Blue Cat's MB-7 Mixer User Manual

"The multiband mixing console and VST/ AU host with built- in effects."

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Note: *An online version of this user manual is available* *here*.

Description

Blue Cat's MB-7 Mixer is a unique plug- in that splits the signal into several frequency bands and lets you re- mix and process them as if they were separate tracks: change levels, apply panning, add built- in effects, or even third party plug- ins.

Each band proposes controls that can be found on a mixing console, and more: bypass, mute or solo each band separately to isolate frequencies you want to work on, adjust the gain, the "stereoness" and the position in the stereo field. When manipulating the stereo image, a master mono switch also lets you check mono compatibility.

You can also apply different audio effects to each band to achieve any kind of spectral manipulation: the plug- in can operate as a multiband plug- ins host. You can process each band independently with your favorite VST, VST3 or Audio Unit plug- ins or choose from any of the 28 built- in effects! Up to four plug- ins can be loaded on each band, pre or post fader. It also include 25 built- in audio effects that can be inserted in each plug- in slot. Latency compensation, presets management, undo/ redo integration, and individual plug- in bypass are included for optimal operation.

The plug- in also proposes unique linking and grouping options thanks to our multi- instances technology. You can link bands together within a single instance or between several instances of the plug- in on different tracks. This lets a simple fader control as many bands on as many tracks as you want. This is particularly useful when adjusting the placement or the balance of several competing tracks.

And as usual with Blue Cat Audio, the plug- in provides comprehensive visual feedback to let you know what's exactly going on: for each channel, monitor the spectrum, the in/ out levels and the frequency response.

Thanks to its advanced MIDI and automation input capabilities, when combined with our other plug- ins, Blue Cat's MB-7 Mixer is capable of advanced side- chaining features that really unveils its potential. Check out our MB-7 Mixer Tutorials for more details.

If you are looking for a simpler plug- in to host VST, VST3 and Audio Unit plug- ins, please try Blue Cat's PatchWork. If you are looking for a multiband dynamics processor that can be combined to this plug- in for side chain effects, check out the Blue Cat's MB-5 Dynamix plug- in. Also, any Blue Cat Audio plug- in is compatible and can be hosted by this plug- in.

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Typical applications: *Multiband levels correction, multiband VST hosting, spectral enhancement, multiband stereo widening, multiband stereo placement, frequency isolation, spectral manipulation, EQ, spectrum inspection, mastering, spectrum- based side chain effects, apply audio effects to a selected frequency range, VST, VST3 and AU plug- in bridge.*

System Requirements

Windows

- An SSE2- enabled processor (Pentium 4 or newer).
- Microsoft Windows Vista, Windows 7, 8 or 10.
- Any VST / AAX compatible host software (32 or 64 bit).

Mac OS X

- An Intel or Apple Silicon processor.
- Mac OS 10.9 or newer.
- Any VST / Audio Unit / AAX compatible application (64- bit) .

For more information about supported platforms, see our FAQ.

Demo Limitations

- 5 instances of the plug- in allowed per session.
- The effect is bypassed for half a second every minute.

Installation

The plug- ins versions cannot be run standalone: they require a host application (see the System Requirements chapter for more information). Depending on which host application you use, you might need to install the plug- ins in different locations.

Before installing one of the plug- in versions, you should close all your host applications.

Windows

Install

All versions of the plug- in provide an installation program. Follow the steps of the wizard to install the software on your machine. During the installation you will be asked where you want the software to be installed. For the VST version, you should install the plug- in inside the VST plug- ins folder used by your host application(s). The default path set in the installer should work for most applications, but you should check your host software documentation to know where it looks for VST plug- ins. For other plug- in types, you should just use the standard path.

Some applications will not automatically rescan the new plug- ins, so you might have to force a refresh of the plug- ins list.

Upgrade

When a new version of the software is released, just launch the new installer: it will update the current installation.

Uninstall

To uninstall the software, simply launch the "Uninstall" program that is available in the start menu or in the configuration panel. It will take care of removing all files from your computer.

Mac

Install

On Mac the plug- ins are available as drive images with an installer. After download, double click on the dmg file to open it. You can then double click on the installer (.pkg file) to install the package.

Note for Mac OS 10.15 Catalina or newer: you will have to right click on the installer and select "Open" instead of double clicking on the file to launch the installation.

Upgrade

When a new version of the software is released, just launch the new installer: it will update the current installation.

Uninstall

To uninstall the software, simply remove the component(s) from their install location (move them to the trash):

- AAX plug- ins are installed in the / Library/ Application Support/ Avid/ Audio/ Plug- Ins/ folder
- Audio Units (AU) are installed in the / Library/ Audio/ Plug- Ins/ Components/ folder
- RTAS Plug- ins are installed in the / Library/ Application Support/ Digidesign/ Plug- Ins/ folder
- VST plug- ins are installed in the / Library/ Audio/ Plug- Ins/ VST folder
- VST3 plug- ins are installed in the / Library/ Audio/ Plug- Ins/ VST3 folder

If you want to completely remove all settings and configuration files, you can also remove these additional directories that may have been created on your computer:

- ~/ Library/ Preferences/ Blue Cat Audio/ [Plug- in name and TYPE], where TYPE is VST, AU, RTAS or AAX: global preferences.
- ~/ Library/ Preferences/ Blue Cat Audio/ [Plug- in name]: license information
- ~/ Documents/ Blue Cat Audio/ [Plug- in name]: user data, such as presets, additional skins and user- created plug- in data.

