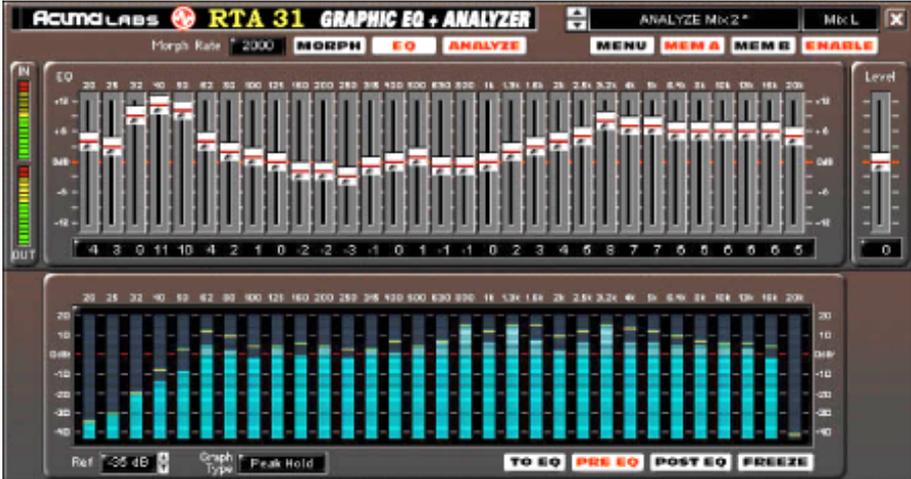




USER'S GUIDE

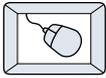


RTA-31™

Plug-in for Mackie Digital Mixers

MACKIE®
Digital Systems™

Iconography



This icon identifies a description of how to perform an action with the mouse.



This icon identifies a description of how to perform an action from the console.



This icon will lead you to some further explanations of features and practical tips.



This icon marks information that is very important, so please make sure you have a read.



This icon does not appear in this guide.



Note: Any future revisions of this guide will be available for viewing and downloading from our website: www.mackie.com.

Further plug-in details and preset downloads can be obtained from www.acumalabs.com.

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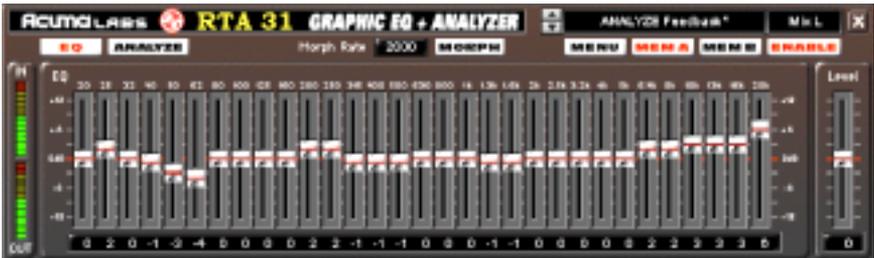
Introduction

Thank you for purchasing the RTA-31, the ultimate in equalization and frequency analysis from Acuma Labs. It is one of the exciting new family of 24-bit plug-ins for the D8B, specifically designed for the new Mackie Universal Effects (UXF) card.

The RTA-31 is a highly creative tool that enables you to produce great mixes quickly and easily. The first time that you use the visual and easy-to-use graphic user interface (GUI), you will quickly understand the power of this package. After using the functions that let you draw EQ curves, you will soon realize that the RTA-31 is destined to become an integral part of the way you produce sessions from now on.

About Acuma Labs

Acuma Labs develops real-time embedded systems for professional audio applications to create high-quality products for the music and pro-audio industries. Acuma specializes in digital audio effects using DSP, real-time operating systems, graphical user interfaces, and digital hardware design.



About the D8B UFX Card

The Mackie UFX card provides robust processing power for computation-heavy plug-ins. The UFX card is a 4-in/4-out architecture, which means it can support four mono, two mono and one stereo, or two stereo sends simultaneously. Up to four UFX cards can be installed in the D8B, allowing up to sixteen simultaneous single-channel effects, eight stereo plug-ins, or combinations thereof.



Note: It is recommended that you increase the D8B's memory if you install more than one UFX card. Memory upgrade instructions are supplied with each card.

About the RTA-31

Acuma Labs' RTA-31 is a dedicated software plug-in for the Mackie Digital 8•Bus that utilizes 24-bit digital processing power to view and modify the frequency response from any given signal within the D8B. An invaluable tool for live sound and studio applications, the RTA-31 lets you create great sounding mixes quickly and easily. View frequency response using the on-board spectrum analyzer to quickly identify the peaks and valleys of your signal. Modify frequency response using the To EQ function, which automatically compensates for the highs and lows of your signal. A unique feature called Sweep Draw lets you quickly paint any EQ curve using your mouse like an on-screen paint brush. Save your edits and settings as presets or create comparative editing references by toggling (morphing) between the Memory A and B settings. The Spectrum Analyzer has a selectable dB reference level (0dB to -60dB) that enables you to zoom in on a specific signal range. Five different graph types (bar, peak hold, peak difference, point, and peak bar) are available for various display options. As with all Mackie plug-ins, 31-Band Graphic EQ+ Analyzer can be routed via channel insert, auxiliary sends, or inserted on the main Left and Right Masters.

