

Compass Go

Version 2.6.0



The screenshot displays the 'Main Stage - Page 1' interface of the Compass Go software. The interface is organized into several functional areas:

- INPUTS:** Located on the left, it features two columns of level meters labeled A, B, C, D and E, F, G, H. Below these are 'Main Stage' labels and two vertical faders for 'LEFT' and 'RIGHT' channels, both currently set to 0.0 dB.
- MAINS:** The central area contains an 'EQ Plot' graph with a frequency axis from 16 Hz to 16 kHz and a gain axis from -18 dB to +18 dB. Below the graph is a grid of 8 faders labeled 'Main Stage' and 'Outputs 1-8'.
- Mute Controls:** On the right side, there is a vertical fader for 'Outputs 1-8' and a 'Mute A-H' button, which is highlighted with a red box.
- System Controls:** At the bottom, there are two buttons: 'MAIN SYSTEM - SUN' (highlighted with a green box) and 'MAIN SYSTEM - SUN' (Active Snapshot).

At the bottom of the interface, there are two buttons: 'ID 3 Reset Levels' and 'Active Snapshot'.

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CHAPTER 1: INTRODUCTION

Combining the key functionalities of the Compass software and the simplicity and mobility of the iPad, Compass Go makes system setup and tuning easier and more intuitive. Download the free app from the Apple App Store, and connect it to Galileo, Galileo Callisto, and Galileo GALAXY processors on the same Wi-Fi network.

This guide explains Galaxy functionality. Callisto and Galileo are similar but have slightly different features.

You can now optimize your sound system using the following features:

- Adjust system delay, gain, and mute.
- Manage U-Shaping, Product Integration, and Parametric EQ filter sets.
- See the current status of parameters and make real-time adjustments at control points.
- Recall snapshots of prior user settings.
- Create, edit, and store new snapshot settings in the individual processors.
- Move about freely with your iPad to analyze the array coverage and sound quality from different seating locations.

COMPASS GO COMPATIBILITY

Compass Go software requires the following firmware versions:

- **GALAXY:** v2.1.0 (All models)
- **Bluehorn 816:** v2.1.0
- **Galileo/Callisto:** v3.12.0

HOW TO USE THIS MANUAL

Make sure to read these operating instructions in their entirety before using the Compass Go software. In particular, pay close attention to material related to safety issues.

As you read these operating instructions, you will encounter the following icons for notes, tips, and cautions:



NOTE: A note identifies an important or useful piece of information relating to the topic under discussion.



TIP: A tip offers a helpful tip relevant to the topic at hand.



CAUTION: A caution gives notice that an action may have serious consequences and could cause harm to equipment or personnel, or could cause delays or other problems.

Information and specifications are subject to change. Updates and supplementary information are available at www.meyersound.com.

MEYER SOUND TECHNICAL SUPPORT

Meyer Sound Technical Support is available at:

- **Tel:** +1 510 486.1166
- **Tel:** +1 510 486.0657 (after hours support)
- **Web:** <https://meyersound.com/contact/>

CHAPTER 2: HOME VIEW

The Home View has three tabs along the bottom:

- Processors
- Custom Layouts
- Settings

PROCESSORS VIEW

To display the Processors View:

1. Touch the Processors tab from the home view.

The DISCOVERED DEVICES window appears.

2. Select a device by touching a Discovered Device.

A green circle indicates the device is connected; a yellow rectangle indicates it is not connected.

The Overview displays after selecting a new device.

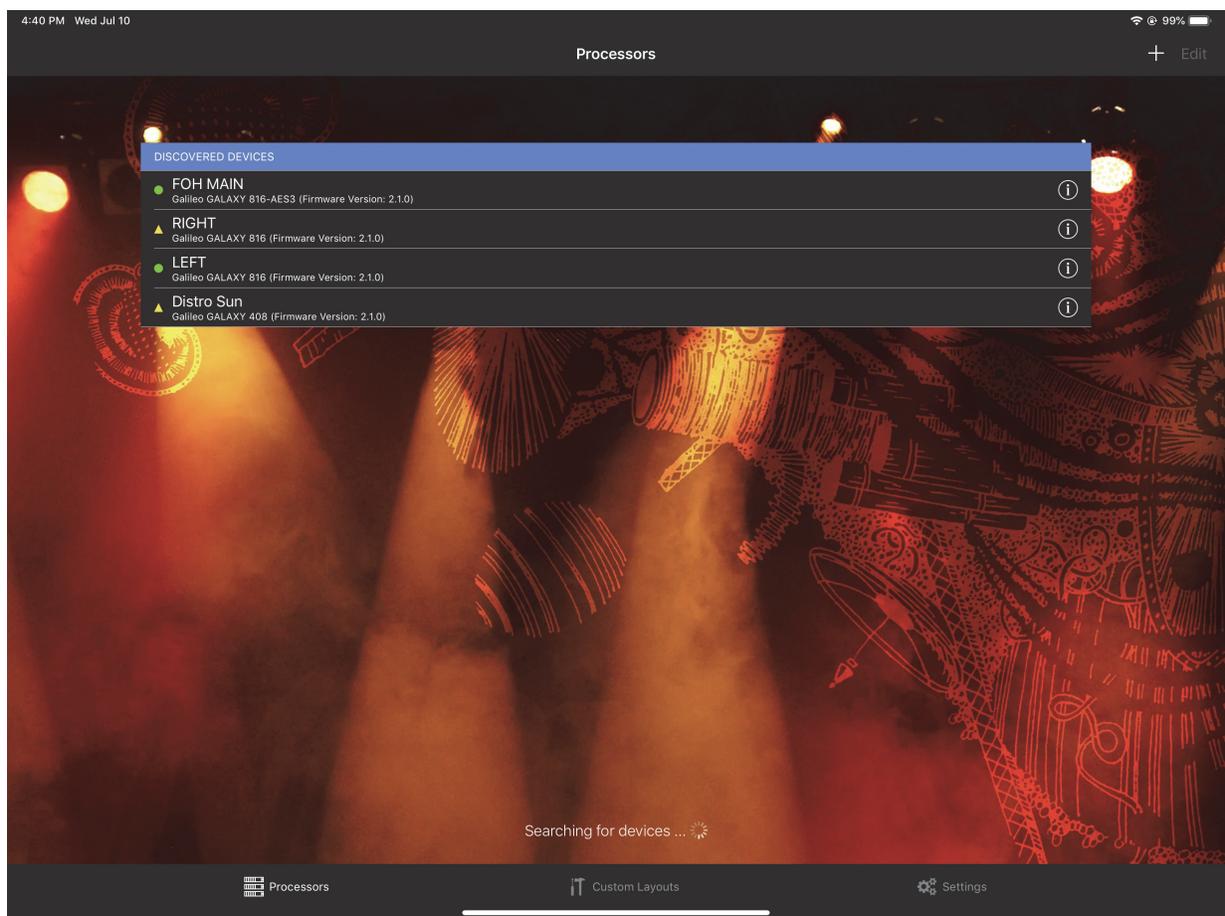


Figure 1: Processors View with DISCOVERED DEVICES window

CUSTOM LAYOUTS VIEW

To display the Custom Layouts View:

1. Touch the Custom Layouts tab from the bottom of the home view.

The Custom Layouts View appears with the RECENT CUSTOM LAYOUTS.

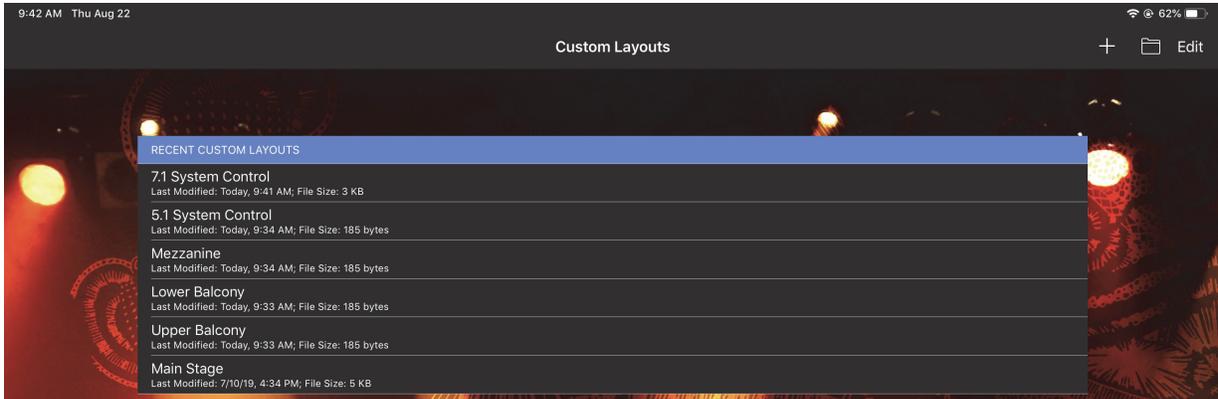


Figure 2: Custom Layouts View with RECENT CUSTOM LAYOUTS window

COMPASS GO SETTINGS

To display the Compass Go Settings:

1. Touch the Settings tab from the bottom of the home view.

The Compass Go Settings window appears.

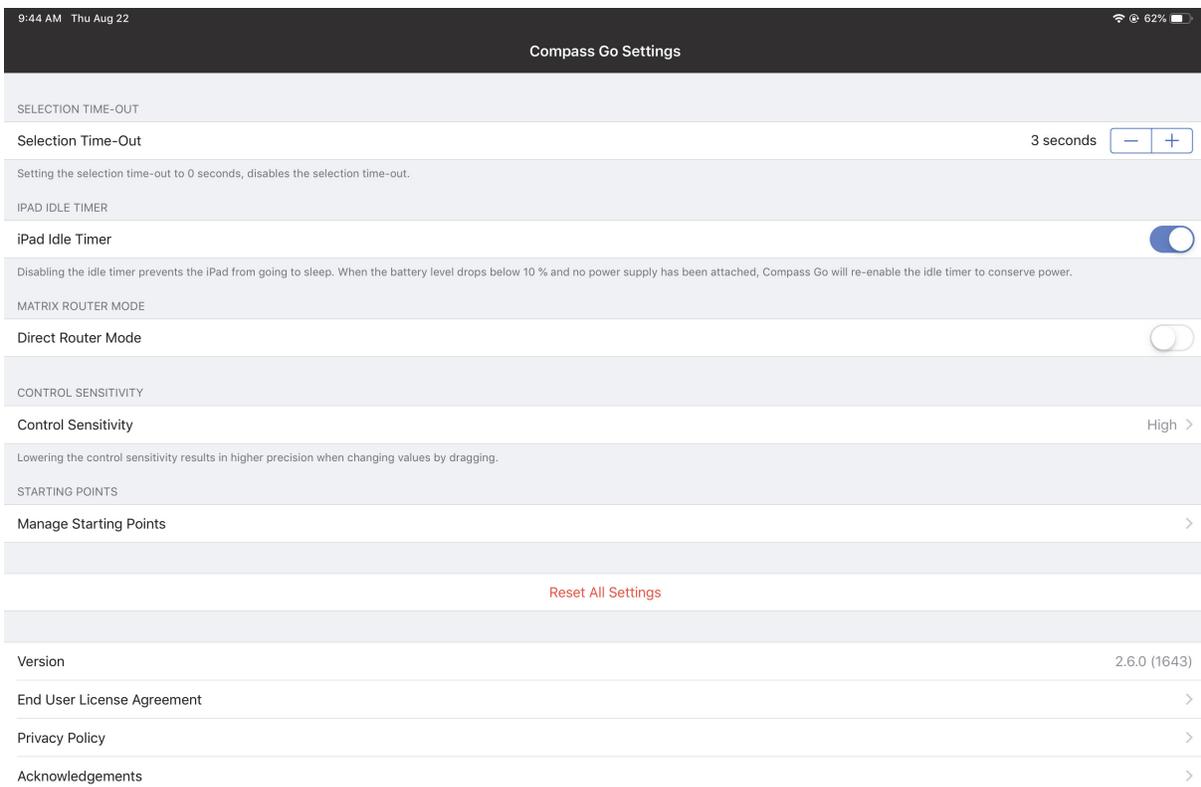


Figure 3: Compass Go Settings

Selection Time-Out

This determines how long a selection persists for graphic controls such as EQ handles.

iPad Idle Timer

This overrides the Auto Lock time set on the iPad when Compass Go is the active application to prevent the iPad from inadvertently turning off.

Direct Router Mode

See “Direct Router Mode” on page 9.

Control Sensitivity

See “Control Sensitivity” on page 9.

Manage Starting Points

This lets you manage the list of starting points presented by this view.

 **TIP:** See “Output Delay Settings” on page 24 to learn how to use Starting Points to make product integration faster and easier.

- Select a starting point and click the Trash icon (top-right) to delete that device from the list.

Figure 4 shows the first part of this list, Figure 5 shows the bottom.

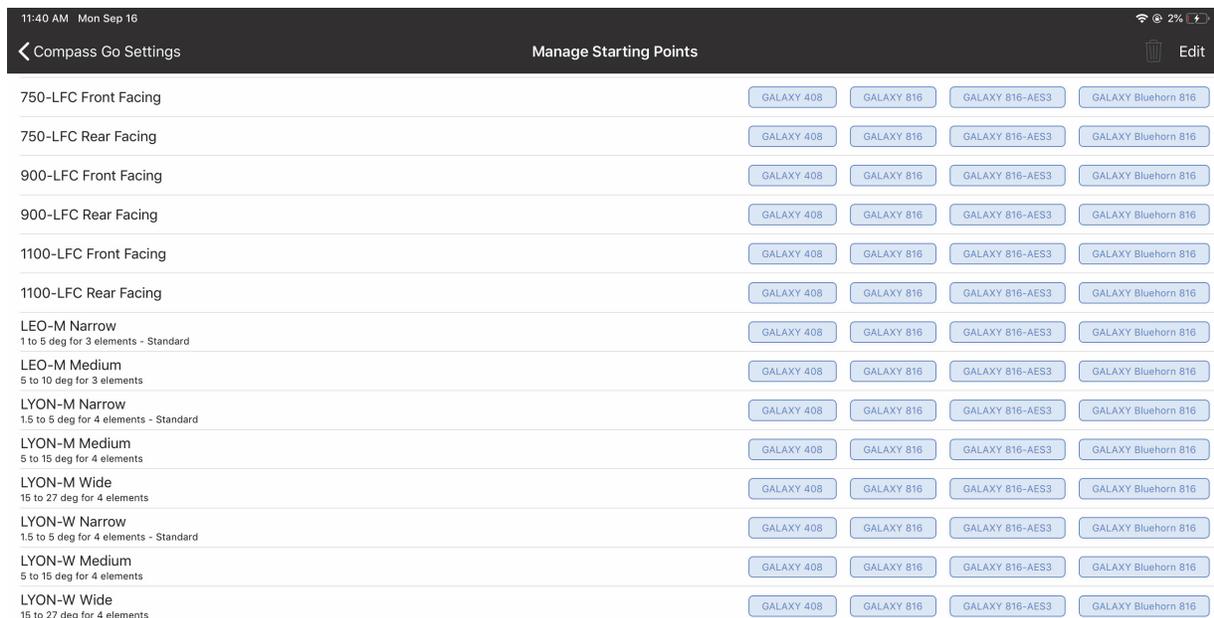


Figure 4: Manage Starting Points window (top)

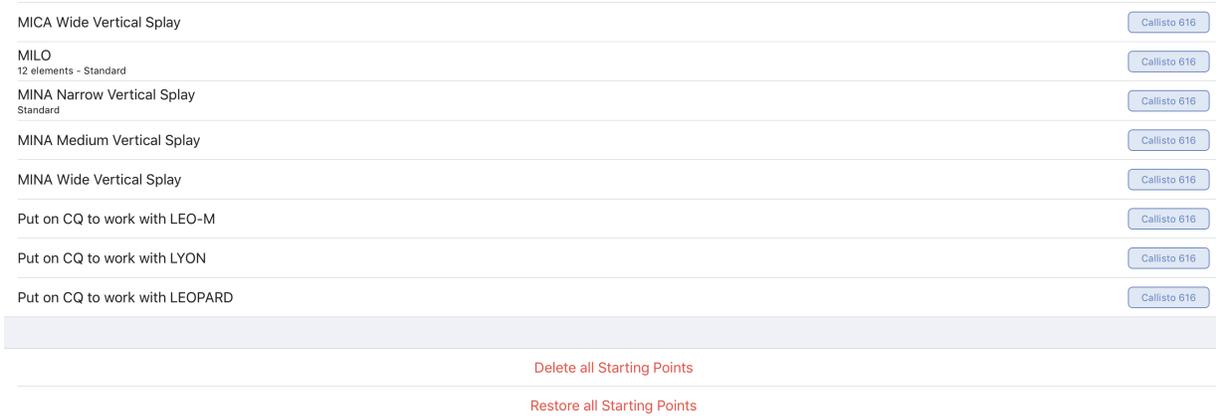


Figure 5: Manage Starting Points window (bottom)

- Touch Delete all Starting Points to delete all Starting Points in this list.
- Touch Restore all Starting Points to restore all entries originally included to the list.
- Touch Edit (top-right) to rearrange the list. Touch Done when finished editing.

Figure 6 shows an entry being dragged to a new location.

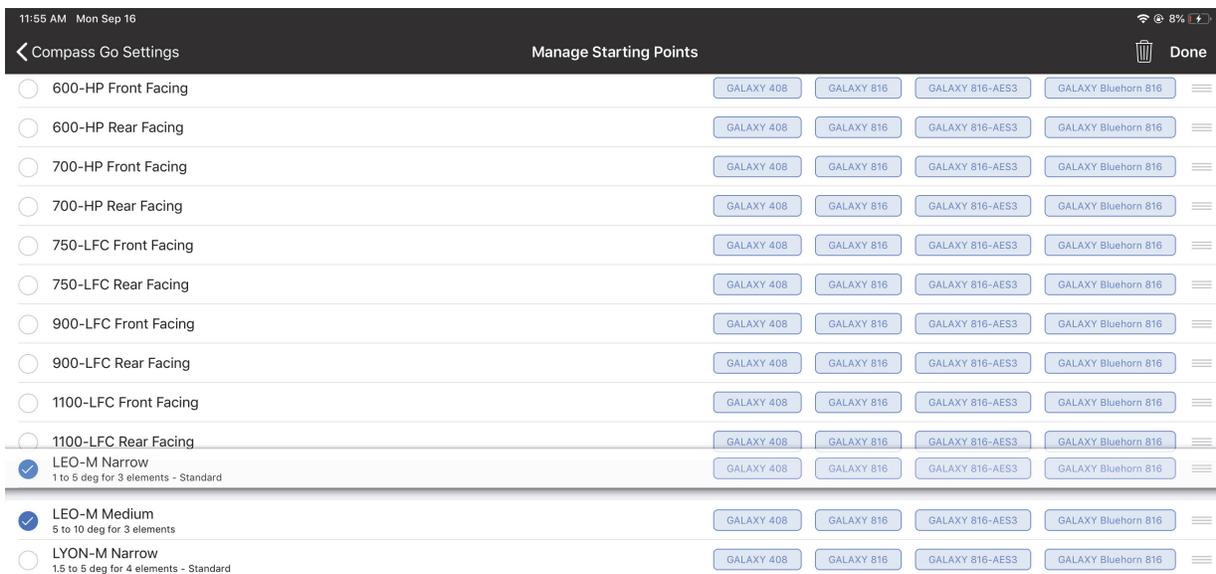


Figure 6: Manage Starting Points during Edit operation

CHAPTER 3: OVERVIEW

To display the Overview:

1. Select a device from the Processors View (Device Icon is at far left) by touching a Discovered Device.

One device can be selected at a time. A green circle indicates the device is connected; a red rectangle indicates it is not connected.