Please be aware that these directories may contain user data that you have created. Remove these directories only if you do not want to reuse this data later.

First Launch

Blue Cat Audio plug- ins cannot be run standalone, they require a host application (see the System Requirements chapter for more information). Some host applications will require you to scan the plug- ins before they are available in the application.

If the plug- in is not available in the application, please check that it has been installed in the appropriate directory (with no host application running), and that the host application has scanned it.

Introduction

Blue Cat's MB-7 Mixer can be called a "multi band mixing console": it splits the incoming signal into a variable number of bands (up to 7) that can be processed separately and mixed again together as if they were separate tracks. It thus provides controls that you would usually find on a mixing console, in addition to frequency splitting configuration capabilities.

Each band can also host external VST or Audio Unit plug- ins, just like many DAWs.

Multi Band?

Blue Cat's MB-7 Mixer is called a multi- band processor, because it splits the incoming signal into several frequency bands before processing them separately:
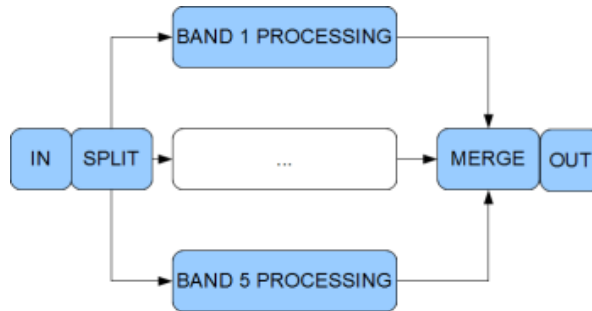
It means that each band can be affected differently, depending on the chosen settings. You can for example monoize the low- end of the spectrum while spreading the mids and keeping the highs unchanged. Since each band can host third party plug- ins, you can even apply different audio effects to different parts of the spectrum!

The split between bands is realized with crossover filters which let you control the separation (the higher the slope of the filter, the sharper the separation):
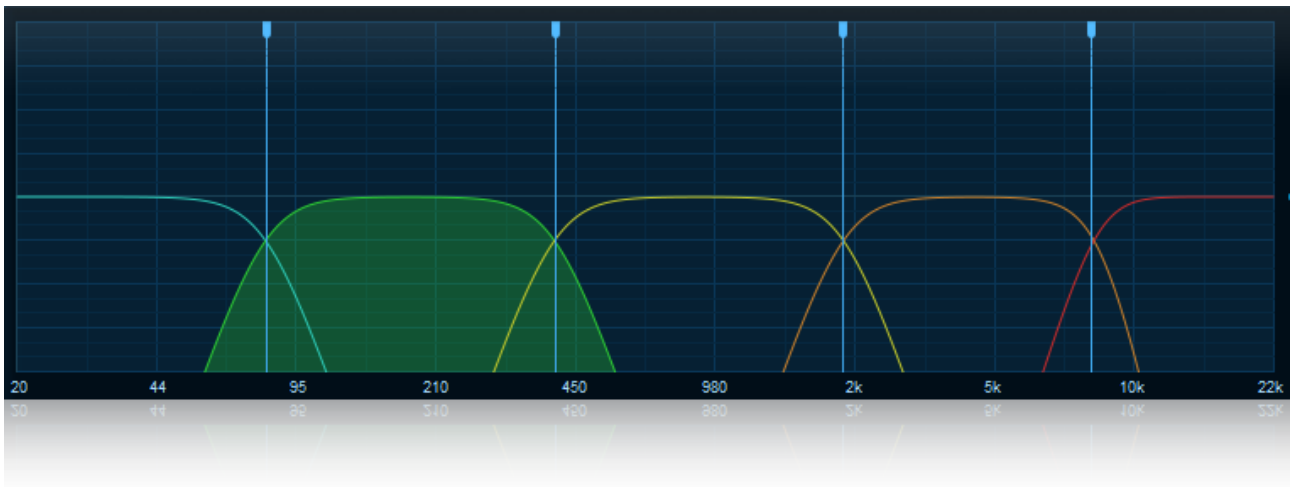
Crossovers filters frequency response (48 dB/ Octave slope)

The slope of the crossovers can be set up to 192 dB/ Octave. You should however be aware that such sharp separation may cause artefacts (such as ringing frequencies), so you might want to keep the crossovers below 60 dB/ Oct in most cases.

Band Mixing Controls

The plug-in comes in three flavors: a mono, a stereo and a dual channels ("Dual") version.

For each band, the mono version provides mute and solo switches that have the same behavior as the ones you can find on a mixing console: "mute" will mute the current band, whereas "solo" will mute all other bands.

The mono version also provides a gain control that affects the volume of the band, as well as a bypass option that lets the signal unchanged, which is particularly convenient for A/ B comparisons: all processing performed on this band is bypassed.

4 plug-ins slots are available, in order to insert built-in effects, or external VST and Audio Unit plug-ins on each band. Two slots are placed before the band fader, meters and other controls ("pre-fader" slots), and two others are placed after the controls and meters ("post fader" slots). More information about third party plug-ins hosting is available below.

