# WAVES

# MultiRack SoundGrid

## Processing Host for Your DiGiCo Console

## USER GUIDE
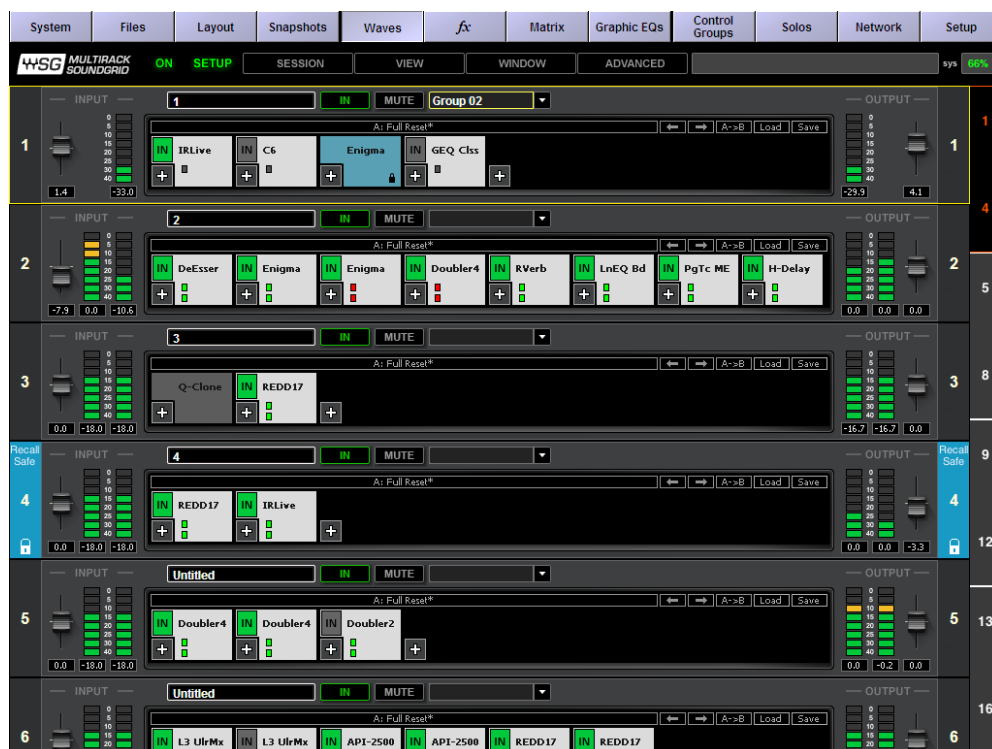## V9.80

# Table of Contents

For information about upgrading software, setup, and hardware connections, please refer to the **DiGiCo Full Install** manual: http://www.waves.com/downloads/digico

# 1. The Rack in Detail

## The Rack Control Strip

At the top of each Rack there is a strip which controls the Rack and assigns it to processing groups. The control strip has the following windows and buttons:
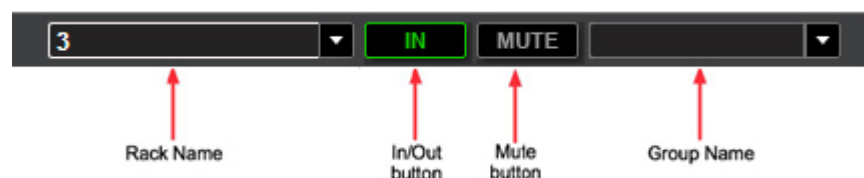


| In/Out | Disables the Rack's plugins and passes the signal directly from Rack **input** to Rack **output**. Typically used for "before and after" comparison or to **bypass processing**. |
| --- | --- |
| Mute | Mutes the Rack but does not remove it from CPU processing. Muting is performed on the Rack's input to allow reverb tails and delay taps to fade gracefully. |
| Rack Name | Displays the Rack's name. Double-click to rename. |
| Group Name | Refers to a latency alignment group to which the Rack may have been assigned. Use the pull-down menu to assign the Rack to another latency group. |

## Selecting Racks and Using Keystroke Commands

Using a mouse, right-click on the top part of a selected Rack. You will see a pull-down menu that offers several functions:
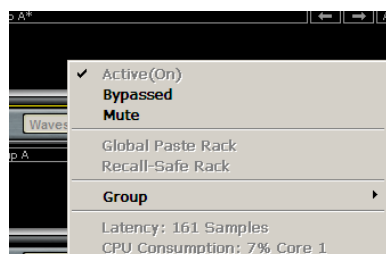


| | |
|---|---|
| **Active(On)** | The Rack is always active. |
| **Bypass** | Disables the Rack's plugin processing and passes the signal from the Rack input to the Rack output. |
| **Mute** | Mutes the entire Rack but does not remove plugins from CPU. |
| **Global Paste Rack** | Copies the Rack's parameters from the recalled Snapshot and pastes them into the selected Snapshots when "Global Paste" is selected in the Snapshot Pane. (For example, if your singer has a cold and you need to EQ the vocals differently, Global Paste allows you to change specific settings, then embed these parameter changes into all of the Snapshots you've made, rather than having to adjust each Snapshot separately.) |
| | The Global Paste function is discussed in detail in the "Snapshots" section of this manual. |
| **Recall Safe** | Places the selected Rack or plugin into a "safe" mode which protects it from Snapshot recalls. "Recalled Safe" racks or plugins are unaffected by all Snapshot recalls, even if a Snapshot has parameters that "should" be changed on Snapshot recall. |

| | |
|---|---|
| **Assign the Rack to a latency alignment group** | Presents a list of available latency alignment groups from which you can assign a latency group/s to a rack/s. |
| **Latency** | Displays the Rack's overall latency (accumulated inserted plugin latencies). |
| **CPU Consumption** | Displays the Rack's CPU consumption (usage) on the SoundGrid Server and the core it runs on. |

**Input and Output Sections**
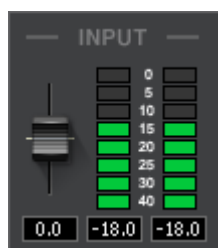


To the right of the Input Rail is the **Input Audio Fader**, with a range of ±18 dB.

On the far right side of each Rack are the Output Rail and the **Output Audio Fader**. Rack audio input and output levels are stored within Snapshots.

The first step in building a MultiRack processing setup is to add empty Racks. Click on the Rack space that says **Click to Add Rack**, or select **Add Racks** from the Window menu.