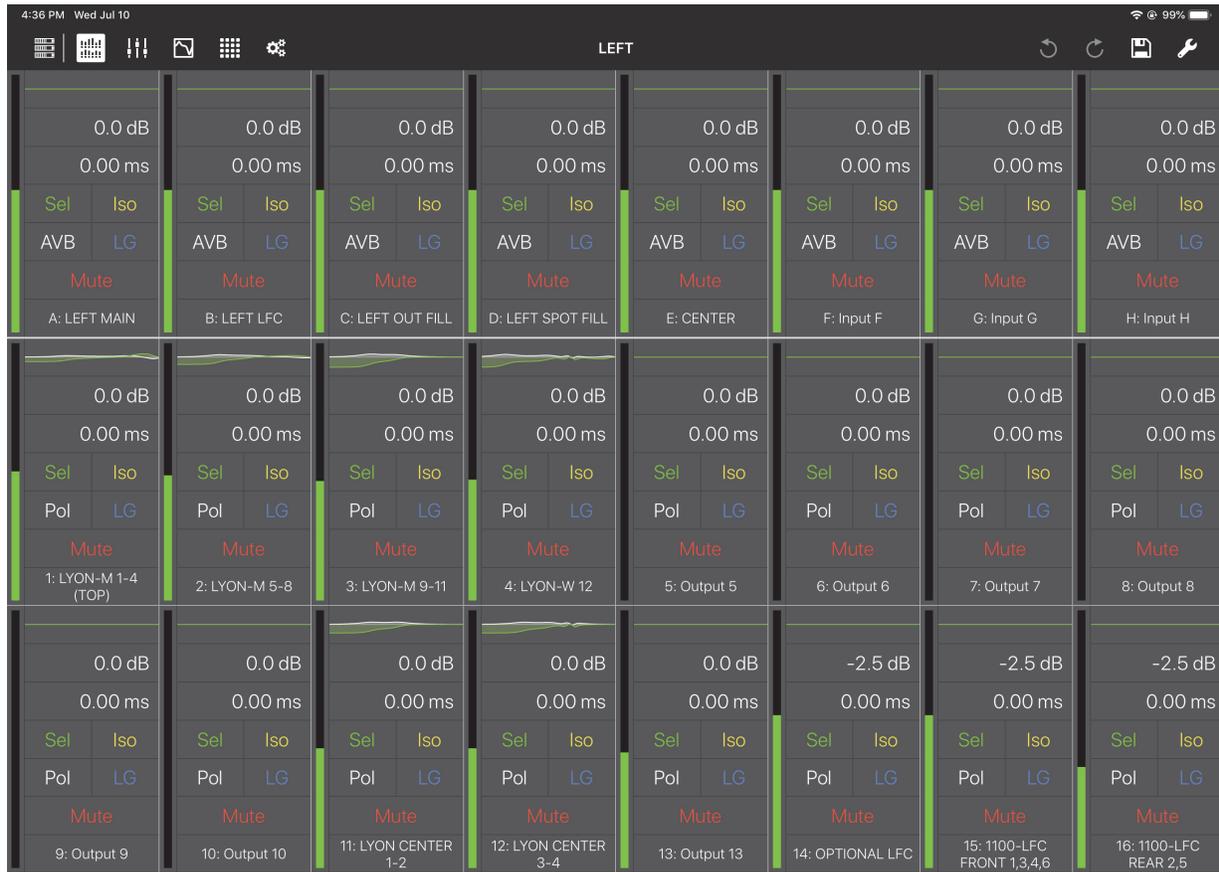


Figure 7: Overview

To display the Overview from any other Compass Go view, tap the Overview Icon (highlighted in Figure 7) in the top menu bar.

The view is organized into one row of inputs, and two rows of outputs:

- Inputs A–H (GALAXY) and Inputs A–F (Galileo and Callisto) are on the top row.
- Outputs 1–8 are on the middle row.
- Outputs 9–16 are on the bottom row.

Each input/output channel has a meter showing its input/output level.

Each channel control is discussed below.

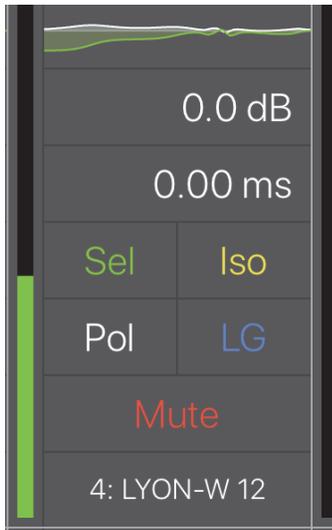


Figure 8: Channel detail

EQ CURVE

At the top of the channel, the EQ Curve is located in a small rectangle. Tapping the EQ curve displays the EQ view for that channel (see Chapter 5: *EQ View*).

GAIN SETTING

To adjust the channel gain, do either of the following:

1. Tap the gain value.

A blue rectangle surrounds the gain value.

2. Drag up/down to increase/decrease the value.

The gain can be in the range -90 dB to +10 dB.

- OR -

1. Double-tap the gain value.

A numeric pad opens.

2. Enter a new gain setting.

The +/- button toggles between positive and negative values.

Note that when no sign is shown, the value is interpreted as negative.

3. Touch Done when finished.

DELAY SETTING

To adjust the channel delay, do either of the following:

1. Double-tap the delay value (below the Gain field).
A numeric pad opens.
 2. Enter a delay amount.
 3. Tap Delay Unit to choose a unit from the following options:
milliseconds, feet, meters, frames (24 fps, 25 fps, 30 fps) samples (96 kHz).
 4. Tap Back to return to the Delay setting numeric pad.
 5. Tap Done when finished.
- OR -
1. Single-tap the delay value.
A blue rectangle surrounds it.
 2. Touch and drag up/down to increase/decrease the delay.

The maximum delay is 2000 ms for outputs, and 500 ms for inputs.

SEL/ISO/MUTE STATUS

Sel/Iso/Mute controls all work the same. Each shows its active state with a solid colored rectangle surrounding it. Touch a control to toggle its value.

POL

POL controls the polarity of the signal. When active, the polarity is reversed.

LG

Use Link Groups to edit and control multiple channels simultaneously. Assign a channel to the desired Link Group. Touch the On/Off switch to enable/disable a Link Group.

CHANNEL NAME

The default channel name is derived from its input/output channel number, but can be edited.

To assign a name to the channel:

1. Double-tap the channel name.
The Edit Channel Name dialog opens.
2. Use the iPad keyboard to enter a new name.
3. Touch Done when finished.

OVERVIEW TOOLS

Tap the Tools icon at the top-right of the Overview to open the following dialog:

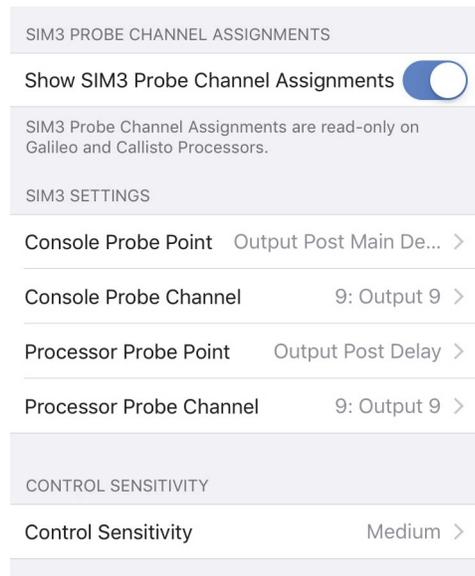


Figure 9: Tools options from Overview

Show SIM3 Probe Channel Assignments

Touch and drag the button to the right to show the SIM3 Probe Channel Assignment fields on the Overview.

Touch and drag the button to the left to conceal the SIM3 Probe Channel Assignment fields from displaying on the Overview.

SIM3 Settings

The current SIM3 Probe Point and Channel Settings are displayed. Touch any of them to open their assignment options.

When Show SIM3 Probe Channel Assignments is active, you can change the Console and Probe Channel assignments on the Overview by touching the C or P fields, respectively, on the desired cells.

The current SIM3 console and probe assignments determine which input and/or outputs display these assignment fields.

- If the Processor Probe Point is set for one of the output options, a P field appears only in the output cells.
- If the Console Probe Point is set for one of the output options, a C field appears only in the output cells.
- If the Processor Probe Point is set for one of the input options, a P field appears only in the input cells.
- If the Console Probe Point is set for one of the input options, a C field appears only in the input cells.

To assign a new channel to either probe point, touch a different channel's C or P field.

The figure below shows the Console Probe Channel set to Input C, and the Processor Probe Channel set to Output 3.

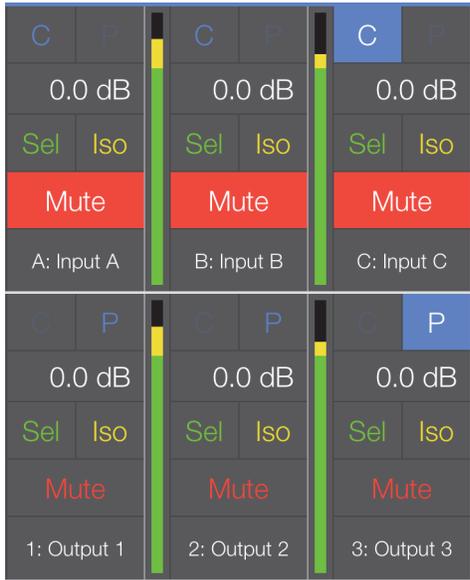


Figure 10: SIM3 Probe Point Assignments on the Overview

 **NOTE:** The field to the left of the highlighted P for Output 3 is gray (inactive) to signify that the Console Probe Point is set to an input. The Console and Processor Probe Point types can only be changed from the Tools menu or the Settings View (see page 57).

Control Sensitivity

This sets the sensitivity for Compass Go’s touch controls.

Touch the current setting and choose Low, Medium, or High (default).

High sensitivity causes the fastest change in value per distance dragged.

SNAPSHOT TOOL

Tap the Disk icon at the top-right of the any of the active device views to open the following dialog:

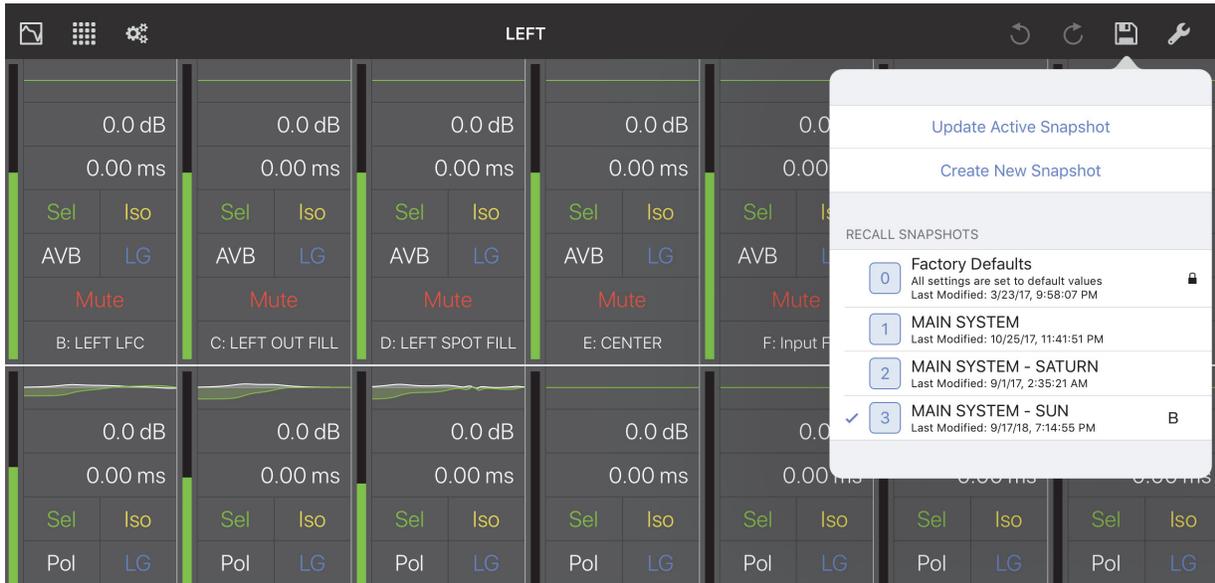


Figure 11: Snapshot options from the Overview

Update Active Snapshot

Touch Update Active Snapshot to use the current settings to update the currently active Snapshot.

Create New Snapshot

Touch Create New Snapshot to use the current settings to create a new Snapshot.

CHAPTER 4: I/O VIEW

To display the I/O View:

- Tap the I/O Icon (highlighted in Figure 12) in the top menu bar from any Compass Go view.

The I/O View appears with the Inputs or Outputs last displayed (**Inputs A–H** by default).

To select the eight Input or Output channels to display, do either of the following:

- Touch the desired tab in the center of the top menu bar: **Inputs A–H**, **Outputs 1–8**, **Outputs 9–16**
- OR -
- Swipe the screen left/right to scroll to the previous/next eight I/O channels.

In Figure 12, swiping to the left displays **Outputs 1–8**.



Figure 12: I/O View displaying Outputs 9–16

Input and Output channels have the same controls except Outputs have a **Pol** (polarity) setting.

SEL-ISO STATUS GRID

The Sel-Iso (Select-Isolate) Status grid appears in several windows. See page 20 for details.

DELAY

To adjust the channel delay, do either of the following:

1. Double-tap the delay value (at the top of the channel).
A numeric pad opens.
2. Enter a delay amount.
3. Tap **Delay Unit** to choose a unit from the following options:
milliseconds, **feet**, **meters**, **frames** (24 fps, 25 fps, 30 fps), **samples** (96 kHz).
4. Tap **Back** to return to the Delay setting numeric pad.
5. Tap **Done** when finished.

- OR -

1. Single-tap the delay value.
An orange rectangle surrounds it.
2. Touch and drag left/right to increase/decrease the delay.

The maximum delay is 2000 ms for outputs, and 500 ms for inputs.

SEL/ISO/MUTE/POL

These controls are discussed on page 27.

LINK GROUP

This control is discussed on page 27.

FADER

The channel Fader appears in several windows. See page 21 for details.

I/O VIEW TOOLS

Tap the Tools icon at the top-right of the I/O View to open the following dialog:

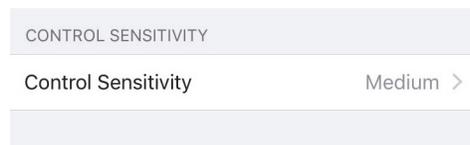


Figure 13: Tools option from I/O View

Control Sensitivity

This sets the sensitivity for Compass Go's touch controls.

Touch the current setting and choose **Low**, **Medium**, or **High** (default).

High sensitivity causes the fastest change in value per distance dragged.

CHAPTER 5: EQ VIEW

To display the EQ View, do either of the following:

- Tap the EQ Icon (highlighted in Figure 14) in the top menu bar from any Compass Go view.
- OR -
- From the Overview or I/O views, double-tap the EQ curve at the top of the channel.

The EQ View appears with the **Channel Settings** tab selected unless the **Parametric**, **U-Shaping**, or **All Pass** tab was last selected for that channel.



Figure 14: EQ View with Channel Settings controls

Channel Settings, **Parametric**, **U-Shaping**, and **All Pass** tabs each have their own meter, fader, and share these screen entities:

- **Channel Settings**, **Parametric**, **U-Shaping**, and **All Pass** tabs along the top
Tap the tab to activate the desired controls. Each tab is discussed in detail below.
- **Sel-Iso Status Grid**
This grid shows any selected or isolated input/output channels. The status of any channel can be toggled directly from the grid. See below for details.

SEL-ISO STATUS GRID

The Sel-Iso (Select-Isolate) Status Grid is comprised of two rows: channel selection is indicated on top, channel isolation on bottom.

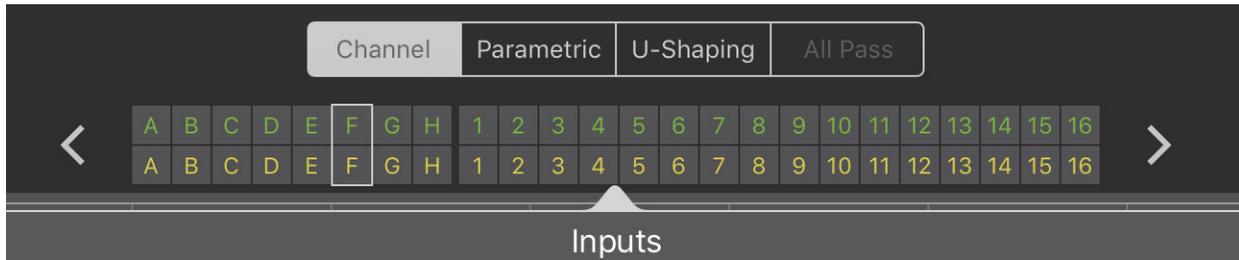


Figure 15: Sel-Iso Status Grid

In Figure 15, Input F is selected and isolated.

The rectangle enclosing Input F shows the currently selected I/O channel on the EQ View. Touch the left or right arrows at each end of the grid to move the selection rectangle to the previous or next I/O channel, respectively. This is an easy way to quickly peruse I/O channels.

To edit channel entries:

1. Touch within the grid.

The grid expands as shown in Figure 16.

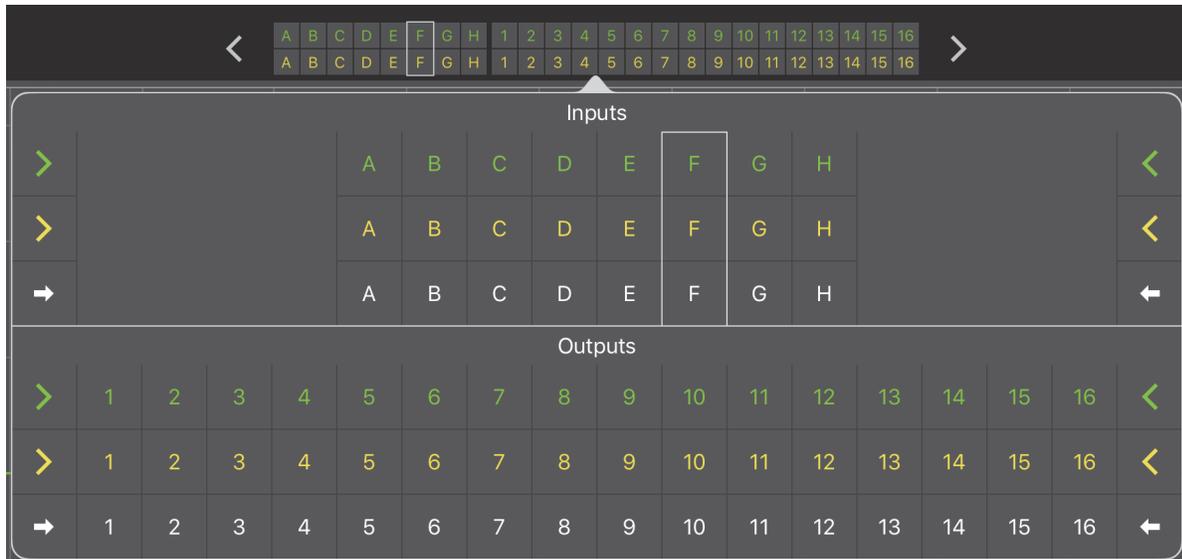


Figure 16: Sel-Iso Grid expanded

2. Tap an arrow pointing *into* the grid to select all values.

Tapping either yellow arrow pointing into the **Iso** Inputs selects them all.

3. Tap an arrow pointing *out* of the grid to deselect all values.

Tapping either green arrow pointing out of the **Sel** Inputs (or Outputs) deselects them all.

If one or more channel is selected or isolated, the arrows point out.

4. Tap an individual I/O channel cell to toggle its value.

FADER

To adjust the I/O channel fader, do either of the following:

- Tap and drag it to a new position.
- OR -
- 1. Double-tap the numeric field above the fader to open a numeric pad.
- 2. Enter a new value (maximum = +10, minimum = -90).
The +/- button toggles between positive and negative values.
Note that when no sign is shown, the value is interpreted as negative.
- 3. Tap Done when finished.

CHANNEL SETTINGS TAB

The Channel Settings tab has these additional controls:

- High and Low Pass filters
- Atmospheric Correction
- Output Delay Settings
- Product Integration
- Sel/Iso/Mute/Pol controls
- LG (Link Group) controls

Bypassed/Enabled

Tap to toggle the Enabled/Bypassed state of the High or Low Pass filter. A solid yellow rectangle surrounds Bypassed.

High and Low Pass Filters (outputs only)



Figure 17: High and Low Pass Filter

Frequency

To adjust the **High** and **Low Pass** filter frequency:

1. Touch the yellow (Low Pass) or green (High Pass) filter line or the High/Low Pass frequency value.
When selected, a blue rectangle surrounds the frequency value. The green or yellow line highlights to show the selected filter for editing. This state persists for 3 seconds, then extinguishes.
2. While the filter is selected for editing, do either of the following:
Touch the green or yellow line and drag to a new position; the frequency field updates while the line is moved.
- OR -
Touch within the blue highlighted rectangle and drag up/down to increase/decrease the frequency values; the corresponding line moves as its frequency value changes.

Filter Type

To select the **High** or **Low Pass Type**:

1. Double-tap the filter type beneath the frequency value.

The **High** or **Low Pass Type** dialog opens. The currently selected filter has a check mark next to it.

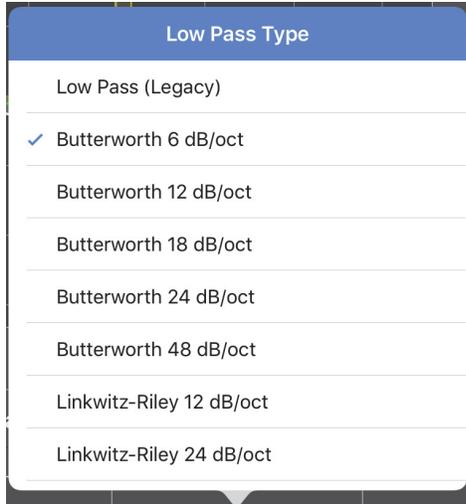


Figure 18: Low Pass Filter Type dialog

2. Touch the desired filter type.

The dialog is automatically dismissed when a type is selected, or you touch outside the dialog.