The stereo version has two additional parameters to control the stereo width and placement of the chosen band:

The stereo version

- You can increase or decrease the width of the signal with the "spread" control. It adjusts the amount of mono and stereo signal in the chosen band. When set at its minimum value, the sound is completely mono (same signal on the left and right channels), while with the maximum value the left and right channels are out of phase. A typical usage of this control is to keep the bass in the center of the stereo field ("monoize") and increase the stereo spread for higher frequencies. Beware that out of phase signals disappear from a mono mix, so you should not in general overuse positive spread values.

- The "pan" pot lets you control the placement of the band in the stereo field. You can move it to the left or right independently from other frequency bands. You can thus create interesting stereo effects or correct stereo placement issues in a mix.

The dual channels version lets you control the gain for the left and right channels independently, and also pan them freely in the stereo field. Each channel can also be muted independently.

A Mid/ Side switch is also available to switch the controls to mid/ side mode (instead of default left/ right). When switched on, you can control the mid and side gains separately, and pan the mid and side signals from mid (-100%) to sides (+100%). More information about mid/ side processing is available below.

With the dual channels version, gain sliders for both channels can also be linked together in order to provide a single gain control for both channels.

The dual version

Master Controls

In addition to its multiband mixing capabilities, the plug-in offers a master section to control the master gain and the output level. The stereo version also comes with a mono switch to check the mono compatibility of the output: using panning and stereo spreading heavily may affect the mono component of the signal, so you may want to check that the sound is still fine in mono.

Grouping

With so many bands available in the plug-in and with multiple instances on several tracks, there are a whole bunch of parameters to control! That's where grouping can be useful, just like on modern mixing consoles.

The plug-in proposes three different types of groups:

- **"Local groups"** let you link several bands together within a single instance of the plug-in.
- **"Global groups"** are shared by all instances of the plug-in within a host application. They let you adjust controls accross several instances of the plug-in.
- The **"quick group"** is a special form of local group. Using the quick group deactivates any other grouping option. It is useful to temporarily adjust several bands at the same time quickly.

When a band is linked to a group, any change to any parameter on this band is reflected to other bands in the same group. The link to the group can be reversed so that increasing the value of the gain, spread or pan parameters on the reversed band decreases these same parameter on non reversed bands.

VST or Audio Unit Hosting

The plug-in is able to host VST or Audio Unit plug-ins on each band, so that you can apply any kind of audio effect on selected frequency ranges. This is particularly useful on pre-mixed tracks, when you want to affect only a part of the mix, but it can also be used

on individual tracks, to affect only a part of the spectrum. For example, you can apply a chorus effect only to the low- end of a vocal track, or a delay only to high end of a guitar track, etc.

DISCLAIMER: while we guarantee that Blue Cat Audio plug- ins are compatible with this plug- in, we cannot ensure full compatibility with all existing VST or Audio Unit plug- ins, especially in all host applications. If you find an issue with a third party plug- in, please report it to us. You may also have to contact your plug- in vendor to find a solution to the problem.

Third Party Effects and Mid/ Side mode

With the dual version, when using the mid/ side mode, inserted plug- ins are operating on the mid and side channels (instead of left/ right). This can be a way to transform any regular stereo effect into a mid/ side effect.

Latency Compensation

The plug- in integrates a latency compensation engine, so that if you insert a plug- in that introduces latency, this does not affect the reconstruction of the fully mixed signal. The latency is also reported to the host application in real time. Please note that some host applications may require that you restart transport (or deactivate/ re- activate the plug- in) to take latency changes into account.

MIDI support

Incoming MIDI events are sent to all inserted plug- ins that support it. You can typically control inserted Blue Cat Audio plug- ins with a MIDI control surface, or use our advanced side chaining techniques inside the plug- in, just like you would do if they were directly hosted by the DAW.

Please note that the plug- in does not currently support MIDI output for inserted VST or Audio Unit plug- ins.

Undo Integration

For most VST and AU plug- ins, the plug- in is able to track changes and perform undo/ redo on inserted plug- in operations. This feature is optional and can be disabled for some plug- ins that would not support it, or if you prefer not to include external plug- in changes in the undo history.

External Side Chain

When the plug- in's external side chain is connected, it is distributed to all sub plug- ins, unprocessed. So each plug- in can use the external side chain signal as if it was directly connected to the host application. Using audio I/ O routing (see below), it is also possible to choose another source for the side chain for each plug- in (for example the signal of the current band), or apply effects to the side chain signal.

Audio I/ O Routing For Plug- Ins

For each audio plug- in, it is possible to choose the audio channels to use for both inputs and outputs. It is thus possible to apply effects to only a subset of audio channels (for multi- mono processing for example, or to apply effect to only the side chain channel). It is also possible to achieve complex routing within the effect chain (such as sending specific channels to the side chain input of a plug- in) and yet keep it simple.

Note: when using audio I/ O routing intensively, it is recommended to change the names of the plug- ins according to the channels being processed

Note: each band operates separately, so it is not possible to send the signal from one band to another.

Multicore Processing

The MB-7 Mixer includes a multicore processing engine that can spread multiband processing on separate processor cores. It lets you use all your processor cores at the same time and load more effects simultaneously on different bands.