This opens a dialog box that enables you to specify the number of Racks you want to add, as well as what type of Racks (Mono, Stereo, Mono-to-Stereo, or Surround). Don't worry about making the wrong choice; you can always change this setting later.
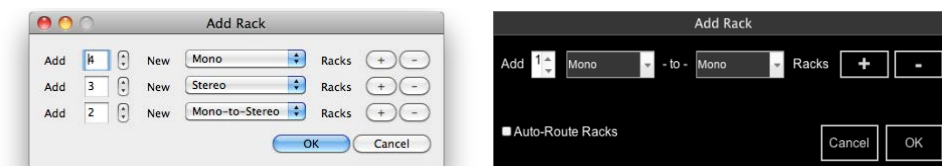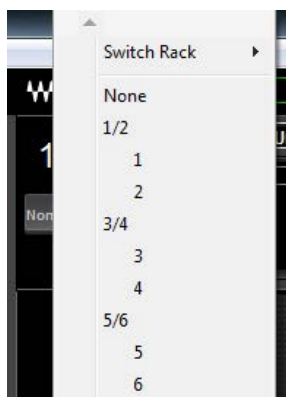


Choose the input and output channel types and the number of these Racks you wish to add. To add additional Racks with a different combination of input and output types, click on the plus (+) sign. This creates a new row from which to select other channel types. Use the minus (-) button to remove a selection line from the "Add Racks" dialog. This does not affect existing Racks. Click OK to complete the process.

You can also automatically route inputs and outputs as you add them. Selecting "AutoRoute Racks" when adding new Racks takes into account the existing Rack routing and then patches new Racks accordingly. If, for example, the previous Rack's input is 7 and the output is 9, new Racks will start with Input 10 and Output 10. Routing of subsequent new Racks will increment from there. This provides a means of adding and routing Racks at the same time.

You may also route Rack input and output manually. Define the audio input and output channels of each Rack by clicking on the left (input) and right (output) side rails of the interface. The Audio I/O pull-down menu will open. Channels you have routed to MultiRack in the Connection window will appear in the Input I/O menu. Channels you have routed from MultiRack will appear in the Output I/O menu per the I/O device you are using and the connections you have made in the Connections window. Set the channel(s) for both input (left side rail) and output (right side rail) for each of the Racks you've created.

The Input Rail is located at the far left of a Rack. Here you choose an input source.
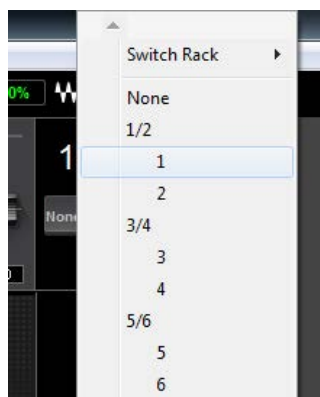


**Input**                                    **Output**

Each Rack can be connected to input and output channels using the drop-down menus. Invalid Input or Output configurations are grayed out.

When a Rack output is set to "None" and the input changes from one channel format to another, the output will change its channel format to match the input. An input set to "None" will behave in the same manner.

Or consider a Rack with input and output whose channel formats are compatible. If the input changes to a format that is incompatible with the output, then the output will attempt to change to a channel format that is compatible with that of the input. Failing that, it will default to "None."

A single input channel can be connected to one Rack only, so Racks cannot share the same input(s).[1] A physical output channel can be connected to one Rack only. Two or more Racks cannot share the same output.

Use the same menu to set the input/output channels and to switch the channel configuration of the Rack.

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[1] This maintains a 1:1 relation between an SD channel and a Rack, so that a specific Rack can be called from the Solo button.

## 2. Adding Plugins to a Rack
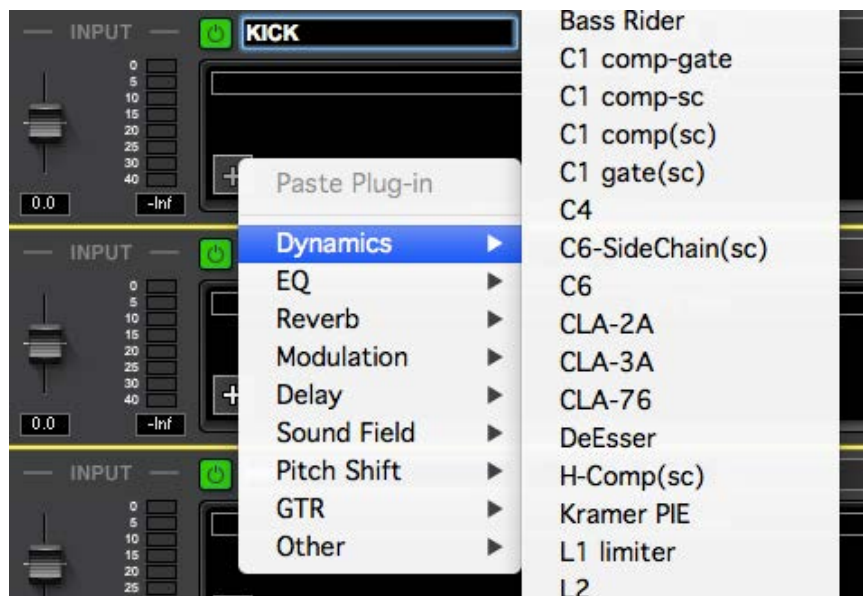
To add a plugin to a Rack, touch the "plus" (+) sign to the right of the Input Fader. Select a plugin from the pull-down menu. An icon representing the plugin will appear on the Rack, along with a new "plus" (+) sign that you can touch to add a new plugin to the right of the existing one.

The signal flow within a Rack is always from left to right.

While in the Main view (or Rack view), you can always change the plugin sequence within a Rack by grabbing a plugin and dragging it to the desired location. Each plugin icon has an "In" switch that bypasses the processor without disengaging it from the Rack.

There is also an LED indicator on the icon that shows plugin output state: gray = no signal, green = signal, red = clip.

# 3. Rack View: Controlling Your Plugins

Double-touch a plugin's icon to open its interface, and enter MultiRack SoundGrid Rack view.



Here you can adjust each plugin parameter by selecting the parameter on screen and using the **Touch-n-Turn** knob or toggle to set the selected parameter. Some controls on selected plugins might appear too small for touch selection—please use DiGiCo's keyboard with mouse for more precise operation. If you're already familiar with Waves plugins, this window will be very easy to use.

At the top of each plugin window is a **WaveSystem Toolbar**, used to load, save and compare processor settings. The layout of the **WaveSystem Toolbar** may vary from one plugin to another. Use this toolbar to save plugin- or Rack-specific presets.