Atmospheric Correction (outputs only)

Distance

To adjust the distances, do either of the following:

1. If **Atmospheric Correction** is **Enabled**, single tap either distance unit value.

A blue rectangle surrounds the distance value.

2. Drag up/down to increase/decrease the value.

- OR -

1. Double-tap the distance value.

A numeric pad opens even if **Atmospheric Correction** is **Bypassed**.

2. Enter a value and tap **Done** when finished.

The maximum distance is 150 m.

Gain Factor

To set the **Gain Factor**:

1. Double-tap **Gain Factor**.

A dialog opens.

2. Choose a value in the range 10–100% in 10% increments.

3. Tap outside the dialog to close it.

Enabled/Bypassed

Tap to toggle the **Enabled/Bypassed** state. A yellow solid rectangle surrounds **Bypassed**.

Output Delay Settings

To adjust the channel delay, do either of the following:

1. Double-tap the delay value (below the channel name on the lower left).
A numeric pad opens.
2. Enter a delay amount.
3. Tap **Delay Unit** to choose a unit from the following options:
milliseconds, feet, meters, frames (24 fps, 25 fps, 30 fps) samples (96 kHz).
4. Tap **Back** to return to the Delay setting numeric pad.
5. Tap **Done** when finished.
- OR -
1. Single-tap the delay value.
A blue rectangle surrounds it.
2. Touch and drag up/down to increase/decrease the delay.

The maximum delay is 2000 ms for outputs, and 500 ms for inputs.

Product Integration

The Product Integration is on the lower left of the EQ View. It consists of Product, Delay Integration, and EQ Integration fields.

Product

First select the Product you would like to integrate:

1. Tap the current product name to open the Product Integration menu.

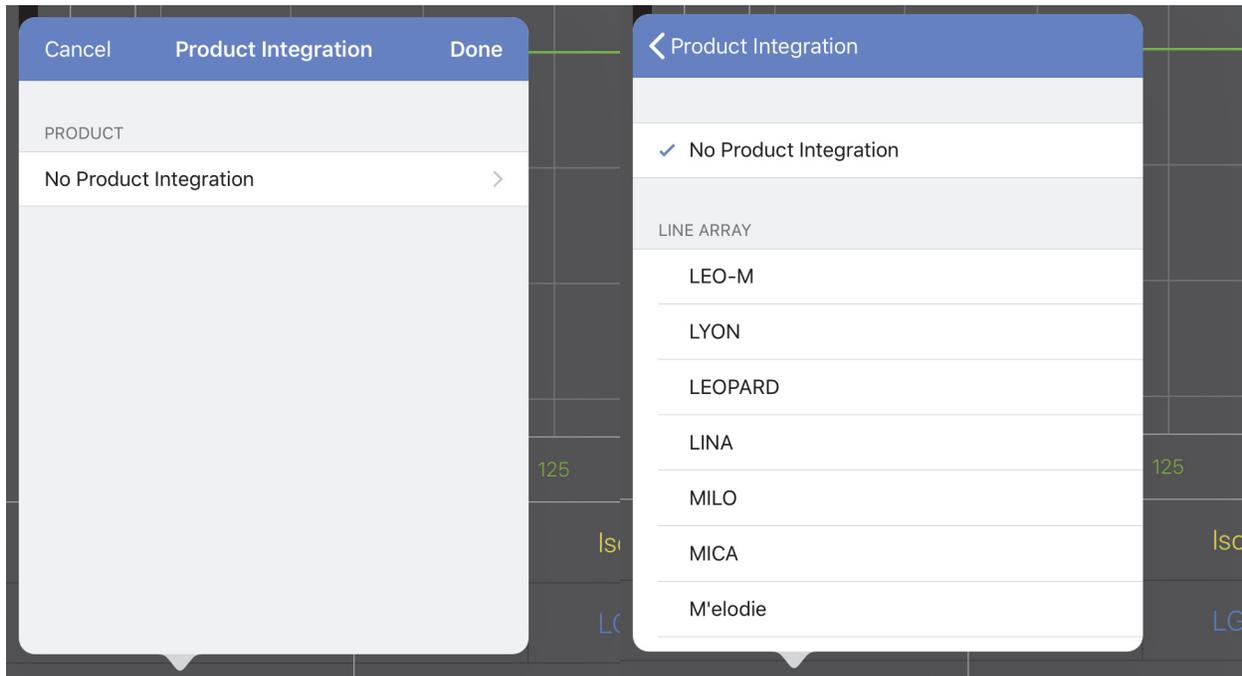


Figure 19: Product Integration menus

2. Tap the current product name to open the menu to select a new product.
3. Select the lowest possible pc (phase curve) value for all channels connected to a Meyer Sound product.

All channels should have the same pc value.

The Delay Integration standard applies corrective filters to match the acoustic characteristics between Meyer Sound product families without introducing excessive shifts in phase that degrade intelligibility and signal clarity. Delay integration is also a quick alignment tool to ensure coherent summation when combining different loudspeaker elements.

Using Delay Integration to the lowest GALAXY phase curve setting possible for all loudspeakers lets your loudspeaker or loudspeaker system perform to the best possible phase curve, providing uniform and integrated system behavior without audio artifacts when transitioning between sources.

Delay integration for subwoofers provides a more controlled response that makes it easier to integrate with both current and past Meyer Sound loudspeaker systems. Matching the GALAXY pc settings for subwoofer products also provides an easier integration between different subwoofer products by unifying their sonic signature, making them easier to align.

- Select the product followed by the desired pc frequency: 55-70, 100, or 125 (Hz). Not all products have every option available (except 125 Hz). Choose the lowest pc available for all of the loudspeaker models in a system.

Below the Delay setting, tap **No Delay Integration** (if never set) or the solid blue rectangle with the Meyer powered loudspeaker listed within it. All compatible loudspeakers appear in this list.

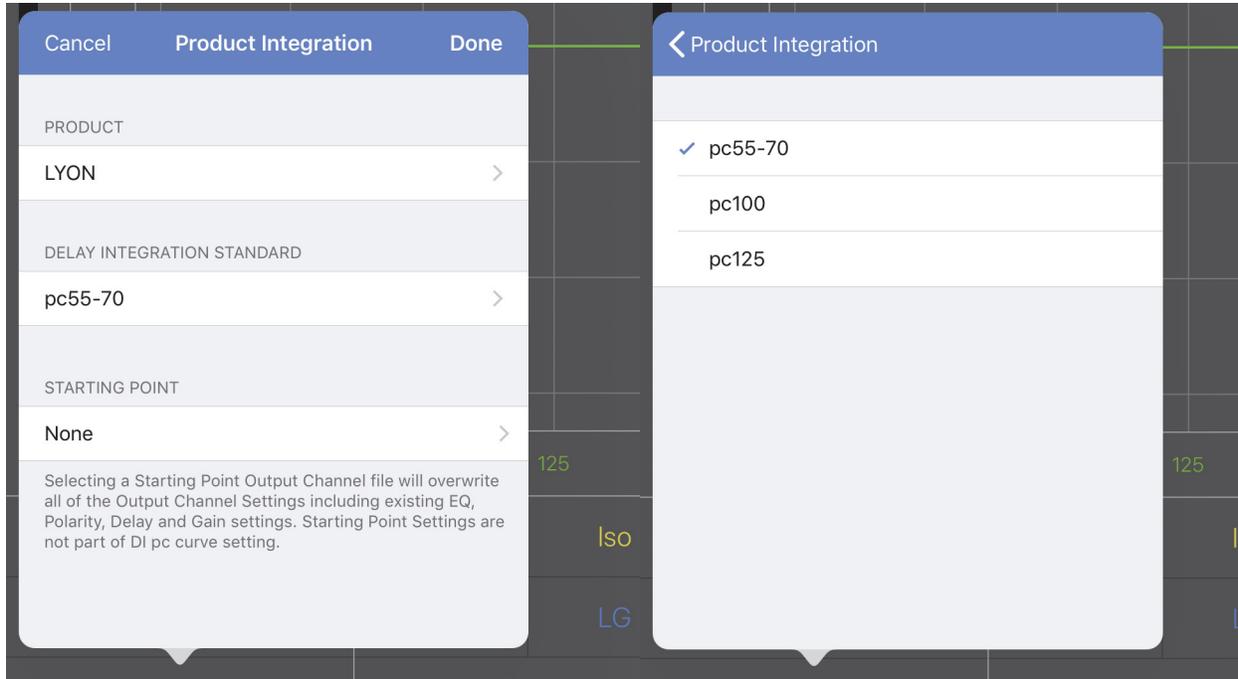


Figure 20: Selecting Delay Integration standard



Figure 21: Starting Points menu (left) and completed field (right)

Sel/Iso/Mute/Pol

1. Tap **Sel**, **Iso**, **Mute** controls to toggle their values.

A rectangular box surrounds an active value.

2. Tap **Pol** to reverse the Polarity (outputs only).

Pol is normal, Rev is reversed.

LG

Use Link Groups to edit and control multiple channels simultaneously. Assign a channel to the desired Link Group. Touch the **On/Off** switch to enable/disable a Link Group.

Inputs have four Link Groups, outputs have eight.

PARAMETRIC CONTROLS

To display the Parametric controls from the EQ View, tap the **Parametric** tab in the center of the top menu bar.



Figure 22: EQ View with Parametric controls

To select a filter to adjust, do either of the following:

- Touch a filter's **Freq.**, **B/W**, or **Gain** value.
- OR -
- Touch a filter's number in the graph.

In both cases, a blue rectangle surrounds the channel's settings and the filter number highlights in blue on the graph. The selection persists for 3 seconds before extinguishing.

With a filter selected, you can adjust its settings by doing either of the following:

- Touch the filter number and drag up/down to alter the gain, or drag left/right to adjust frequency.
- Drag in both directions to adjust frequency and gain at once.
- Use three fingers to drag to change the gain but keep the frequency constant.
- OR -

1. Double-tap **Freq.**, **B/W**, or **Gain**.

A numeric pad opens so you can enter values directly.

2. Enter a new value.

The +/- button toggles between positive and negative values.

Note that when no sign is shown, the value is interpreted as negative.

3. Tap **Done** when finished.



NOTE: Touching and dragging within a selected channel's settings operates the same as if you touched and dragged the filter number. **Freq.** and **Gain** can be adjusted in this manner but not **B/W**. Use a two-finger pinch/spread gesture to change **B/W**.

Each filter can be individually enabled or bypassed.

To enable or bypass a filter:

- Touch **Enabled** or **Bypassed** at the top of the filter's settings to toggle its state.

To set all filters to the same state:

- Touch the yellow arrow at the far left of the window.

If one or more filters is **Bypassed**, the arrow faces left and will set all filters to **Enabled** when touched.

In Figure 22, touching the left-facing arrow sets all filters to **Enabled** and the arrow will point to the right.



Figure 23: Bypassed/Enabled control to toggle all channels

U-SHAPING CONTROLS

To display the U-Shaping controls from the EQ View, tap the **U-Shaping** tab in the center of the top menu bar.

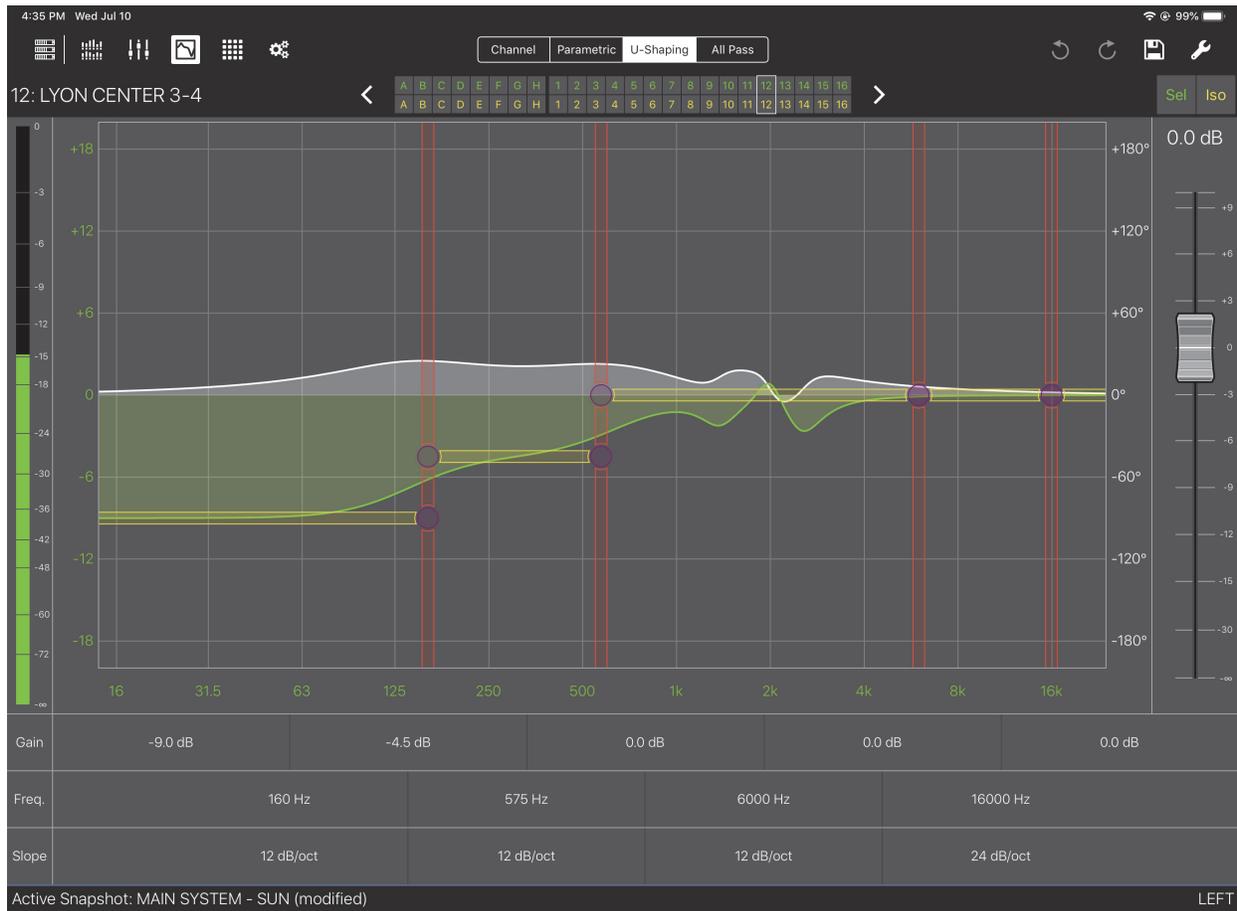


Figure 24: EQ View with U-Shaping controls

- Touch a vertical red line to select a filter's frequency.
The line highlights in red and the **Freq.** setting has a red outline.
In Figure 24, **Freq.** is selected for the highest filter.
- Touch a horizontal yellow line to select gain.
The line highlights in yellow and the **Gain** setting has a yellow outline.

The selected state persists for 3 seconds before extinguishing.

To adjust a selected filter:

1. Drag a red selected **Freq.** line left/right to decrease/increase the value.
Dragging within the **Freq.** value accomplishes the same function.
2. Drag a yellow selected **Gain** line up/down to increase/decrease the value.
Dragging within the **Gain** value accomplishes the same function.
3. Double-tap the **Slope** value to select a value for the filter (see options below).



Figure 25: Slope options for U-Shaping filters



NOTE: The first two breakpoints include the Slope options shown above; the next two do not include 48 dB/oct.

ALL PASS FILTER CONTROLS

To display the All Pass controls from the EQ View, tap the **All Pass** tab at the right of the top menu bar.

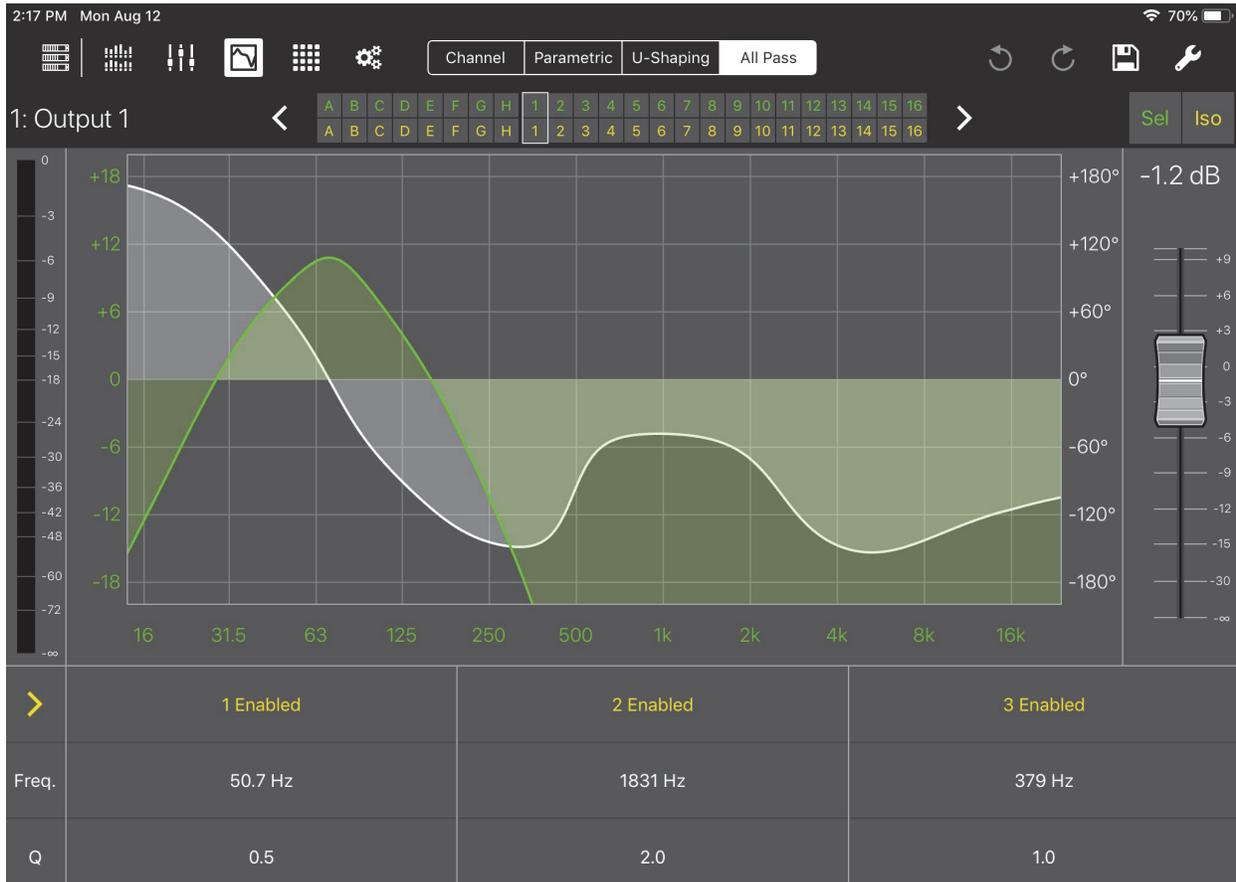


Figure 26: EQ View with All Pass controls

Select one of the three filters by touching its **Freq.** or **Q** field:

- Touch and drag up/down in the **Freq.** field to increase/decrease the frequency.
- Double tap the **Q** field to bring up a numeric pad in which you can enter the Q value.

In both cases, a blue rectangle surrounds the channel's settings and the filter number highlights in blue on the graph. The selection persists for 3 seconds before extinguishing. Filter 6 is selected in Figure 22).

Each filter can be individually enabled or bypassed.

To enable or bypass a filter:

- Touch **Enabled** or **Bypassed** at the top of the filter's settings to toggle its state.

To set all filters to the same state:

- Touch the yellow arrow at the far left of the window.

In Figure 26, touching the right-facing arrow sets all filters to **Bypassed**.

If one or more filters is **Bypassed**, the arrow faces left and will set all filters to **Enabled** when touched.

EQ VIEW TOOLS

The content of the EQ View Tools menu depends on the device and whether an input or output is currently selected. The EQ View Tools menu shown below is from a GALAXY output, which contains all relevant controls.