Note: effects that are processed in series (one after the other) cannot be parallelized and do not benefit from multicore processing. Only separate bands can be processed independently.

The multicore engine can be activated or deactivated for each preset independently. When using very few plug- ins with low CPU usage in parallel, the cost of multicore processing can be higher than the benefits (you can check the CPU usage with the built- in CPU meter at the bottom right of the user interface).

Performance also depends on the host application and its own multicore processing strategy, so you may want to try and compare with or without multicode enabled.

Mid/ Side Processing

Blue Cat's Blue Cat's MB-7 Mixer offers mid/ side processing capability. With this feature you can process the mid (center) and side (sides) channels instead of the usual left and right channels.

Concept Origin: Mid/ Side Recording

Mid/ Side recording is a famous recording technique that is preferred in some cases to the traditional left/ right recording. Looking for "mid side recording" in an internet search engine will give you many tutorials about this technique.

The result of such a recording is a pair of mid/ side (M/ S) channels instead of classic left/ right (L/ R) channels in an audio stream. The mid channel is also often called "Mono" and side "Stereo": the mid channel contains the signal that is in the center of the stereo mix, and the side channel contains the rest (everything that is on the sides of the mix):

(The triangles above represent the listener's head)

From Mid/ Side Recording to Processing

The relationship between L/ R and M/ S channel can be computed so that you can transform any Mid/ Side recording to standard listenable left/ right stereo stream. The reverse operation is also possible, which means that you can artificially separate mid/ side information from your usual L/ R stereo tracks. That's what is done by our mid/ side processing plug- ins.
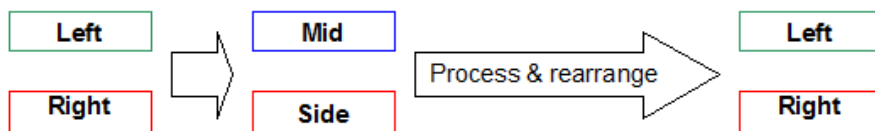
Processing separately the mid/ side channels instead of left/ right channels offers more control over the stereo character of a sound. Reducing the volume of the side channel makes it sound more "mono" and vice versa.

Built- In Effects

Blue Cat's MB-7 Mixer includes 28 top quality built- in effects that can be used in plug- in slots, next to third party VST, VST3 or AU plug- ins:

Bit Crusher, Chorus, Comb Filters, Compressor, Ducker, Echo, Multitap Delay, EQ, Multimode Filter, Flanger, Frequency Shifter, Gain, Gate, Stereo Pan, Mute, Phase Shifter, Phaser, Pitch Shifter, Harmonizer, Stereo Strip, Sweep Filter, Tremolo, Wah, and Waveshaper.

Built- in plug- ins offer the same preset management and control features as the external plug- ins (MIDI learn, undo/ redo, parameters range...). For more details about each effect and its controls, please refer to the included documentation ("?" icon in the toolbar of each plug- in).

MIDI Preset Loading

It is possible to load presets using MIDI (with Bank Select and Program Change messages). More details about MIDI and presets loading is available in the presets section.

The User Interface

Note: The main toolbar, menus and basic features available with all our plug- ins are detailed in the Blue Cat Audio Plug- ins Basics section.

The plug- in is bundled with a single skin for each version (Mono, Stereo and Dual), and you may create your own and download new ones on www.bluecataudio.com. Only the specific features of the included skins are discussed here. The next section describes the other features that are common to all Blue Cat Audio plug- ins.

In this chapter we'll detail the user interface for the stereo and dual channels versions. The mono version is very similar to the stereo version: it just has fewer controls.

Overview

Default skin for the stereo version of the plug- in.

Main toolbar (1)

At the top of the plug- in stands the main toolbar, with multiple controls to configure the plug- in:

1. Main bypass (to enable/ disable the plug- in)
2. generic menu, controls settings, undo redo, help and plug- in info buttons. More details are available in the next section.
3. Select user interface scaling (zoom level).
4. Select the appropriate size for the user interface (small, medium, large).
5. Enable/ disable multicore processing.
6. Show/ hide the presets browser.

7. Show/ hide the main graph display.
8. Show/ hide the bands and master controls areas (bottom of the plug- in).
9. Show/ hide the pre fader plug- ins slots.
10. Show/ hide the post fader plug- ins slots.
11. Show/ hide the mapped parameters area.
12. Enable/ disable tail spilllover on bypass.
13. Lock the user interface settings so that they are not affected when loading presets.
14. Display the preferences pane.

Header (2)

Just below the graph display stand various global controls:

- You can select the number of bands for the plug- in. It ranges from one (broadband) - to seven.
- You can customize the range for the gain faders and the response curve graph (+-12 to 60 dB).