There are two quick ways to move from one plugin to another within a Rack:

1. Use your keyboard's <u>left and right arrows</u>. This will move you through the list of plugins in the Rack, opening each plugin interface as it is selected.
   *Note:* If a plugin control is selected, the left and right arrows will no longer navigate from one plugin to another, but will instead affect the value of the parameter,*.*

2. Touch another plugin icon. This will move you directly to the new plugin and open its window.

# 4. System Toolbar Buttons
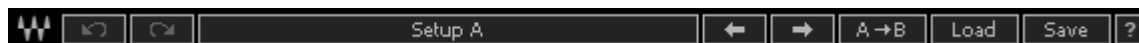


| | |
|---|---|
| **Setup A (Setup B)** | Toggles between two setups, allowing you to compare different settings. This facilitates quick A/B comparisons and lets you determine which of two settings works best without having to save a preset. An asterisk (*) on the button indicates that changes have been made since a preset was loaded. |
| **A►B; B►A** | Copies the current settings to the second setup register. The direction of copying is from the currently shown setup to the one not shown. |
| **Load** | Here you load factory presets, user presets, and other preset files. Factory presets are permanent elements of the Load popup menu, created by Waves. They cannot be changed or deleted. You can turn the current settings of the plugin you're using into a user preset by clicking the Save button. User presets can be changed and deleted, and the preset files you save through the toolbar will appear as Load menu presets until you close the preset file or close the plugin. Some plugins have a very large library of presets, too large to display on the main pull-down menu. To load these library files or load presets from external files, select "**Open Preset File**." Waves preset files are saved with an .XPS extension |
| **Save** | Save your plugin presets here. You can save the current parameters as a user preset in the Preset menu, or create a new file. If you choose to save the preset as a new file—outside the plugin's Preset menu—WaveSystem will ask you where you want to put it. |
|  | Clicking on the Waves logo will bring up the "About This Plugin" page, providing information about the plugin. |

# 5. Inserting a Rack into an SD Channel

Choose a port from the **Insert** drop-down menu. If sockets aren't assigned as the Rack input, they will be named <Waves #> (for example, "Waves 1"). Once a socket is assigned as the Rack input, it is named based on the Rack name and the specific stem (for example, "Rack 2 L").

Set routing by selecting a Port:Rack. You can send audio to any port or to multiple ports without restriction. The Rack whose name is displayed here is the Rack that receives input from this port.

Below are two examples of how you can use Waves plugins in your session: as an Insert, or through an Aux.

*Example 1: Assigning Waves Plugins to a Channel Insert A*

To open the **Ch## Outputs** dialog you can do one of the following:

1.  Press the console's **Screen Assign** left or right button, and select the desired channel. Tap **Insert A** to open a sub-menu.
2.  From the sub-menu, tap **Insert A** on the touchscreen and select a channel in the **Ch## Outputs** routing window.

**Set Routing:**
1.  Click on **Ins A Send**.
2.  Set the Insert **On**
3.  In the **Ch## Insert Send Route** window, click **send+return**.
4.  In the **Ports** column, choose **Waves**.
5.  Choose a **Signal Group**.
6.  Under **Signals**, choose the desired **Waves I/O**.
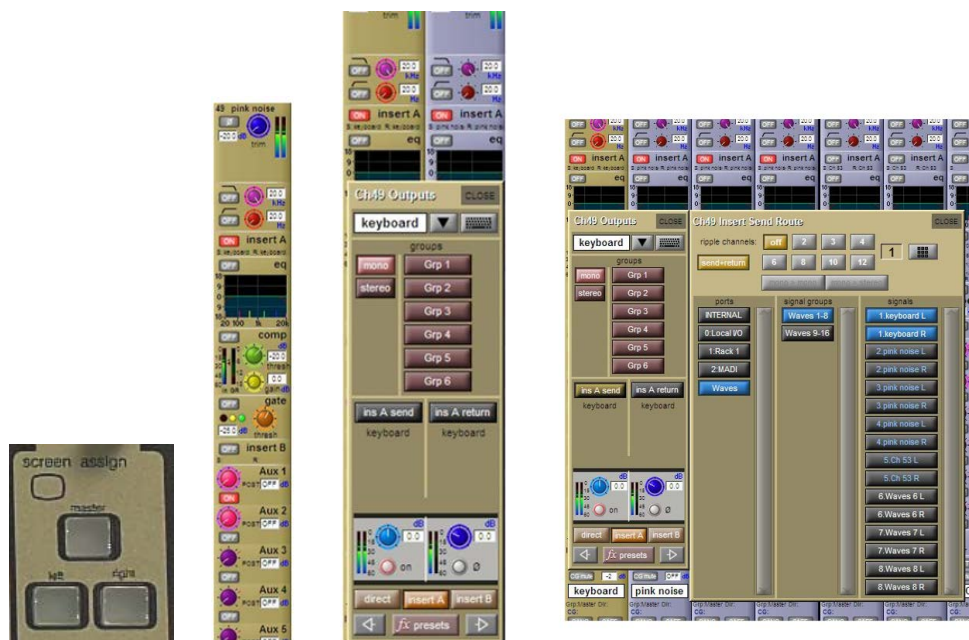
### *Example 2: Setting Rack as Parallel FX*

To use a Rack for parallel FX processing, you must use an **Aux** channel (mono or stereo). Return audio to an **Input** channel.

**The Aux channel:**

In the example below, we will use **Aux01** (mono).

Open the **Aux01 Outputs** dialog by doing one of the following:

1. Open the Master channel view by pressing **Screen Assign** on the console's center section. Select a **Master channel**, and then tap **Outputs.**
2. Touch **Outputs** to open the routing panel for the desired **Master** channel.

**Set Routing:**

1. Click **Output**.
2. In the **Ports** column, choose **Waves**.
3. Choose a **Signal Group**.
4. Under **Signals**, choose the desired **Waves I/O**.
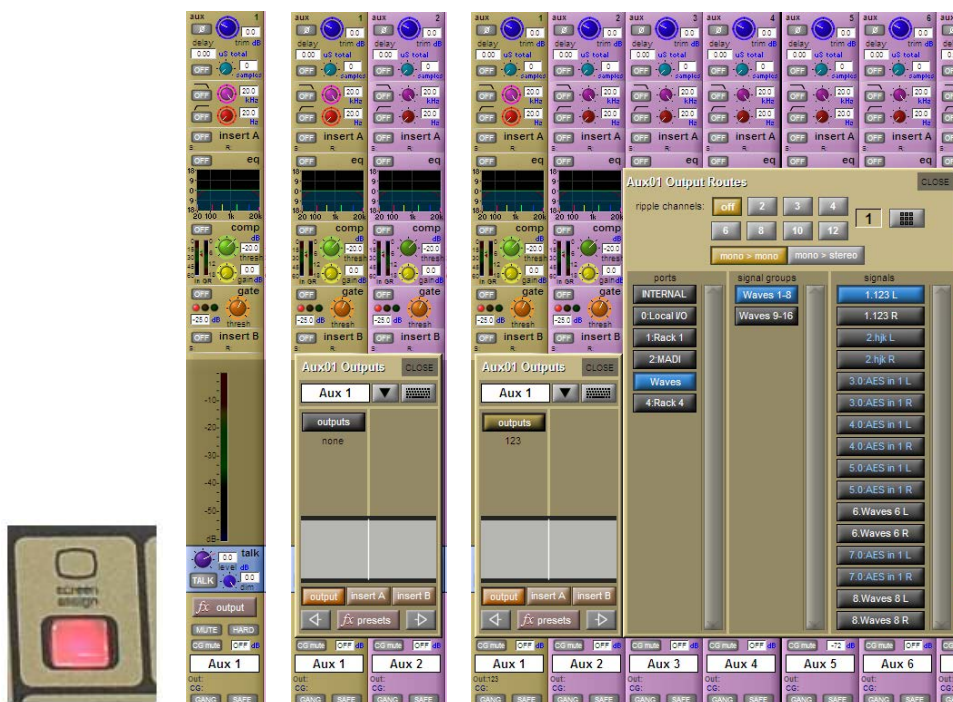
### The FX Return to an Input Channel