Tap the Tools icon at the top-right of the EQ View to open the following dialog:

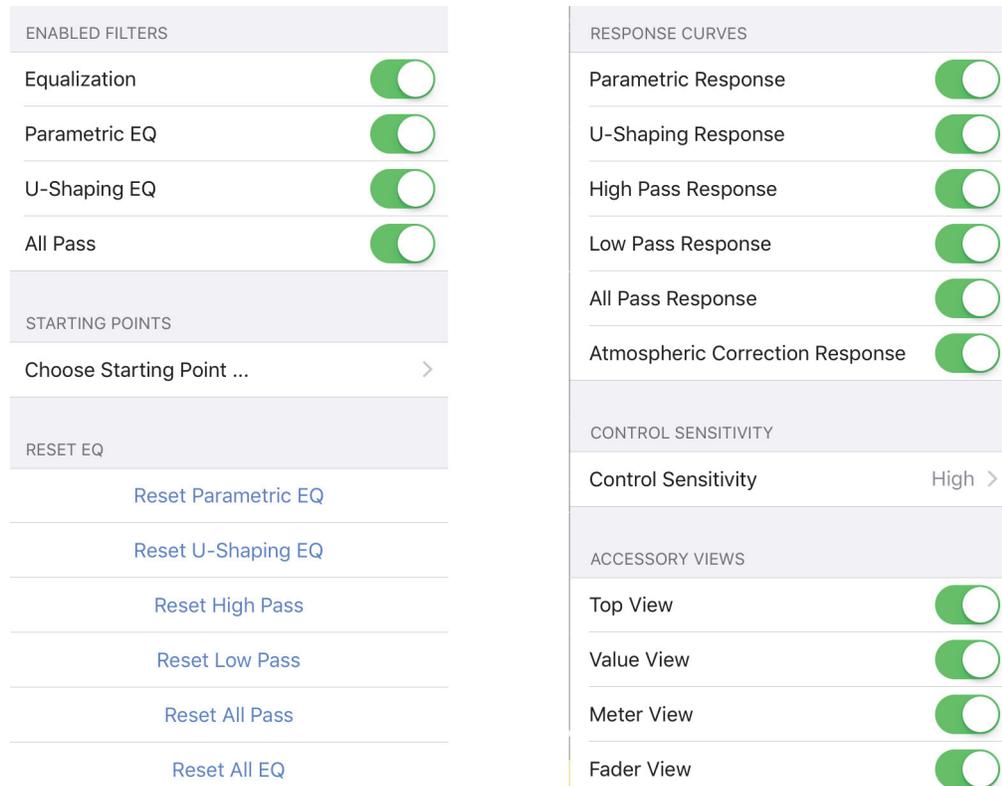


Figure 27: EQ View Tools options for a GALAXY output: Upper controls (left), lower controls (right)

Enabled Filters

Swipe the buttons to the right (active) to enable the desired filter types. If a filter is enabled and has settings applied, you can disable it but still retain its values for later use; just re-enable the filter.



NOTE: Some devices do not include all of these filter options.

Starting Points

Touch **Choose Starting Point** to set a new Starting Point. This may overwrite any current parameters already set.



NOTE: Only the Callisto 616 and GALAXY outputs offer this option.

The following Meyer Sound loudspeaker options can be used as a Starting Point:

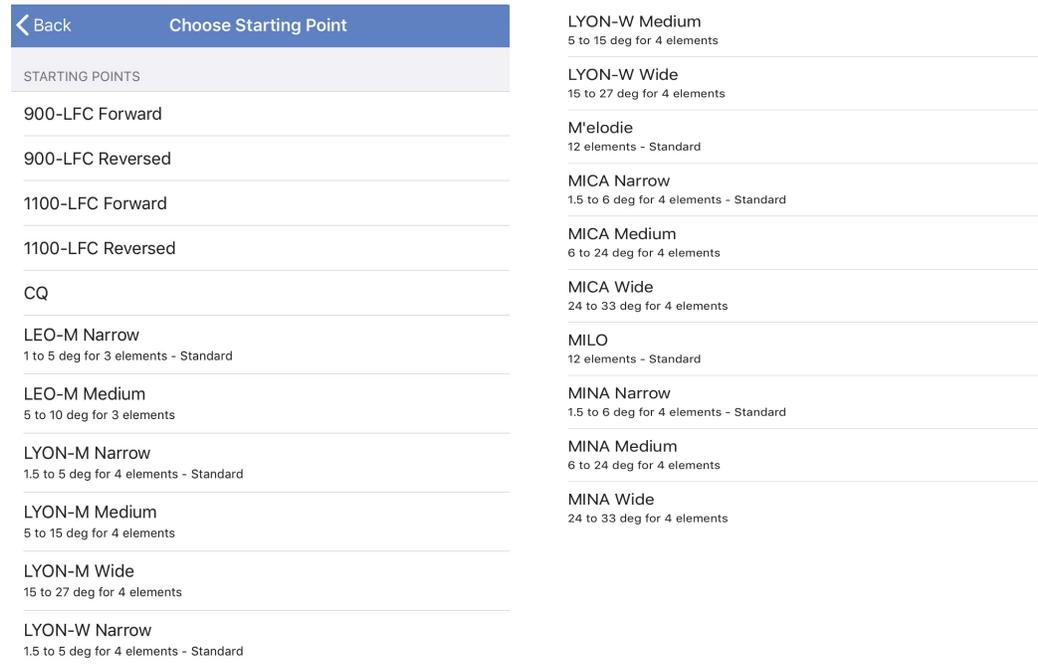


Figure 28: Choosing a new Starting Point: Top of menu (left), bottom of menu (right)

Reset EQ

Touch **Reset Parametric EQ**, **Reset U-Shaping EQ**, **Reset High Pass**, **Reset Low Pass**, or **Reset All Pass**, to reset that filter to flat (0 gain at all bands) and all other filter parameters (i.e., bandwidth, frequency, slope, etc.) to their default values. Touch **Reset All EQ** to reset all filters to their default values at once.



NOTE: Some devices do not include all of these reset options.

Response Curves

Swipe any of the **Response** buttons to the right (active) position to enable display for those curves in other windows. This setting is channel-specific so you can show any combination of these curves for each input and output.

Control Sensitivity

This sets the sensitivity for Compass Go's touch controls.

Touch the current setting and choose **Low**, **Medium**, or **High** (default).

High sensitivity causes the fastest change in value per distance dragged.

Accessory Views

Swipe the **Top View**, **Value View**, **Meter View**, and/or **Fader View** buttons to the right (active) position to show those entities in the EQ View window. You can conserve screen area by swiping them to the left when they are not essential to your current task.

SIM3 Trim (Galileo and Callisto only)

Each output channel can be enabled/disabled in the SIM3 section of the device settings. When enabled, the **SIM3 Trim** for each output can be adjusted between -12 dB and +6 dB.

CHAPTER 6: MATRIX VIEW

To display the Matrix View, tap the Matrix Icon (highlighted in Figure 29) in the top menu bar from any Compass Go view.

The Matrix View has three tabs: **Gain Mode**, **Router Mode**, and **Delay Mode**. Touch a tab to change the display. When visiting other views, the last mode displayed is used when you reselect the Matrix View. Gain Mode is selected in Figure 29.

Each matrix contains the following entries:

- 8 processed inputs **A–H**
- 24 unprocessed AVB inputs **9–32**
- 16 processed outputs **1–16**

GAIN MODE

	-∞ dB	-9.0 dB	-6.0 dB	-4.5 dB	-3.0 dB	+0.0 dB	+3.0 dB	+6.0 dB	+8.0 dB	-∞ dB
Clear Gain Matrix										
11/232 crosspoints										
1: LYON-M 1-4 (TOP)										
2: LYON-M 5-8										
3: LYON-M 9-11										
4: LYON-M 12										
5: Output 5										
6: Output 6										
7: Output 7										
8: Output 8										
9: Output 9										
10: Output 10										
11: LYON CENTER 1-2										
12: LYON CENTER 3-4										
13: Output 13										
14: OPTIONAL LFC										
15: 1100-LFC FRONT 1-...										
16: 1100-LFC REAR 2,5										
A: LEFT MAIN	+0.0	+0.0	+0.0	+0.0	-∞	-∞	-∞	-∞	-∞	-∞
B: LEFT LFC	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞
C: LEFT OUT FILL	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞
D: LEFT SPOT FILL	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞
E: CENTER	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞
F: Input F	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞
G: Input G	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞
H: Input H	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞

Figure 29: Matrix View in Gain Mode

To set the gain for an individual cell:

1. Touch the cell to select it.
A white rectangle encloses the cell. The selection persists for 3 seconds before extinguishing.
2. Touch a dB value from the top list.
The cell updates with that value.

To set the gain for multiple cells:

1. Touch multiple cells to select them.
A white rectangle encloses each selected cell. The selection persists for 3 seconds before extinguishing.
2. Touch a dB value from the top list.
The cells update with that value.

To select an entire Input or Output, touch its label on the left or top, respectively.

To select all cells, touch **Select All** at the top left.

ROUTER MODE

Clear Gain Matrix	1: LYON-M 1-4 (TOP)	2: LYON-M 5-8	3: LYON-M 9-11	4: LYON-W 12	5: Output 5	6: Output 6	7: Output 7	8: Output 8	9: Output 9	10: Output 10	11: LYON CENTER 1-2	12: LYON CENTER 3-4	13: Output 13	14: OPTIONAL LFC	15: 1100-LFC FRONT...	16: 1100-LFC REAR 2-5
11/232 crosspoints																
A: LEFT MAIN	+0.0	+0.0	+0.0	+0.0	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞
B: LEFT LFC	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	+5.0	+5.0	-10.0
C: LEFT OUT FILL	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-20.0	-∞	-∞	-∞
D: LEFT SPOT FILL	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-10.0	-∞	-∞	-∞	-∞
E: CENTER	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	+0.0	+0.0	-∞	-∞	-∞	-∞
F: Input F	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞
G: Input G	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞
H: Input H	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞	-∞

Figure 30: Matrix View in Router Mode

To directly toggle a cell value:

- Touch a cell marked $-\infty$ to set it to 0 dB.
- Touch a cell marked with any dB value other than $-\infty$ to set it to $-\infty$.

To set a cell to a specific gain value:

1. Double-tap the cell.

A numeric pad opens.

2. Enter a new value.

Gain settings can vary from -90 to 20 dB.

The +/- button toggles between positive and negative values.

Note that when no sign is shown, the value is interpreted as negative.

3. Touch **Done** when finished.

To set a row or column to $-\infty$:

- Touch an Input or Output label.

To set a all entries to $-\infty$:

- Touch **Clear Gain Matrix**



NOTE: See “Direct Router Mode” on page 39 to learn about additional assignment options

DELAY MODE

Delay Mode can set a delay between Inputs and Outputs.

Clear Delay Matrix	1: LYON-M 1-4 (TOP)	2: LYON-M 5-8	3: LYON-M 9-11	4: LYON-W 12	5: Output 5	6: Output 6	7: Output 7	8: Output 8	9: Output 9	10: Output 10	11: LYON CENTER 1-2	12: LYON CENTER 3-4	13: Output 13	14: OPTIONAL LFC	15: 1100-LFC FRONT...	16: 1100-LFC REAR 2-5
A: LEFT MAIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B: LEFT LFC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C: LEFT OUT FILL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D: LEFT SPOT FILL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E: CENTER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F: Input F	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G: Input G	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H: Input H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Figure 31: Matrix View in Delay Mode

To select one or more cells for editing, do one of the following:

- Touch each cell you wish to select.
- Touch an Input or Output label to select the entire row or column, respectively.
- Touch **Select All** at the top left to select all cells.

A white rectangle encloses each selected cell. The selection persists for 3 seconds before extinguishing.

While cells are selected, do either of the following:

- Drag up/down to increase/decrease the delay.
- OR -

1. Double-tap a selected cell.

A numeric pad opens.

2. Enter a new delay value.
3. Touch **Done** when finished.

All selected cells update with their new values.

EXPANDED MATRIX INPUTS

Figure 32 shows the expanded Matrix inputs available to the Router, Gain, and Delay Matrices. You can zoom in/out with a two-finger spread/pinch gesture.

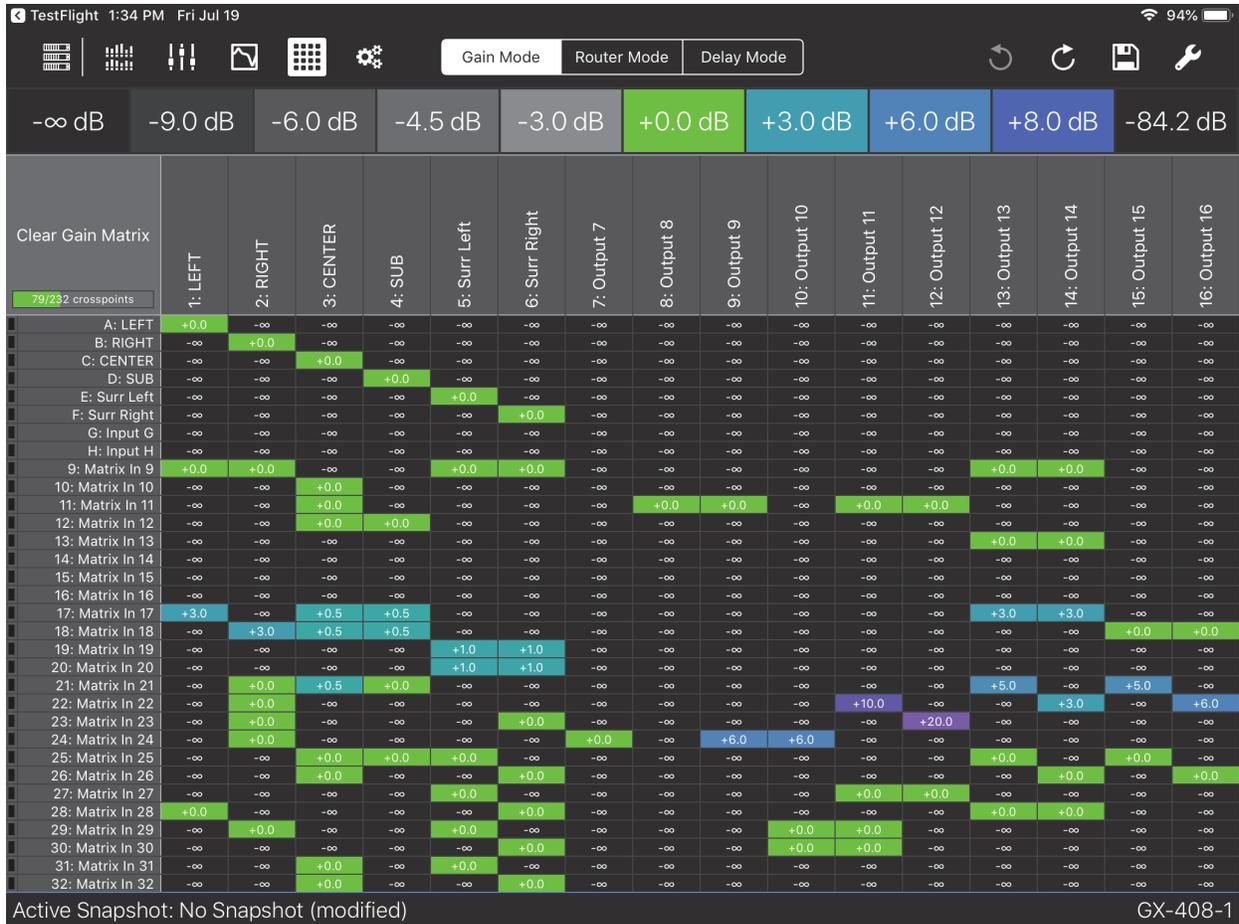


Figure 32: Expanded Matrix Inputs



Figure 33: Expanded Matrix zoomed in

MATRIX VIEW TOOLS

Tap the Tools icon at the top-right of the Matrix View to open the following dialog:

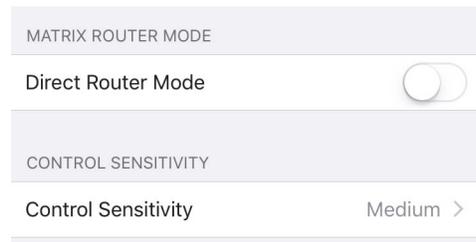


Figure 34: Tools options from Matrix View

Direct Router Mode

The **Direct Router Mode** affects *subsequent* Router tab assignments in the Matrix View:

- Slide the button to the left (inactive) position to *disable* direct routing.
 - Tap a crosspoint to toggle the gain between $-\infty$ and **0.0**. Multiple inputs can be routed to one output.
- Slide the button to the right (active) position to *enable* direct routing.
 - Tap any crosspoint set to $-\infty$ to change its value to **0.0**, and set all other crosspoints in that column (outputs) to $-\infty$. This automatically restricts routing to one input per output.

If you *previously* assigned multiple inputs to the same output, and then activated **Direct Router Mode**, you could conceivably toggle one assignment to $-\infty$ and still have multiple inputs routed to that output. However, by tapping any output crosspoint set to $-\infty$, you will toggle it to **0.0**, and set all other crosspoints in that column (outputs) to $-\infty$.

Control Sensitivity

This sets the sensitivity for Compass Go's touch controls.

Touch the current setting and choose **Low**, **Medium**, or **High** (default).

High sensitivity causes the fastest change in value per distance dragged.

CHAPTER 7: SETTINGS VIEW

To display the Settings View:

1. Select a device from the **Devices View**.
2. Tap the **Settings** icon (highlighted in the top-left menu bar in the figure below).

The **Snapshot Settings** are shown below.

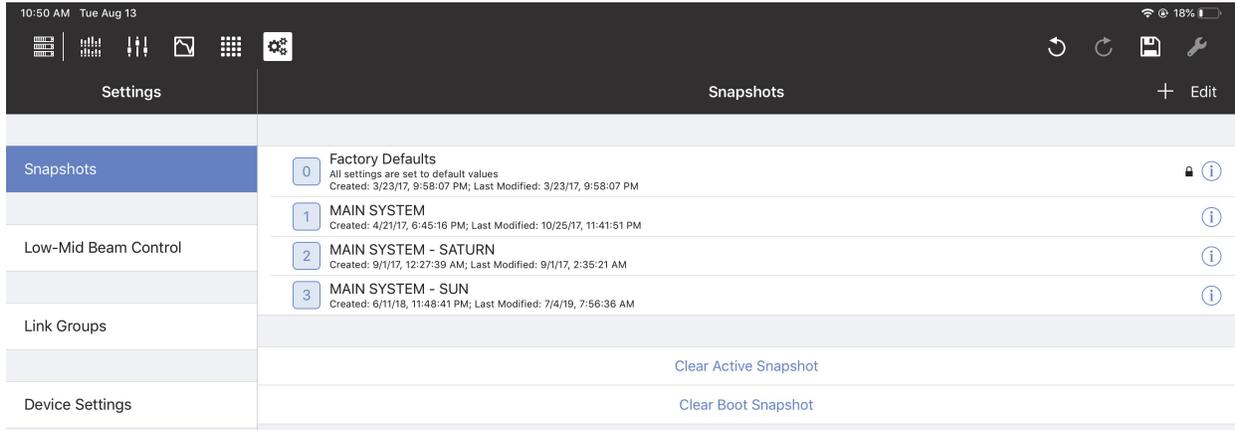


Figure 35: Settings View with Snapshots tab selected

The following Settings View tabs are discussed in this chapter:

- Snapshots (see page 42)
- Low-Mid Beam Control (see page 43)
- Link Groups (see page 46)
- Device Settings (see page 47)
- Input & Output Settings (see page 49)
- Clock Source Settings (see page 54)
- SIM3 (see page 57)

The Global Controls that appear at the top-right of each view are discussed at the end of this chapter on page 58.



Figure 36: Global Controls

SNAPSHOTS

A Snapshot contains all settings that configure a particular device. Each device has a:

- **Factory Default Snapshot:** Includes typical settings to start with. It can be duplicated but not edited.
- **Boot Snapshot:** Activated upon starting the device, and remains the Active Snapshot until another is loaded. If there is no Boot Snapshot, the device boots with its previous settings.
- **Active Snapshot:** The Active Snapshot contains one instance of all GALAXY settings that are currently active in the GALAXY hardware.

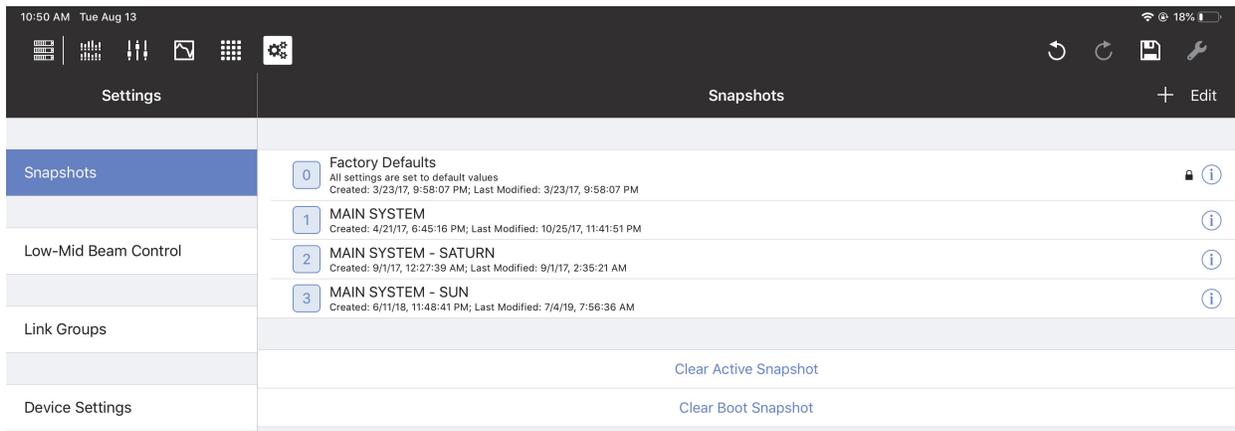


Figure 37: Snapshot tab in Settings

Factory Defaults

Tap Factory Defaults to recall the Factory Default settings.