Let's Get Started

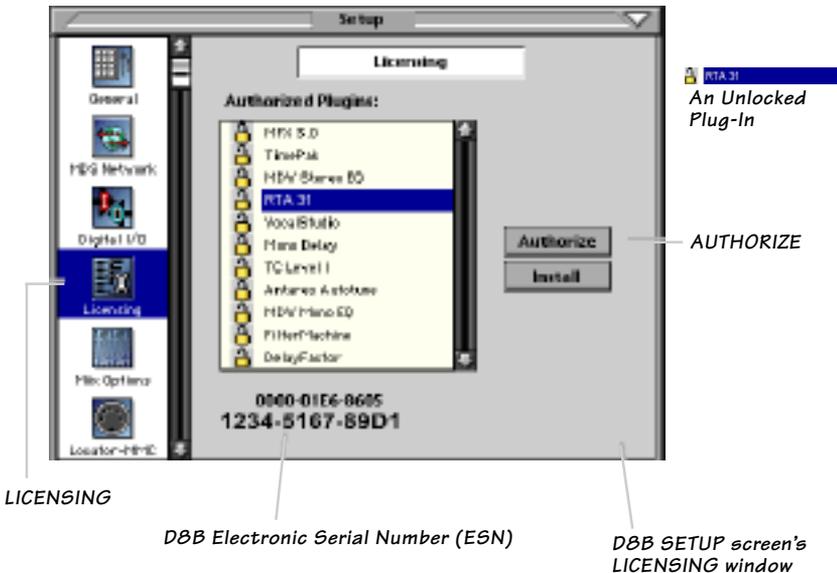
Requirements

- One or more Mackie UFX cards
- Mackie Real Time OS 3.0 Software
- Plug-in Software

We will assume you have successfully installed a Mackie UFX card and Mackie Real Time OS 3.0 software upgrade. If you have encountered problems with the installation of hardware or software, please see their associated user guides or contact Mackie support (www.mackie.com).

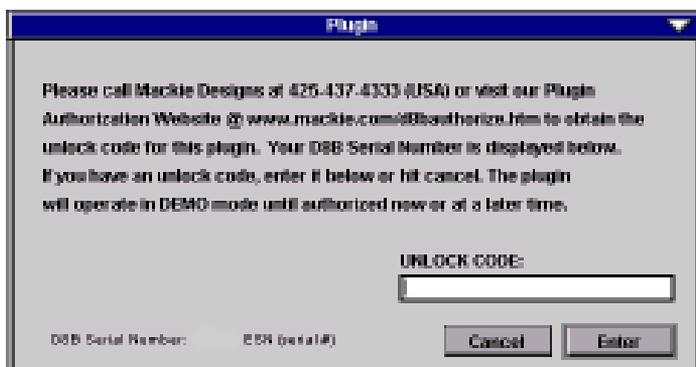
Authorizing the Plug-In

If you have Digital 8•Bus version 3.0, build 186 or higher, the RTA-31 may already have been installed on the Digital 8•Bus hard drive via the demo kit. If not, go to www.mackie.com and download the Digital 8•Bus Plug-in Demo Kit for Macintosh or Windows. When the demo kit has been installed, the D8B's Setup Screen Licensing window displays a "locked" icon for GraphicEQ. You must enter an authorized unlock code to unlock the plug-in for normal operation.



Unlock Procedure

1. Locate your D8B's Electronic Serial Number (ESN). This is displayed at the bottom of the Licensing window, which is accessed from the Setup screen. The 12-digit ESN is made from numbers 0–9 and letters A–F. It is unique to the D8B processor, and is not the same as the serial number on the rear of the control surface or CPU chassis.
2. You will also need your plug-in's serial number, which is printed on the floppy disk label. If you download the plug-in, you won't have a serial number unless you purchase it (and obtain the floppy disk).
3. To obtain the unlock code, have the ESN and plug-in serial number ready. Then you have two options:
 - Log on to the Mackie plug-in authorization web page: (<http://www.mackie.com/d8bauthorize.htm>)
 - or
 - Telephone Mackie Tech Support at 800-258-6883.
4. When you have obtained an unlock code, open the D8B Setup window, and click **Licensing**.
5. With your plug-in highlighted in the Licensing window, click **Authorize**, and enter your unlock code in the UNLOCK CODE box. Click **Enter**, and enjoy your newly expanded console.



Configuring the Plug-In

After installing your UFX card, unlocking the plug-in, and booting up the D8B, all you need to do is assign the RTA-31 to a UFX card slot.