The example below uses **Input Channel 12.** To open the **Ch12 Setup** dialog, do one of the following:

1. Open Channel view by pressing the console's **Screen Assign** left or right button.
2. Select the desired input channel for the FX Return, and touch **Input** to open the **Ch12 Setup.**
3. Set Routing:
    a. In the **Ch12 Setup** window, click on **Main Input**.
    b. In the **Ports** column, choose **Waves**.
    c. Choose a **Signal Group**.
    d. Under **Signals**, choose the **Waves I/O and** select the Aux output as established in the previous section.

# 6. Rack Types: Mono, Stereo, Surround and Up/Down Mix

Use the MultiRack Add Rack dialog to create and add more Racks. The Rack type is determined either by which input and output configurations are selected when the Rack is added, or, when I/O settings are changed on each Rack I/O menu, as described above.

**Rack type switching**

To change a Rack type you must change its I/Os. Racks will not switch between types based on the SD channel they're inserted on.
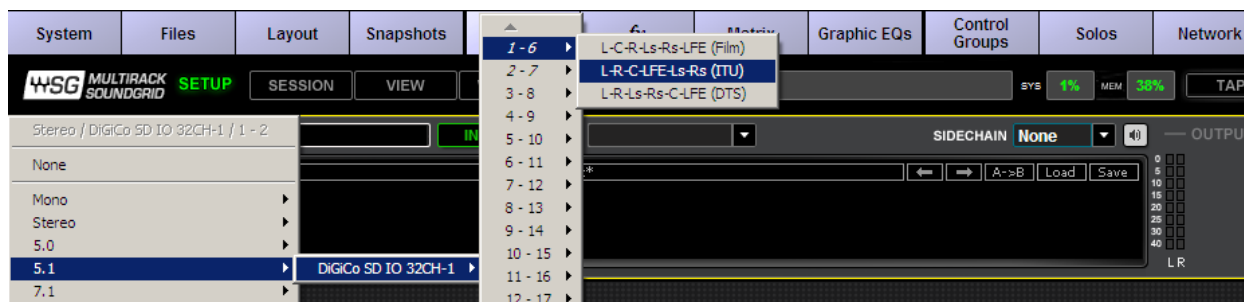
# 7. Setting up a Sidechain

Sidechains are used by some plugins to modify their behavior, for example, to allow ducking by a compressor plugin. Each Rack can be set to receive a sidechain from the MultiRack inputs. A stereo Rack can receive a stereo or mono sidechain signal. A mono or mono-to-stereo Rack can receive a mono sidechain signal.

**Sidechain List**

The Sidechain Input List is displayed in the same manner as the SD channel: Socket# or Socket/SD channel name. The socket name is displayed if a Rack is not routed to the socket. Otherwise, the Input list shows socket names as shown in the Audio I/O SD window and on the insert buttons.

For example:

| Socket name: socket not routed | Sidechain list, regardless of how many channels are in the sidechain |
| --- | --- |
| Socket#1 is default at Waves 1 | 1: Waves 1 |
| Socket#2 is named SD Ch 1 | 2: Ch 1 |
| Socket#3 is default at Waves 3 | 3: Waves 3 |
| Socket#4 is named SD Ch 2 | 4: Ch 2 |

If the MR Rack is mono, then choosing a sidechain channel is straightforward.

If the MR Rack is multi-channel—stereo, for example—then choosing a sidechain channel results in additional consecutive channels being selected. This selection will include as many channels as the sidechain is made up of.

For example, if you select a stereo Rack, "2:Rack1," then "3: Waves 3" will also be selected. Selecting "3: Waves 3", will also select "4: Rack2".

The top section of the Rack features a drop-down menu called **Sidechain**. Use this menu to select the input that will be feeding the sidechain signal to the Rack.

1.  Insert a plugin with sidechain capabilities. Plugins with sidechain capabilities are marked with (sc) after the plugin's name.



2.  Right-click on the plugin and select Enable Side Chain from the drop down menu. This can also be done by clicking the SC button on the side of the Rack View (see below).

3. Sidechain-enabled plugins are marked by a yellow SC button and by another yellow SC button on the side of the Rack View (see below).

The same device input can be used for a Rack's input and sidechain simultaneously. You can preview your sidechain input by clicking on the speaker button.

# 8. Group Properties: Organization & Latency Alignment

This window allows you to group several racks together. Racks often have something in common, and it may make sense to assign all relevantly similar Racks to a latency group.

Grouping all of the channels of your brass section, or drums, or audience, then assigning these groups a color will help you keep track of your racks in concert situations. Also, each track will display the name of the group, further aiding quick visual organization.
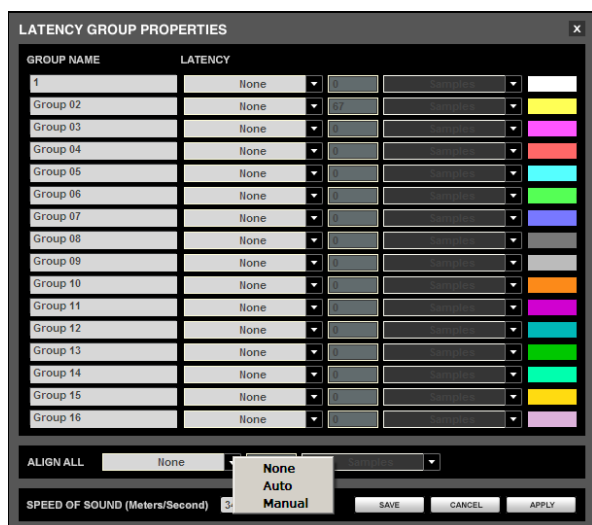
Plugins may impose a delay (known as "latency") as a signal passes through them. Often, this is not a problem. However, on certain occasions you will want to time-align all of the Racks in a group in order to compensate for different processor latencies that may cause phase-related problems.

Use the **Latency Group Properties** window to create groups of racks and align their latencies. Open this window from the pull-down menu located at the top of a rack or from the **Window** menu.

In the **Group Properties** window, you can create up to 16 processing groups, each of which can contain any number of racks.

Create a group by double-clicking on a **Group Name** cell and typing the name you want to assign the group (using the external keyboard). Now, decide how you want to align the processors within the group.