 **NOTE:** The Factory Default Snapshot cannot be edited.

Create New Snapshot

Tap Create New Snapshot to create a new Snapshot using this device's current settings. This is now the Active Snapshot.

Clear Active Snapshot

Tap Clear Active Snapshot to clear the Active Snapshot. The device continues with its current settings and will use the Boot Snapshot (if one is assigned) next time it restarts.

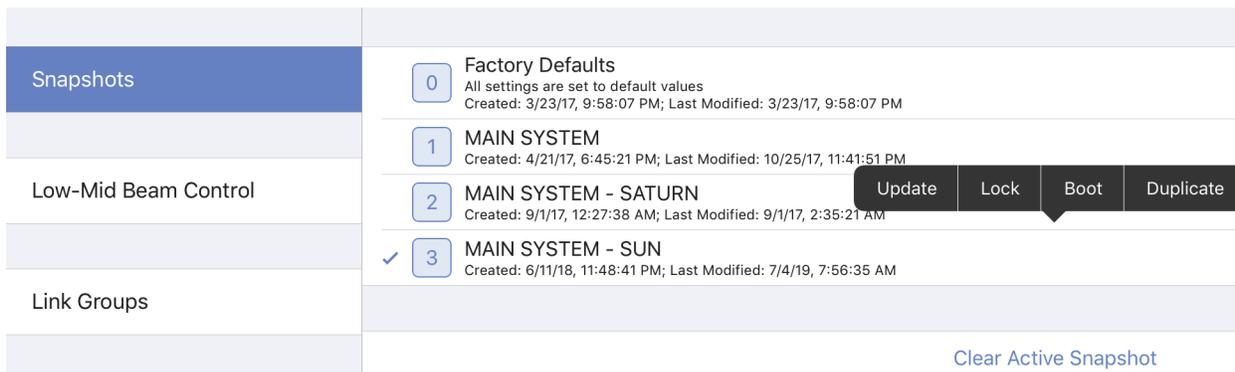


Figure 38: Snapshot assignment and editing options

In Figure 38, MAIN SYSTEM - SUN is the Active Snapshot. Tap and hold any Snapshot. The following options are available (some states are context-sensitive and may appear inactive):

- **Update:** Updates the Snapshot with the device’s current settings.
The **Factory Defaults** Snapshot cannot be updated.
- **Lock or Unlock:** Toggles the locked state of the Snapshot. When locked it, cannot be updated.
The **Factory Defaults** Snapshot cannot be unlocked.
- **Boot:** Makes that Snapshot the Boot Snapshot.
- **Duplicate:** Makes a copy of that Snapshot.



NOTE: There need not be an Active Snapshot. The device continues with its current settings.

Clear Boot Snapshot

Tap **Clear Boot Snapshot** to remove it as the Boot Snapshot. A device without a Boot Snapshot restarts using its last settings before shutting down.

LOW-MID BEAM CONTROL

Low Mid Beam Control (LMBC) is a tool that lets GALAXY users modify the natural vertical coverage of the low mid frequencies of a Meyer Sound line array to better match the high frequency coverage. Settings can be applied for up to four Arrays, each with up to 32 elements.

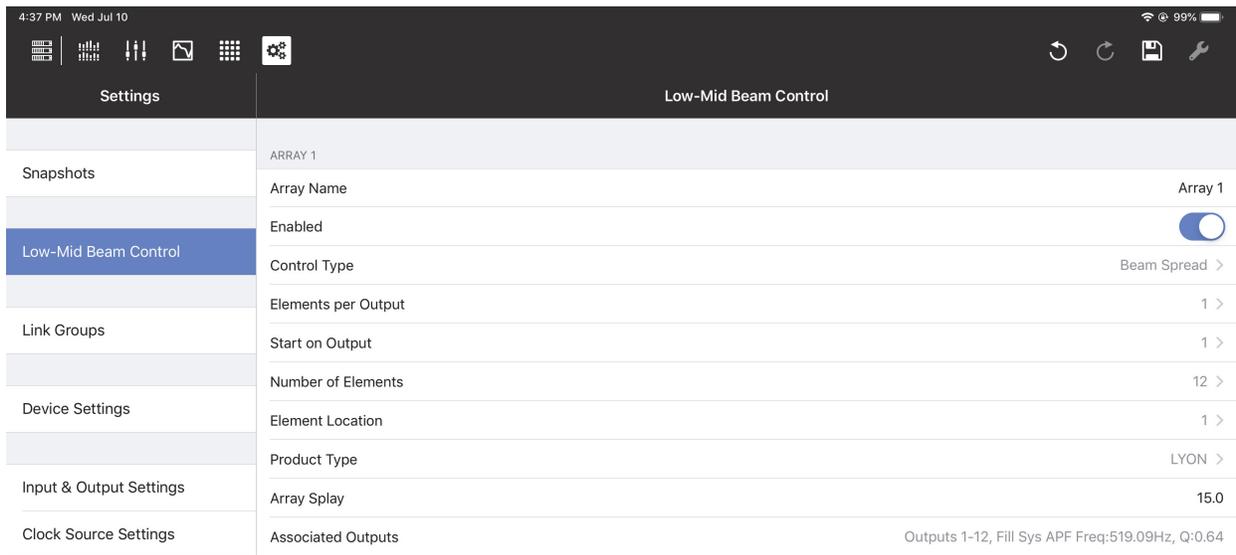


Figure 39: Low-Mid Beam Control tab

Low Mid Beam Control Settings

Array Name: Lets you assign a name to the array (Flown Loudspeaker System).

Enabled/Bypassed: This status button lets you enable or bypass LMBC for all affected channels.

Control Type: The two options are **Beam Spread** and **Steer Up**.

Elements per Output: There can be one or two elements per output; this should match the physical connections in the array.

Start on Output: Selects the first output of the GALAXY processor where LMBC processing starts. Element 1 always starts at the top of the array.

Number of Elements: Sets the number of total elements in the array.

Element Location: Use this control when spanning multiple GALAXY processors if you have more than 16 elements that require more than 16 processor outputs.

For example, in an array with 22 elements, one element per output, and two processors:

1. Set the **Number of Elements** to 22 on both processors.
2. On the first processor, set **Start On Output** to 1, and set **Element Location** to 1.
3. On the second processor, set **Start On Output** to 1, and set **Element Location** to 17.

Product Type: Select the product type for this array from the list shown below:

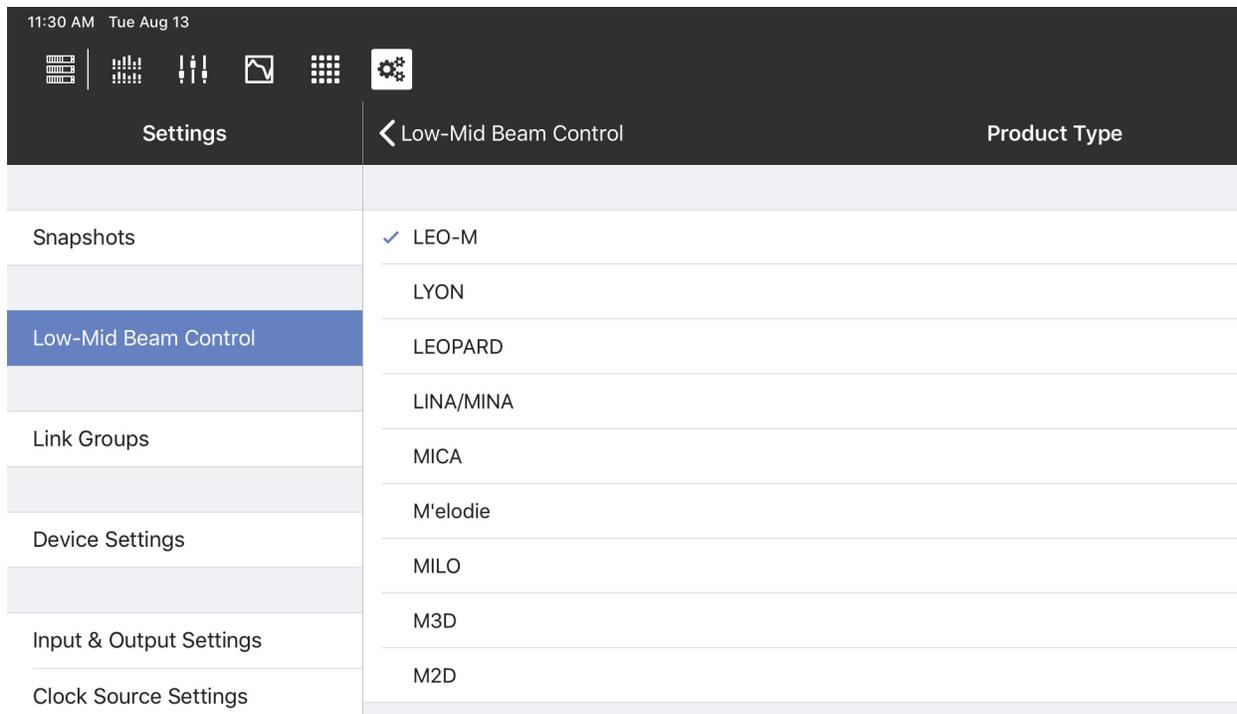


Figure 40: Product Types for LMBC

Array Splay: This is the sum total of the splay angles of the array.

To calculate **Array Splay** using the MAPP System Design Tool:

1. Subtract the **Rotation About Reference Point** value from the **Array Splay** value shown at the bottom element of the Flown Loudspeaker System.
2. Enter the result in the Compass or Compass Go **Array Splay** column.
3. Set the splay angle between the top grid and the first element to 0°.

For example: If the MAPP **Rotation About Reference Point** = -2 and **Array Splay** = -56, then the LMBC **Array Splay** = 54°.

Associated Outputs: This shows the device outputs in use with that LMBC array.

For example in Figure 39, the array starts on output 1, has 1 element per output, and 12 elements, so **Associated Outputs** is 1–12.



NOTE: If there is an error in the configuration, the **Associated Outputs** row turns red and its name changes to **Error**. A non-optimal configuration shows a warning in yellow.

Low Mid Beam Control Operational Tips

The following tips will help LMBC be more effective:

- Signal drive lines must have correct polarity.
- Apply LMBC before any other EQ.
- Gain Tapering can make LMBC ineffective.
- Do not treat array zones with different processing and/or gain below 1 kHz. For example, correct for low mid buildup with the same filters on the entire array, but correct for high frequency distance only above 1 kHz on individual zones.
- **Beam Spread** is not optimal above 95° **Array Splay**.
- **Steer Up** is not optimal above 45° **Array Splay**.
- One array element per output is optimal.
- Two array elements per output is maximum, and can only be used in an array with 12 or more elements.
- Compass Software is designed to prevent invalid or non-optimal configurations.
- LMBC is not designed to mix different product types in one array.
- Set all speakers of the same type to the same Delay Integration pc setting.
- When loudspeakers use separate outputs without LMBC, one all pass filter can be used to optimize alignment with the LMBC outputs.

LINK GROUPS

Link Groups let you control multiple Inputs or Outputs simultaneously with one control. There are four Input Link Groups, and eight Output Link Groups.

Tap **Link Group Name** to enter a name for the Input or Output Link Group.

Input Link Groups (1–4)

Enable each Input Link Group you wish to control by sliding its button (Group 1, Group 2, etc.) to the right (it turns green). Then enable the Inputs (A–H) to include in that Input Link Group.

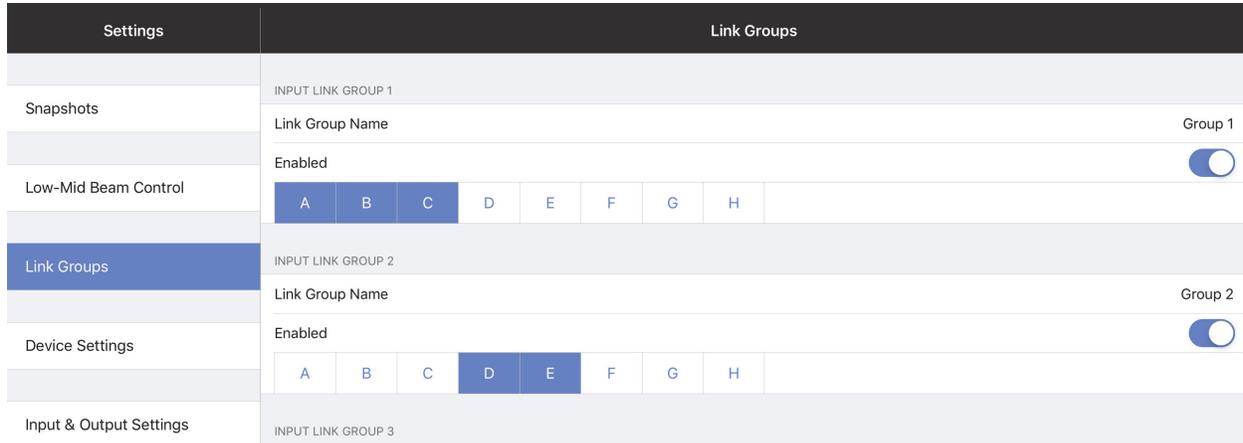


Figure 41: Input Link Groups from the Link Groups tab

Output Link Groups (1–8)

Enable each Output Link Group you wish to control by sliding its button (Group 1, Group 2, etc.) to the right (it turns green). Then enable the Outputs (1–16) to include in that Output Link Group.

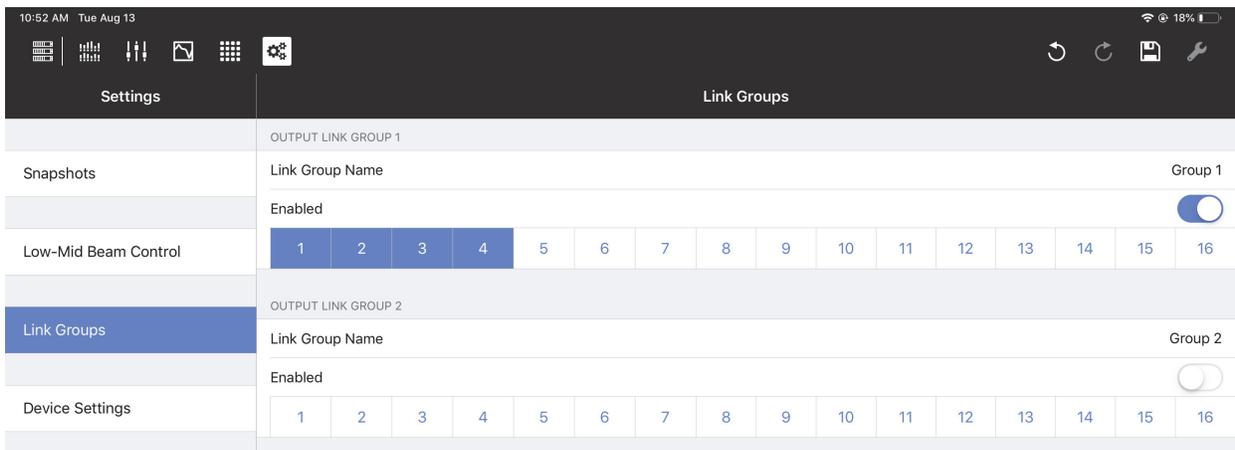


Figure 42: Output Link Groups from the Link Groups tab

DEVICE SETTINGS

Settings	Device Settings
	NETWORK SETTINGS
Snapshots	Entity Name LEFT
	Group Name LYON
Low-Mid Beam Control	Device Type Galileo GALAXY 816
	Serial Number 17176806
Link Groups	Device Identify Enabled <input checked="" type="checkbox"/>
	GALAXY TIME
Device Settings	GALAXY Time 7/4/19, 6:06:12 AM ⓘ
	ENVIRONMENT SETTINGS
Input & Output Settings	Temperature °Celsius 20.0 °C
	Temperature °Fahrenheit 68.0 °F
Clock Source Settings	Humidity 50 %
SIM3	Altitude Below 800m/264ft >

Figure 43: Device Settings tab

Network Settings

These settings enable each device to uniquely identify itself on a network.

Device Name

Initially each Device receives an automatically generated name. To rename it, tap **Device Name** and use the onscreen keyboard.

Device Group Name

To assign a name to the Device Group, tap **Device Group Name** and use the onscreen keyboard.

Device Type and Serial Number

These parameters are set at the Factory in each device and cannot be edited. Together, they uniquely identify each device (regardless of the user-assigned **Device Name**).

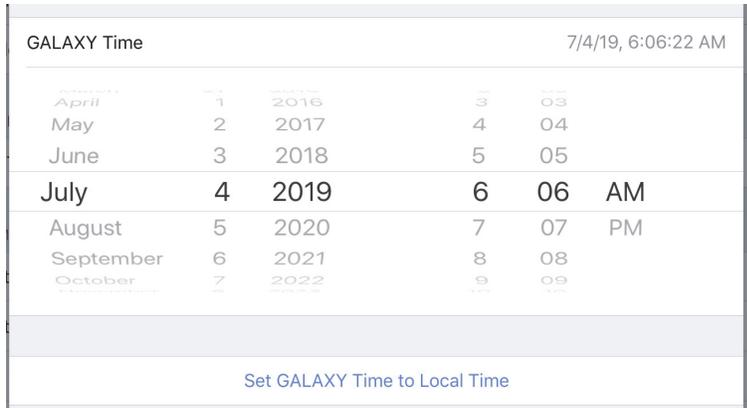
Device Identity Enabled

Slide the button to the right to cause this GALAXY device to identify itself by winking its rear panel **Wink LED** button and front panel display.

GALAXY Time

The GALAXY Time can be edited using the fields shown by the figure below. Touch the date and time fields to set them manually.

Touch **Set GALAXY Time to Local Time** to set the time and date automatically.



GALAXY Time		7/4/19, 6:06:22 AM			
April	1	2016	3	03	
May	2	2017	4	04	
June	3	2018	5	05	
July	4	2019	6	06	AM
August	5	2020	7	07	PM
September	6	2021	8	08	
October	7	2022	9	09	

[Set GALAXY Time to Local Time](#)

Figure 44: Setting the GALAXY Time

Environment Settings

These values are used by the atmospheric correction algorithm (if enabled) and should be set to match the current operating environment.

- Temperature Celsius
- Temperature Fahrenheit
- Humidity
- Altitude

INPUT AND OUTPUT SETTINGS

This section lets you specify the types of Inputs and Outputs you wish to use.

