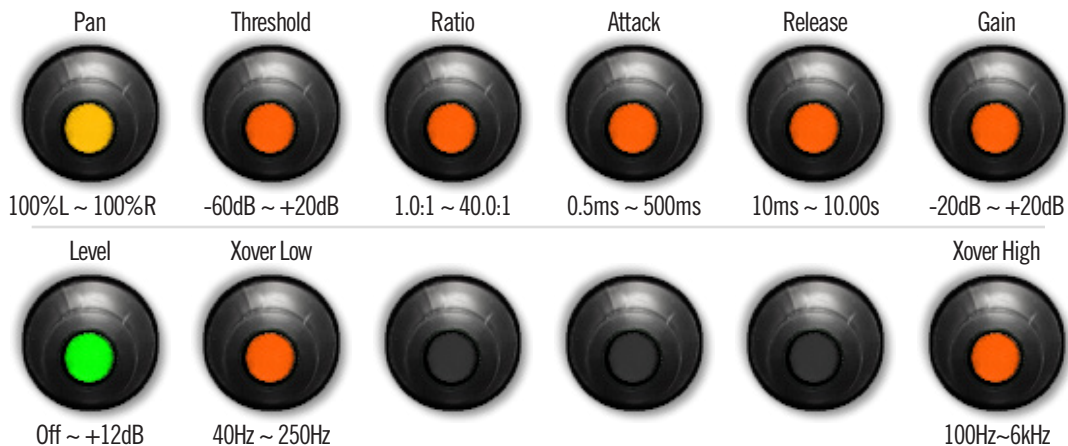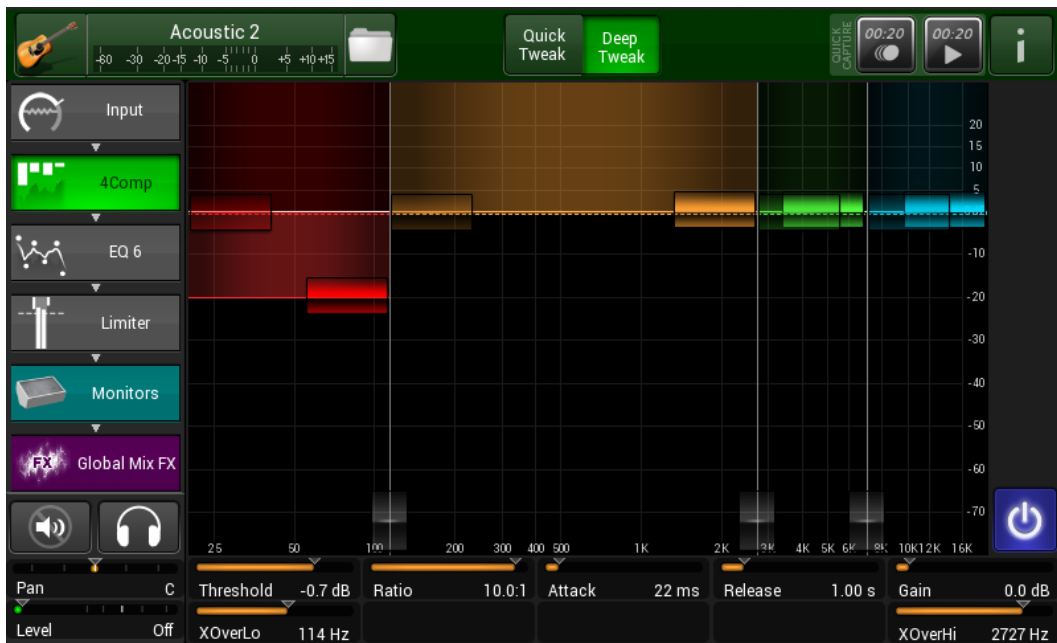
4 Comp (page 3)

This is page 3 of the 4 Comp compressor, displaying the parameter controls for band 3, highlighted in green.

Pan	Threshold	Ratio	Attack	Release	Gain
100%L ~ 100%R	-60dB ~ +20dB	1.0:1 ~ 40.0:1	0.5ms ~ 500ms	10ms ~ 10.00s	-20dB ~ +20dB

Level	Xover Low				Xover High
Off ~ +12dB	100Hz ~ 6kHz				2400Hz ~ 10kHz

4 Comp (page 4)

This is page 4 of the 4 Comp compressor, with band 4 highlighted in blue. (You can also view the various pages by swiping the controller strips left or right on the touchscreen).

Pan	Threshold	Ratio	Attack	Release	Gain
100%L ~ 100%R	-60dB ~ +20dB	1.0:1 ~ 40.0:1	0.5ms ~ 500ms	10ms ~ 10.00s	-20dB ~ +20dB

Level	Xover Low				
Off ~ +12dB	2400Hz ~10kHz				
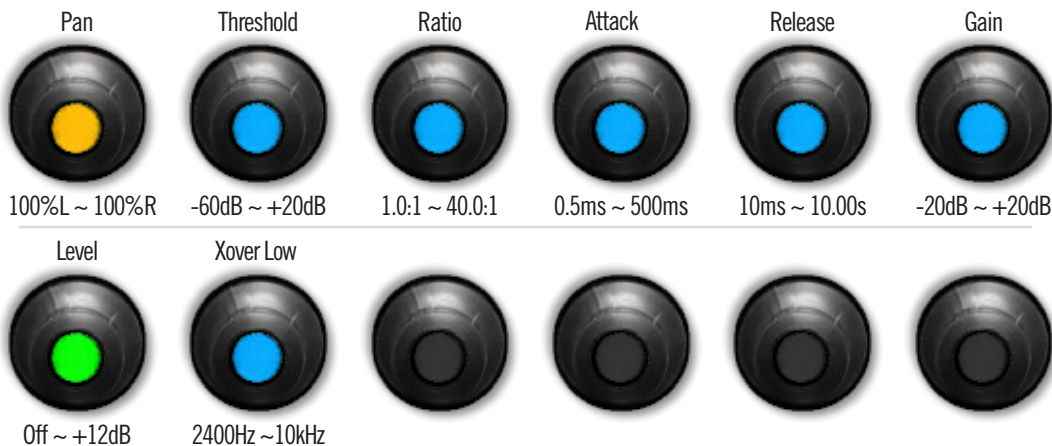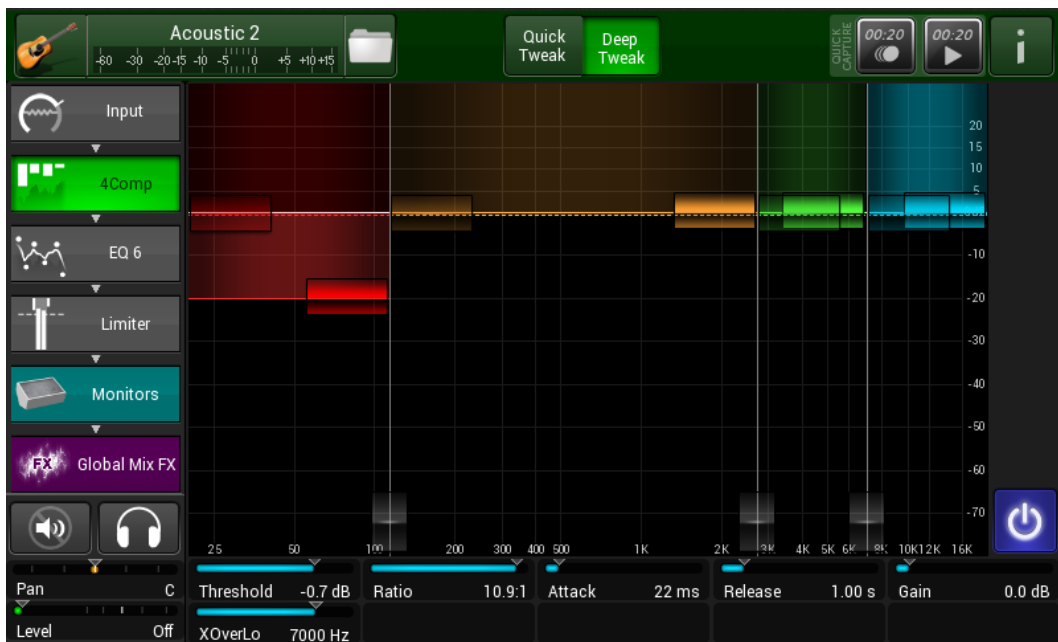
DeEsser

The DeEsser is useful for eliminating vocal sibilance. Parameters are available for detecting the sibilant frequency, then fine-tuning the removal of the unwanted sound.

Pan	DetectorFreq	Attack	Cut Freq	Strength	
100%L ~ 100%R	2500Hz ~ 12kHz	1ms ~ 100ms	2500Hz ~ 12kHz	-30dB ~ 0dB	

Level	Sensitivity	Release	Filter Q		
Off ~ +12dB	-60dB ~ +20dB	50ms ~ 2.00s	0.40q ~ 8.00q		
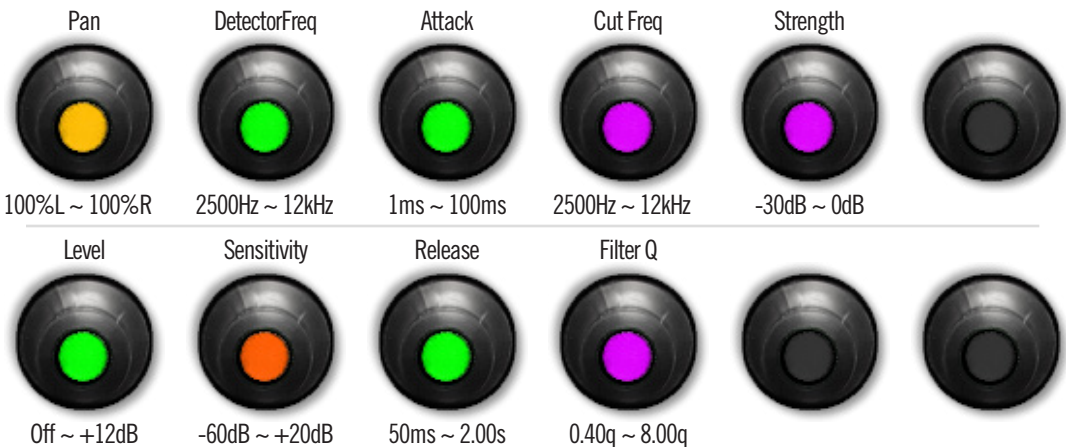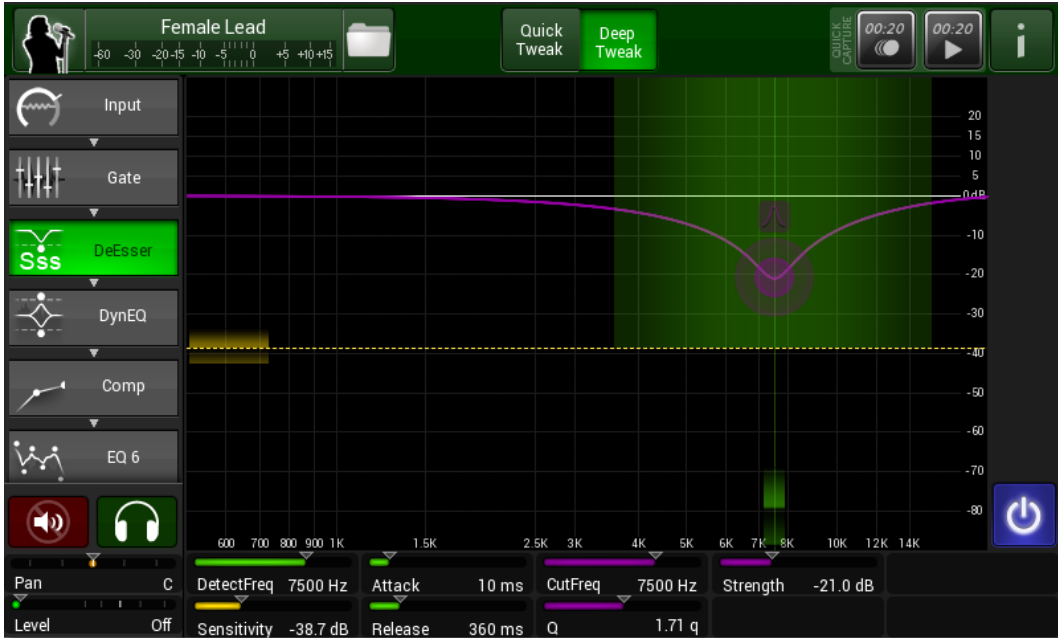
Delay