**None**      A group is created, but there is no latency alignment.

**Auto**      The group is delayed to match the latency of the rack in the group with the greatest total latency.

**Manual**    Manually delay the group by a specific value by entering it in the Latency field. The value is displayed in samples, milliseconds, meters or feet, depending on your choice in the pull-down window. The minimal value allowed for this setting matches the latency of the rack in the group with the greatest total latency.

Groups are color-coded for easier identification. Color selection is based on placement in the list, and is not user-definable.

At the bottom of the Group Properties page is the **Align All** section.



Here you can align all groups of racks in order to create a unified timing for all channels. The **Auto** setting will offset all of the groups to match the timing of the group with the greatest latency, while **Manual** will delay all groups by a specific value.

Below the Align All section is the "**Speed of Sound**" setting.

| SPEED OF SOUND (Meters/Second) | 343.0 | | SAVE | CANCEL |
| --- | --- | --- | --- | --- |

This parameter control, expressed in meters per second, allows you to calibrate MultiRack SoundGrid's latency controls to match measured speed of sound. The speed of sound at sea level, at a temperature of 20 degrees Celsius and dry air, is 343 meters per second.

# 9. Snapshot Pane: Automating Your Racks

Snapshots contain the following parameters:

1. Rack input and output gain
2. Rack in/out, mute and on/off states
3. Current plugin parameters

Snapshots are contained and saved as part of the Session file and are displayed as a vertical playlist.

Use Snapshots to change the state of racks (Mute/In/Off), levels, and, most importantly, the settings for the plugins.

*Technical Note: Snapshots do not change the physical configuration of a session, so you cannot use a snapshot to change the audio I/O, the rack order, or the plugins embedded in a rack.*

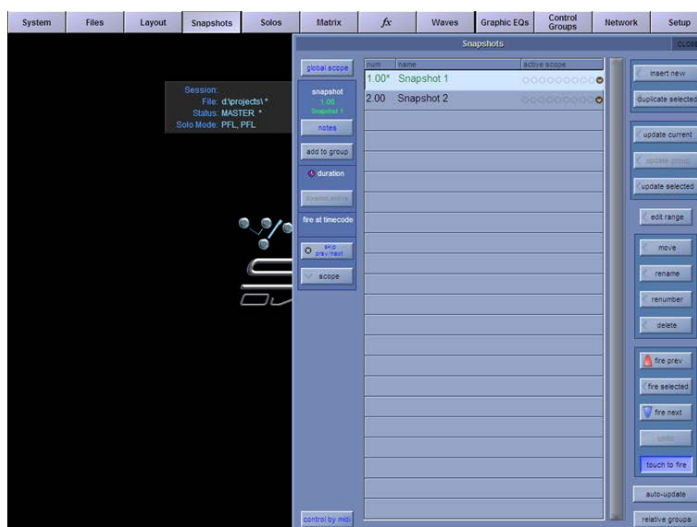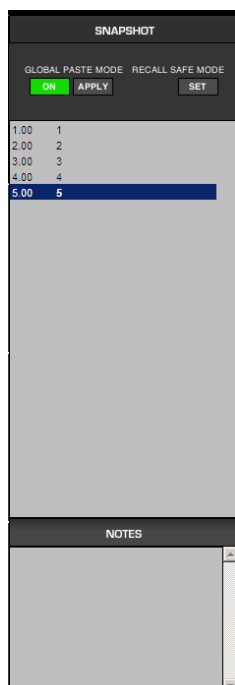To open the Snapshot Pane (Fig. A), go to **Waves tab > View > Open Snapshot Pane**.



*Fig. A – MultiRack Snapshot Pane     Fig B – DiGiCo Snapshot Window*

To save a Snapshot of your existing rack environment, use the console's **Snapshot Management** window (see Fig. B above). Add **Waves** to the snapshot's scope.

When creating snapshots on the SD snapshot window, the snapshot will automatically be created, with the same name, in MultiRack's Snapshot Pane.
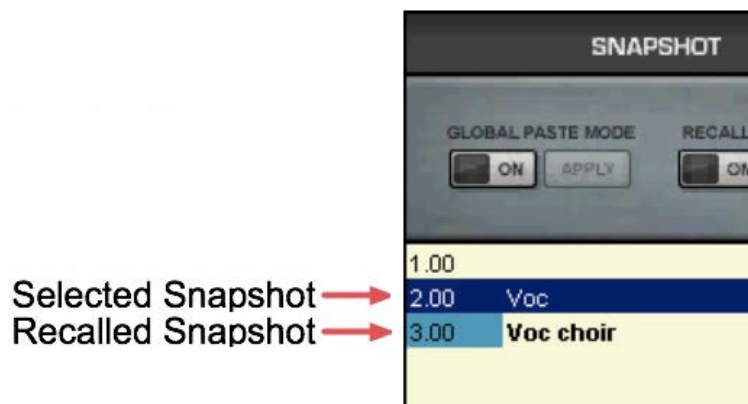


Note that selected snapshots are highlighted, with the currently recalled snapshot's name appearing in **boldface** with its number highlighted, as shown above.

At the bottom of the Snapshot Pane, under **NOTES**, is an area where you can write notes about the selected snapshot.

## Global Paste and Recall Safe Modes

There are times when you don't want certain racks or specific plugins to be affected by snapshot changes, and there are times when you wish to apply a setting of a plugin or rack across several snapshots.

The **Global Paste** and **Recall Safe** are the tools that give you that ability.

### Global Paste

Global Paste enables you to copy a plugin's or rack's parameters into one or more other snapshots. This is useful when you've set up several racks filled with plugins and you decide to change plugins settings across several snapshots.

1. Recall the snapshot from which you want to copy settings.
2. Touch the Global Paste "**On**" button.
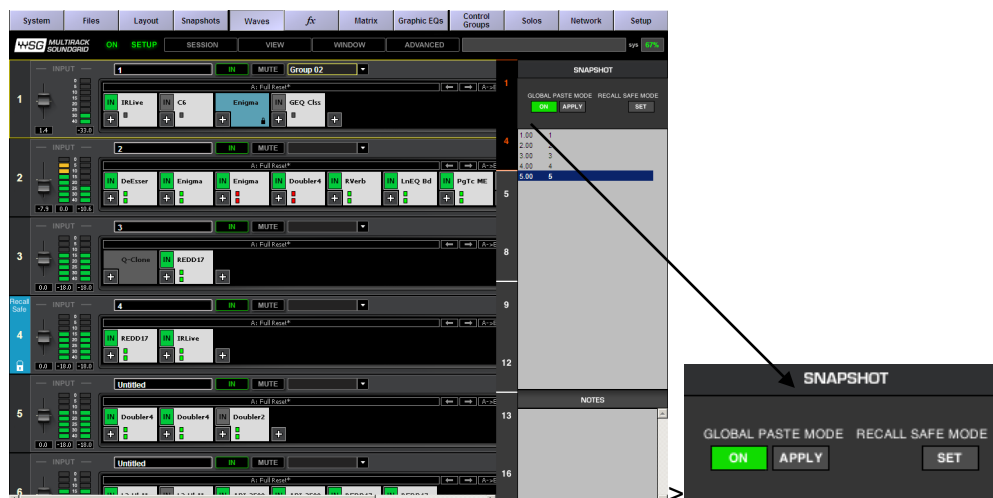


3. Select the **target snapshot/s** that you want to modify. To select multiple snapshots, Ctrl+Click on the desired target snapshots, or Shift+Click to select several contiguous snapshots (using a mouse).
4. In the rack windows, select the plugin or rack to which to copy the selected snapshots to. Right-click on the plugin and choose **Global Paste Plugin/Rack** from the menu and touch the "**Apply**" button. Repeat this for each of the plugins or Racks whose settings you want to Global Paste.
5. Touch the Global Paste button "**On**" in the snapshot Pane once again to turn this mode off and end the process.