Settings	Input & Output Settings
	AVB OUTPUT SETTINGS
Snapshots	Default Presentation Time 2.000 ms
	INPUT CHANNEL TYPES
Low-Mid Beam Control	A: LEFT MAIN Primary Connected Talker: LYON.Distro Sun.Outputs 1-8.LEFT MAIN A Media Status: Locked, Sample Rate: 96 kHz, Presentation Time Offset: 2.000 ms, Accumulated Latency: 0.368 ms Secondary Connected Talker: No talker connected Media Status: Unlocked, Sample Rate: 0 kHz, Presentation Time Offset: 0.000 ms, Accumulated Latency: 0.000 ms
Link Groups	B: LEFT LFC Primary Connected Talker: LYON.Distro Sun.Outputs 1-8.LEFT MAIN B Media Status: Locked, Sample Rate: 96 kHz, Presentation Time Offset: 2.000 ms, Accumulated Latency: 0.368 ms Secondary Connected Talker: No talker connected Media Status: Unlocked, Sample Rate: 0 kHz, Presentation Time Offset: 0.000 ms, Accumulated Latency: 0.000 ms
Device Settings	C: LEFT OUT FILL Primary Connected Talker: LYON.Distro Sun.Outputs 1-8.LEFT MAIN C Media Status: Locked, Sample Rate: 96 kHz, Presentation Time Offset: 2.000 ms, Accumulated Latency: 0.368 ms Secondary Connected Talker: No talker connected Media Status: Unlocked, Sample Rate: 0 kHz, Presentation Time Offset: 0.000 ms, Accumulated Latency: 0.000 ms
Input & Output Settings	D: LEFT SPOT FILL Primary Connected Talker: LYON.Distro Sun.Outputs 1-8.LEFT MAIN D Media Status: Locked, Sample Rate: 96 kHz, Presentation Time Offset: 2.000 ms, Accumulated Latency: 0.368 ms Secondary Connected Talker: No talker connected Media Status: Unlocked, Sample Rate: 0 kHz, Presentation Time Offset: 0.000 ms, Accumulated Latency: 0.000 ms
Clock Source Settings	E: CENTER Primary Connected Talker: LYON.Distro Sun.Outputs 1-8.LEFT MAIN E Media Status: Locked, Sample Rate: 96 kHz, Presentation Time Offset: 2.000 ms, Accumulated Latency: 0.368 ms Secondary Connected Talker: No talker connected Media Status: Unlocked, Sample Rate: 0 kHz, Presentation Time Offset: 0.000 ms, Accumulated Latency: 0.000 ms
SIM3	F: Input F Primary Connected Talker: LYON.Distro Sun.Outputs 1-8.LEFT MAIN F Media Status: Locked, Sample Rate: 96 kHz, Presentation Time Offset: 2.000 ms, Accumulated Latency: 0.368 ms Secondary Connected Talker: No talker connected Media Status: Unlocked, Sample Rate: 0 kHz, Presentation Time Offset: 0.000 ms, Accumulated Latency: 0.000 ms

Figure 45: Input & Output Settings

Settings	Input & Output Settings
	OUTPUT CHANNEL TYPES
Snapshots	1: LYON-M 1-4 (TOP) Analog, AVB
	2: LYON-M 5-8 Analog, AVB
Low-Mid Beam Control	3: LYON-M 9-11 Analog, AVB
	4: LYON-W 12 Analog, AVB
Link Groups	5: Output 5 Analog, AVB
	6: Output 6 Analog, AVB
Device Settings	7: Output 7 Analog, AVB
	8: Output 8 Analog, AVB
Input & Output Settings	9: Output 9 Analog, AVB
Clock Source Settings	10: Output 10 Analog, AVB
	11: LYON CENTER 1-2 Analog, AVB
	12: LYON CENTER 3-4 Analog, AVB
SIM3	13: ULTRA-X40 FILLS Analog, AVB
	14: OPTIONAL LFC Analog, AVB
	15: 1100-LFC FRONT 1,3,4,6 Analog, AVB
	16: 1100-LFC REAR 2,5 Analog, AVB
	VOLTAGE RANGE
	Input & Output Voltage Range +26 dBu >

Figure 46: Input & Output Settings

Default Presentation Time

Devices using the AVB I/O network periodically exchange timing information that allows both sides to precisely synchronize their time base reference clocks. This exchange of timing information allows an AVB *listener* to calculate the worst-case network transit time per stream, which is expressed as **MSRP (Multiple Stream Reservation Protocol) Accumulated Latency**. A network with one switch hop will typically have a smaller measured MSRP latency than one with several switch hops.

The **Default Presentation Time** (shown in Figure 35) lets the user obtain the lowest latency for AVB output streams in a given network topology without losing any audio samples.

Consider the following before choosing a **Default Presentation Time** setting:

- The **MSRP Accumulated Latency** indicator displays the worst case transit time through the network.
- The **Presentation Time Offset** indicator is the maximum transit time handled by the AVB listener.
- The **Remaining Transit Time** indicator is the time remaining between the packet reception and presentation time at the output.
- Higher **Default Presentation Time** settings result in higher audio latency in the AVB streams.
- Using a lower **Default Presentation Time** setting than the **MSRP Accumulated Latency** will lose audio samples, resulting in lower quality audio. Therefore, always set the **Default Presentation Time** value higher than the MSRP. Include a margin of error to support possible changes to the network topology or bandwidth.



NOTE: To synchronize your local AES or analog input(s) to an incoming AVB stream with a given presentation time, add the appropriate amount of input delay to the desired non-AVB inputs. For example, if the AVB source's default presentation time is 2 ms, set the input delay on each local device AES or analog input to 2 ms.

Input Channel Types

Input Types can be **Analog**, **AES3**, or **AVB**.

When the AES3 input and the GALAXY's sample rate are the same, you can disable **Enable Asynchronous Sample Rate Converter** to reduce the latency introduced by the clock recovery. When disabled, you must use another method to synchronize the AES3 input with the GALAXY's clock signal.

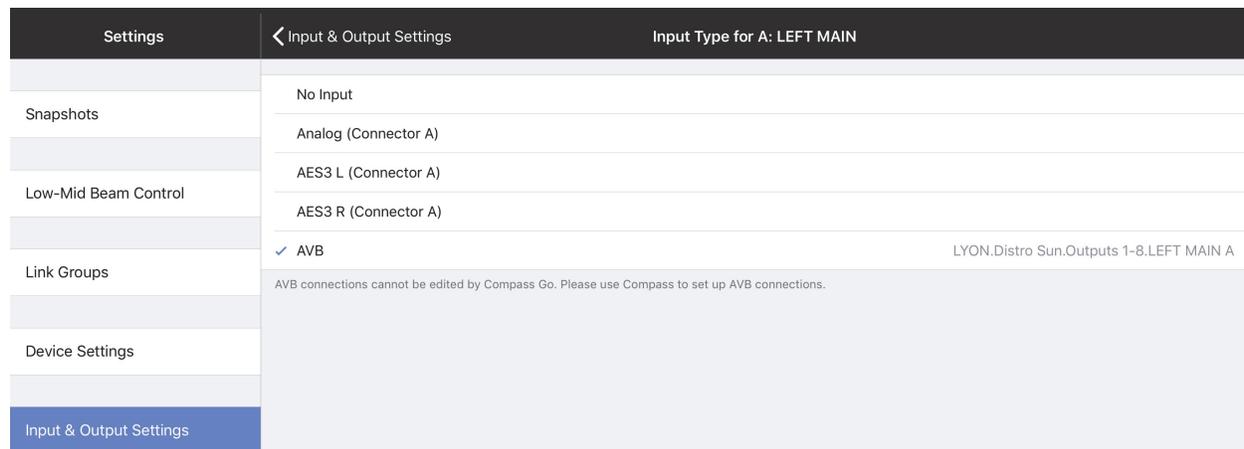


Figure 47: Input Channel Types

AVB Connections

An AVB Stream functions much like an analog multi-cable. Each stream can vary in number of channels and format, similar to AES3 and standard analog multi-cables. The difference is that many audio streams can flow down a single Ethernet cable.

Unlike traditional multi-cables, AVB streams do not stay connected when the audio devices are turned off. An AVB software controller creates and maintains these connections running on a computer attached to the network or inside one of the audio devices being controlled. An AVB controller in the audio device will maintain persistent connections and remake connections after power cycle or other interruptions like unplugging an Ethernet link.

Each GALAXY has a built-in AVB controller. If GALAXY B's inputs are subscribed to GALAXY A's outputs for the first time using Compass software, GALAXY B's AVB controller will attempt to remake that connection in case of any interruption.

GALAXY AVB streams are 24-bit/96 kHz 8-channel AAF packet format. AAF supports the transport of multi-channel 24-bit linear audio. Since GALAXY inputs can choose up to eight individual AVB channels from up to eight different streams, it is possible to send up to 8 eight-channel streams (64 channels) into the unit. However, only eight of them are available for input processing. There are 24 additional AVB inputs available into the Gain, Delay, and Router matrices without input processing (see figure below).

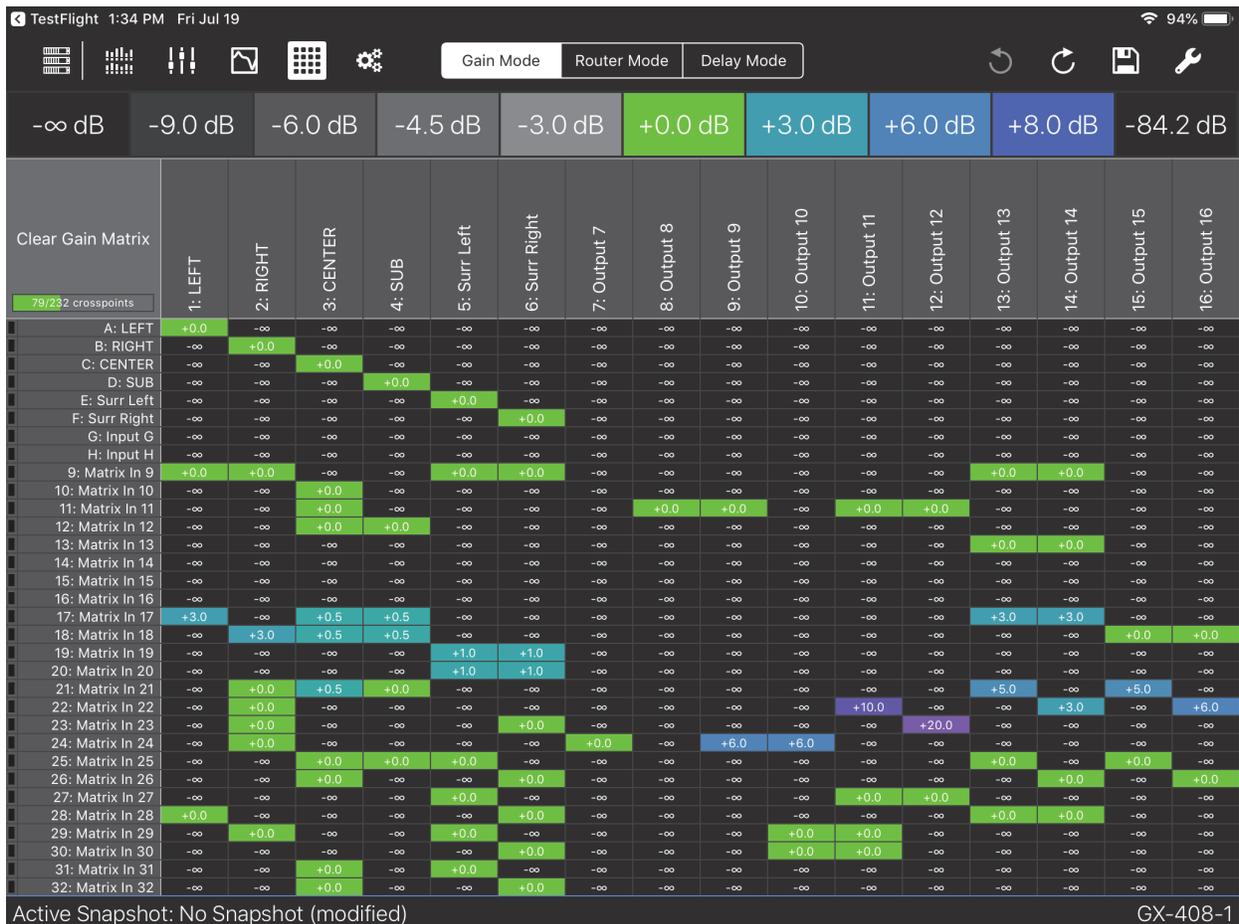


Figure 48: Expanded Matrix Inputs

GALAXY outputs use two AAF formatted streams: Outputs 1–8 are available in the first 8-channel stream, outputs 9–16 are available in the second 8-channel stream. If no units have subscribed to these streams, the GALAXY will stop transmitting altogether. The analog outputs are always active.

Network digital source signals can be connected to the AVB/Network port connectors (labeled 1 and 2) on the GALAXY rear panel. Standard AM824 eight-channel AVB streams are supported (24 bit, 48/96 kHz). The **AVB Controller Mode** can be set to **External** or **Internal**. AVB Stream Information can be viewed by selecting the status indicator next Input Channel Type if AVB is used for a given channel (see Figure 49).

AVB Connections cannot be edited by Compass Go. Use Compass Control Software to setup AVB connections. AVB Stream Information can be viewed by selecting the status indicator next to the Input Channel Type if AVB is used for a given channel.

Compass Control software is available at: <https://meyersound.com/product/compass/>

AVB Stream Information					Done
Input A			Input a		
Connection Error	Talker Enumeration Error		Connection Error	No Error	
Stream Format	AAF, 0 kHz		Stream Format	AAF, 0 kHz	
Connection Details					
	Talker		Listener		
Group	RME AVB Group		MSLI GL		
Entity	Digiface AVB		Milky Way		
	Name	Index	Name	Index	
Stream	Output Stream(1)	0	Audio Sink 1	0	
Channel	Input 1	0	Input 1	0	
Stream Details		Listener Counters			
Media Status	Locked	Stream Reset	15		
MSRP Accumulated Latency	0.286 ms	Sequence Mismatch	1		
Presentation Time Offset	0.000 ms				
Stream Details		Listener Counters			
Media Status	Unlocked	Stream Reset	0		
MSRP Accumulated Latency	0.000 ms	Sequence Mismatch	0		
Presentation Time Offset	0.000 ms				

Figure 49: AVB Stream Information window

The figure below shows the Device Group, Device, available Stream, and Channel (to the right of the selected AVB) for a configuration using the Internal AVB Controller Mode in Compass Control Software. See Compass Control Software Help for more detail.

The figure below shows a completed AVB connection.

Settings	Input & Output Settings	Input Type for B: LEFT LFC
Snapshots	No Input	
Low-Mid Beam Control	Analog (Connector B)	
	AES3 L (Connector A)	
	AES3 R (Connector A)	
Link Groups	<input checked="" type="checkbox"/> AVB LYON.FOH MAIN.Unnamed Stream (0).Output 2	
Device Settings	AVB connections cannot be edited by Compass Go. Please use Compass to set up AVB connections.	
Input & Output Settings		

Figure 50: Results of an Internal AVB Controller Mode configuration using Compass Software

Input and Output Voltage Range

The **Input & Output Voltage Range** can be set to **+26 dBu** or **+16 dBu**. To toggle the voltage range, tap the current value, select the other setting, and tap **Done**.

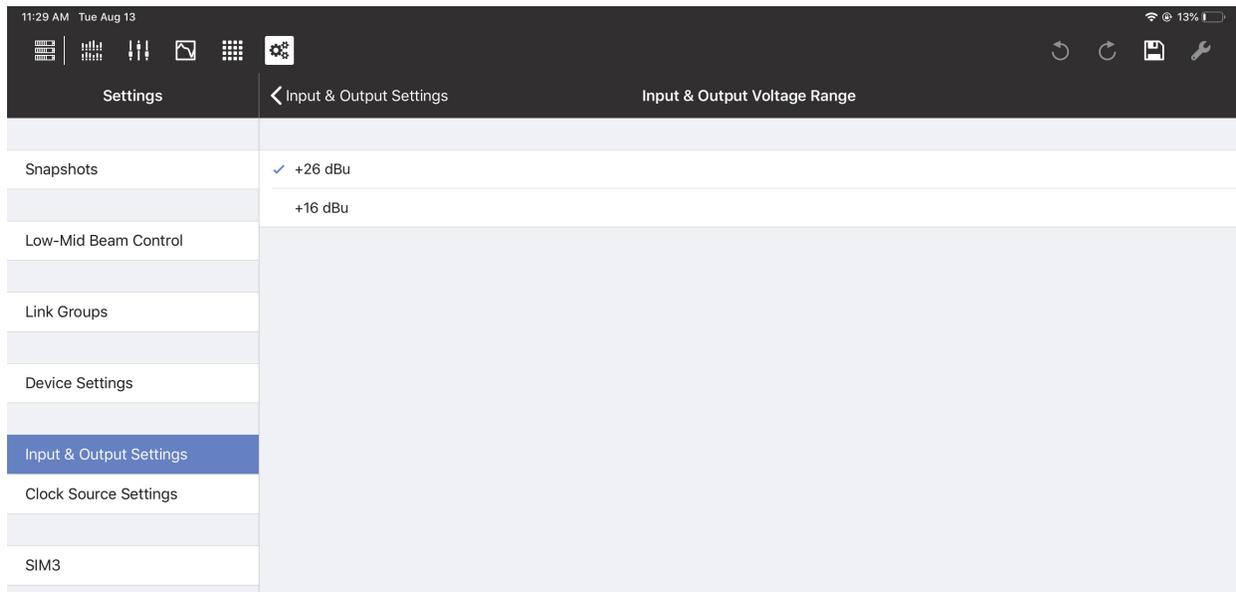


Figure 51: Input & Output Voltage Range

The **Input & Output Voltage Range** can be set for a different range of Input/Outputs on each GALAXY device:

- GALAXY 816: Input/Outputs 1-16
- The GALAXY 816-AES: Input/Outputs 9-16
- The GALAXY 408: Input/Outputs 1-8

CLOCK SOURCE SETTINGS

These settings control how this device is synchronized within its system.

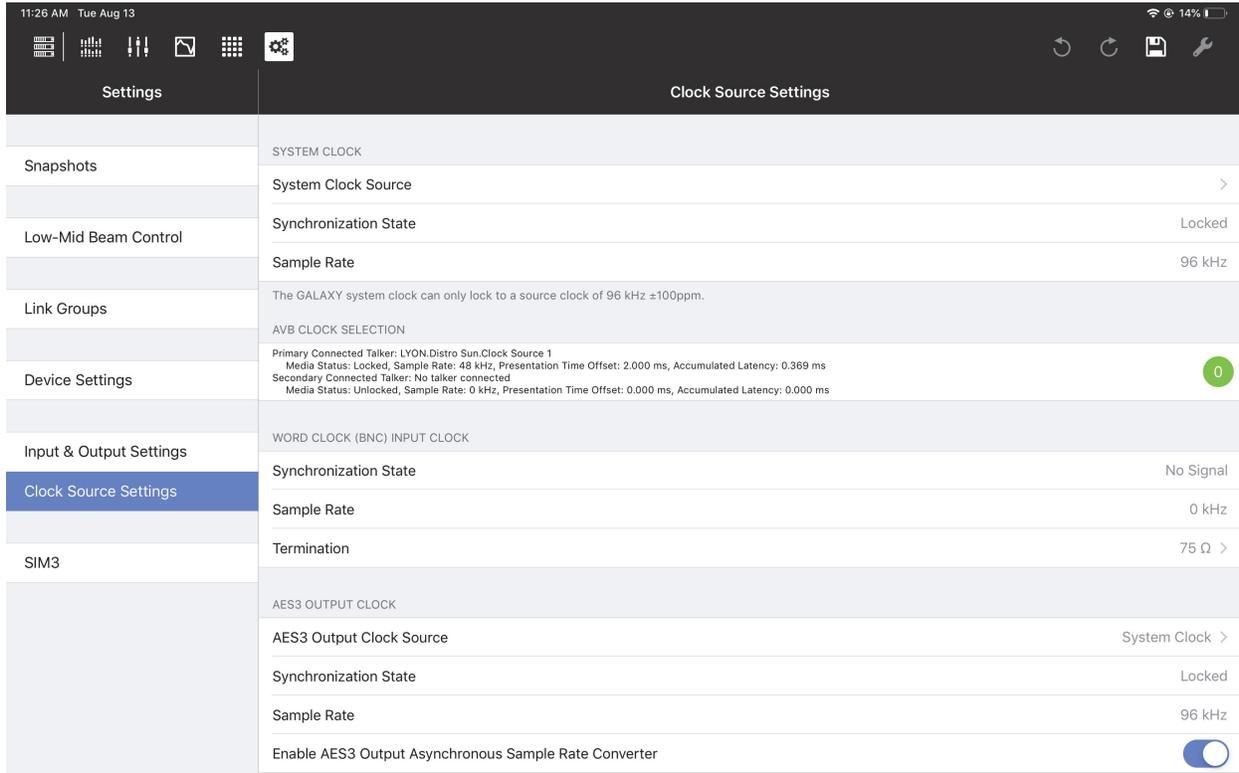


Figure 52: Clock Source Settings tab

System Clock Source

The System Clock Source can be set to Internal, AES3, AVB (if AVB connections have been established), or Word Clock (BNC),

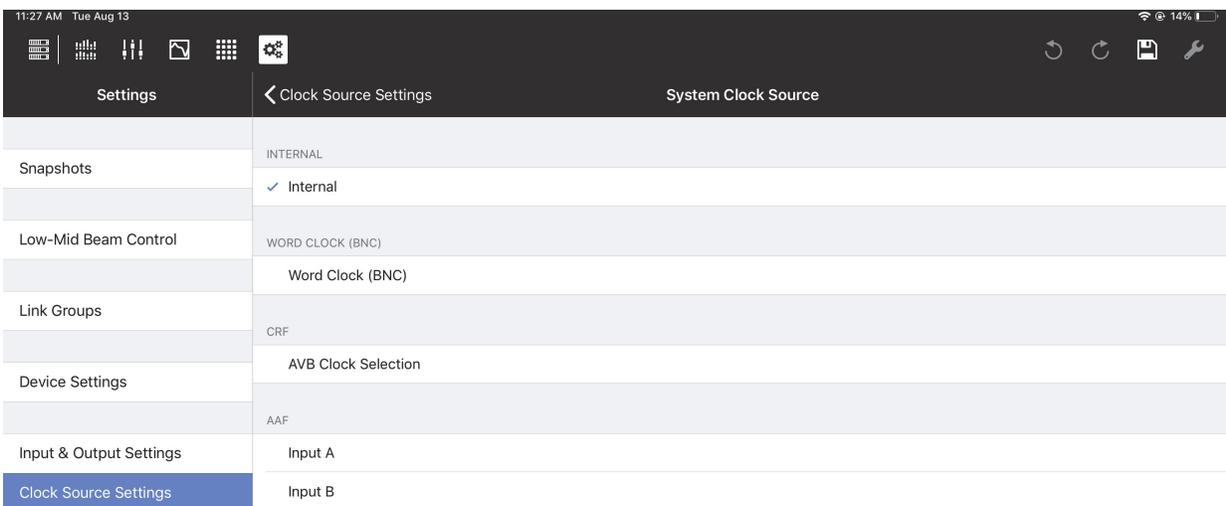


Figure 53: System Clock Source Settings

If using AES3:

- Specify which Input to use as the **System Clock Source**.
- The input and output system clocks may be different.