The Delay is a standard, mono delay with parameters for Delay Time, Feedback, Dry Level and Wet Level, providing intuitive control of channel delay.
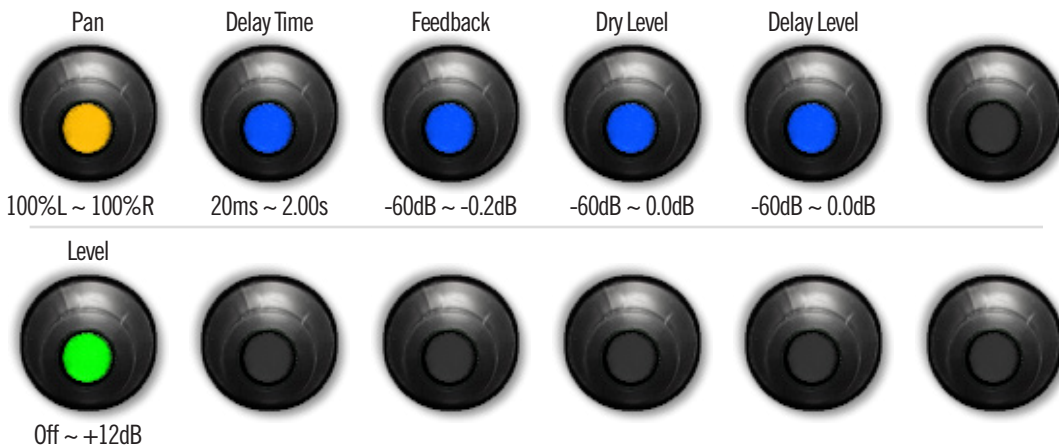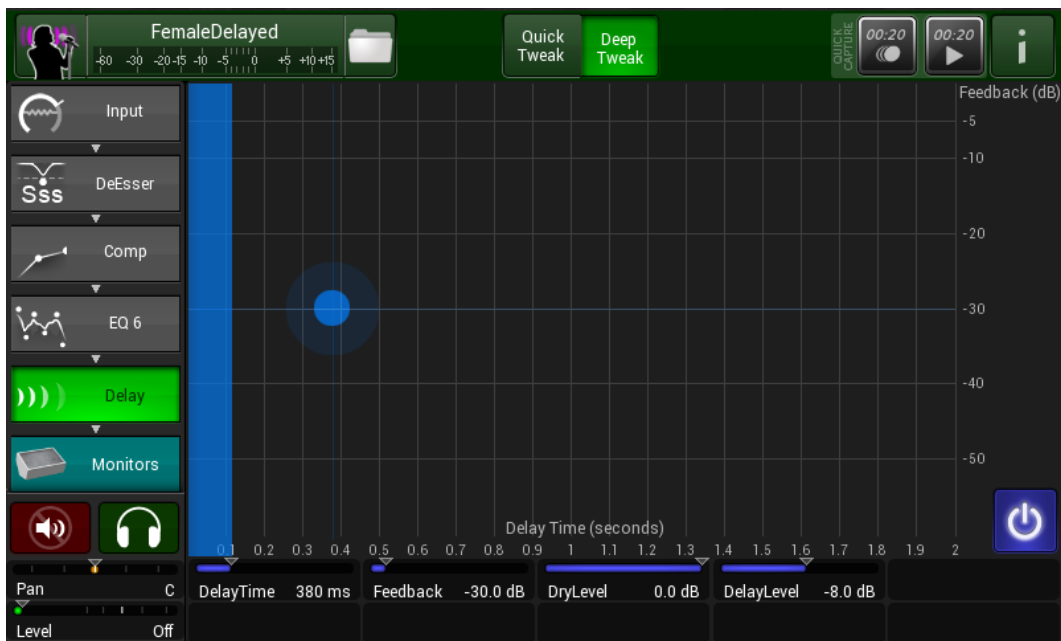
Dynamic EQ

The Dynamic EQ enables applying EQ that is dependent upon channel signal level, with settings for Low Threshold, High Threshold, Low Gain, High Gain, Frequency, Filter Q, Attack and Release.

Pan	Low Thresh	High Thresh	Frequency	Attack	
100%L ~ 100%R	-60dB ~ +20dB	-60dB ~ +20dB	60Hz ~ 8000Hz	1ms ~ 2.00s	

Level	Low Gain	High Gain	Filter Q	Release	
Off ~ +12dB	-18dB ~ +18dB	-18dB ~ +18dB	0.50q ~ 5.00q	1ms ~ 2.00s	
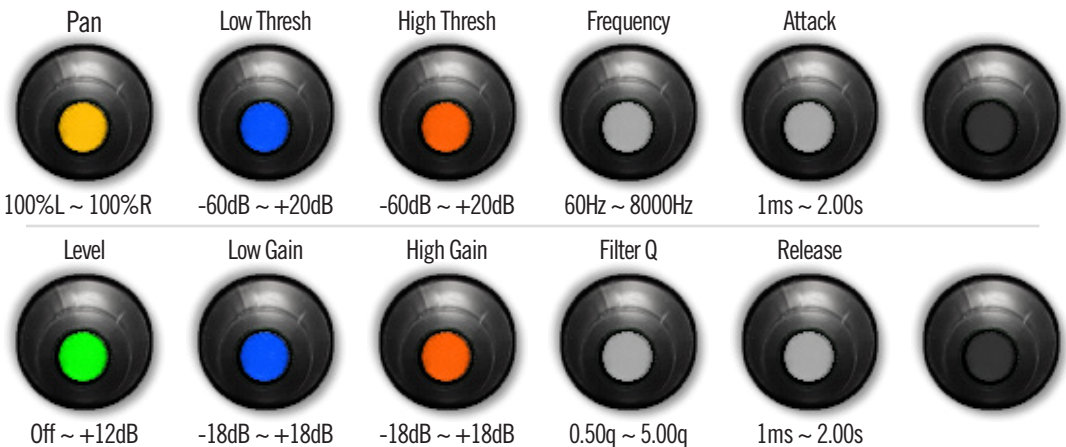
EQ 3

The EQ 3 is a 3-band equalizer featuring a Low Frequency Shelf, High Frequency Shelf and Mid Frequency parametric, with controls for Mid Frequency, Mid Q and Mid Gain.

Pan	Low Freq	Low Shelf	Mid Freq	Mid Q	Mid Gain
100%L ~ 100%R	20Hz ~ 500Hz	-15dB ~ +15dB	20Hz ~ 18kHz	0.1q ~ 10.0q	-15dB ~ +15dB

Level	High Freq	High Shelf			
0ff ~ +12dB	1kHz ~ 18kHz	-15dB ~ +15dB			
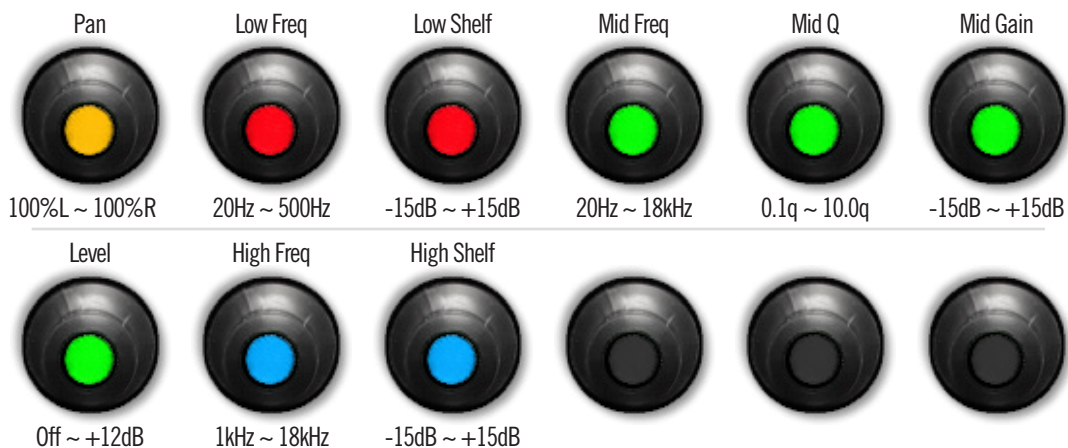
EQ 4

The EQ 4 is a 4-band equalizer, adding a second user-adjustable Mid 2 frequency parametric band to the EQ 3's Low Shelf, High Shelf and Mid 1 parametric bands.

Pan	Low Freq	Low Shelf	Mid Freq 1	Mid Q 1	Mid Gain 1
100%L ~ 100%R	20Hz ~ 500Hz	-15dB ~ +15dB	20Hz ~ 18kHz	0.1q ~ 10.0q	-15dB ~ +15dB

Level	Mid Freq 2	Mid Q 2	Mid Gain 2	High Freq	High Shelf
Off ~ +12dB	20Hz ~ 18kHz	0.1q~ 10.0q	-15dB ~ +15dB	1kHz ~ 18kHz	-15dB ~ +15dB
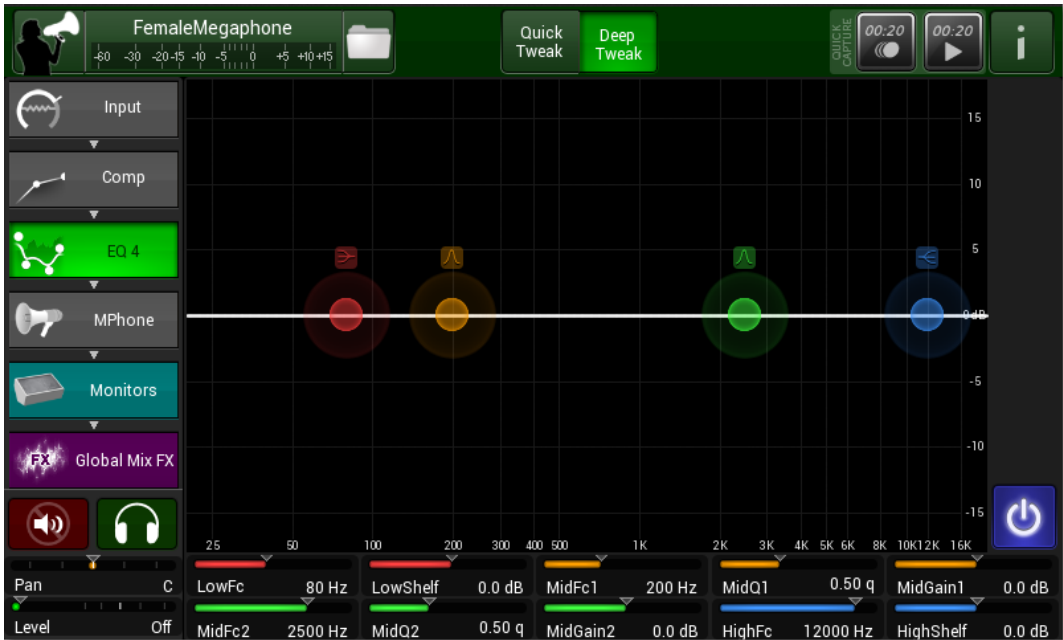
EQ 6 (page 1)

EQ 6 is a 6-band EQ featuring Low Shelf, High Shelf and 4 parametric bands of Mid EQ. Page 1 displays parameters for the Low Shelf, Mid 1 and Mid 2 bands. Simply tap a band on the touchscreen to display its parameters.

Pan	Low Freq	Low Shelf	Mid Freq 1	Mid Q 1	Mid Gain 1
100%L ~ 100%R	20Hz ~ 500Hz	-15dB ~ +15dB	20Hz ~ 18kHz	0.1q ~ 10.0q	-15dB ~ +15dB

Level			Mid Freq 2	Mid Q 2	Mid Gain 2
0ff ~ +12dB			20Hz ~ 18kHz	0.1q ~ 10.0q	-15dB ~ +15dB

EQ 6 (page 2)

Page 2 of the EQ 6 displays parameters for the Mid 3, Mid 4 and High Shelf bands. An optional way to view page 1 or 2 controls is by 'swiping' the controller strips left or right.

Pan	Mid Freq 3	Mid Q 3	Mid Gain 3	High Freq	High Shelf
100%L ~ 100%R	20Hz ~ 18kHz	0.1q ~ 10.0q	-15dB ~ +15dB	1kHz ~ 18kHz	-15dB ~ +15dB

Level	Mid Freq 4	Mid Q 4	Mid Gain 4		
Off ~ +12dB	20Hz ~ 18kHz	0.1q ~ 10.0q	-15dB ~ +15dB		
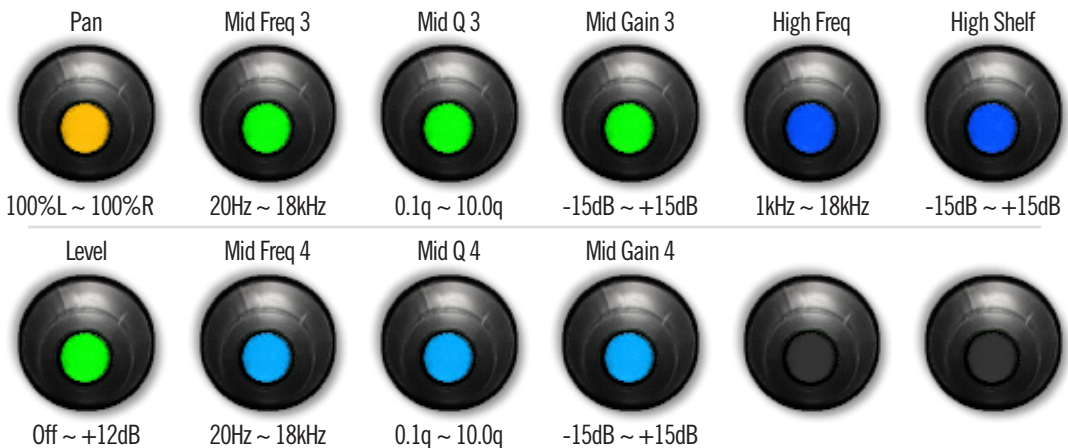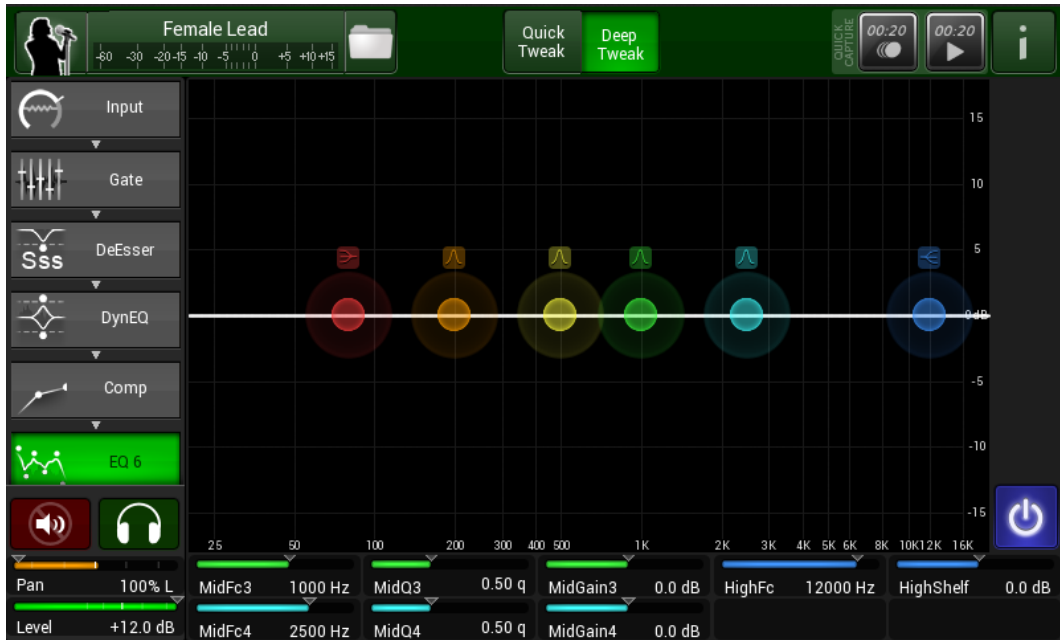
FBS (Feedback Suppression)

FBS is accessible via the Input tab. When FBS is enabled, it automatically detects up to 12 problem frequencies and filters them out. Select either Universal or Vocal mode. (Vocal is the most aggressive - may trigger unintentionally on pure tones, i.e. keyboards).