Main Graph Display (3)

Overview

The main graph display occupies a central spot at the top of the user interface. It shows a lot of information about what is happening inside the plug- in:


1. If not displaying the maximum range (+/-60 dB), dragging this area lets you offset the range of the gain controls and display. This also affects the band and master faders. Please note that it does not apply to the spectrum analyzer.
2. Crossover frequencies: the vertical lines can be dragged left and right to modify the crossover points.
3. Spectrum: the built- in spectrum analyzer shows the spectrum of the signal at the output of the plug- in. For the stereo version, the left channel is represented with a blue curve, and the right channel with a pink curve.
4. Gain control: you can drag the band controls vertically to change the gain for each band. Clicking on this control also selects the band as current.
5. The frequency response of the crossover filters is displayed with a different color for each band. The displayed curve is the actual curve of the filter, not a theoretical or simplified representation of it. The response curve of the selected band is filled with the associated color (band number 3 in the screen shot above).
6. Global response: this curve represents the global spectral response of the plug- in (it does not include the gain stage of the master section).
7. Additional controls at the bottom right give you access to the following features, from left to right:

   - Select the **dB range** for the graph display. It also affects the range of the slider.
   - Activate **spectrum analysis** and select spectrum display type. When "spectrogram" is selected, an extra knob appears to let you adjust the contrast.
   - Show/ hide **the global response curve**.
   - Show/ hide **the crossover filters response curves**.
   - Show/ hide **the gain controls**.
   - Show/ hide **the reference curve**. The reference curve can be used to match external filters measured with Blue Cat's FreqAnalyst Multi or copied from the global response curve.
   - Open the **reference curve menu** to load reference curves or paste them from the FreqAnalyst Multi plug- in. The current global response curve can also be copied or saved similarly:

|	
Paste Reference Curve	
Load Reference Curve...	
Reset Reference Curve	
Copy Filter Curve	
Save Filter Curve As...	
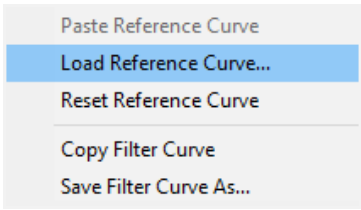
Spectrum Analysis Modes

Two modes are available for output spectrum display. In spectrum mode, curves representing the instant spectrum of both channels is displayed (blue is channel 1 and red is channel 2):
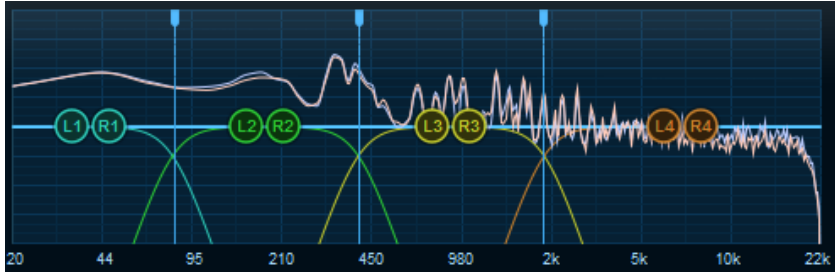
In spectrogram mode, the evolution of the spectrum over time is displayed as a color (or greyscale) map. In color mode, louder parts of the spectrum are visible as bright red spots, whereas quieter parts will show in dark blue/ black. In greyscale mode, the brighter also means the louder:
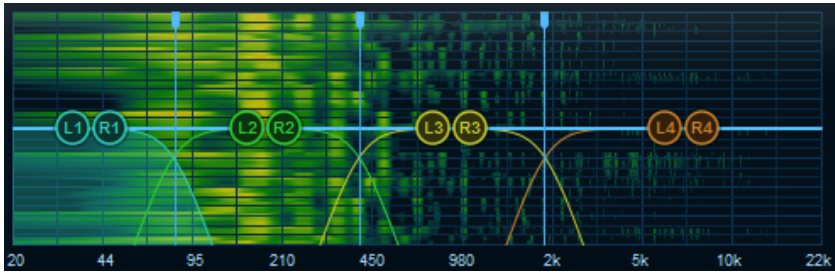
For stereo signals, you can also select for which channels you want the analysis curves to be displayed.

Crossovers (4)

The crossovers area displays controls for each band to modify either the frequency or the slope of the crossover filters:


The slopes of the crossovers range from 12 to 192 dB/ Octave. They can be controlled independently thanks to the black drop- down boxes.

Bands (5)

Below the crossovers section stand the various mixing controls for each band:

1. Gain control.
2. Bypass, Mute and Solo buttons.
3. Peak level meters.
4. On the stereo version only: spread ("stereoness") and pan controls.
5. The group drop- down box lets you choose a group to link with.
6. Quick group button. Using the quick (local) group overrides any other group that has been chosen with (5)
7. Reverse link: reverses the link with the selected group (if any).
8. Pre- fader plug- ins slots.
9. Post- fader plug- ins slots.
10. With +/-12 and +/-24 dB ranges, this area can be dragged to offset the operating range of the fader as well as the main display.
11. Click on the band number to open the band presets menu that lets you save and load or copy/ paste settings for the current band, including plug- ins and their state:
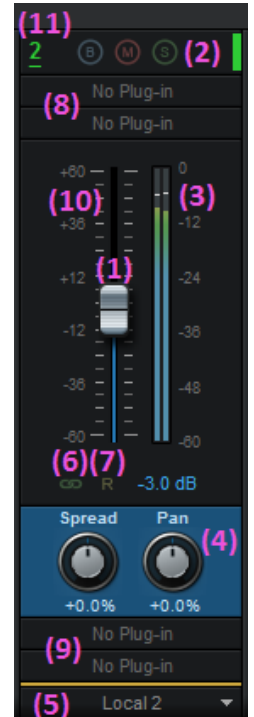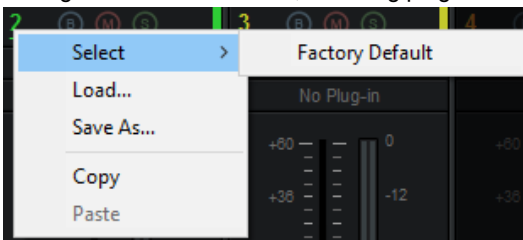
Note: grouping affects the following controls: bypass, mute, solo, gain, spread and pan. The reverse button affects only the gain, spread and pan controls.