NOTE: If each device uses its own internal clock source, they will not stay synchronized.

Synchronization State

This field shows the status of the **System Clock Source** assignment: locked, unlocked, or no signal.

Sample Rate

Sample Rate is set globally for the system and cannot be changed here.

GALAXY accepts a wide range of sample rates for both AVB and AES inputs (see below).

Accepted Input sample rates and bit depth based on format

Format	Accepted Input Sample Rates (kHz)	Bit Depth
AES3	20 – 216	up to 24
AVB	48 or 96	24

If an AES3 or Word Clock input is selected as the AES output clock source (GALAXY 816-AES3 unit only), then the following sample rates may be used:

- 44.1 kHz
- 48.0 kHz
- 88.2 kHz
- 96.0 kHz
- 176.4 kHz
- 192.0 kHz

AES3 Output Clock

This setting controls the synchronization of AES3 outputs.

AES3 Output Clock Source

The AES3 Output Clock Source can be set to **System Clock**, **AES3**, or **Word Clock (BNC)**. If using AES3, specify which Input to use as the Clock Source.

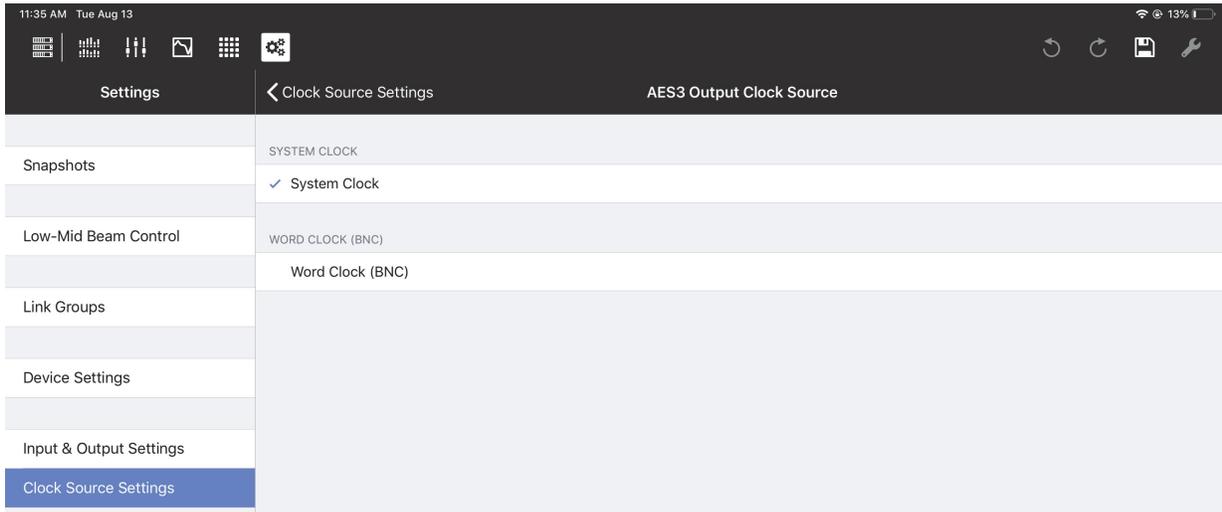


Figure 54: Setting the AES3 Output Clock Source

Synchronization State

This field shows the status of the **System Clock** assignment: locked, unlocked, or no signal.

Sample Rate

Sample Rate is set elsewhere and cannot be changed here.

Enable AES3 Output Asynchronous Sample Rate Converter

Slide the button to the right to enable the **AES3 Output Asynchronous Sample Rate Converter**.

SIM3

The Meyer Sound SIM3 Measurement and Correction System can be interfaced with GALAXY devices.

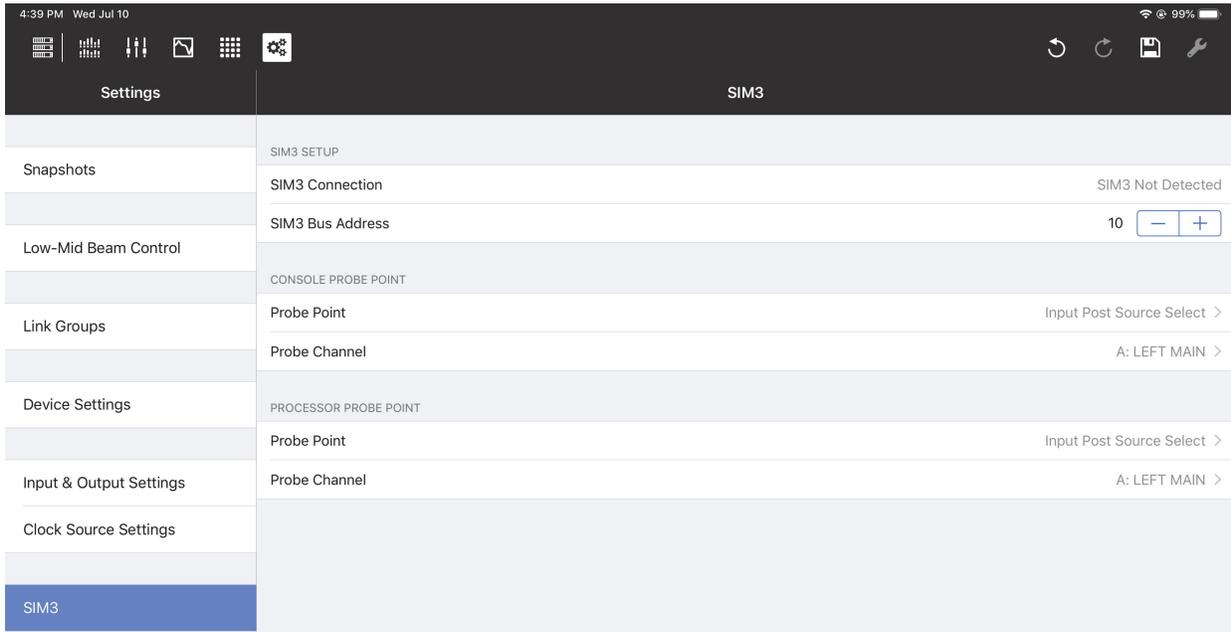


Figure 55: SIM3 options

SIM3 Setup

Consult the SIM3 machine to determine its Bus address. In Compass Go, enter it in the **SIM3 Bus Address** field using the +/- buttons.

The **SIM3 Connection** field should now display **SIM3 Detected**.



NOTE: SIM3 can also be interfaced using the AVB network. Contact Meyer Sound Technical Support for help with SIM3 (page 5).

Console and Processor Probe Point and Channel

The Console Probe Point, Console Probe Channel, Processor Probe Point, and Processor Probe Channel can be set to the following options:

- Input Post Source Select
- Input Post Processing
- Output Post Matrix
- Output Post EQ
- Output Post Processing

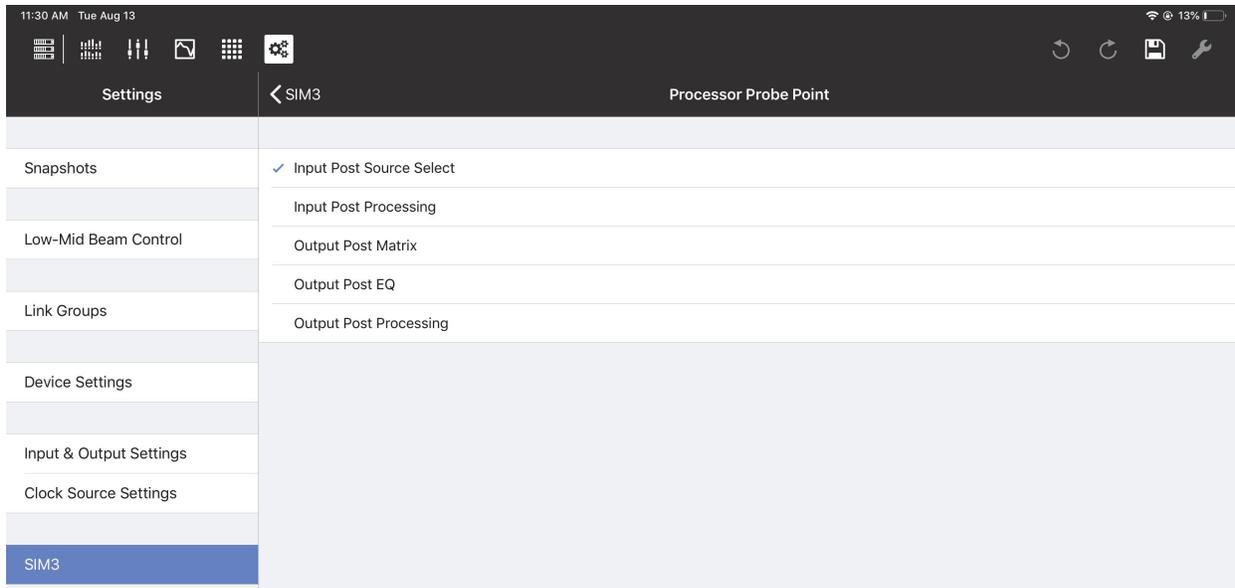


Figure 56: SIM3 Processor Probe options

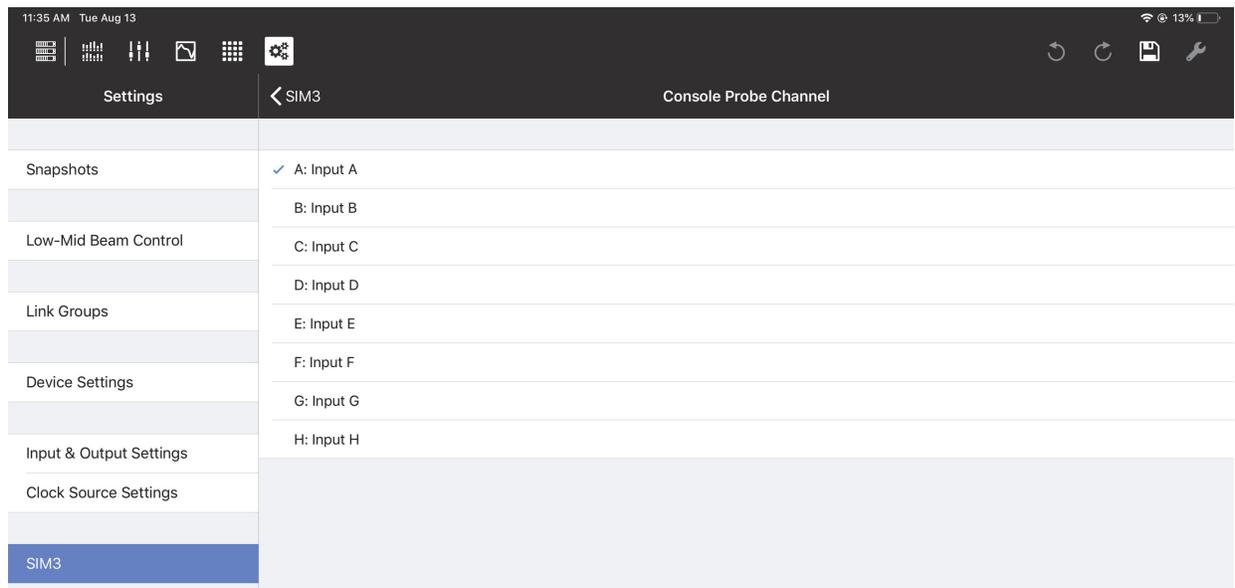


Figure 57: SIM3 Console Probe Channel options

GLOBAL CONTROLS

The Global Controls are at the top-right of each view.

Tools

The wrench icon accesses the Tools options, which differ for each view. See the end of the Overview, I/O, EQ, and Matrix View sections for details. Note that the Tools icon is dim and not available from the Settings View.

Save Settings

The disk icon opens a dialog to update, create, and recall Snapshots.

1. Tap the disk icon to open the following dialog:

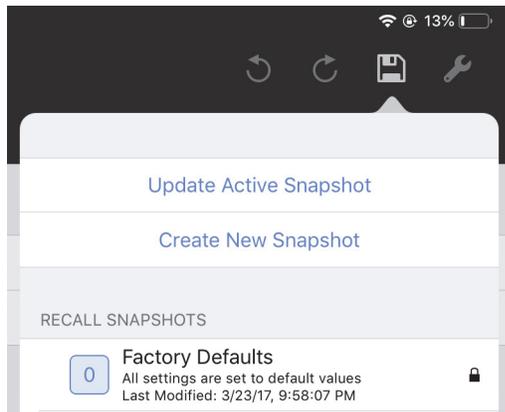


Figure 58: Disk icon with Snapshot options

2. Do one of the following:

Tap **Update Active Snapshot** to update the current Snapshot.

- OR -

Tap **Create New Snapshot** to create and name a new Snapshot.

- OR -

Tap a Snapshot in the **RECALL SNAPSHOTS** column to restore its saved settings.

Undo/Redo Editing

The most recent editing operation can be undone/redone with the standard circular controls.

CHAPTER 8: CUSTOM LAYOUTS

Custom Layouts let you use a single control to adjust settings on multiple Galileo, Galileo GALAXY, and Galileo Callisto devices. Custom Layouts can be spread across multiple views and can include background images. Views can be reordered and deleted.

Users with an iPad Pro can take advantage of the larger screen size by setting the **Canvas Size** to **Large Canvas** from the Tools menu (**Small Canvas** is the default setting).

 **NOTE:** Setting a normal iPad to **Large Canvas** makes part of the screen not visible. Tap and drag to scroll the screen to see the extra screen space.

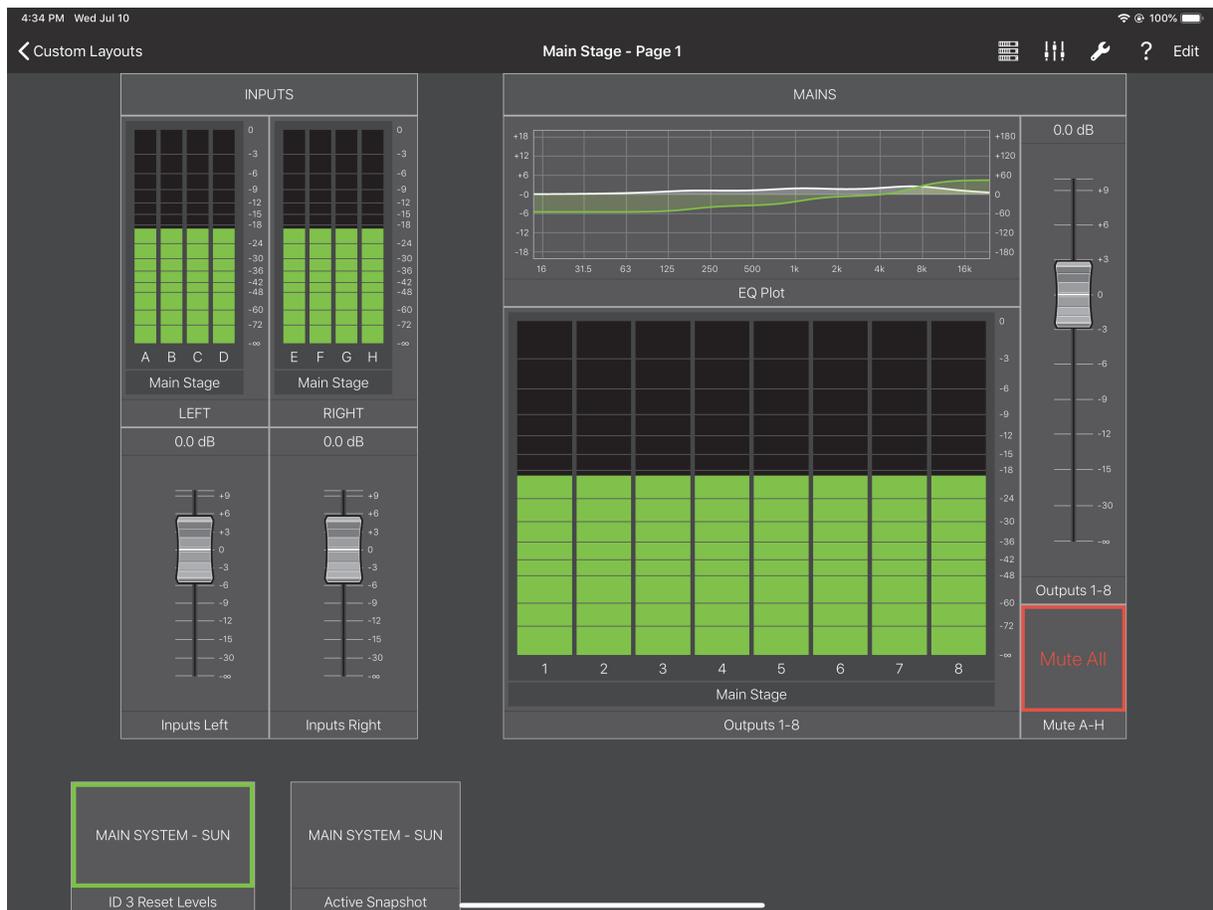


Figure 59: Custom Layouts View

CREATING A CUSTOM LAYOUT

To create a Custom Layout:

1. Tap **Custom Layouts** on the Devices View.
2. Tap **Add Custom Layout**.

A blank Custom Layout appears along with a keyboard to name it.

3. Name the Custom Layout.

ADDING A DEVICE TO A CUSTOM LAYOUT

1. Tap the Devices Icon from the top-right of your Custom Layout.
2. Tap Add Device.

The Add Device dialog appears.

3. Tap in the **Device Name** field and use the keyboard to assign a unique name so it is easy to identify.
4. Tap **Device Type** and choose from the corresponding Galileo, Galileo Callisto, or Galileo GALAXY types to match device in use.
5. Enable **Device Auto Mapping** by moving the switch to the right so it lights green.

Compass Go will automatically map this device next time the app is launched.

6. Tap the Devices Icon and select the devices to include in your Custom Layout.

Devices on the network are listed. A red dot to the left of the device shows it is not yet mapped. A yellow triangle shows it is mapped but disconnected.

7. If a device has a red dot, tap **Map Devices**.

The **Map Devices** dialog opens showing Devices already in this Custom Layout on the left and **Discovered Devices** on the right. Lines between the columns indicate valid mappings.

8. Tap a Device in either column that you wish to map.

Note that only the same Device Types can be mapped to each other; incompatible device types are grayed out in each column.

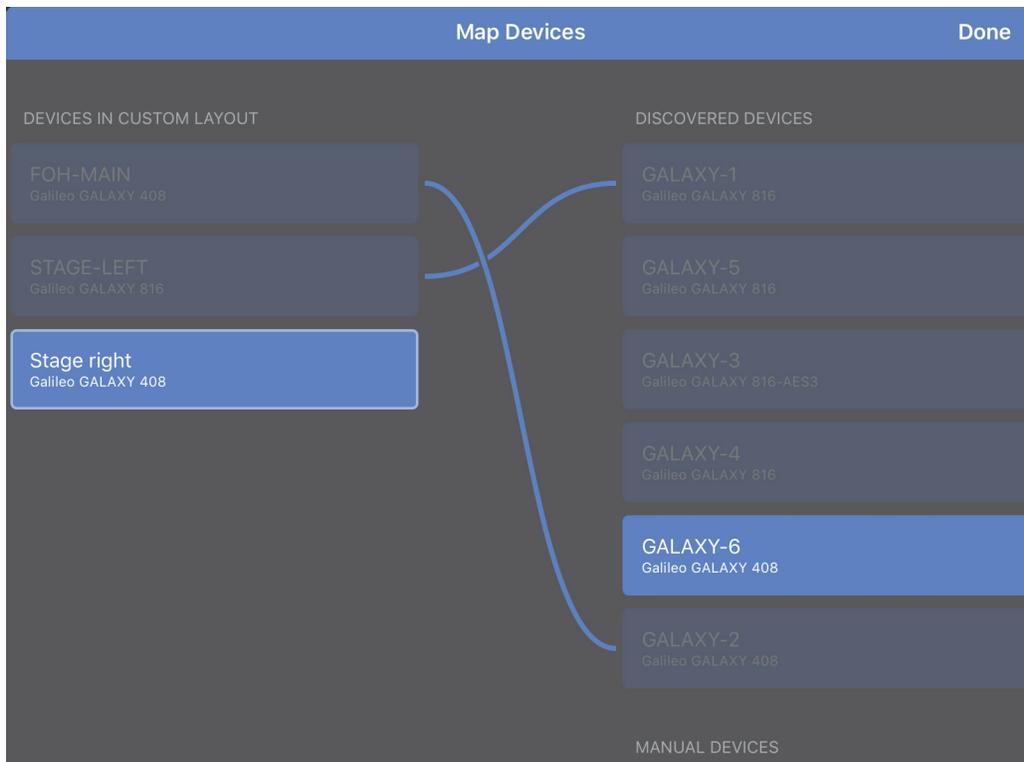


Figure 60: Devices valid for mapping

9. Tap the corresponding Device (in the other column) that you wish to connect to.

A line between the Devices shows the mapping was successful.