A•14
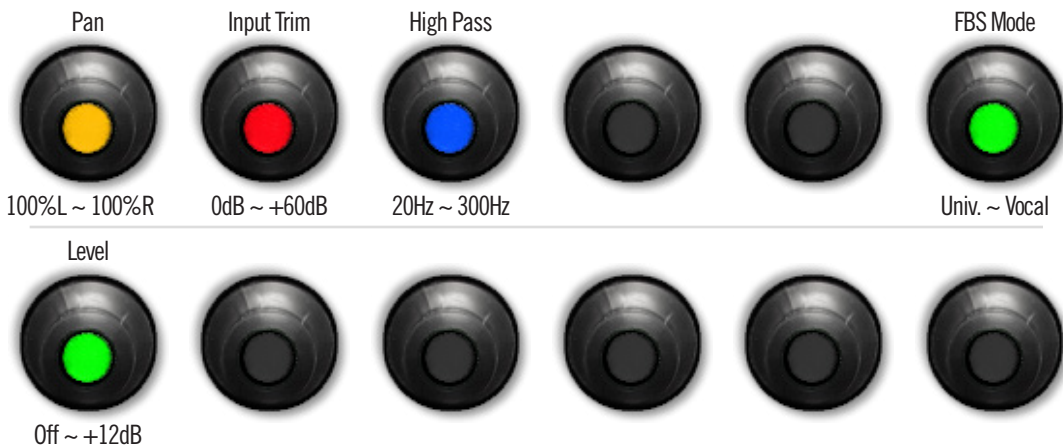
Noise Gate

This simple but effective 'look ahead' Noise Gate features parameter controls for Attack Threshold, Release Offset, Hold and Decay.
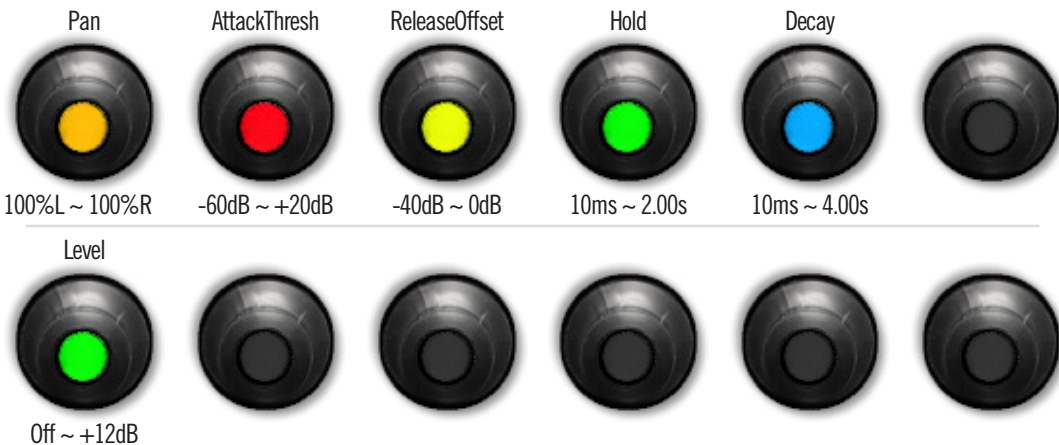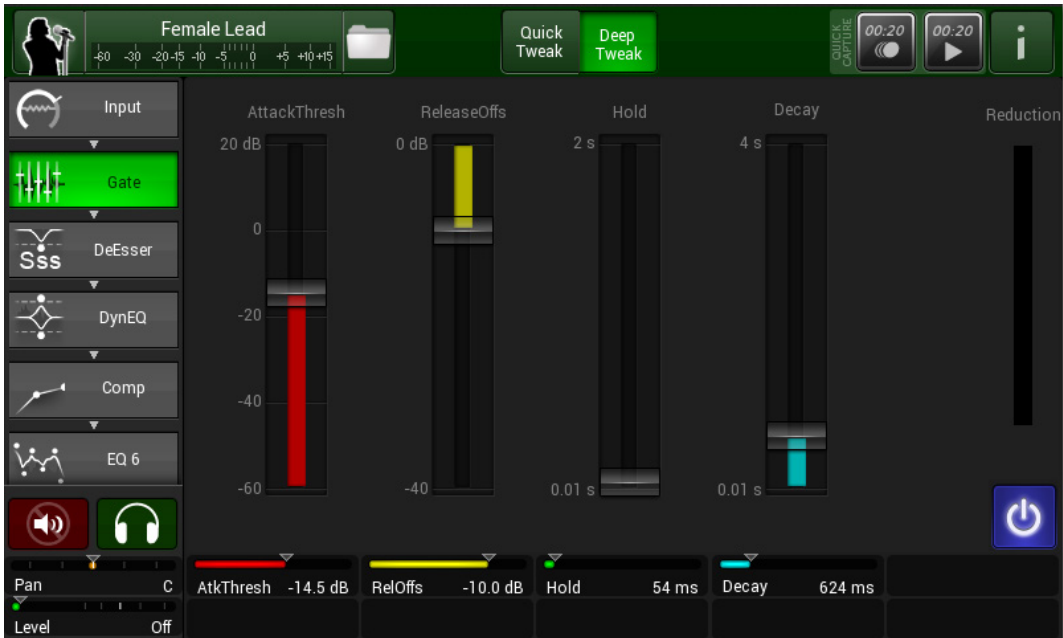
Limiter

This conventional Limiter offers user-adjustable Threshold, Attack, Release and makeup Gain controls. It's placed last in the signal chain for several Preset DSP Types.

A•16
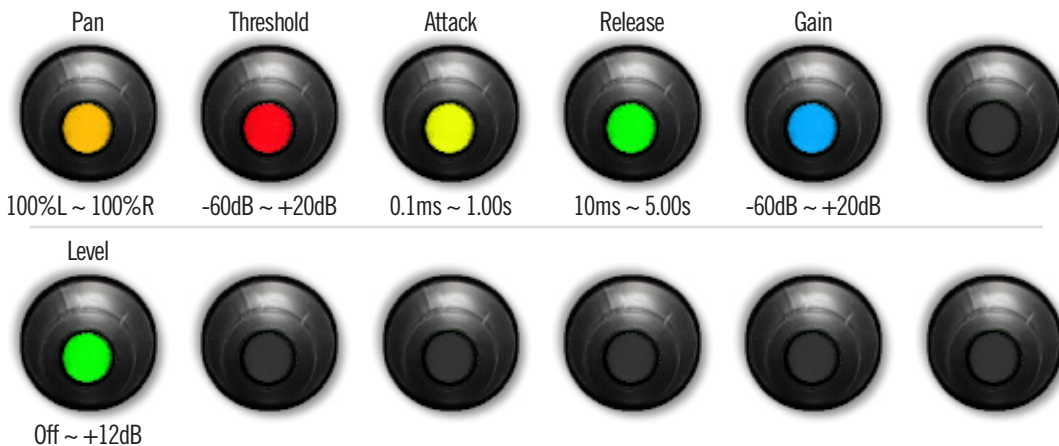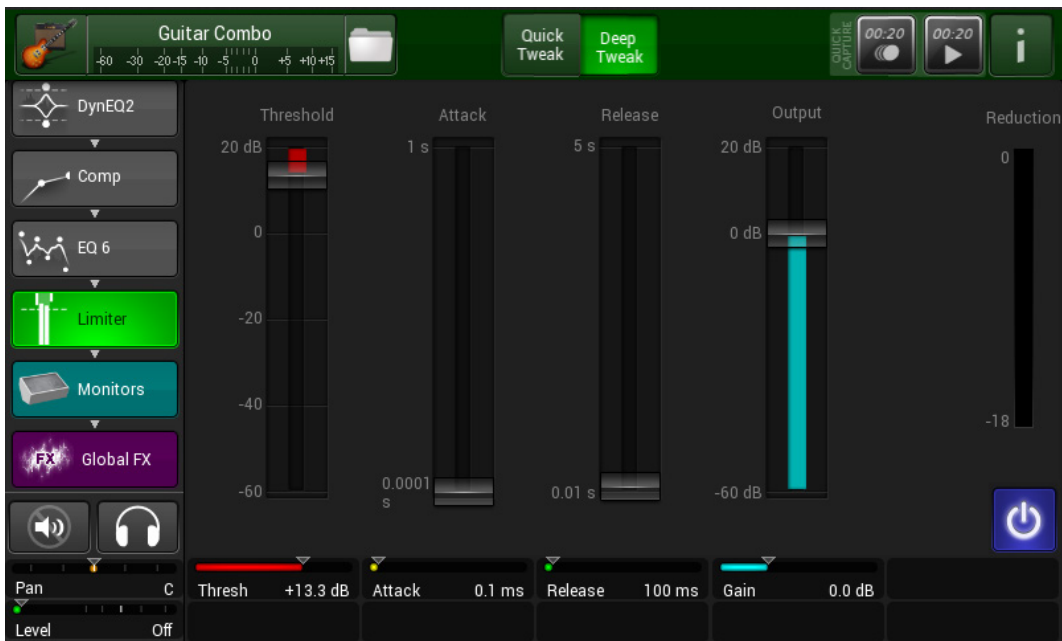
Megaphone

The Megaphone is used mostly as a special effect for vocals. It enables user-adjustable fine-tuning of Grit, Space, Tone, Focus, Level and Mix.

Pan	Grit	Space	Tone	Focus	Level
100%L ~ 100%R	0% ~ 100%	0% ~ 100%	0% ~ 100%	0% ~ 100%	0% ~ 100%

Level					Mix
Off ~ +12dB					0% ~ 100%
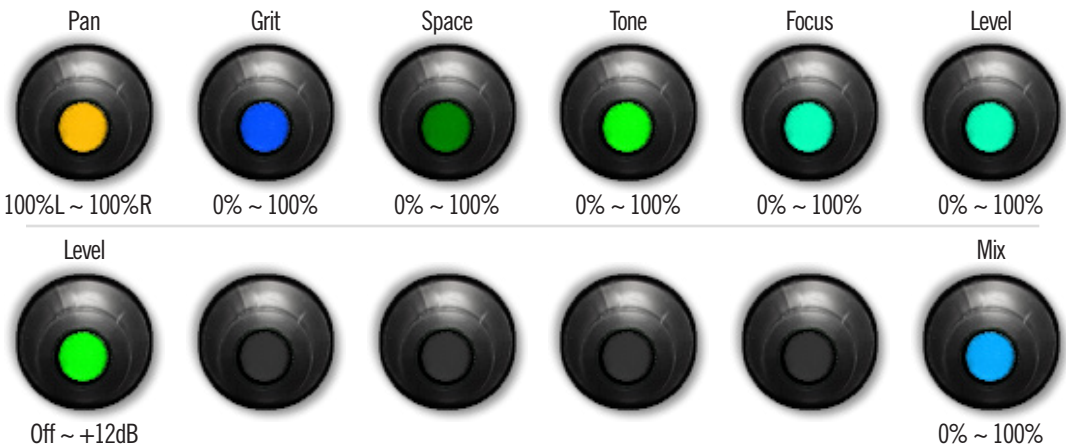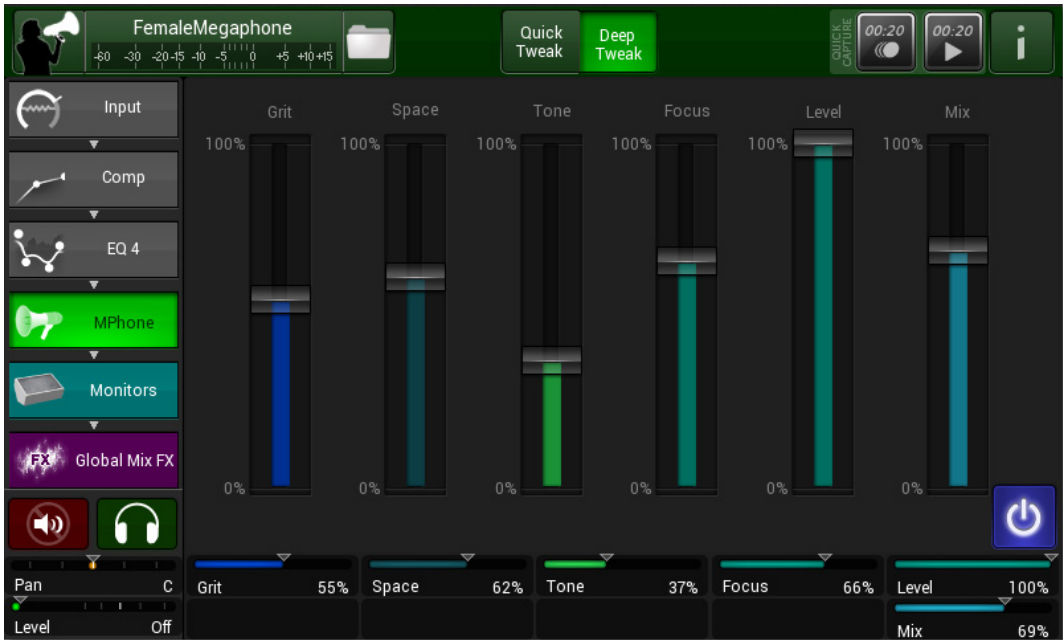
Sub Boost

The Sub Boost adds some serious bass boost when desired, with useful controls for Trigger Frequency, Threshold, Boost Frequency, Boost Level, Attack and Release.

Pan	TrigFreq	Threshold	BoostFreq	Boost Level	Attack
100%L ~ 100%R	60Hz ~ 500Hz	-60dB ~ +20dB	60Hz ~ 90Hz	0dB ~ +18dB	1ms ~ 2.00s

Level					Release
Off ~ +12dB					1ms ~ 2.00s

Global FX

There are 4 **Global FX** blocks in the M20d. Unlike Channel Processing, Global FX apply to your entire mix, based on individual Channel Monitor levels. Each Global FX block has a number of preset choices available. We'll list them in the following pages, along with their parameter names, ranges, and assigned hardware encoders.