Master Section (6)

The master section lets you manage the main output levels. It also shows output peak level meters.

On the stereo version, a mono/ stereo switch can be used to check the mono compatibility of the effect. On the dual version the switch is replaced by a stereo/ mid- side modes selector.

The gain control can also be part of a group, just like with bands.

You can reset the max level meters available at the top of the master section by clicking on them. Note: these meters become red when the maximum output level is above 0dB.

Workload Meter (7)

The workload meter on the bottom right of the user interface gives an idea of the amount of cpu used by the plug- in to process audio frames:
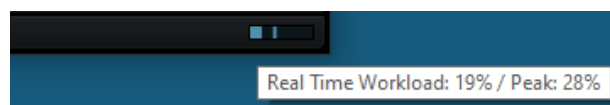
It measures the *realtime workload*, which corresponds to the time spent processing an audio buffer compared to its duration. This value may be impacted by other tasks running on the system.

In general the average value gives a good idea of the cpu usage of the plug- in, while the peak value is an indication of potential audio dropouts (if larger than 100% for too long), that may be caused by overall system load (not just the plug- in's audio processing).

The workload meter becomes orange then red when the peak load grows. Hover the mouse on the meter to see numerical values in a tooltip.

The Dual Channels Version

With its two independent channels, the "dual" version has a couple of differences with the other flavors of the plug-in.

First, most controls are available as pairs, channel 1 on the left, channel 2 on the right. In stereo mode, channel 1 is simply the left channel and channel 2 the right channel, while in mid/ side mode, channel 1 is the mid channel (the mono part of the signal), and channel 2 is the sides channel (the stereo part of the signal).

You can switch from left/ right to mid/ side mode thanks to the "mid/ side" switch available at the top of the user interface.

Additional features are also available, compared to the stereo version:

1. Link gain controls for both channels.
2. In addition to the general band mute button, each channel can be muted independently.
3. Each channel can be panned independently (for left to right in stereo mode, and from mid to side in mid- side mode).

Browsing Presets

In order to browse both factory and user presets, you can either use the simple presets menu or open the full featured presets browser from the toolbar that remains visible until you close it:
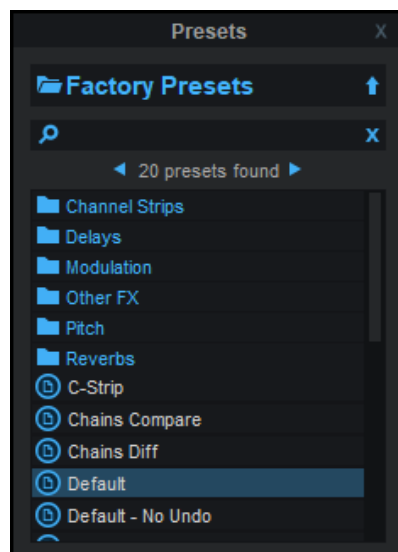
Click on preset files and folders to open them, or use the arrows to navigate between displayed presets. You can navigate upward in the folders tree by clicking on the current folder at the top. Type in the search box to find presets by name (it also searches in folder names). The search is performed recursively in the currently selected folder (displayed at the top).

Search Tips: you can search for multiple terms by separating them with commas. Wildcards are also supported (with * and ? characters), but they are applied to the full path of the preset. For example, to search for all presets containing the word "phase", type *phase* in the search box. To look for these presets only in the factory presets, you can type *Factory Presets/ *phase*.

Using VST, VST3, Audio Unit or Built- In Plug- Ins

Note: before using VST plug- ins, it is strongly recommended that you setup your main VST plug- ins directory in the preferences pane, as detailed later in this manual (this setting does not affect VST3 plug- ins).

Warning: in a 64- bit application you can only load 64- bit plug- ins, and in a 32- bit application you can only load 32- bit plug- ins, unless your are using a third party bridging application.

Each Plug- in slot lets you insert a third party plug- in. When clicking on an empty slot, the following menu appears:
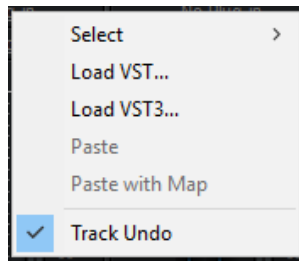
The "Select" item is enabled if you have previously saved plug- ins as favorites using the "save as" command described below. It lets you choose a favorite plug- in directly from the menu, instead of having to load it from the file system.

Selecting "Load VST" will open a standard system window where you can select the VST plug- in you want to load. If the preferences have been properly set, the window should open the appropriate location where you can find the VST plug- ins.

Selecting "Load VST3" will open a standard system window where you can select the VST3 plug- in to be loaded.