## Recall Safe

The Recall Safe mode allows you to select the racks and/or plugins that won't be affected as you change snapshots that would normally affect them. The Recall Safe option applies within the session (and not to a specific snapshot).

Turn Recall Safe "**On**" in the Snapshots Pane
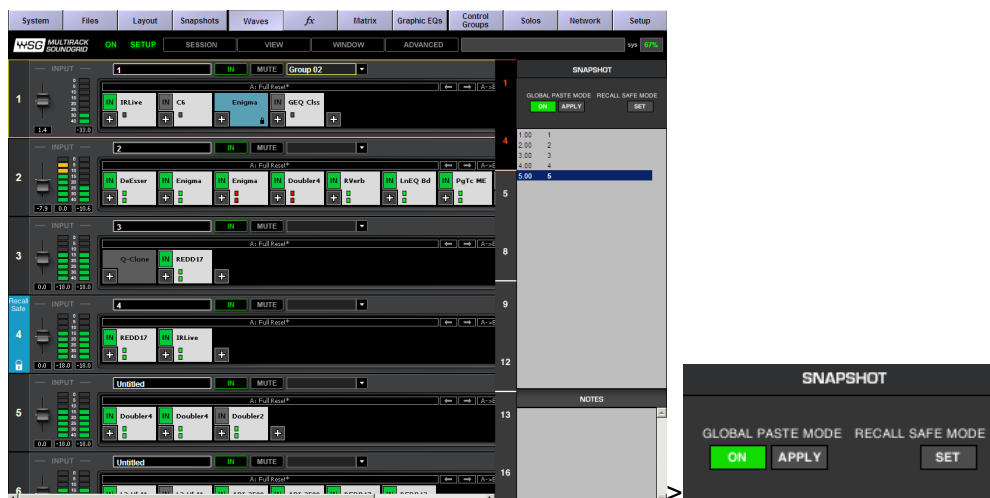


**Racks**: Select a rack you want to set to Recall Safe. Touch the "**Set**" button or right-click on the selected rack and choose **Recall Safe** from the pull-down menu. "Recall Safe" racks glow blue:



**Plugins:** Select the plugin you want to set to Recall Safe. Touch the "**Set**" button or right-click on the selected plugins and choose **Recall Safe** from the pull-down menu. "Recall Safe" plugins glow blue:

To remove a rack or plugin from Recall Safe mode, select the respective rack or plugin and touch the "**Unset**" button or de-select **Recall Safe** from the right click pull-down menu.

Plugins or racks that are set to Recall Safe can be edited. However, their Recall Safe status can be viewed only while in Recall Safe mode. Selecting Recall Safe in the Snapshots menu does not activate or de-activate Recall Safe. Rather, it only allows you to see plugins and racks, and set them to Recall Safe. When you turn Recall Safe mode off, racks and plugins which have been Recall Safe remain so; they just don't glow blue.

When a rack is Recall Safe, all the plugins within that rack are affected, i.e. are effectively Recall Safe as well.

# 10. Saving in MultiRack SoundGrid

MultiRack SoundGrid offers four different levels of "Save," enabling you to quickly and confidently store and recall needed Session information. From most specific to most general, here are your options for saving information:

- **Per Plugin:** Each plugin has its own WaveSystem Toolbar, so you can load and save your favorite plugin settings without affecting the rest of the processing environment. Say you have a C4 preset that you'd like to use for the bass. Simply load the preset from the C4's WaveSystem Toolbar's **Load** menu. Plugin settings can be saved to an external USB key and loaded on to another console, given that the same plugins are installed and authorized on both consoles.
- **Per Rack:** There's a WaveSystem Toolbar at the top of each rack, so you can load and save settings for an entire Rack, independent of the Snapshots. Plugin settings can be saved to an external USB key and loaded into another console, given that the same plugins are installed and authorized on both consoles.
- **Sessions** hold the settings for every plugin and all racks. MultiRack Sessions are saved alongside the console's Session file; both files are named identically and are loaded in synchronization when the corresponding console Session file is loaded.
- **Snapshots** hold the settings for every plugin and rack. Snapshots are created and stored on the console main Snapshot window.

The chart below illustrates the relationship between functions and snapshots/presets/session management within the Waves MultiRack and DiGiCo system:

|  | Plugins | Racks | Snapshots | Session |
|---|---|---|---|---|
| **Rack routing** | - | - | - | All racks |
| **Rack in/out gain** | - | Single rack | All racks | All racks |
| **Rack in/out and mute state** | - | Single rack | All racks | All racks |
| **Plugin chains and parameters** | Only preset for individual plugin | All plugins in single rack | All plugins | All plugins |

# 11. Overview Window – Viewing the Status of All Racks

Once you've filled several racks, you'll want a convenient way to keep track of everything happening within your processing environment. To get an overview of your racks, select **Overview** from the **View menu**. This will reveal the Overview window, where you'll see a condensed view of each rack.



The Overview window tells you if a rack or an individual plugin is functioning, and enables you to turn on or off, bypass, or mute a rack. Clipping is also indicated for each rack.