Global FX Presets and their levels are accessible in **Deep Tweak** mode when you select the **Global FX** tab. For example, select the Female Lead vocal channel, enter Tweak Mode, tap the Deep Tweak button, then tap the Global FX tab in the lower left FX column. Your M20d display will look something like this:
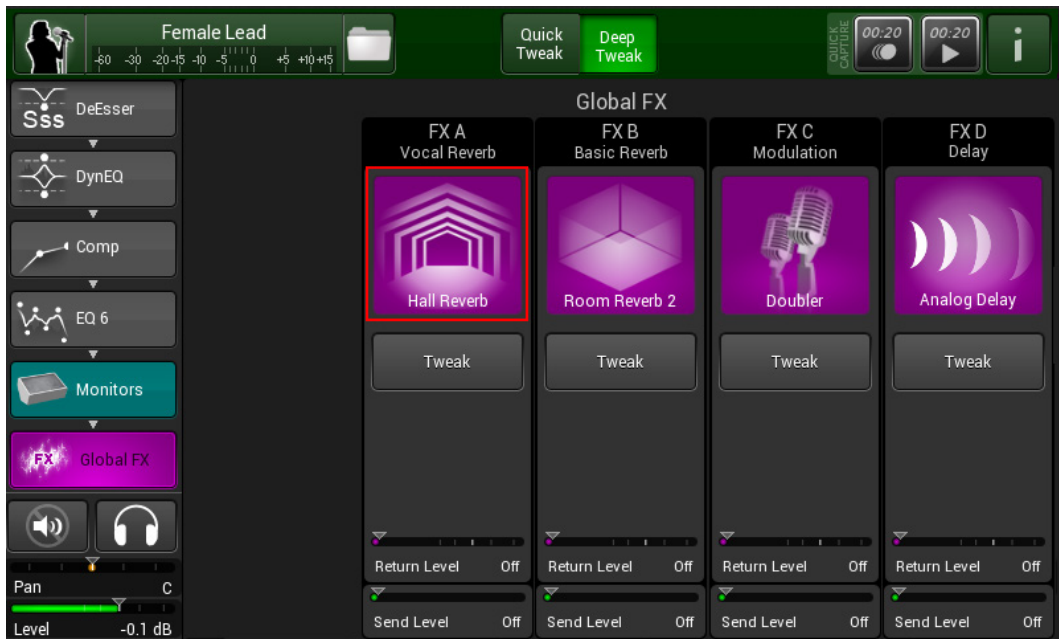
In the above example, we'll load a different reverb preset into the **FX A** Vocal Reverb block, which initially has Hall Reverb loaded. To open the **Load FX Preset** browser, tap the purple preset graphic in FX A (outlined in red above). The Load FX Preset browser window will open, displaying a scrollable list of the 9 available Vocal Reverb presets.
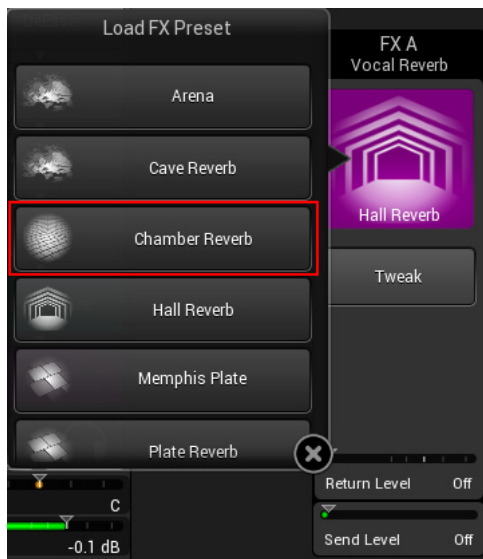
Tap the Chamber Reverb tab and the Chamber Reverb preset will load into FX A, dismissing the browser window. To tweak FX parameters, tap the Tweak button.
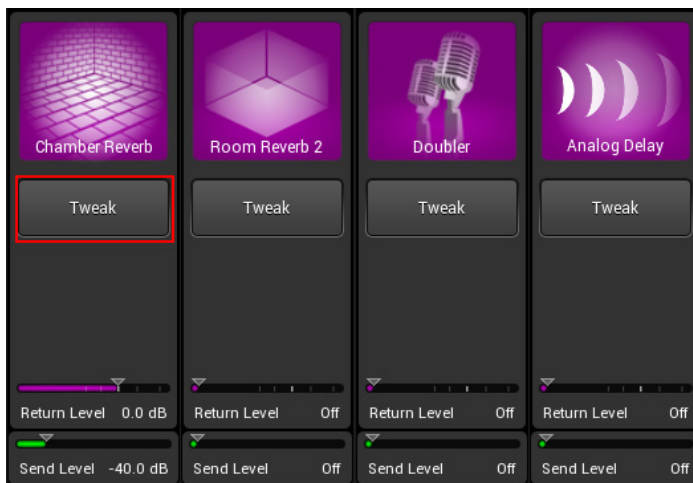
B•2 It's usually best to set the Return Level to 0.00 dB and leave it there. That way you can control any individual input channel's reverb level by adjusting its Send Level, as illustrated here for the Female Lead channel.

Global FX A: Vocal Reverb

There are 9 Global FX A Vocal Reverb presets. Each has the same set of 5 Parameters, but with different ranges. We'll display each preset's ranges for PreDelay, Decay, High Cut and Early Reflections on the following pages. Below is the Arena Preset.

PreDelay	Decay	High Cut	E.R.
20ms ~ 200ms	1.70s ~ 8.75s	1kHz ~ 20kHz	0% ~ 100%

Level

Off ~ +12dB
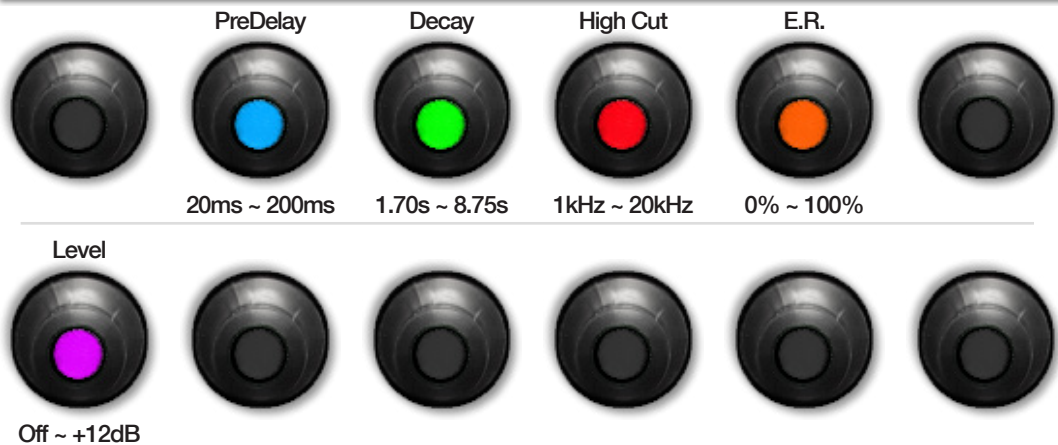
Global FX A: **Vocal Reverb** (parameter ranges)

The graphics below represent the top row of M20 hardware encoders for each Vocal Reverb preset, noting ranges for PreDelay, Decay, High Cut and Early Reflections. The range for the Level parameter, as illustrated on the previous page for encoder 7, bottom row left, is the same for all 9 reverb presets, so we won't duplicate it here.

Cave Reverb
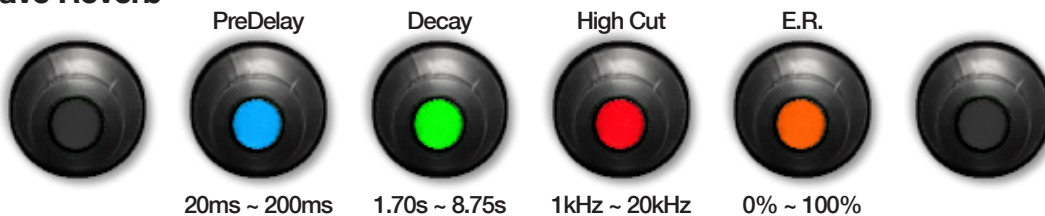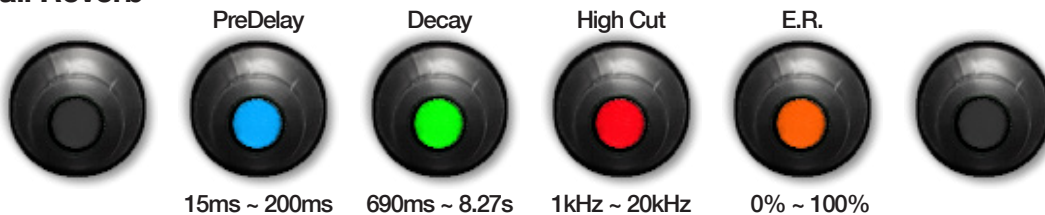
	PreDelay	Decay	High Cut	E.R.	
	20ms ~ 200ms	1.70s ~ 8.75s	1kHz ~ 20kHz	0% ~ 100%	

Chamber Reverb

	PreDelay	Decay	High Cut	E.R.	
	15ms ~ 200ms	710ms ~ 3.62s	1kHz ~ 20kHz	0% ~ 100%	

Hall Reverb

	PreDelay	Decay	High Cut	E.R.	
	15ms ~ 200ms	690ms ~ 8.27s	1kHz ~ 20kHz	0% ~ 100%	

Memphis Plate

	PreDelay	Decay	High Cut	E.R.	
	15ms ~ 200ms	830ms ~ 4.51s	1kHz ~ 20kHz	0% ~ 100%	

Global FX A: Vocal Reverb (parameter ranges)

Below are the parameter ranges for PreDelay, Decay, High Cut and Early Reflections for the final 4 Vocal Reverb presets: Plate Reverb, Room Reverb, Tile Reverb and Union Station. As mentioned previously, the Level parameter has the same range for all Vocal Reverbs (Off ~ +12dB), controlled by encoder 7, so we're not listing it here.

Plate Reverb

	PreDelay	Decay	High Cut	E.R.	
	15ms ~ 200ms	830ms ~ 4.51s	1kHz ~ 20kHz	0% ~ 100%	

Room Reverb

	PreDelay	Decay	High Cut	E.R.	
	15ms ~ 200ms	480ms ~ 2.49s	1kHz ~ 20kHz	0% ~ 100%	

Tile Reverb

	PreDelay	Decay	High Cut	E.R.	
	15ms ~ 200ms	300ms ~ 1.26s	1kHz ~ 20kHz	0% ~ 100%	

Union Station

	PreDelay	Decay	High Cut	E.R.	
	15ms ~ 200ms	710ms ~ 3.62s	1kHz ~ 20kHz	0% ~ 100%	

B•5

Global FX B: Basic Reverb

There are 4 Global FX B Basic Reverb presets. Each has the same set of 4 Parameters, with slightly different ranges. Below is the Chamber Reverb 2 preset. We'll display the other 3 Presets' ranges for PreDelay, Decay and High Cut on the next page.
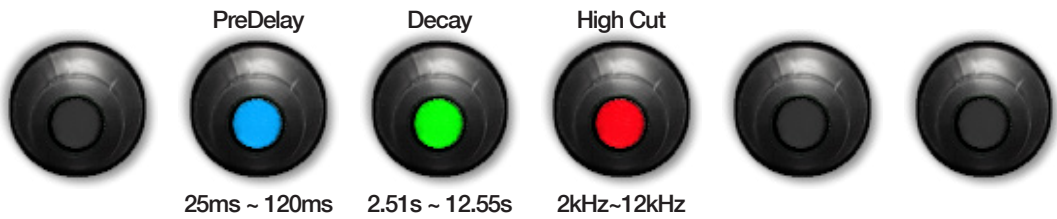

PreDelay
25ms ~ 120ms

Decay
2.51s ~ 12.55s

High Cut
2kHz~12kHz

Level
Off ~ +12dB

Global FX B: **Basic Reverb** (parameter ranges)

Below are the parameter ranges for PreDelay, Decay, and High Cut for the other 3 Basic Reverb presets: Hall Reverb 2, Plate Reverb 2 and Room Reverb 2. As with the Vocal Reverbs, the Level parameter has the same range for all Basic Reverbs (Off ~ +12dB), controlled by encoder 7, so we're not listing it here.

Hall Reverb 2

	PreDelay	Decay	High Cut		
	25ms ~ 120ms	870ms ~ 1.86s	2kHz ~ 12kHz		

Plate Reverb 2

	PreDelay	Decay	High Cut		
	15ms ~ 44ms	950ms ~ 2.40s	2kHz ~ 12kHz		

Room Reverb 2

	PreDelay	Decay	High Cut		
	5ms ~ 44ms	420ms ~ 920ms	2kHz ~ 12kHz		

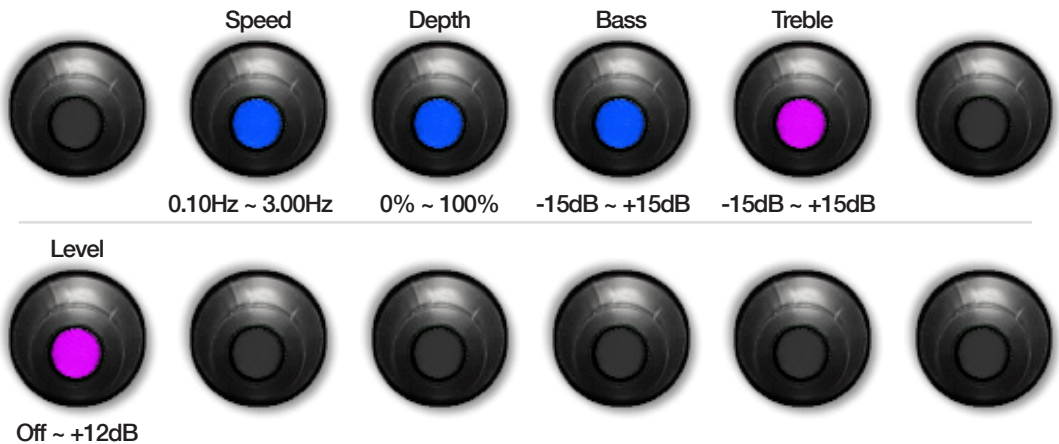## Global FX C: Modulation: Chorus

Global FX C gives you a choice of 5 modulation-based presets. These include Chorus, Doubler, Flanger and Four Voices. Each effect has different parameters, as illustrated on the next several pages. Below is the Chorus preset.