Assigning the Acuma RTA-31 to a UFX Card



1. Click the Plugins menu and select **Plugins**, or use the keyboard shortcut Ctrl+P.
 2. In the Plugin Configuration menu, locate the card slot that contains the UFX card to which you want to assign the RTA-31.
 3. In the MODE column, click the MONO/STEREO toggle button and select **MONO**.
 4. In the PLUGIN column, select **Graphic EQ**.
- It should look something like this:



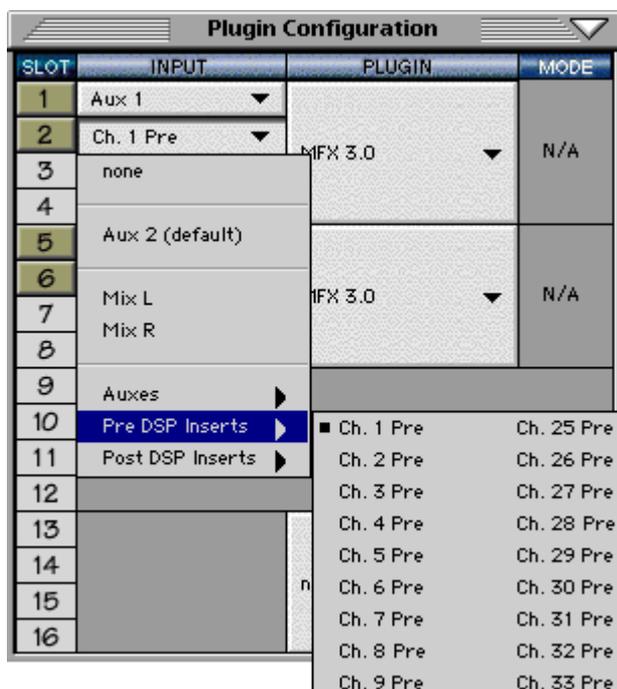
Plugin Configuration			
SLOT	INPUT	PLUGIN	MODE
1	Aux 1	DelayFactor	STEREO
2	Aux 2		
3	Ch. 3 Pre	FilterMachine	STEREO
4	Ch. 4 Pre		
5	Ch. 5	TimePak	STEREO
6	Ch. 6		
7	Ch. 7 Pre	Mono Delay	MONO
8	Ch. 8 Pre	Saturated Fat	
9		none	MONO
10		none	
11	Mix L	RTA 31	MONO
12	Mix R	RTA 31	
13	Aux 7	MFX 3.0	NA
14	Aux 8		
15			
16			



Note: A Plug-in can also be loaded from the Setup section on the console.

Assigning an Input Source

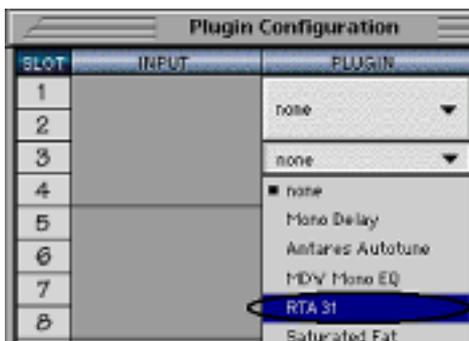
In the **INPUT** column of the Plugin Configuration screen, select an input source for the RTA-31. This can be an auxiliary send, a Pre- or Post-DSP channel insert, or the main left or right mix. In this example, we've chosen the Pre-DSP insert point for Channel 1.



SLOT	INPUT	PLUGIN	MODE
1	Aux 1		
2	Ch. 1 Pre	UFX 3.0	N/A
3	none		
4			
5	Aux 2 (default)		
6	Mix L	UFX 3.0	N/A
7	Mix R		
8			
9	Auxes		
10	Pre DSP Inserts	■ Ch. 1 Pre	Ch. 25 Pre
11	Post DSP Inserts	Ch. 2 Pre	Ch. 26 Pre
12		Ch. 3 Pre	Ch. 27 Pre
13		Ch. 4 Pre	Ch. 28 Pre
14		Ch. 5 Pre	Ch. 29 Pre
15		Ch. 6 Pre	Ch. 30 Pre
16		Ch. 7 Pre	Ch. 31 Pre
		Ch. 8 Pre	Ch. 32 Pre
		Ch. 9 Pre	Ch. 33 Pre

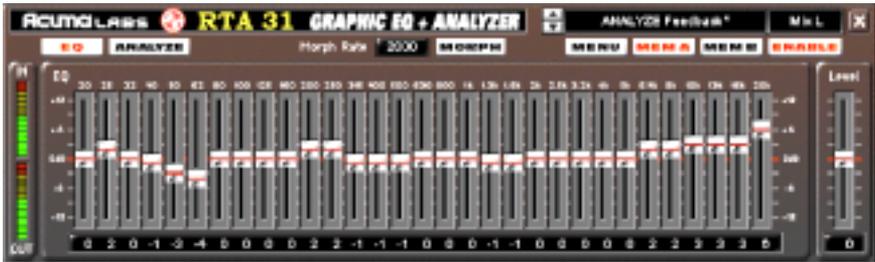
Deactivating the RTA-31

If you wish to deactivate the plug-in from a UFX card slot, select **none** from the **PLUGIN** column's pull-down menu.