Use the Overview window when you want to keep an eye on the entire processing setup. Since each mini-rack in the Overview window displays clipping information, you can easily watch out for over-clipping across your entire setup.
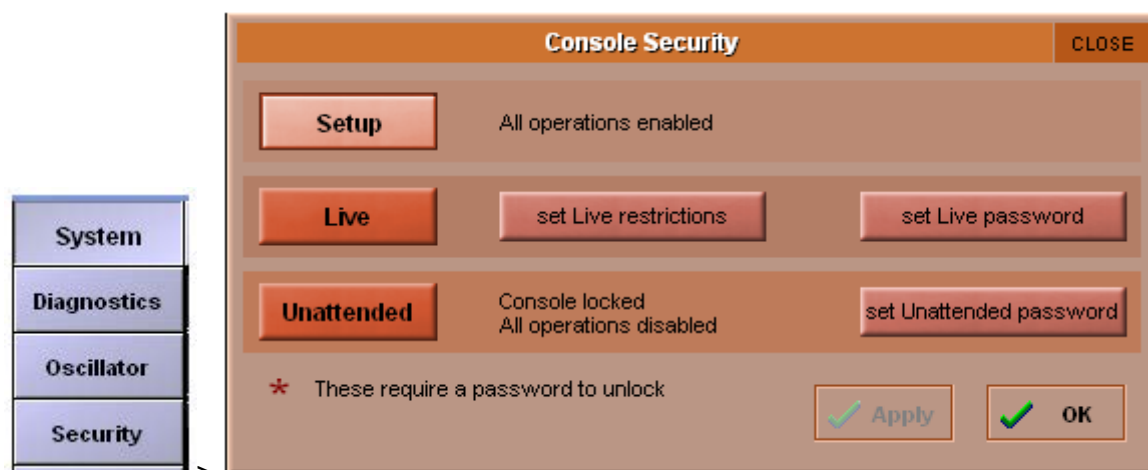
# 13. Show Mode
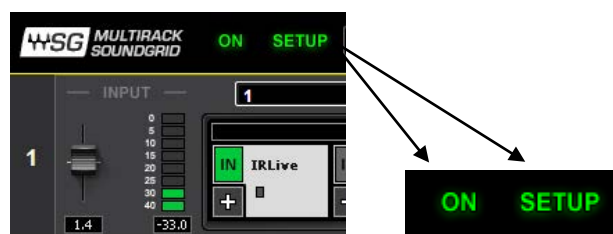


Show Mode is a "safe mode" used during performances which lets you adjust parameters within plugins, without changing the routing, configuration, and other settings that could cause problems in a live situation.

When **Show** is selected you are locked out from much of the interface.

To switch between Setup and Show modes, go to **Master view > System tab > Security** and switch between **Setup** and **Live**.



When choosing **Setup**, MultiRack will switch to Setup mode; when choosing **Live**, MultiRack will switch to Show Mode.

# 14. Automatic Recovery

Since MultiRack SoundGrid is an application for live shows, it is equipped with an automatic recovery mechanism. This means that if MultiRack SoundGrid quits unexpectedly, it will automatically relaunch and reopen the same session file it was running when it crashed, with the same snapshot that was recalled when the crash occurred (if applicable). While MultiRack SoundGrid relaunches itself, streaming and processing audio continues without interruption; only user control is lost until MultiRack SoundGrid reloads its Session.

# 15. Rescan Present Licenses
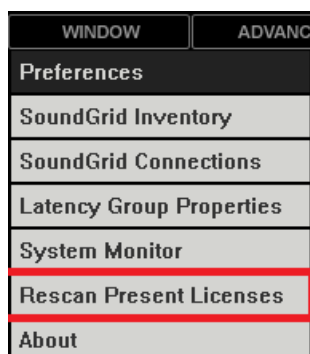


If you are preparing a setup and routing without licenses (i.e. without a connected USB flash drive), the plugins will load in a disabled state. The plugins won't process audio, but you can still assign inserts and FX as well as load plugins and presets.

To enable disabled plugins:

- Connect your USB flash drive.

- Go to **Window** Menu and select "**Rescan Present Licenses**."

All disabled plugins will be enabled.

- You can re-enable plugins individually by right-clicking on a disabled plugin and choosing the **enable** option from the menu.

# 16. System Monitor Window

This Window offers general information to the current state of the SoundGrid system. To get to this window, go to the **Audio** menu and select the **System Monitor** item, or press CTRL+M.
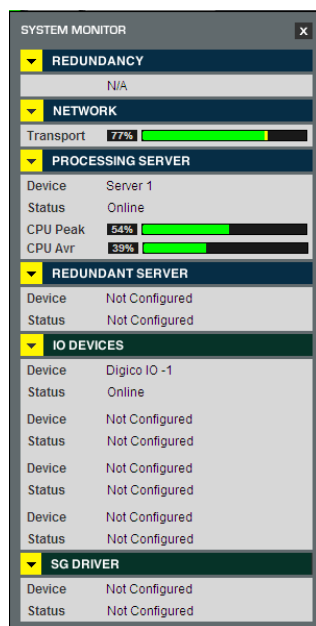


Open this window from the Window menu.

This window displays the real-time status info on your network, I/O devices, Servers, and Integration controller.

| | |
|---|---|
| **Redundancy** | Displays redundancy status. |
| **Network** | Displays network transport load.<br>High loads may result in audio drops. |

**Processing/Redundant Server**

- **Device** – Device name
- **Status** – Server status (online or offline)
- **CPU Peak** and average loads (**AVR**) – Displays the load on the processing server. High loads may result in audio drops.

**I/O Device 1 and 2 (if available)**

- **Device** – Device name
- **Status** – Device status

Integration – IP of the controller (SD console) and its connectivity status

# 17. Dugan Automixer

The Dugan Automixer plugin is a MultiRack Native and SoundGrid plugin that's integrated into the MultiRack system. The Dugan Automixer is inserted on the MultiRack's outputs, post the racks. All the racks' processing occurs prior to the signal reaching the Dugan Automixer plugin. For example, if MultiRack is inserted on console channels, turning the Dugan Automixer on will insert the Automixer between Rack Outs and Insert Returns, as shown below.
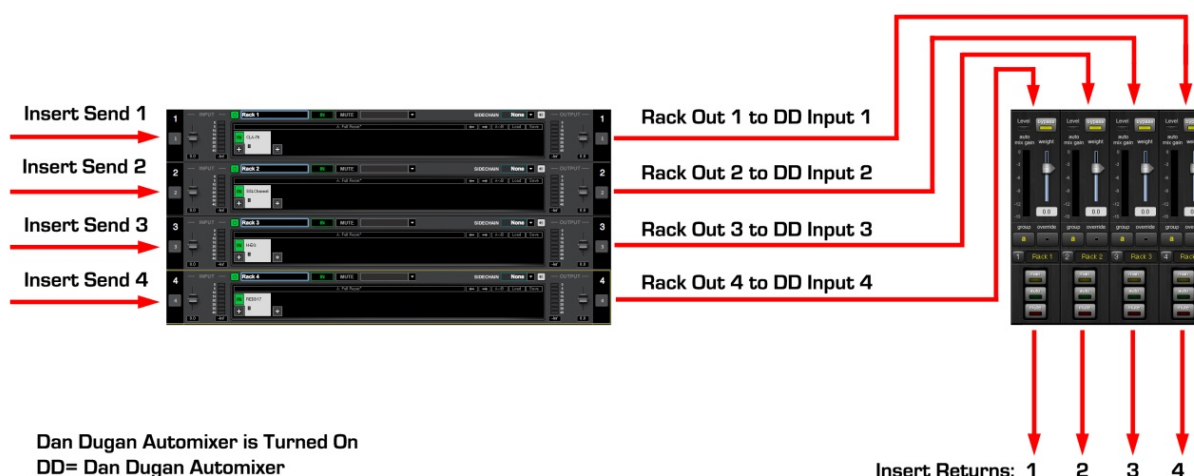


All available Outs are routed through the Dugan Automixer consecutively; Rack Outs routing values are thus identical to the Automixer channel number: Rack 1 Mono Out 1 connects to Automixer channel 1; Rack 2 Stereo Outs 3-4 connect to Automixer channels 3 and 4.