Speed
0.10Hz ~ 3.00Hz

Depth
0% ~ 100%

Bass
-15dB ~ +15dB

Treble
-15dB ~ +15dB

Level
Off ~ +12dB

Global FX C: Modulation: Doubler (page 1)

The Doubler features 4 voices and has 2 pages of parameters to adjust Voice Pan, Voice Delay, Voice Pitch, Voice Level and overall Level. Below are the page 1 parameters for Voices 1 and 2.

	Voice 1 Pan	Voice 1 Delay	Voice 2 Pan	Voice 2 Delay	
	100%L ~ 100%R	0ms ~ 60ms	100%L ~ 100%R	0ms ~ 60ms	
Level	Voice 1 Pitch	Voice 1 Level	Voice 2 Pitch	Voice 2 Level	
Off ~ +12dB	-30.0ct ~ +30.0ct	-60dB ~ +6.0dB	-30.0ct ~ +30.0ct	-60dB ~ +6.0dB	

Global FX C: Modulation: Doubler (page 2)

The page 2 parameters for the Doubler are illustrated below. The parameter ranges for Voices 3 and 4 are the same as for Voices 1 and 2. As with the other multi-page FX, you can access page 2 by swiping the parameter controller strips to the left from page 1.
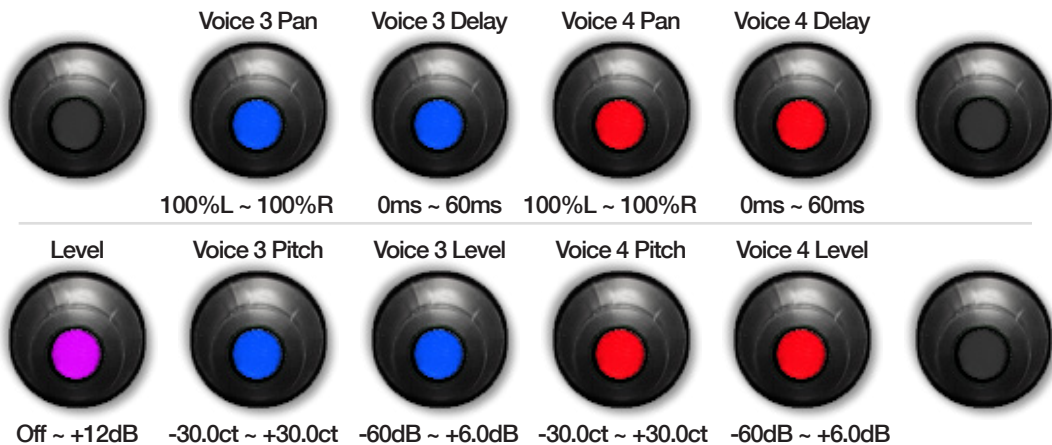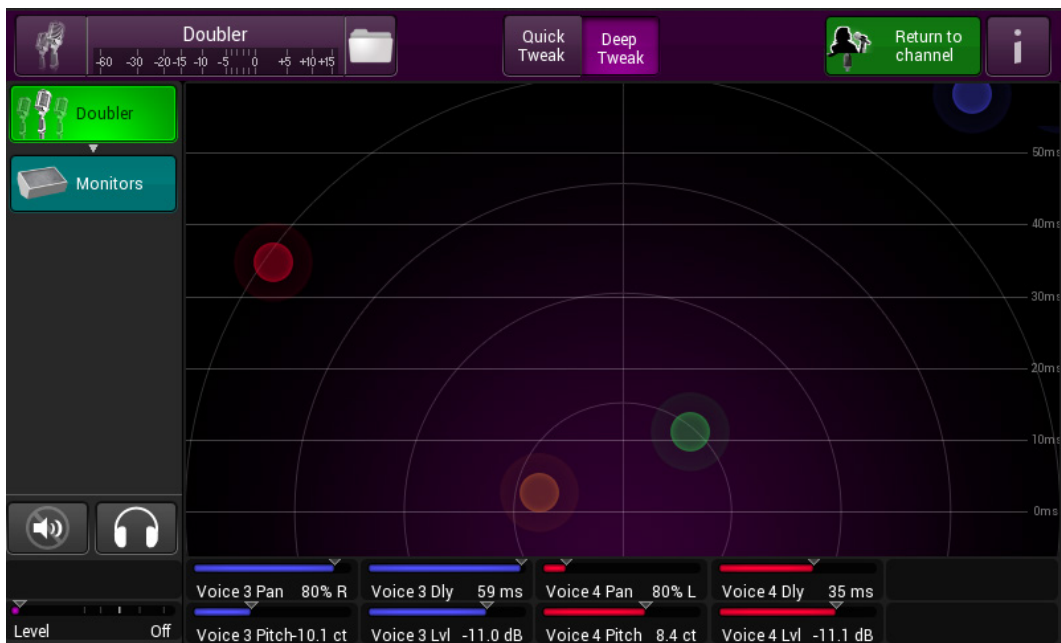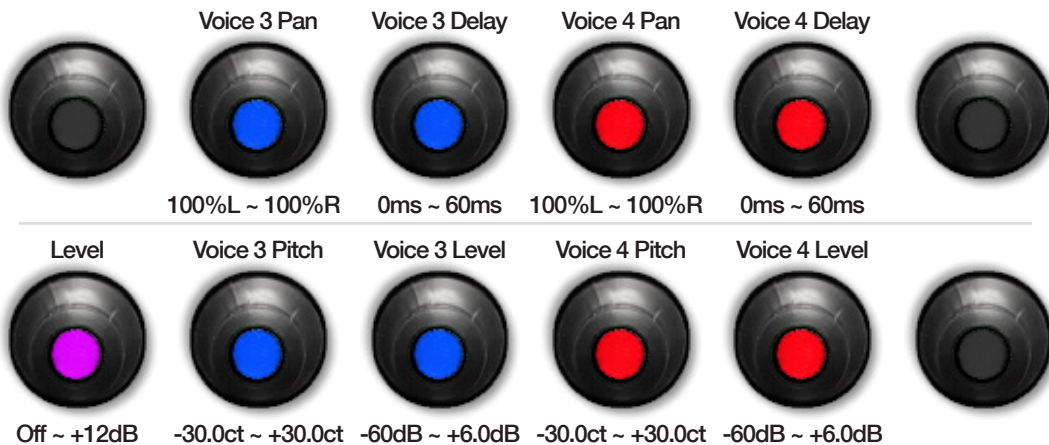
Global FX C: Modulation: Flanger

This is the Global FX C Flanger. It's a straightforward, classic Flanger with parameter controls for Speed, Feedback, Depth, PreDelay and overall Level, as illustrated below.
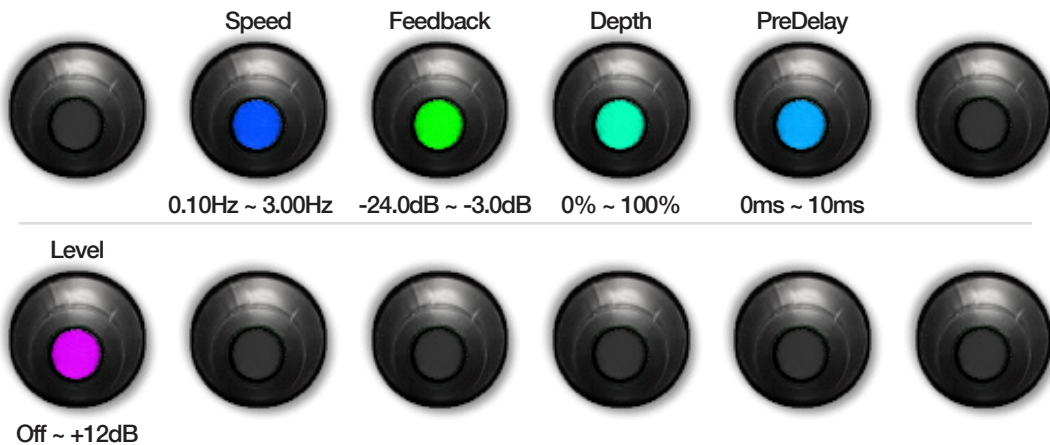
Global FX C: Modulation: Four Voices

The Four Voices preset uses the Doubler effect, with default settings that are optimized to emulate 4 voices. The page 1 parameter settings for Voices 1 and 2 are similar to the Doubler (see Page B•8), but the Pan and Level settings for Voices 3 and 4 are different, as illustrated below.

| Voice 3 Pan | 80% R | Voice 3 Dly | 59 ms | Voice 4 Pan | 80% L | Voice 4 Dly | 35 ms |
| Voice 3 Pitch | -10.1 ct | Voice 3 Lvl | -11.0 dB | Voice 4 Pitch | 8.4 ct | Voice 4 Lvl | -11.1 dB |

| | Voice 3 Pan | Voice 3 Delay | Voice 4 Pan | Voice 4 Delay | |
| | 100%L ~ 100%R | 0ms ~ 60ms | 100%L ~ 100%R | 0ms ~ 60ms | |

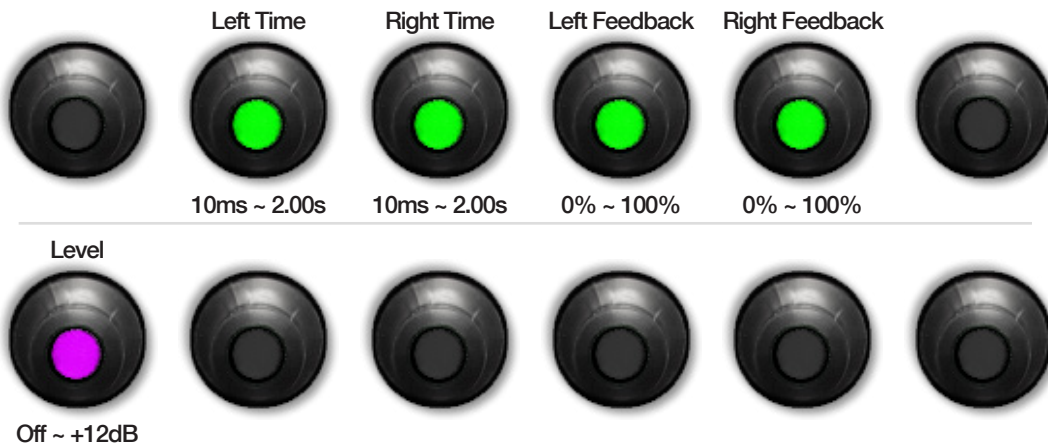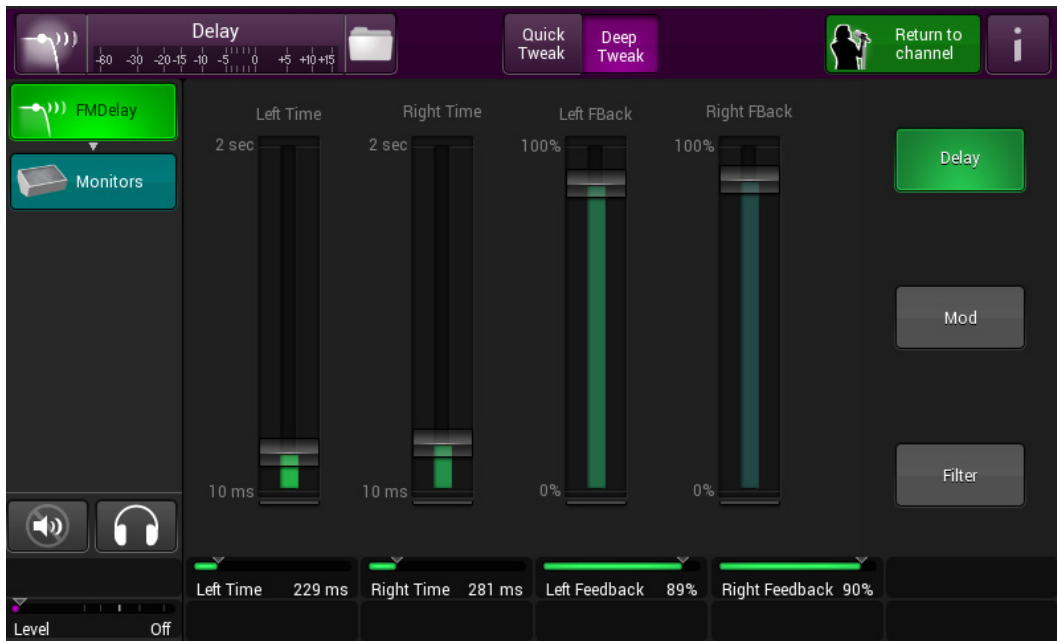| Level | Voice 3 Pitch | Voice 3 Level | Voice 4 Pitch | Voice 4 Level | |
| Off ~ +12dB | -30.0ct ~ +30.0ct | -60dB ~ +6.0dB | -30.0ct ~ +30.0ct | -60dB ~ +6.0dB | |

Global FX D: Delay: Analog Delay

Global FX D includes 4 Delay presets. These include Analog Delay, Filter Delay, Rockabilly Slap and Stereo Delay. Each has slightly different parameters, as illustrated on the next several pages. Below is the Analog Delay.

B•13
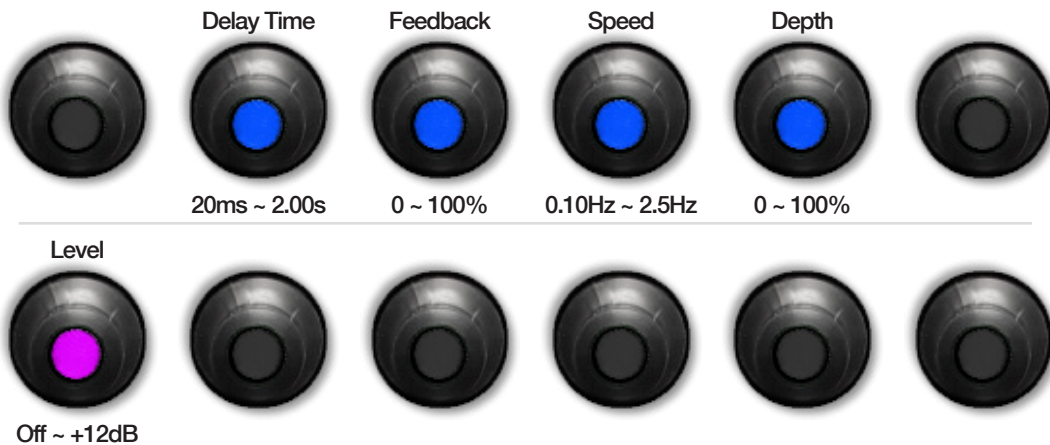
Global FX D: Delay: Filter Delay (page 1)

The Filter Delay has 3 pages of parameters: Delay, Mod and Filter. These pages are accessible by tapping the appropriate button on the right of the touchscreen, or by swiping the controller strips to the left or right. Below is page 1, the Delay parameters.