SLOT	INPUT	PLUGIN
1		none
2		
3		none
4		■ none
5		Mono Delay
6		Antares Autotune
7		MDY Mono EQ
8		RTA 31
		Saturated Fat

Using the RTA-31



Front Panel (Overview)

You can think of the RTA-31 as being comprised of two separate panels: the EQ Panel and the Analyzer Panel. There is also a reduced view (Shrunk Screen) that collapses the plug-in window into the minimized control strip.

EQ Panel

The 31-Band Graphic EQ section of the GUI (graphic user interface) is a fully functional 1/3-octave frequency EQ controlled by a series of linear sliders. These sliders may attenuate only (band cut) or, more typically, attenuate and boost (band cut/boost) the frequency response curve of a given signal. This can help to reduce resonating peaks and dips associated with live sound systems and acoustic environments. It does so by eliminating feedback and other unwanted noise as well as shaping the frequency response of your mix.

31 Bands of Graphic EQ

The thirty-one bands of EQ range from 20Hz to 20kHz. Each band allows for -12 dB to +12 dB of level. All of the linear sliders can be adjusted up or down independently. The adjustment of the sliders can have a dramatic or subtle effect on the EQ depending on the amount of boost/cut applied.

There are four adjustment modes for the EQ sliders (Sweep, Single Set, Sweep Default, and Sweep Copy). These modes adjust one or more of the bands at a time. Sweep is the feature that lets you adjust more than one band at a time using your mouse in conjunction with selected key commands.

Mouse Control

Use your mouse to perform various editing EQ functions:

- **Single Set:** Click the left mouse button to adjust individual bands and sweep across the GUI to quickly paint a new EQ curve.
- **Sweep Default:** Press Ctrl and click the left mouse button (Ctrl + left click) to set the default (0 dB) on individual EQ bands as you sweep across the bands. When using Sweep Default, you must press the Ctrl key before the mouse click and keep it down when you click the mouse.
- **Sweep Copy:** Click the right mouse button to copy a selected value to all other bands with one sweeping motion.

Input/Output



The input and output meters, located at the far-left side of the GUI, represent the incoming signal and the output (post-effect) signal. The “In” signal meter is determined by the amount of aux send or insert level sent from the D8B. The “Out” meter level from the RTA-31 is controlled with the Level slider found on the far-right side of the GUI. You will notice the Output level may need to be adjusted using the Level slider to compensate for changes made in band frequency levels in the graphic EQ.

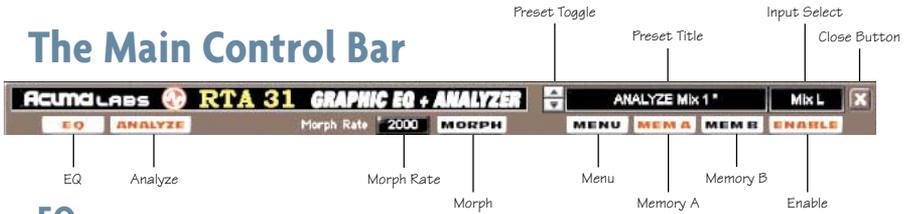


The Level slider, found on the far-right side of the GUI, controls the output level of RTA-31. It represents the pre-effect gain level to let you create headroom when boosting the signal. This value ranges from -12 dB to $+12$ dB. Remember: Changes in EQ settings will have an effect on the output and can cause clipping in the EQ. You will notice that the Output level may need to be adjusted from time to time using the Level slider to compensate for changes made in the graphic EQ settings.



Note: Use Ctrl + click to set the level to 0 dB.

The Main Control Bar



EQ

The EQ selection button toggles the graphic EQ in and out of view via the mouse. Clicking the EQ button when the analyzer is not activated shrinks the EQ GUI to a condensed yet functional screen that can access and modify EQ curve settings, change between Mem A and B, and access the Menu functions.

Analyze

The Analyze select button activates the analyzer drop panel, which is not visible when the plug-in is first activated. Clicking the EQ button off when the full screen is active brings up the Analyzer panel only. Clicking the Analyze button brings up the Analyzer panel. (More on this in the next section.)

Morph

The Morph button activates a morph sequence that gradually changes an EQ curve from the Mem A setting to the Mem B setting, or vice versa.

Morph Rate

The Morph rate is measured in milliseconds and varies from 0 to 4000ms (four seconds). You can adjust the rate using the mouse cursor to drag the values up or down. This timing setting determines how long the Morph sequence takes to change between Mem A and Mem B.

Menu

Pressing the Menu button opens a pull-down menu that performs familiar functions such as load, save as, cut, copy, and paste.

Memory A/Memory B

The Mem A and Mem B buttons temporarily store EQ settings to allow comparative referencing. You can also copy and paste settings from one memory location to another.

Enable

This button simply enables or disables the RTA-31 for a wet/dry comparison.

Preset Toggle Buttons

The up/down arrows, located just to the left of the Preset window, enable you to scroll up or down through either the Factory or User Presets.



Tip: As there is no delay in loading presets, you might try building performances by stacking user presets and toggling between them using the up/down arrows located at the right-hand side of the Preset window. For example, you can quickly switch from a mix EQ to Low Fi and back for an effect, recording the preset switch into automation. Remember to name your presets with similar names as the list is organized alphabetically.