On Mac, an additional "Load AU" menu item is available to load Audio Units. It opens a file open dialog in the standard location for Audio Units on your system. **Note:** if you want to load the system Audio Units provided by Apple, you will need to open the CoreAudio component located in the / System/ Library directory.

You can also choose to paste an existing VST or Audio unit plug- in if previously copied into the system clipboard from another slot (or another plug- in, such as Blue Cat's PatchWork). When using the "Paste with Map" command, if the plug- in in the source slot had mapped parameters, these parameters will be added to the map until no more assignable parameters are available.

Once a plug- in has been loaded into a slot, a mouse click will display the following plug- in menu that offers various controls over the plug- in:
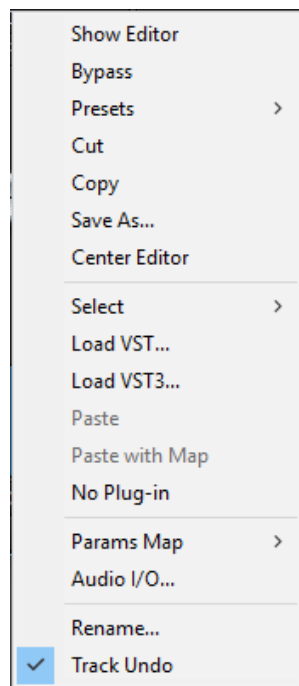
- Show (Hide) Editor: display or hide the plug- in's user interface.
- Bypass: toggle bypass for the plug- in.
- Presets: access the plug- in's factory presets if any, and load/ save presets files in the plug- in's native format (fxb/ fxp, vstpreset or aupreset).
- Copy: copy the plug- in and its settings into the system clipboard. Onced copied, it can be pasted to any other slot, in any instance of the MB-7 Mixer plug- in (even in a different application) .
- Save As: save the plug- in in the slot and its settings as a favorite. Favorites are saved in the plug- in documents folder and can be organized using folders to appear later in sub menus. .
- Cut: copy the plug- in and its settings into the system clipboard and remove it from the slot.
- Center Editor: bring back the editor of the plug- in to the center of the screen, in case you cannot find it.
- Select: select a plug- in and its settings from the favorites list.
- Load VST: load another VST plug- in in the slot (will replace the existing plug- in if any).
- Load VST3: load another VST3 plug- in in the slot (will replace the existing plug- in if any).
- Load AU (Mac only): load another Audio Unit plug- in in the slot (will replace the existing plug- in if any).
- Paste: paste a plug- in and its settings from the system clipboard into the slot.

- Paste with Map: paste a plug- in, its settings and mapped parameters from the system clipboard into the slot. Parameters are re-mapped in order, until no more assignable parameter is available.
- Params Map: lists the plug- in's parameters that can be mapped for automation, and lets you assign them to external controls (see the next paragraph).
- No Plug- in: remove the plug- in.
- Audio I/ O: opens the audio i/ o routing window for this plug- in (see below).
- Rename: rename the instance of the plug- in. Setting an empty name reverts back to the plug- in's default name.
- Track Undo: toggle undo tracking for the slot. If enabled, inserted plug- ins changes will be inspected and added to the MB-7 Mixer plug- in undo history when possible. Please note that some plug- ins may not work properly when this feature is enabled.

When the mouse is over a plug- in slot, the following buttons appear:
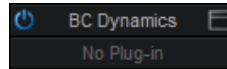
Clicking on the power button on the left will bypass/ unbypass the plug- in in the slot. The button on the right can be used to show/ hide the plug- in's editor.

Missing Plug- Ins

Sometimes it may happen that you are working on a workstation that does not have all plug- ins that were previously loaded into your PatchWork session. In this case, the MB-7 Mixer plug- in will display a "Missing Plug- in" message on corresponding slots. You can still continue working on your session: the MB-7 Mixer plug- in will retain the state of the missing plug- ins as if they were here. The session can be saved later: the data for missing plug- ins will be saved as well, and the session can be restored later without losing data.

For VST and VST3 plug- ins, if the plug- in is missing because of a path issue (the plug- in is located in another directory that is not referenced in the preferences, or the 64- bit version has a different name from the 32- bit version...), you can choose to relocate the plug-in:
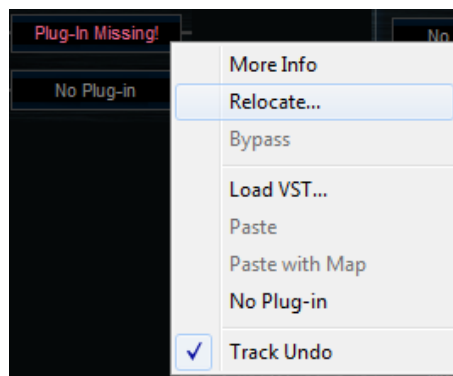

This lets you find the plug- in on your workstation and re- link to it. The state of the plug- in that was previously saved in the preset or the session will be restored, making sure all data is kept.

Note: the plug- in chosen with the relocate function has to be compatible with the plug- in that was originally loaded in this slot. Relocation will fail otherwise.