Left Time   **Right Time**   **Left Feedback**   **Right Feedback**

10ms ~ 2.00s   10ms ~ 2.00s   0% ~ 100%   0% ~ 100%
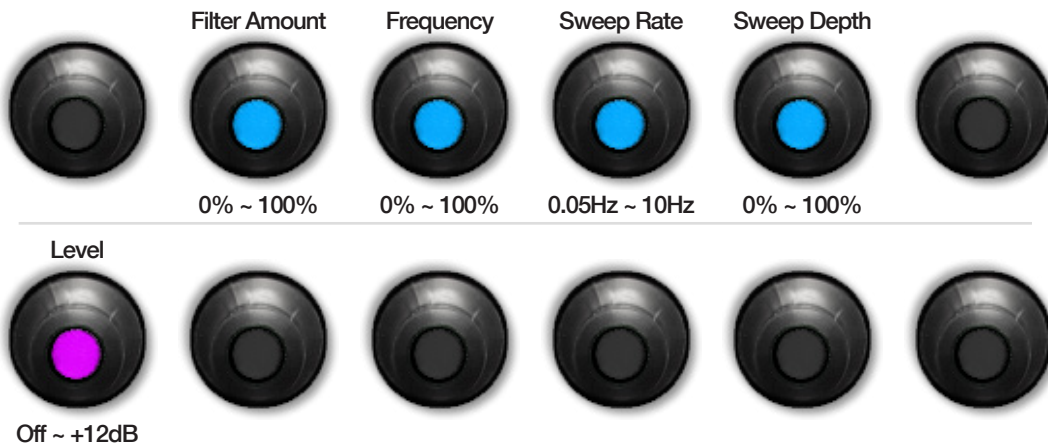
Level

Off ~ +12dB

Global FX D: Delay: Filter Delay (page 2)

This is page 2 of the Filter Delay preset parameters, the Mod page. This page is displayed when you tap the Mod button on the right center of the touchscreen. It features Mod Rate, Mod Depth, Spread and Level.

Mod Rate
0.1Hz ~ 10.00Hz

Mod Depth
0% ~ 100%

Spread
0% ~ 100%

Level
Off ~ +12dB

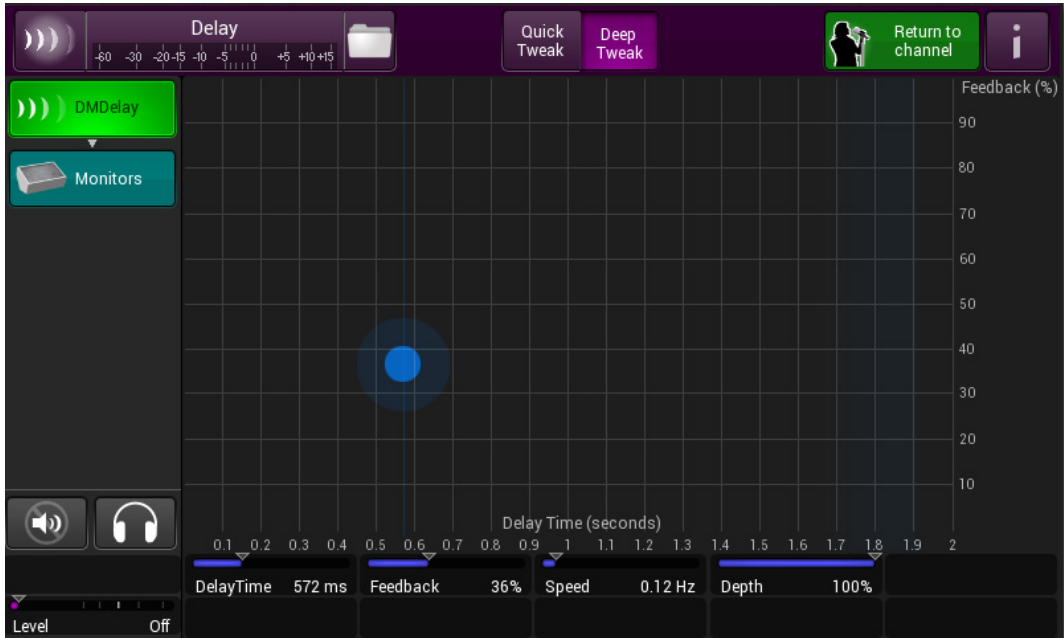## Global FX D: Delay: Filter Delay (page 3)

This is page 3 of the Filter Delay preset parameters, the Filter page. This page is displayed when you tap the Filter button on the lower right of the touchscreen. Or you can swipe the controller strips to the left from page 2.

Filter Amount — 0% ~ 100%

Frequency — 0% ~ 100%

Sweep Rate — 0.05Hz ~ 10Hz

Sweep Depth — 0% ~ 100%

Level — Off ~ +12dB

Global FX D: Delay: Rockabilly Slap

The Rockabilly Slap preset delivers a quick 135ms slap delay with 37% feedback. To tweak your settings, parameters for Delay Time, Feedback, Speed and Depth are provided.
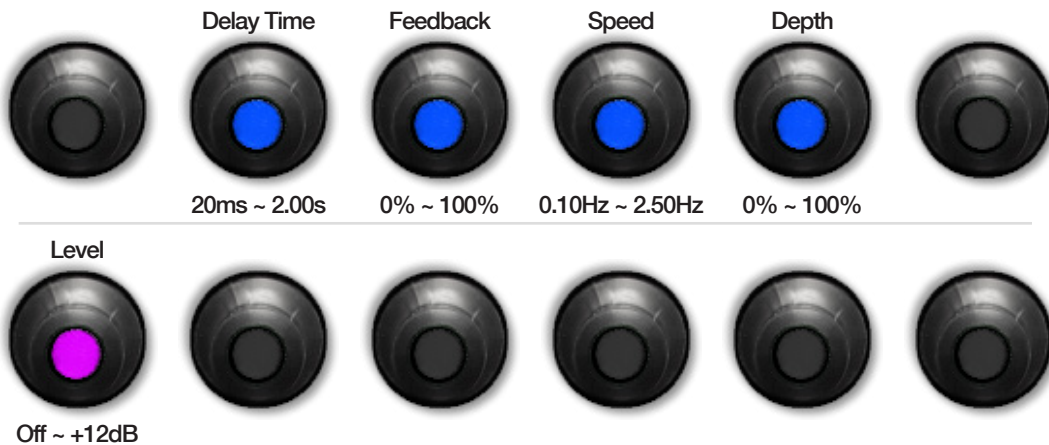
Global FX D: Delay: Stereo Delay

The fourth Delay preset is a traditional Stereo Delay, with parameters for Left Time, Right Time, Left Feedback, Right Feedback and Level, as illustrated below. The Mod and Filter tabs are also available, in case you want to use them to modify this preset.

Left Time	Right Time	Left Feedback	Right Feedback
10ms~2.00s	10ms~2.00s	0%~100%	0%~100%

Level

Off ~ +12dB
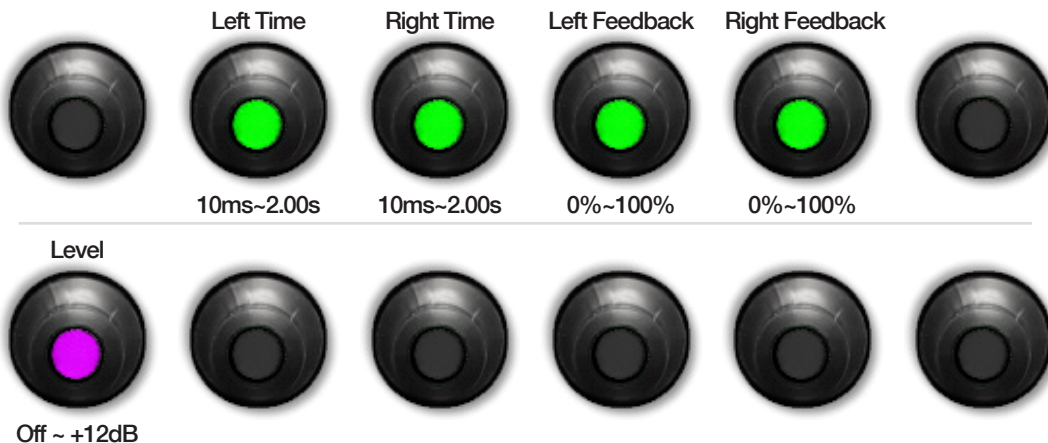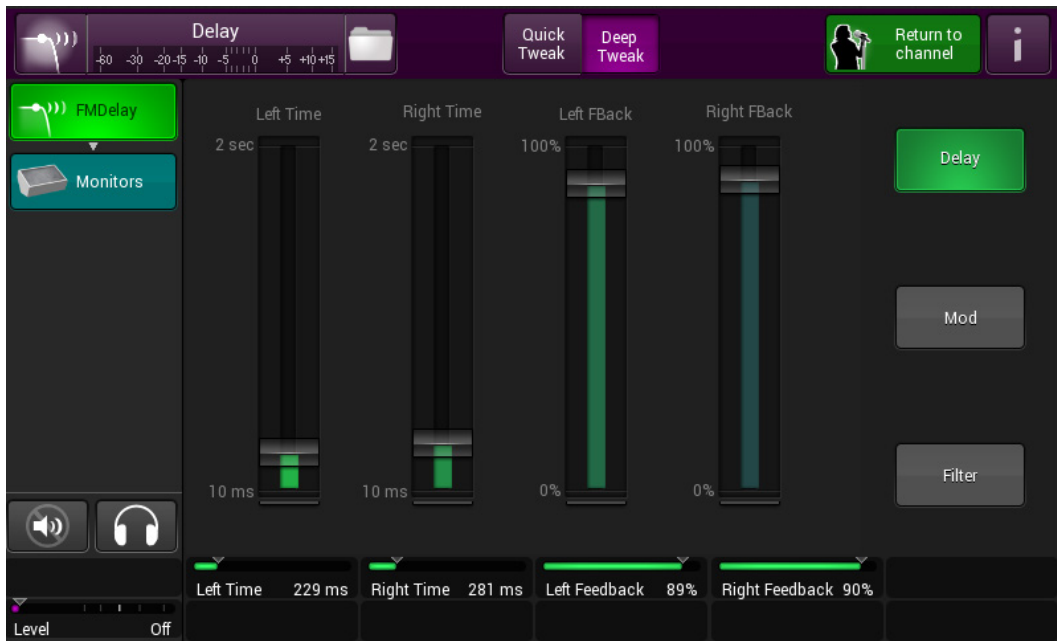
Preset DSP Types

A **Preset DSP Type** is essentially a channel preset of various processing blocks arranged in a particular order in the channel's signal chain. Each preset is designed with a specific DSP Type, which can be changed if desired.

For example, one Preset DSP Type may include an EQ 6-Band followed by a Comp, and a similar DSP Type may change the processing block order by placing the Comp in front of the EQ 6-Band. To load a particular Preset DSP Type, follow these steps:

1. Enter Setup Mode by pressing the hardware SETUP button.

2. Tap the stage icon for the Channel Preset you'd like to edit; in this example, we'll use the "Female Lead" preset. Its stage icon should now be highlighted.
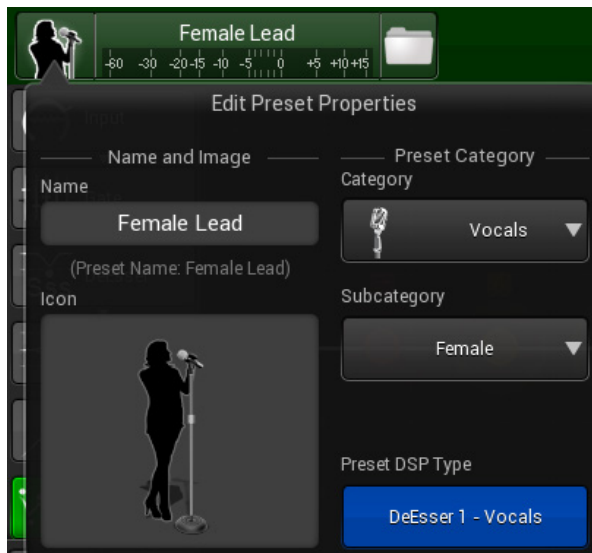
3. Enter Tweak Mode by pressing the hardware TWEAK button.

4. Tap the Deep Tweak button in the Tweak window if it isn't already selected.

5. Tap the image of the Female Lead vocal in the upper left of the display. The **Edit Preset Properties** window will appear.

C•1

6. Press the blue **Preset DSP Type** button in the lower right corner of the window. It will be labeled "De-Esser 1- Vocals". This is the default **Preset DSP Type** for the "Female Lead" Channel Preset.

A menu of **Preset DSP Types** will appear; swipe upwards to scroll through all the available **Preset DSP Types**. When you see "Delay DeEsser 1 - Vocal", select it by tapping the touchscreen. When selected it will be highlighted in blue.


7. Press the blue **Load Selected** button and the "Delay DeEsser 1 - Vocal" **DSP Type** will be loaded for the "Female Lead" channel.

In the following pages of this chapter, we'll describe all the available **Preset DSP Types**, as displayed in the **Change DSP Type** menu illustrated above.