Preset Title Window

The Preset Title window, located at the top of the control bar, displays the currently selected preset that corresponds to the visible EQ or Analyzer curve. Click on the window to open a pull-down menu that selects specific Factory or User presets.



Note: It is possible to save presets to the User Preset folder (which is the default folder) or a folder of your own making. The user presets then point to the last folder you've saved or recalled presets from.

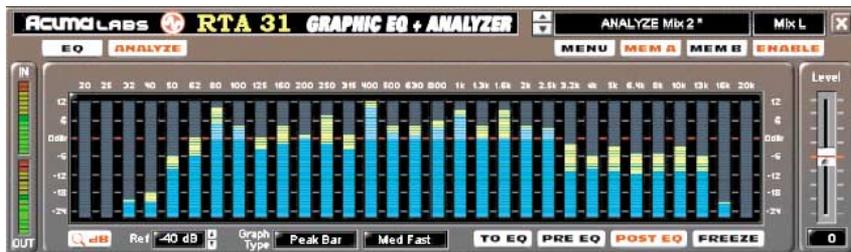
Input Select

The Input Select is located directly to the right of the Preset Title window. Use your mouse to select from pre/post insert, auxiliary, or master insert inputs.

The Close button

The X button in the top-right corner hides the GUI, although it is still active, until it is disabled or recalled in the Plugins window of the D8B.

The Analyzer Panel



dB Range Magnifier

dB Reference Window

Graph Type

Graph Speed Select

To EQ

Pre EQ

Post EQ

Freeze

The Analyzer Window

The analyzer window is represented by thirty-one bar graphs that correspond to the same thirty-one sliders of the graphic EQ section. The Analyzer displays a frequency spectrum from 20Hz to 20kHz with a range that runs from -40 dB to +20 dB or -24 dB to +12 dB. The reference point is 0 dBfs in the D8B.

The dB Range Magnifier

The dB Range Magnifier, represented by the magnifying glass icon/dB symbol button, switches the analyzer viewing range between -40 dB to +20 dB (a 60 dB range) and -24 dB to +20 dB (a 44 dB range) for fine-tuning.

The dB Reference Window

The dB reference window, found just to the right of the Range Magnifier, is used to select a dB reference point relative to 0 dBfs found in the D8B. Adjusting the reference point will change the relationship of the graph display relative to 0 dB, giving you specific analysis information pertaining to your signal. The reference select range is from 0 dB to -60 dB. Adjust the dB Reference value to raise or lower the entire display (for instance, to boost the whole spectrum up to determine the lowest level frequencies).

Graph Type

The Graph Type window enables the selection of different graph types (Bar, Peak Hold, Point, Peak Diff., and Peak Bar) to suit your analyzer view preference.

Graph Speed Select

Graph speed select refers to the response speed of the Analyzer meters. It controls the peak and hold times as well as the decay rate of the meters. This is very useful when you are trying to identify quick transients and is probably most noticeable when you have selected either Peak Hold, Point, or Peak Difference.

To EQ (Live Application/Pre EQ Only)

The To EQ feature is designed to optimize your live sound by finding high and low spots in the room and then applying an automatic flattening curve to the signal. Additional tools needed to use this feature are a pink noise generator and a reference microphone setup in the room that is to be analyzed. As you generate pink noise through your house speakers, return the signal to the D8B via the reference microphone, selecting your reference point as you route signal through the RTA-31 (Pre-EQ). Pressing the To EQ button will take a snap shot of the analyzer's current state and then send those settings to the EQ section, which will automatically compensate (flatten) the curve based on the input signal.



Note: You only have approximately four seconds to Undo the To EQ button before it is saved as the current Graphic EQ state.

Pre EQ

The Pre EQ button selects the analysis point (on the analysis graph) to occur prior to the EQ section.

Post EQ

The Post EQ button selects the analysis point (on the analysis graph) to occur after the EQ section.

Freeze

Freeze will freeze the Analyzer at the same instant that the button is pressed. The freeze frame can also be copied to the Graphic Equalizer by selecting the To EQ button.

The Reduced Screen Control Bar



Input/Output Meters

31-Band Graphic EQ

EQ

Analyze

The Reduced Screen Control Bar

The control bar is a convenient way of viewing your signal without taking up valuable real estate on the D8B screen. With the Analyzer button off, simply click the mouse pointer on the EQ button to switch from the full screen GUI to the reduced version.



Note: The analyzer must be closed to access the smaller screen. The reduced screen is intended for EQ control only. The full GUI is required to access the spectrum analyzer. The features found in the minimized control bar are exactly the same as the ones found on the larger EQ screen. You can quickly view and adjust your EQ settings or select different modes from this handy reduced panel.

Input/Output Meters (Reduced Screen)

The horizontal input and output meters represent the incoming signal and the output (post-effect) signal. The functions work exactly the same as they do in the larger GUI.

31-Band Graphic EQ (Reduced Screen)

A reduced version of the 31-Band graph is represented by a series of blue and yellow bars located directly to the right of the input and output meters. The graph curve can be adjusted with the same mouse commands used in the full screen (see page 12).