When the Dugan Automixer is turned on, all its channels are bypassed by default.

The Dugan Automixer is installed into the plugins folder: D:\Waves\Plugins V9.

To open the Dugan Automixer, go to the **Waves** tab under **Advanced** > **Dugan Automixer**, or press F9.

Close the Dugan Automixer by clicking **X** on top right corner.

*Note that closing the Dugan Automixer window does not stop the Automixer's processing. It only closes its control window.*

## Dugan Channel Count

The Dugan Automixer window opens 64 processing channels in 8 tabs.
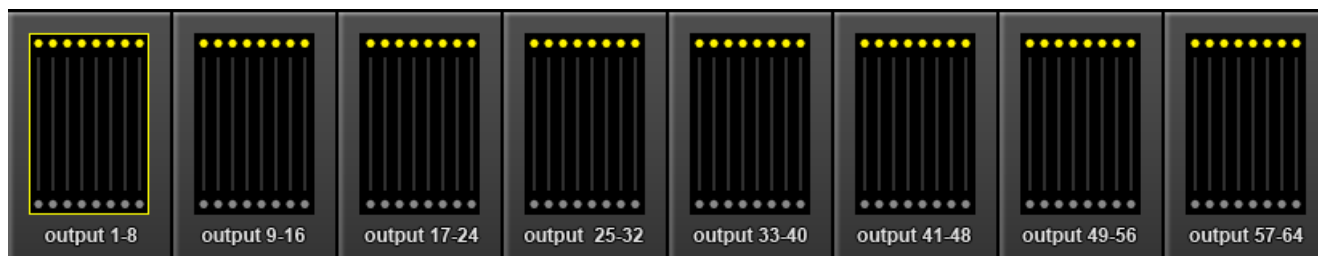


**Snapshots** – All plugin controls are saved in the snapshots except for Master Pane controls. Master pane controls are not saved in Snapshots.

**Recall Safe** – The Dugan Automixer can be Recall-Safed as a whole by clicking/pressing the Recall Safe button on the plugin's Master Pane. Alternatively, right-clicking on the top of the Dugan Automixer window opens a menu where enabling/disabling Recall Safe is also possible.
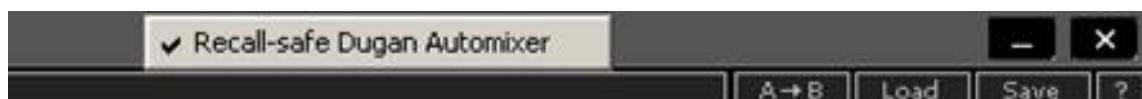


When The Dugan Automixer is on, an indicator will appear on the MultiRack window, as shown below:



## License & Session Behavior

There are three possibilities:

1. If the Dugan Automixer is not installed. the **Waves** tab > **Advanced** menu will show **Dugan Automixer is Not Installed**, and the Automixer's settings will not be saved in the session file. When you load an existing session that contains Dugan Automixer processing, the session will load without the Automixer. The Automixer will not be removed from the session file.

2. If the Dugan Automixer is installed but not activated, the **Waves** tab > **Advanced** menu will show **Dugan Automixer is Not Activated**, and the Automixer's settings will not be saved in the session file. When you load an existing session that contains Dugan Automixer processing, the session will load with the Automixer disabled. The Automixer will not be removed from the session file.

3. If the Dugan Automixer is installed and activated, its menu item will be shown normally. The Automixer will be saved in the session file even if it's not turned on.

Use **Rescan Licenses** to refresh activation for added licenses via the **Waves** tab > **Window** > **Rescan Present Licenses**.

For more information, please refer to the Dugan Automixer manual by clicking on the question mark (?) on the plugins GUI.

# 19. Global Tempo (BPM)

Global Tempo allows all of the tempo-based plugins in the session, such as delays, to sync their

BPM setting to the same value, which is controlled centrally. If you want a plugin to sync to this global

tempo setting, set it to "Host. Refer to the plugin manual for specific instructions.

Tempo can be set on MultiRack's top bar**.**



To set BPM on the MultiRack interface, tap/click the Tap button, enter the BPM value directly

into the value field, or scroll the value up or down.

* **TAP button:** Tap the button to set global tempo.

* **Tempo LED:** The LED flashes at the tempo rate.

* **Tempo display:** Displays the BPM value and allows setting it by entering a number.

The BPM setting is saved in the session file as well snapshots. This allows you to set a different BPM
value in each snapshot.

# Appendix

## 20. MultiRack Menus

| Session | View | Window | Advanced |
|---|---|---|---|
| Import All Rack Presets<br>Export All Rack Presets<br>Auto-Route All Racks | View/Hide Snapshot Pane<br>Main View<br>Overview<br>Rack View | Add Racks<br>Preferences<br>SoundGrid Inventory<br>SoundGrid Connections<br>Latency Group Properties<br>System Monitor<br>Rescan Present Licenses<br>About | Enable Verbose<br>Mode |

# 21. MultiRack SoundGrid Keyboard Shortcuts

If you are using an external keyboard you may want to get familiar with MultiRack's keyboard shortcuts:

| Session Item | Definition | Keyboard shortcut |
| --- | --- | --- |
| Import all Rack Presets | Opens Explorer window,  imports all Rack presets | Ctrl+Alt+I |

| Window Item | Definition | Keyboard shortcut |
| --- | --- | --- |
| Open Snapshot Pane | Opens/closes the Snapshot Pane in MultiRack SoundGrid window. | F7 |
| SoundGrid Inventory | Opens the SoundGrid Inventory Window | F2 |
| SoundGrid Connections | Opens the SoundGrid Connections Window | F3 |
| Group Properties | Opens the Group Properties window | Ctrl+G |
| System Monitor | Opens the System Monitor window | Ctrl+M |
| Preferences | Opens the Preferences window | Ctrl+P |

| Menu Item | Definition | Keyboard shortcut |
| --- | --- | --- |
| Main view Mode | Opens the main application view (multiple Racks) | F4 |
| Overview Mode | Opens the Overview view | F5 |
| Rack view Mode | Opens the Rack view | F6 |

| Advanced Item | Definition | Keyboard shortcut |
| --- | --- | --- |
| Enable Verbose mode | Creates Log file for troubleshooting. | |
| Rescan Present Licenses | Starts rescan of licenses on connected USB flash drive | Ctrl + L |