Uber 1 (General, Snare, Toms, Guitar)

These 4 full-featured **Uber 1 Channels** are identical regarding FX order, with default settings designed for slightly different applications.
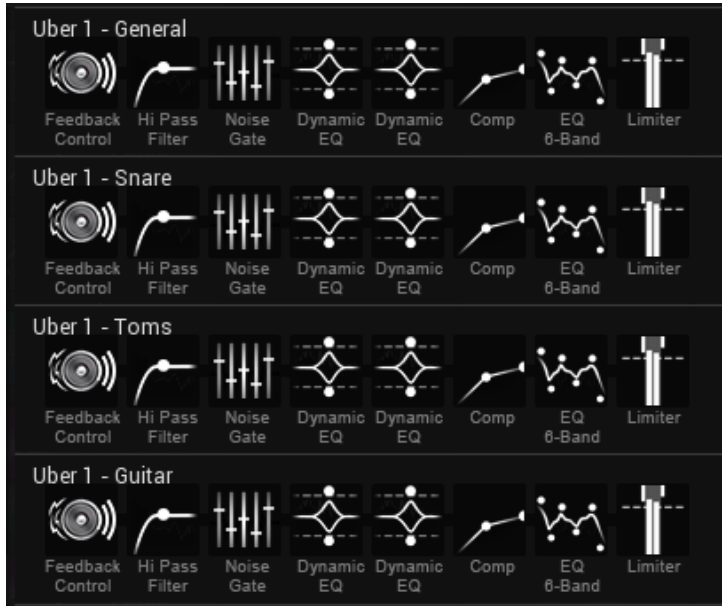
FX Order for Uber 1:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- Noise Gate
- Dynamic EQ
- Dynamic EQ
- Comp
- EQ 6-Band
- Limiter

Uber 2 (General, Snare, Toms, Guitar)

These 4 **Uber 2 DSP Types** are the same as the 4 **Uber 1** versions, except the Comp is positioned after the EQ 6-Band, for those who prefer having the EQ before the Compressor.
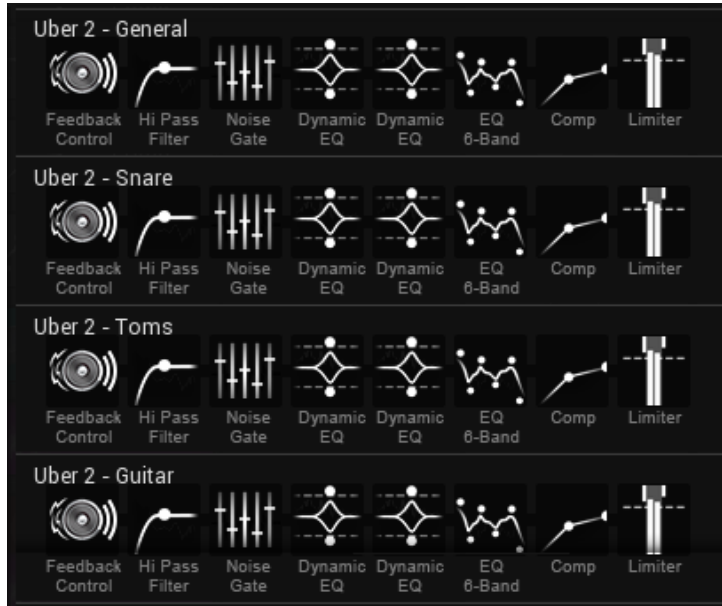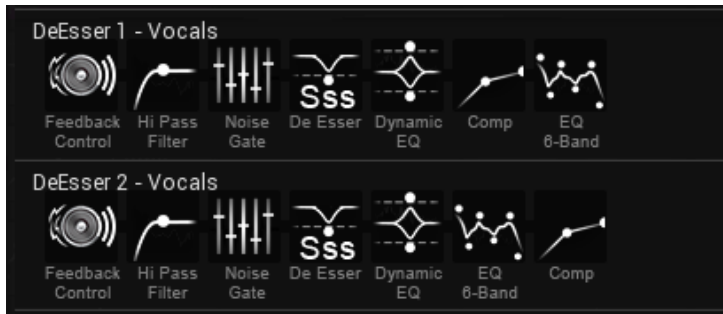

FX Order for Uber 2:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- Noise Gate
- Dynamic EQ
- Dynamic EQ
- EQ 6-Band
- Comp
- Limiter

DeEsser 1 & 2 (Vocals)

These 2 **Vocal Preset DSP Types** use fewer FX than the **Uber Channels**. The only difference between them is the Comp is positioned after the EQ 6-Band in DeEsser 2.

FX Order for DeEsser 1:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- Noise Gate
- DeEsser
- Dynamic EQ
- Comp
- EQ 6-Band

FX Order for DeEsser 2:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- Noise Gate
- DeEsser
- Dynamic EQ
- EQ 6-Band
- Comp

SubBass 1 & 2 (Kick, Bass)

These 3 Sub Bass DSP Types for Kick and Bass are very similar, the difference being the Comp is positioned after the EQ 6-Band in SubBass 2.

FX Order for SubBass 1:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
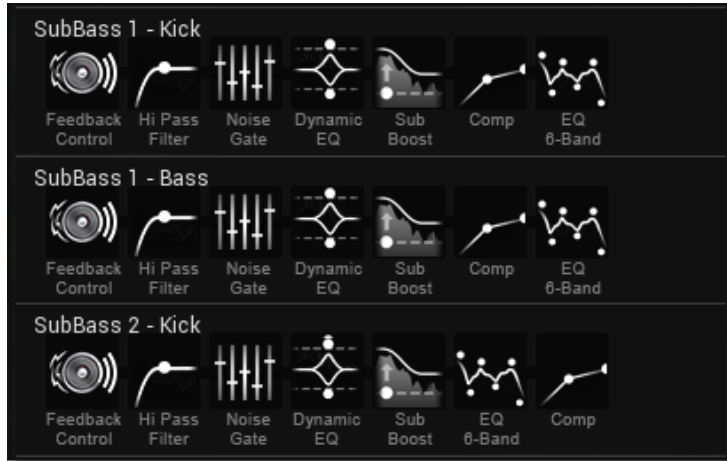- Noise Gate
- Dynamic EQ
- Sub Boost
- Comp
- EQ 6-Band

FX Order for SubBass 2:

Same order as **SubBass 1** except Comp follows EQ 6-Band in the signal chain.

Delay: Gate 1, DeEsser 1, DynEQ 1 (General, Vocal)

These 3 Delay DSP Types are similar to each other, except the 3rd effect in the signal chain changes for particular applications.
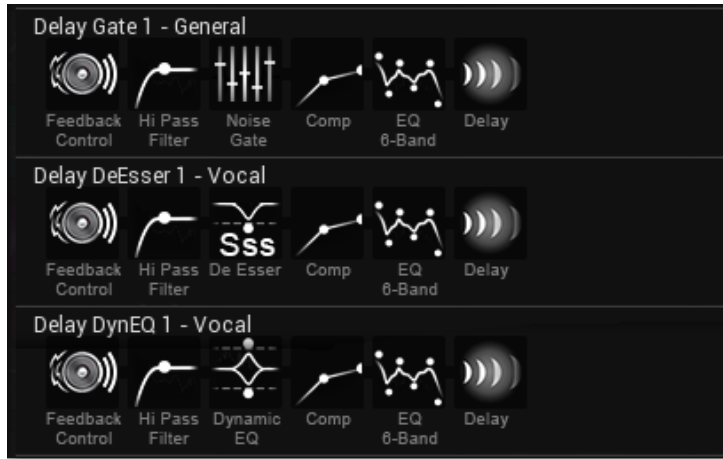
FX Order for Delay 1:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- Noise Gate (Delay Gate 1 - General only)
- DeEsser (Delay DeEsser 1 - Vocal only)
- Dynamic EQ (Delay DynEQ 1 - Vocal only)
- Comp
- EQ 6-Band
- Delay

Delay: Gate 2, DeEsser 2, DynEQ 2 (General, Vocal)

These 3 Delay DSP Types are identical to the Delay 1 versions, except Comp is positioned after the EQ-6 in the signal chain, just before the Delay.

FX Order for Delay 1:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- Noise Gate (Delay Gate 2 - General only)
- DeEsser (Delay DeEsser 2 - Vocal only)
- Dynamic EQ (Delay DynEQ 2 - Vocal only)
- EQ 6-Band
- Comp
- Delay

MultiComp 1 & 2 (Drums)

These 2 MultiComp DSP Types are the same except Multi-Comp 2 positions the EQ 6-Band before the MultiComp in the signal chain.
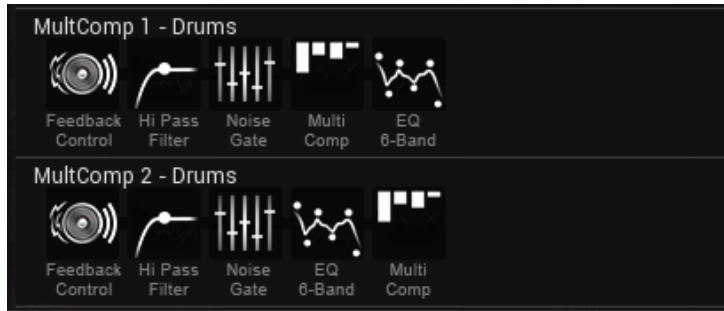
FX Order for MultiComp 1:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- Noise Gate
- Multi Compressor
- EQ 6-Band

FX Order for MultiComp 2:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- Noise Gate
- EQ 6-Band
- Multi Compressor

MultiComp 3 & 4 (General, Bass)

The **MultiComp 3 DSP Types** are similar to the **MultiComp 4**, except the MultiComp effect is positioned after the EQ 6-Band in the **MultiComp 4 General** and **Bass** versions.

FX Order for MultiComp 3 (General, Bass):

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- MultiComp
- EQ 6-Band
- Limiter

FX Order for MultiComp 4 (General, Bass):

Same order as **MultiComp 3** except MultiComp follows EQ 6-Band in the signal chain.

Chorus & Flanger (General), Megaphone (Vocals)

These 3 **DSP Types** use a moderate number of FX, the difference being the final effect in the signal chain is Chorus, Flanger or Megaphone respectively.
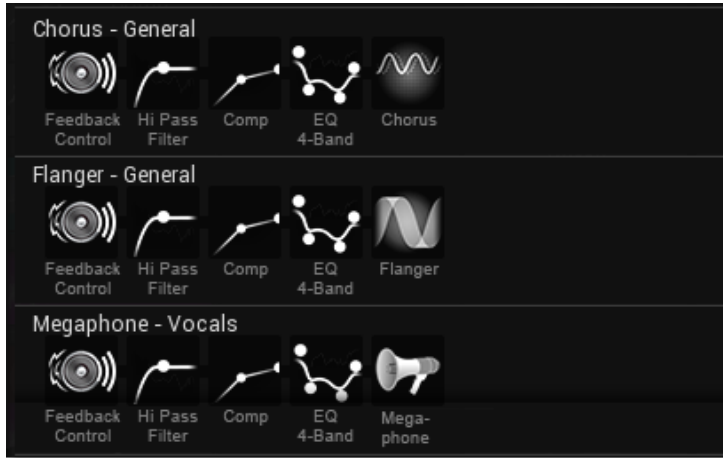
FX Order for Chorus, Flanger, Megaphone:

- Feedback Control (Feedback Suppression)
- Hi Pass Filter
- Comp
- EQ 4-Band
- Chorus (Chorus - General only)
- Flanger (Flanger - General only)
- Megaphone (Megaphone - Vocals only)

Basic 1, Basic 2, Basic 6-Band EQ

These final 3 **Basic DSP Types** use minimal FX in the signal chain.

FX Order for Basic 1:

- Hi Pass Filter
- Comp
- EQ 3-Band

FX Order for Basic 2:

- Hi Pass Filter
- EQ 3-Band
- Comp

FX Order for Basic 6-Band EQ:

- Hi Pass Filter
- EQ 6-Band

Fader View

With firmware update v1.20, the M20d now features **Fader View**, available in Perform mode, which streamlines the visual mixing process. To display Fader View, follow these steps:

1. Enter **Perform** mode by pressing the hardware **PERFORM** button.

2. Tap the **Show Faders** button in the Main Toolbar.

The Fader View user interface will be displayed.

Perform mode: Fader View (Inputs selected)

Depending on your selections in the Fader View Toolbar, you can easily adjust various parameters using the onscreen faders (or the upper row encoders on the hardware, which duplicate fader functionality). Available parameters include **Input Channel Level**, **FX Channel Level**, **Monitor A**, **B**, **C** or **D** Send Level, and **Output Level** for **Monitors** and **Main Outs**.

And when you're in **Inputs Select** mode, several parameter assignments are available for the M20d hardware's lower row encoders, via a dropdown menu. These include **Input Trim**, **Pan**, and **FX A**, **B**, **C** and **D** (for sending channel audio to M20d's four Global FX).

Fader View Toolbar

The Fader View Toolbar is illustrated below, with functional descriptions of the available buttons.

Fader View Toolbar

A **Scenes Button**: tap to open the Scenes window, to save, load or manage Scenes.

B **Fader Assign**: displays fader parameter assign dropdown menu; faders can be assigned to control Channel Level or Monitor A, B, C or D Send Level.

C **Lower Encoder Assign**: displays lower encoder parameter assign dropdown menu; in Inputs Select mode, lower encoders can be assigned to control Trim, Pan, or FX A, B, C or D Send Level.

D **Fader Page Buttons**: tap to jump to previous or next page of faders; if on first page, left arrow button is disabled; if on last page, right arrow button is disabled.

E **Inputs Select Button**: tap to enter Inputs Select mode (displays Channel Input faders).

F **FX Select Button**: tap to enter FX Select mode (displays Global FX faders).

G **Outs Select Button**: tap to enter Outputs Select mode (displays Monitors and Main Outputs faders).

H **Follow Stage Button**: tap to follow Stage View selection of Channel on M20d hardware (enabled for iPad WiFi application only); fader for the currently selected Channel will be displayed.

I **Show Stage Button**: displays Stage View for easy Channel selection (button then becomes "Show Faders" button); tap to return to Fader View (fader for selected Channel will be displayed).

J **Quick Capture Controls**: buttons for Quick Capture record and playback.

**K** **Help Button**: tap to access the M20d's onboard Help system.

Fader Assign Menu

When either the **Inputs** button or the **FX** button is enabled in the Fader View Toolbar, the Fader Assign menu is available (tap the **Level** button to display it). Using this menu, the faders for Input or FX channels can be assigned to control **Input Channel Level** (in Inputs Select mode) or **FX Channel Level** (in FX Select mode), or **Monitor A**, **B**, **C** or **D** Send Levels (in either mode).