EQ

Pressing the EQ button on the reduced screen will show or hide the full EQ panel.

Analyze

Pressing the Analyzer button while in reduced mode will show or hide the full Analyzer.

Saving, Loading and Resetting a Preset

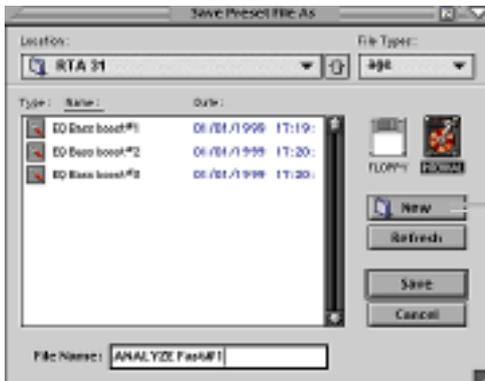
RTA-31 settings can be saved and recalled from the hard drive. You can save and load files to either Memory A or Memory B.



To Save a Preset:



1. Click and hold the **MENU** button.
2. Select **Save User Preset** to overwrite the file currently opened.
3. Select **Save User Preset As** to save to a new file name. The Save Preset File As dialog box appears.
4. A default name for the preset is automatically displayed, such as Preset#1. If you want to rename it, simply type the name you want, using up to 20 characters.



A new subfolder can be easily created to help organize custom patches.

5. Select **INTERNAL** (default hard drive) or **FLOPPY**.
6. Click **Save** to complete the operation.

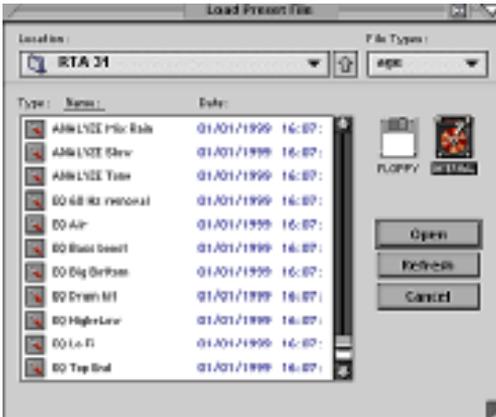
To Load a Preset:



1. Click **MEM A** or **MEM B** to choose the memory location from which to load the file.



2. Click and hold the **MENU** button.
3. Select **Load Graphic EQ** to open a file. The Load Preset File dialog box appears.



4. Click **INTERNAL** if the file is on the internal drive, or click **FLOPPY** if the file is on a floppy disk.
5. Select the preset you want to load.
6. Click **Open** to load the selected preset.



Click in the Preset Display to load from the pull-down menu or scroll through presets using the Up/Down buttons alternatively.



Note: Presets can also be downloaded from www.acumalabs.com, then saved to a floppy disk and loaded onto the D8B.

To Reset The Preset:

Reset will reload the previous patch.

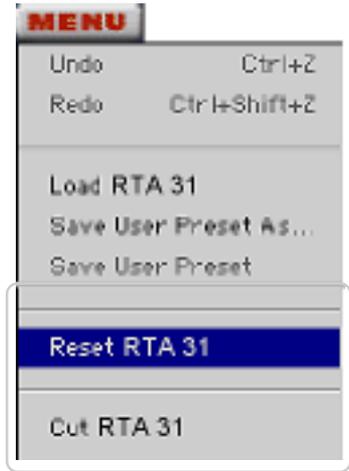


1. Click and hold the **MENU** button.
2. Select **Reset Graphic EQ**.

To Cut Preset Settings:



1. Click and hold the **MENU** button.
2. Select **Cut Graphic EQ**.



The current settings are temporarily stored in the clipboard memory in case you want to paste them to a new preset. The plug-in also reverts to its default state (it is reset).

To Copy Preset Settings:



1. Click and hold the **MENU** button.
2. Select **Copy**.

The current settings are temporarily stored in the clipboard memory in case you want to paste them to a new patch.

To Paste Preset Settings:



1. Click and hold the **MENU** button.
2. Select **Paste Graphic EQ**.

The current settings are replaced with the settings in the clipboard memory.

Automation and Snapshot Control

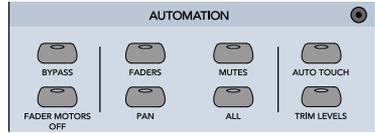
Dynamic Real Time

To Write Automation on a Loaded Plug-In:

On The Console



1. Engage AUTO TOUCH.
2. Engage ALL, disengage BYPASS, and send timecode to the console – the POSITION readout changes to show time code is being received.
3. Move a parameter or recall a patch (user or factory preset).



Subsequent edits to any recorded automation moves may be performed in the Mix Editor. Enable the channel view by clicking the Channel View button, then choose the plug-in you wish to view from the page pull-down menu. This displays a list of available channel and plug-in automation tracks on a parameter basis.



Note: Parameters can be controlled from either the GUI plug-in graphic parameters (using a mouse to modify the parameters) or via the VFD V-Pots and SELECT buttons (with the plug-in parameters called up on the VFD readout).