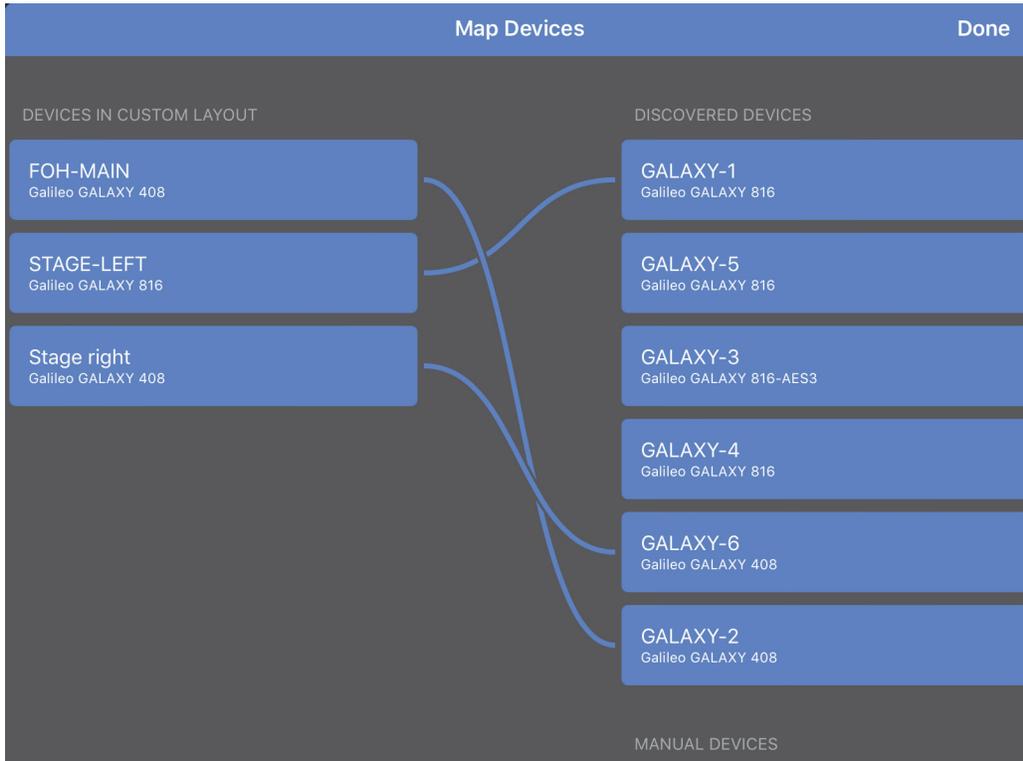


Figure 61: Devices successfully mapped

10. To unmap a mapped Device, tap the Device in either column, then tap the X that appears in the center of the line connecting them.

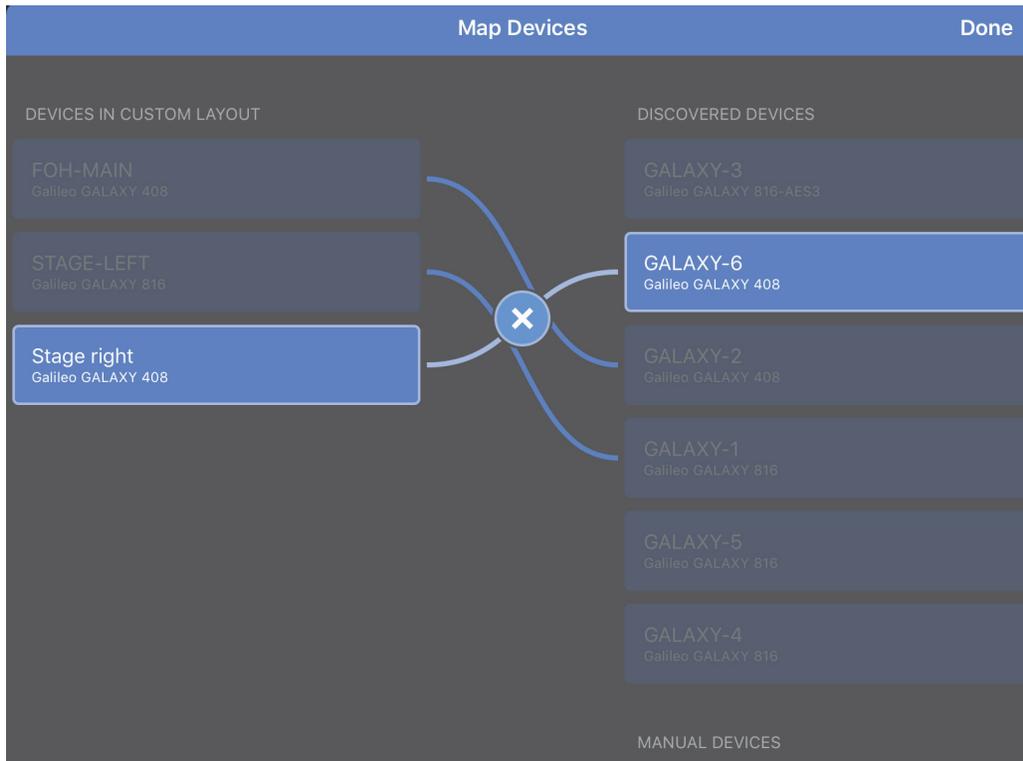


Figure 62: Devices being unmapped

11. Map each Device.

In the Devices menu, all Devices should have a green circle on their left.

Select a mapped Device to disconnect it but leave it mapped (yellow triangle).

ADDING CONTROLS TO A CUSTOM LAYOUT

Fader

To add a Fader to your Custom Layout that controls the gain of selected output channels:

1. Tap the I/O Icon in the menu bar, and select **Fader**.
The Fader dialog opens.
2. Tap in the **Control Label** field and assign a name.
3. Tap in the **Control Point Type** field and select **Gain**.
4. Tap **Channel Type** and select **Output**.
5. Tap in the **Channel Assignments** section to select the Output channel(s) to control.



TIP: Most controllers attempt to preserve the relative values of the multiple parameters they adjust if they differ. A blue band appears on the controller if this is the case.

Rotary

To add a Rotary control to your Custom Layout that adjusts the delay of selected output channels:

1. Tap the I/O Icon in the menu bar, and select **Rotary**.
The Rotary dialog opens.
2. Tap in the **Control Label** field and assign a name.
3. Tap in the **Control Point Type** field and select **Delay**.
4. Tap **Channel Type** and select **Output**.
5. Tap to select the Output channel(s) from the **Channel Assignments** section.

Spin Dial

To add a Spin Dial control to your Custom Layout that adjusts the delay of selected output channels:

1. Tap the I/O Icon in the menu bar, and select **Spin Dial**.
The Spin Dial dialog opens.
2. Tap in the **Control Label** field and assign a name.
3. Tap in the **Control Point Type** field and select **Delay**.
4. Tap **Channel Type** and select **Output**.
5. Tap to select the Output channel(s) from the **Channel Assignments** section.

Wheel

To add a Wheel to your Custom Layout that controls the gain of a parametric EQ band:

1. Tap the I/O Icon in the menu bar, and select **Wheel**.
The Wheel dialog opens.
2. Tap in the **Control Label** field and assign a name.
3. Tap in the **Control Point Type** field and select **Parametric EQ**.
4. Tap **Channel Type** and select **Output**.
5. Tap **Parametric EQ Attribute** and select **Gain**.
6. Select a parametric **Band**.

Callistos have five bands of Output EQ, Galileo and Galaxy have 10.

If **Input** is the selected **Channel Type**, Callisto 616s are not available as they do not have parametric EQs on their inputs.

7. Tap to select the Output channel(s) from the **Channel Assignments** section.

Mute Button

To add a Mute Button to your Custom Layout:

1. Tap the I/O Icon in the menu bar, and select **Mute Button**.
The Mute Button dialog opens.
2. Tap in the **Control Label** field and assign a name.
The **Control Point Type** field is automatically set to **Mute**.
3. Tap **Channel Type** and select **Output**.
4. Tap to select the Output channel(s) from the **Channel Assignments** section.

If Mute states differ among controlled channels, the label on the control changes from **Mute All** (or **Unmute All**) to **Mute/Unmute**. When tapped, a dialog appears with the following choices: **Mute All**, **Unmute All**, **Toggle All**, and **Cancel**.

Snapshot Recall

To add a Snapshot control to your Custom Layout:

1. Tap the I/O Icon in the menu bar, and select **Snapshot Recall**.
2. Tap in the **Control Label** field and assign a name.
3. Tap the +/- controls to set the **Snapshot ID** to use for each device.

When the Snapshot control is tapped, the selected Snapshots are recalled into their respective devices.

Meter

To add a Meter to your Custom Layout for an Input Channel:

1. Tap the I/O Icon in the menu bar, and select **Meter**.

The Meter dialog opens.

2. Tap in the **Control Label** field and assign a name.

The **Control Point Type** field is automatically set to **Meter**.

3. Tap **Channel Type** and select **Input**.
4. Tap to select an Input channel from the **Channel Assignments** section.

Response Curve

To add a Response Curve to your Custom Layout for an Input Channel:

1. Tap the I/O Icon in menu bar, and select **Response Curve**.

The Response Curve dialog opens.

2. Tap in the **Control Label** field and assign a name.

The **Control Point Type** field is automatically set to **Response Curve**.

3. Tap **Channel Type** and select **Input**.
4. Tap to select an Input channel from the **Channel Assignments** section.

Background Image

Background images add context to a Custom Layout, making it easier to find and use controls.

To add a Background Image to your Custom Layout:

1. Tap the I/O Icon in menu bar, and select **Background Image** (from the Miscellaneous section).

The Photos dialog from your iPad opens.

2. Tap the folder containing your background image and select it.

The image appears as a background in your Custom Layout.

Background Images can be resized and moved when a Custom Layout is in Edit Mode.

To resize the background image:

1. From your Custom Layout View, tap **Edit** in the top-right of the menu bar.
2. To resize the image, use two fingers to pinch inward or expand outward to shrink or enlarge the image, respectively.
3. To move the image, tap it with two fingers and drag to the desired location.
4. Tap **Done** when finished.

Label

Labels add context to a Custom Layout, making it easier to remember how to use the controls.

To add a Label to your Custom Layout:

1. Tap the I/O Icon in the menu bar, and select **Label** (from the Miscellaneous section).

The Label dialog appears.

2. Tap to assign a name using the onscreen keyboard then tap **Done**.

The new Label appears in your Custom Layout.

To delete a Label from your Custom Layout:

1. From the Custom Layout containing the Label, tap **Edit**.
2. Edit handles now surround all controls and Labels on the Custom Layout.
3. Tap a Label.

The Label dialog appears.

4. Tap **Delete Label**.

Tapping the Label name also lets you rename the Label instead of deleting it.

EDITING CONTROLS IN A CUSTOM LAYOUT

Any control that appears in a Custom Layout can be cut, copied, deleted, and pasted within that Custom Layout, but you cannot edit between two Custom Layouts.

To use editing commands on controls within a Custom Layout:

1. Tap **Edit** on the upper-right of the menu bar.

Editing handles appear surrounding each control.

2. Tap and hold a control until you see **Cut Control**, **Copy Control**, **Paste Control**, **Delete Control** appear on top of it.
3. Touch to select **Cut Control**, **Copy Control**, or **Delete Control**.
4. With a control copied to the clipboard, tap and hold a blank area of the Custom Layout until you see **Paste Control** appear.
5. Touch **Paste Control** to paste the cut or copied control onto that area.

Each editing command behaves as follows:

- **Cut** copies the control into the Custom Layout's clipboard, then deletes that control from the view. **Paste** is now active.
- **Copy** copies the control into the Custom Layout's clipboard. **Paste** is now active,
- **Paste** inserts the cut or copied control into the current Custom Layout View. The clipboard retains its contents for repeated **Paste** commands.
- **Delete** removes the control from the view without copying it to the clipboard. Note that a previous **Copy** command may still reside in the clipboard.

SELECTING A NEW CUSTOM LAYOUT

To select a new Custom Layout:

1. Navigate to the Compass Go Custom Layouts Library.
2. Tap a Custom Layout.

The new Custom Layout will automatically load.

MOVING AND RESIZING CONTROLS IN A CUSTOM LAYOUT

To move and resize controls in your Custom Layout:

1. From your Custom Layout View, tap **Edit** in the top-right of the menu bar.
Note that each control is surrounded by editing handles.
2. Tap and drag within the control to move it.
3. Tap and drag an editing handle to resize it.
4. Tap **Done** when finished.

MANAGING VIEWS IN CUSTOM LAYOUTS

Views can be added, deleted, and reordered.

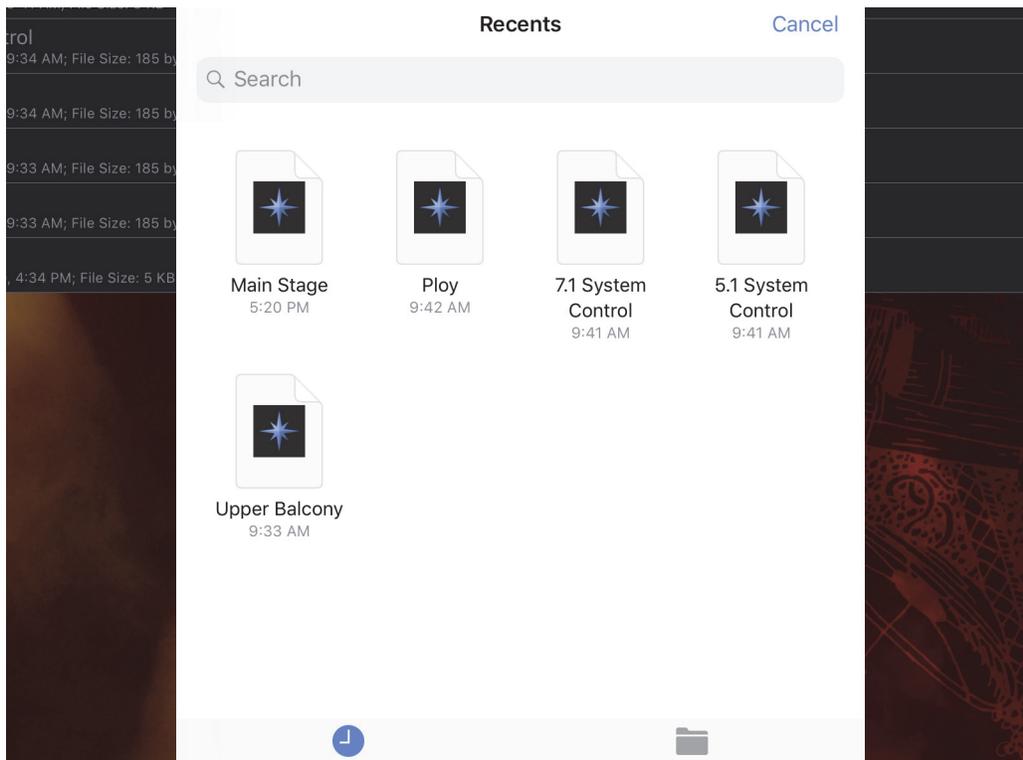


Figure 63: Managing Custom Layouts

Adding a view

To add a view to your Custom Layout:

1. In your Custom Layout (any view), tap the title at the top.
The Custom Layout views dialog opens showing the current views.
2. Tap **Add view**.

A blank view is added at the end of your current view list.

Deleting a view

To delete a view from your Custom Layout:

1. In your Custom Layout (any view), tap the title at the top.
The Custom Layout views dialog opens showing the current views.
2. Swipe the desired view left.

A red **Delete** button appears at the right of the dialog.

3. Tap the **Delete** button to delete the view.

Reordering a view

To reorder views in your Custom Layout:

1. In your Custom Layout (any view), tap the title at the top.
The Custom Layout views dialog opens showing the current views.
2. Tap and hold a view you wish to reorder.

A shadow appears around the outside of the view's rectangle when it is selected.

3. Drag the view to its new location and release your finger.

STORING AND SHARING CUSTOM LAYOUTS

To store or share Custom Layouts:

1. From the Custom Layouts Library View, tap **Edit** in the top-right of the menu bar.
All Custom Layouts appear with a selection circle to the left of each, and three horizontal bars to the right.
2. Tap anywhere (except on the three bars) to select the Custom Layouts to share or store.

Selected Custom Layouts display a check mark to their left.

3. Tap the Upload Icon in the top-right of the menu bar.

Choose **Share** or **Save to iCloud Drive**.

4. To reorder the Custom Layouts in your Library, tap and hold the three bars at the far-right of a Custom Layout until a rectangular shadow appears, then drag it to a new location.

DELETING CUSTOM LAYOUTS

To delete Custom Layouts, do either of the following:

1. In the Compass Go Custom Layouts Library, tap **Edit** in the top-right of the menu bar.
2. Tap to select the Custom Layouts you wish to delete.

A check mark appears beside selected Custom Layouts.

3. Tap the Trash icon.
4. Tap **Done** when finished.

- OR -

1. In the Compass Go Custom Layouts Library, swipe the Custom Layout you wish to delete to the left (do not tap **Edit** first).

A red **Delete** rectangle appears at the far right of the selected Custom Layout.

2. Tap **Delete** to confirm you wish to delete that Custom Layout.

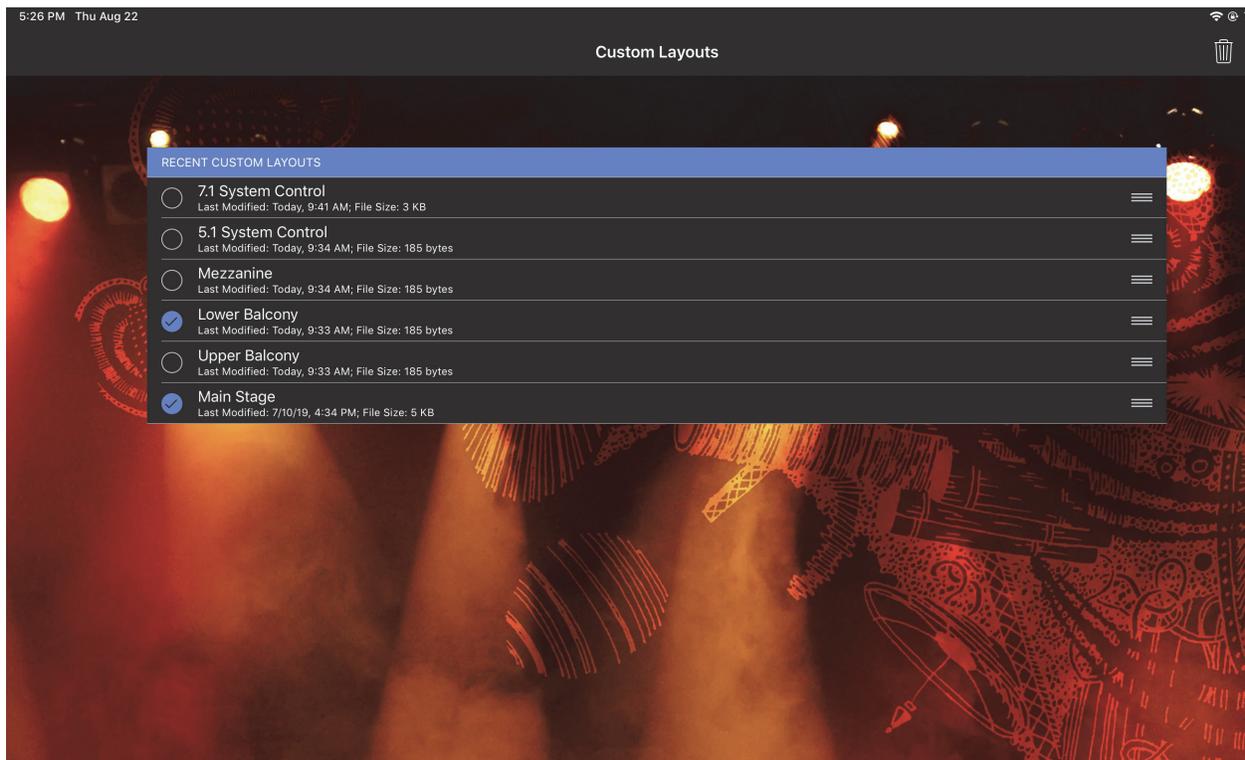


Figure 64: Selecting Custom Layouts





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