Fader Assign Menu: (Inputs Select mode)
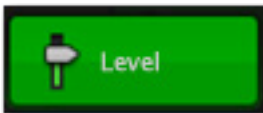
Assign faders to **Level** and the faders will adjust **Input Channel Level** (in Inputs Select mode) or **FX Channel Level** (in FX Select mode), indicated by a green background.


Assign faders to one of the four **Monitor** selections (**A**, **B**, **C** or **D**) and the faders will adjust **Monitor Send Level** to the selected Monitor (Inputs or FX Select mode), indicated by a blue background.

Lower Encoder Assign Menu

When the **Inputs** button is enabled in the Fader View Toolbar, the lower row encoders on the M20d can be assigned to control various parameters via the Lower Encoder Assign menu (tap the **Pan** button to display it).
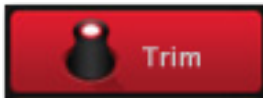
Lower Encoder Assign Menu: (Inputs Select mode only)

Assign to **Trim** and lower encoders will adjust **Input Trim Level**, highlighted in red.

Assign to **Pan** and lower encoders will adjust **Pan Position**, highlighted in amber.

Assign to **FX A**, **B**, **C** or **D** and lower encoders will adjust **FX Send Level,** highlighted in purple.

Inputs Select

When **Inputs** is selected in the Fader View Toolbar, the faders control Channel Inputs.

Perform mode: Fader View in Inputs Select mode (with Level and Pan assignments)

Depending on fader and lower encoder parameter assignments, slightly different information is displayed onscreen, as follows:

- When faders are assigned to **Level**, they adjust Channel level and are highlighted in green.

- When faders are assigned to **Mon A**, **B**, **C** or **D**, they adjust Monitor Send level and are highlighted in blue.

Settings for the lower encoder parameter assignments are displayed at the bottom of each fader, below the Mute and Solo buttons, as follows: (Group faders excluded)

- When lower encoders are assigned to **Trim**, Trim levels are displayed.

- When lower encoders are assigned to **Pan**, Pan position is displayed.

- When lower encoders are assigned to **FX A**, **B**, **C** or **D**, Global FX Send levels are displayed.

See the next page for illustrations of the various settings displayed in **Inputs Select** mode.
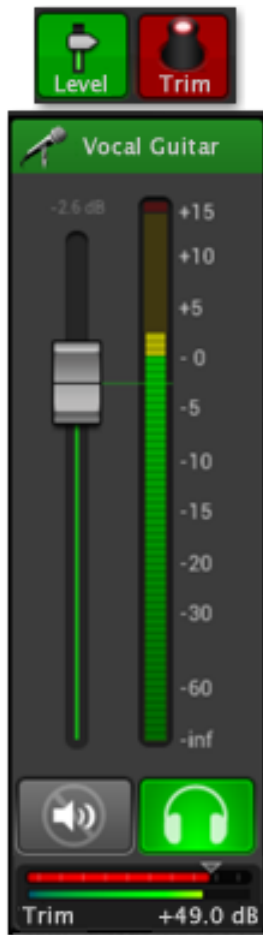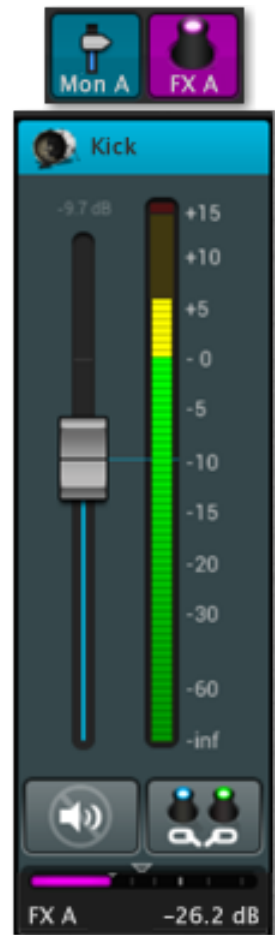
Inputs Select Illustrated

Below are a few **Inputs Select** fader views, depending on parameter assignments.
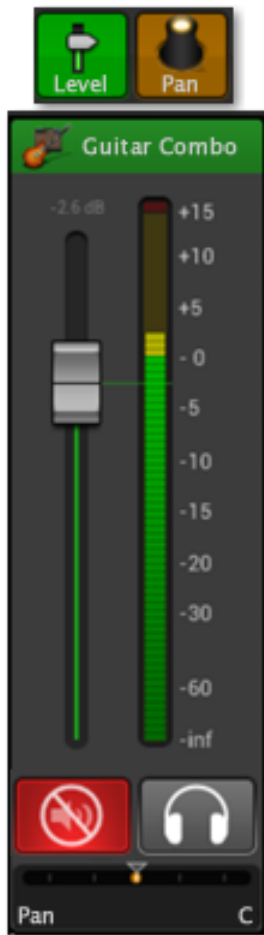
• Fader assigned to adjust Input Channel **Level**

• Lower encoder assigned to adjust **Pan** position

• **Mute** button is ON

• Fader assigned to adjust Input Channel **Level**

• Lower encoder assigned to adjust Input **Trim**

• **Solo** button is ON

• Fader assigned to adjust send level to **Monitor A** (monitor send is **UnLinked**)

• Lower encoder assigned to adjust send level to **FX A**

FX Select

When the **FX** button is engaged in the Fader View Toolbar, faders for the four Global FX are displayed. Tap the Fader Assign button to display the dropdown menu, then select the parameters you'd like to adjust with the faders. Your choices are **Level** (with **Mute** and **Solo** buttons), which adjusts FX channel level sent to the Main Outputs, or **Monitor A**, **B**, **C** or **D** (with **Mute** and **Linked/Unlinked** buttons), which adjusts FX channel level sent to any of the four Monitors.

* Mains Level Meter is displayed momentarily when M20d hardware Master Volume knob is adjusted

FX Select mode (with Level fader assignment)

• Choose **Level** from the Fader Assign menu to adjust FX channel level for each of the four Global FX, sent to the Main Outs. Engage the **Mute** button to mute the effect channel, or **Solo** to solo the effect channel in the headphones.

• Choose **Monitor A, B, C** or **D** from the Fader Assign menu to adjust FX channel audio sent to any of the 4 Monitor Outs. Engage the **Mute** button to mute the effect channel. Engage the **Linked** button to link FX level adjustments to the Main Outs and Monitor Outs (see page D•11 for more details on Linked/Unlinked button).

• The menu for lower encoder assign is not available in **FX Select** mode.

FX Select Illustrated

Below are a few **FX Select** fader views, depending on parameter assignments.
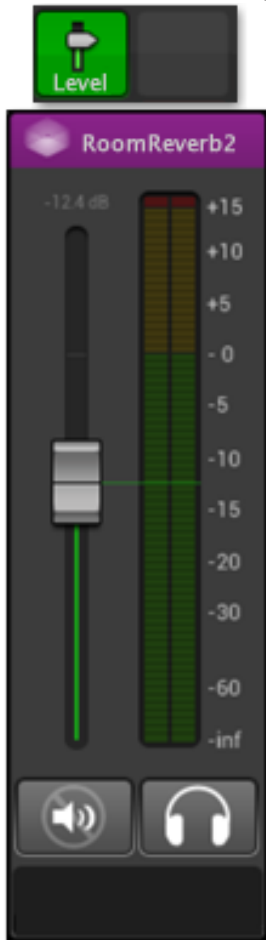
• Fader assigned to adjust
FX channel **Level**

• **Mute** and **Solo** buttons
are available

• No lower encoder assign

• Fader assigned to adjust
FX send level to **Monitor A**
(monitor send is **Linked**)

• **Solo** button replaced by
Linked/Unlinked button

Outputs Select

When the **Outs** button is engaged in the Fader View Toolbar, faders for the Main Outputs and Monitor Outputs are displayed. Fader assignment defaults to **Level** only, and there are no lower encoder assignments available. **Mute** and **Solo** buttons are provided for Monitors only.
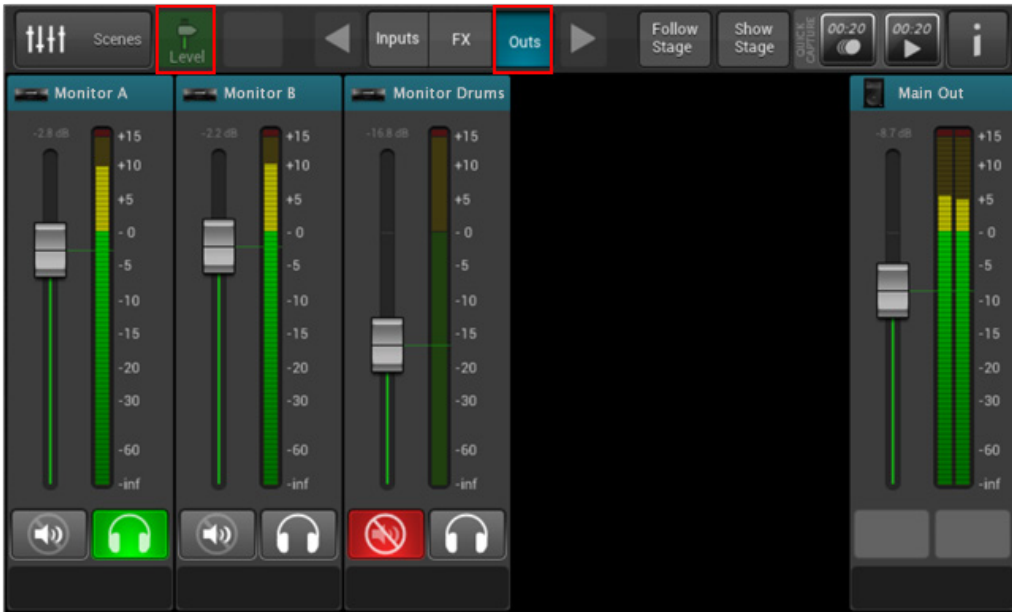
Outputs Select mode (fader assignment defaults to Level)

• Adjust faders on the left (or upper row M20d hardware encoders) to set output level for any of the four Monitor Outputs (3 monitors are connected in the above example)

• Adjust stereo fader on the far right (or M20d hardware Main Out encoder) to set level for the Main Outputs

• Engage **Solo** button to solo any of the Monitor channels

• Engage **Mute** button to mute any of the Monitor channels

• No lower row encoder assignments are available in Outputs Select mode

Outputs Select Illustrated

Below are the **Outputs Select** faders: a Monitor Out on the left, stereo Main Out on the right.

• Monitor fader defaults to adjusting Monitor channel **Level**

• **Mute** and **Solo** buttons are available for Monitor Outs only

• No lower encoder assign

• Main Out fader defaults to adjusting Main Out **Level** (duplicates **Main Out** encoder)

• No **Mute** or **Solo** buttons are available for Main Outs

Fader Page Buttons

The left and right arrows in the Fader View Toolbar enable you to navigate to the previous and next page of faders. When the first fader page is displayed, the left arrow is disabled. When the last fader page is displayed the right arrow is disabled.

Follow Stage Button

The **Follow Stage** button is available only on the iPad application, when using the iPad to control your M20d via WiFi. When this button is engaged, if a channel icon is selected on the stage of the M20d hardware, that channel's fader is automatically selected and displayed on the iPad as well.

Show Stage Button

The Show Stage button makes it extremely easy to navigate your channels during a mix. When this button is engaged, you can quickly select a channel icon on the stage, then tap the Show Faders button to return to Fader View. The fader for the channel you selected will automatically be displayed when you return to Fader View.

Quick Capture Controls

The Quick Capture Record and Playback buttons in Fader View are exactly the same as they are in Perform mode, Tweak mode or Monitor mode. Tap the Record button to capture up to 20 seconds of audio. Tap Play button to play it back (audio will loop) - tap it again to stop.

Linked/Unlinked Button

When Input Channel or FX Channel faders are assigned to **Mon A**, **B**, **C** or **D**, the **Linked/Unlinked** button provides a means for you to link your monitor levels to your channel levels. When **Linked**, you can set your relative monitor level as desired, then any change you make to your channel level will also be applied to your relative monitor level. When **Unlinked**, any change you make to channel level will have no effect on monitor level.

Workflow Tips 🔆

The following are a few **Fader View** workflow tips that you may find helpful.

Quick Fader Navigation:

In **Inputs Select** mode, here's a quick and easy way to select your faders during a mix:

- Tap the **Show Stage** button in the Fader View Toolbar. This takes you to the Stage View.

- Select the stage icon for the channel you'd like to adjust in your mix.

- Tap the **Show Faders** button to return to Fader View - the fader for the channel you just selected will be displayed.

- Adjust the channel's parameters as desired.

- Repeat for any other channel you'd like to adjust in your mix.

WiFi Fader Navigation Using The Follow Stage Feature:

When running the M20d iPad application via WiFi, the **Follow Stage** feature makes it easy to navigate faders based on channel selections made on the M20d hardware.

- In **Inputs Select** mode on the iPad application, tap the **Follow Stage** button.

- The fader page that includes the currently selected channel will be displayed.

- With the M20d hardware in Stage View, select any stage icon; the fader for the selected channel will immediately be displayed on the iPad.

- With the **Follow Stage** button engaged, each time a different stage icon is selected on the M20d hardware the fader for the selected channel will be displayed on the iPad.

Re-position Fader Order:

The onscreen faders are positioned in the same order as the controller strips that are displayed in Stage View. If you'd like to change the fader position layout, here's how to do it:

- Tap the **Show Stage** button in the Fader View Toolbar. This takes you to the Stage View.

- At the bottom of the display, tap and hold the controller strip for the channel you'd like to re-position - its image will pulsate.

- Drag the source controller strip to the target location; the controller strips will swap positions. Repeat the process for any other channels you'd like to re-position.

- When your channels are in the desired order, tap the **Show Faders** button to return to Fader View; the faders will now be positioned in the new order you just created.

Tweak Input, FX or Output Channels:

If you'd like to tweak various parameters for your Input, Output or FX channels when mixing in Fader View, follow these steps:

• Tap the **Inputs**, **FX** or **Outs** button to display the fader page that contains the channel you'd like to tweak; then select the desired channel by tapping its name at the top of its fader.

• Press the hardware **Tweak** button - the M20d will enter Tweak mode.

• Tweak the channel parameters as desired.

• Press the hardware **Perform** button to return to Perform mode; Fader View will be displayed. Repeat the above steps for any other channels you'd like to tweak.

StageScape™

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