Dynamic Off-Line

To Write a Snapshot on a Loaded Plug-In:



- Use the Event Automation Track, available under the Window Menu as 'Event Track', to load plug-in user (previously stored) or factory preset patches at a specific time during automation playback.

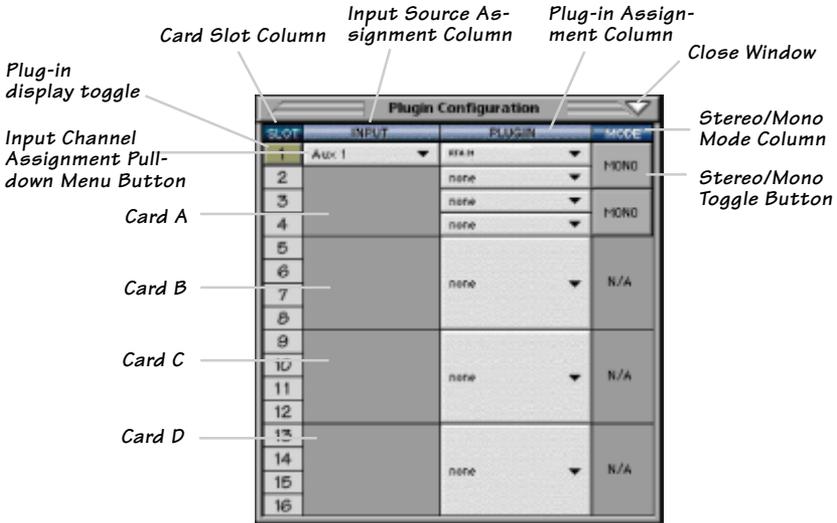


General Note:

Plug-in settings are recalled as part of a console Snapshot, but may also be recalled as Presets (patches). If you are recalling snapshots and presets, be aware that one may override the other.

FX Routing

The Plugin Configuration Window

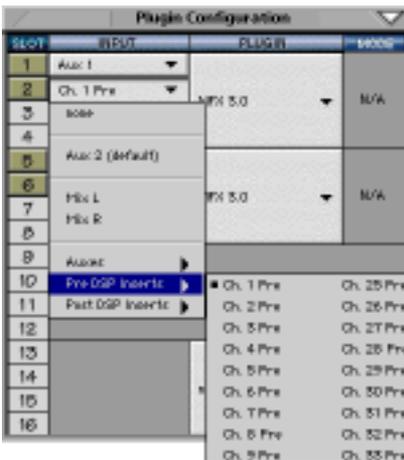


Select RTA31 from the Plugin configuration window in one of two ways. You may go to the Plugin pull-down menu at the top of the Digital 8•Bus software or press the associated hot key to bring it back into view. You may also select RTA31 from the Plugin Bar at the bottom of the Digital 8•Bus software to bring it back into view.

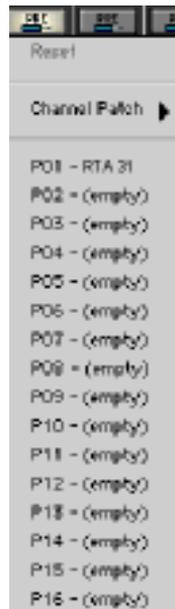
Inserting a Plug-in into a Channel

A pre- or post-DSP channel insert can also be used as the input source for a plug-in. When a channel insert point is selected, the plug-in output returns to the channel. The FX return path is disconnected, although the plug-in output is still displayed on the FX return channel meter.

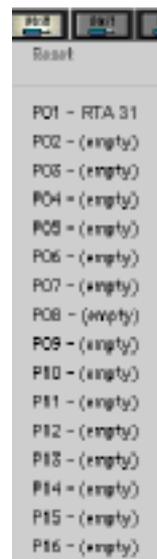
A plug-in channel insert assignment can be made from the Plug-in Configuration window, or from a pull-down menu from the mixer screen, or from the RTA-31 front panel.



Plug-in Configuration Window



Pre-DSP Pull-down



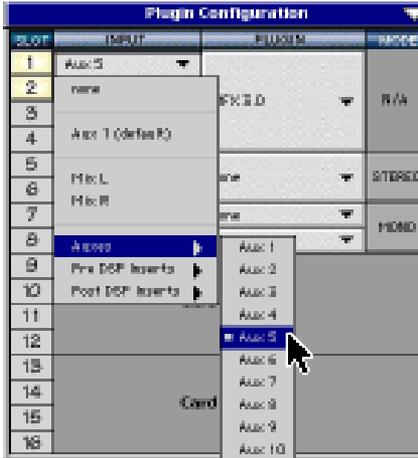
Post-DSP Pull-down

This assignment can also be made from the control surface and VFD by holding in the desired channel's SELECT button for two seconds, then paging over to Plug Pre or Plug Post, selecting the input source, then selecting the desired plug-in slot from the guided menu.

Using an Aux Send with a Plug-In



- Click on the associated **INPUT** menu button and select an Aux input source. In the example below, we have chosen the **Aux 5** Bus.



Send the Input Signal to the Aux Bus



- Send a signal to a D8B mixer input channel (MIC/LINE or TAPE IN).



- Assign the input channel V-Pot/GUI Control Pot to an aux send. We have chosen **AUX 5** according to the example above.

- Use the **AUX 5** control to adjust the input level to the plug-in.



GUI Control Pot Assigned to AUX 5



Remember to select an aux send before using the V-pot or GUI Control Pot on the mixer input channel (MIC/LINE or TAPE IN).

You will see the plug-in's input meter become active as you raise the mixer input channel's aux send.

Set the plug-in input/output signal levels as you would with any effect, so the meter reaches its upper-most range every so often (always trust your ears first). This can be accomplished from the console or GUI.

Pre-Fader and Post-Fader Auxiliary Sends

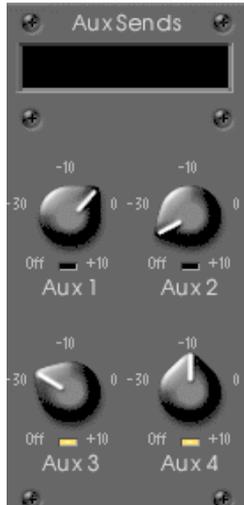
Normally, effects sends are post-fader, so the signal sent to the effect follows the program level in the mix. Occasionally you may wish to feed an effect from a pre-fader source so that the signal level from the aux control is independent of the channel fader position. Aux sends are selectable pre- or post-fader globally (all Aux 1's for instance) from the Mix Options screen in the Setup window, or individually on a channel-by-channel basis either from the channel strip or the Fat Channel.



In the channel strip, Alt-click the Aux Send level indicator to toggle between pre- and post-fader operation. Post-fader is indicated by a red bar, pre-fader is indicated by a yellow bar.



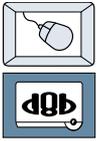
Channel Strip



Fat Channel

In the Fat Channel, clicking on the small indicators below the Aux knobs toggles between pre- and post-fader operation. Yellow indicates pre-fader, otherwise the Aux is post-fader.

The FX Return Channel



- Switch the D8B Bank Select to **EFFECTS (49-72)** and bring up faders one and two (channels 49 and 50). You will also see meter activity associated with these channels.



FX Channels 1&2
(channels 49&50)

Mono plug-in

Plugins	Windows
Plugins	Ctrl+P
P 1	Alt+1
P 2	Alt+2
P 3- RTA 31	Alt+3
P 4	Alt+4
P 5	Alt+5
P 6	Alt+6
P 7	Alt+7
P 8	Alt+8
P 9	Alt+9
P10	Alt+0
P11	Alt+Shift+1
P12	Alt+Shift+2
P13	Alt+Shift+3
P14	Alt+Shift+4
P15	Alt+Shift+5
P16	Alt+Shift+6



The Plug button toggles between Windows menu buttons and FX buttons (lower left on the D8B mixer screen).

Plug-ins button opens the Patch Configuration window (or Ctrl-P on the keyboard)



Here the Graphic EQ + Analyzer plug-in is selected for display.

Factory Presets

The following table is a simple guideline to help you understand the factory presets, and which type of source file was applied to the individual presets. But don't be afraid to run anything through the plug-in preset and customize the parameters to your specific needs, and save it as a user preset. So get creative and have fun! Please visit www.acumalabs.com periodically to download more audio examples and free presets.

Analyzer

Preset Name	Function	Comments
Analyze Fast	Sets Analyzer bar graphs to respond quickly.	Good for general noise monitoring.
Analyze feedback	Sets Analyzer to identify peaks where potential feedback is likely to occur.	Adjust your reference dB to peak at the point of feedback. Adjust the EQ band that corresponds to the peak (light blue).
Analyze Medium	Sets Analyzer bar graphs to medium response speed.	Good for general noise monitoring.
Analyze Mix 1	Check your mix.	A good overall analyzer for full mix.
Analyze Mix 2	Check your mix.	A good overall analyzer for full mix.
Analyze Mix Rain	Sets Analyzer bar graphs to show Peak Difference.	Impress your clients with cool graphics!
Analyze Slow	Sets Analyzer bar graphs to slow response.	Use to check out live sound with Pink Noise.
Analyze Tone	Sine Wave or Tone test setup.	Find resonant peaks using test tones or tone sweeps.

Graphic EQ

Preset Name	Function	Comments
EQ 60Hz Removal	Removes the 60Hz band associated with noisy track or power hum.	This is the spot.
EQ Air	5k to 20k boost	Brighten your mix.
EQ Bass Boost	Slight boost from 20Hz to 160Hz.	Beef up the bottom.
EQ Big Bottom	20Hz to 80Hz full boost (+12dB). 100Hz to 20K are at -12dB.	Over the top bottom end.
EQ Drum Kit	Good drum kit EQ.	This works great.
EQ High + Low	Slight boost of bottom and top end.	Give me more.
EQ Lo Fi	Boost from 400Hz to 2.5K.	Boom Box.
EQ Top End	Boost from 2.5K to 20K.	Brighten it up.