Mapping Parameters

The "Params Map" item in the plug- in menu lets you map sub plug- in parameters so that they can be automated or controlled with an external control surface. It also lets you view existing mapping for this plug- in if any:
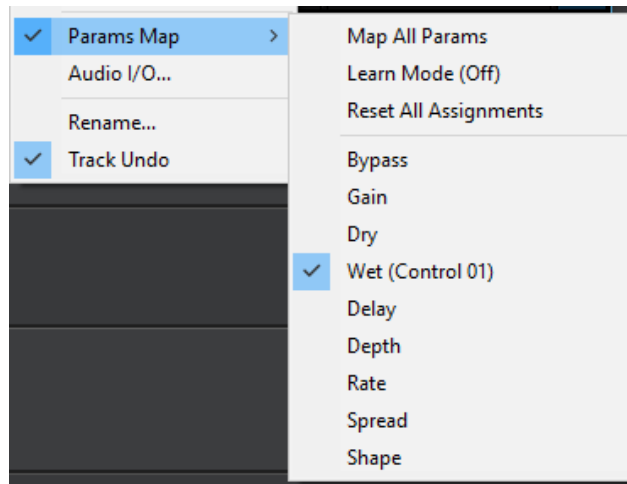
- Map All Params: assign all parameters of this plug- in to remaining controls (in the same order as exposed by the plug- in). The maximum number of parameters that can be mapped is 40.
- Learn Mode (on/ off): when learn mode is on, touching a control in your plug- in's user interface will automatically add it to the parameters map (if the plug- in supports it). Once you are done with parameters assignment, you may want to disable learn mode to avoid mapping unwanted parameters.
- Reset All Assignments: removes all assigned parameters from the params map, for this plug- in. This frees all controls used by previously assigned parameters (for this plug- in only).
- All parameters available for assignment are then displayed in the menu. Clicking on a parameter toggles mapping on or off. When a parameter is mapped, the name of the external control (as displayed in the host application) appears next to it, inside parentheses.

Parameters Mapping works the following way: 16 parameters are available for mapping in Blue Cat's MB-7 Mixer. They are named "Control 01" to "Control 16". When a sub plug- in parameter is selected for mapping, the first control available within Blue Cat's MB-7 Mixer is used. Once mapped, the sub plug- in parameter and this control are linked together, so that any change to either of them is reported to the other.

This enables the sub- plug- in to expose its parameters to the outside of the MB-7 Mixer plug- in. You can for example use these external controls for automation, MIDI control , control surface assignment etc.

If assigned controls are shown in Blue Cat's MB-7 Mixer ("Show Assigned Controls" button), new knobs will appear when new parameters are mapped, until the maximum number of 16 controls is reached. You can use these knobs to control the parameters or check their names (the name of the mapped parameter is displayed when the mouse is over the knob).

Audio I/ O Routing

Using the "Audio I/ O" command in the plug- in menu, it is possible to manually change which audio channels are processed by each plug- in.
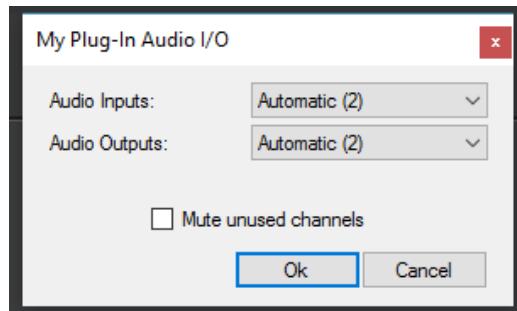
Automatic Selection

By default, Blue Cat's MB-7 Mixer will automatically detect the number of channels to use for each plug- in depending on its own configuration: effect plug- ins will process only the **main** audio channels and leave side chain channels unaffected. Plug- ins which appear to have a side chain input will receive the side chain channels.

About mono plug- ins: in automatic mode, mono plug- ins will process only the first audio channel, and the wet mono output will be copied to all channels of the main bus (side chain unaffected). If you want to only apply the plug- in to one of the incoming audio channels instead, you can use the manual configuration.

Manual Selection

Automatic detection may however not work properly for some plug- ins, and you may want to change which channels the effect applies to (for multi- mono effects, or to process side chain channels for example). That's what the audio I/ O window is for:

By default, audio i/ o selection is automatic

When selecting a specific number of inputs and/ or outputs instead of using "automatic", you can choose which channels are connected to each i/ o for this particular plug- in:
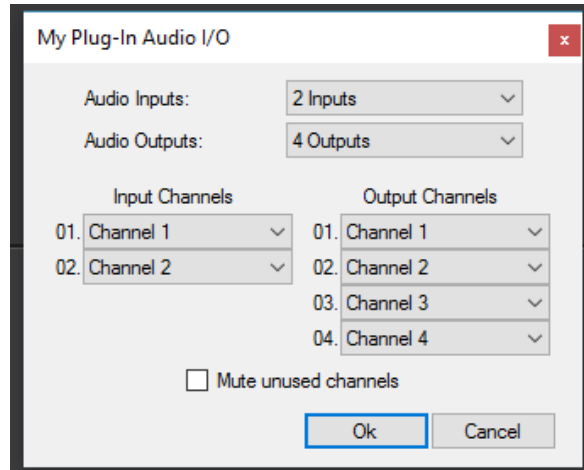

manual audio i/ o configuration

Notes:

- if the same channel is selected for multiple outputs, only the last selected plug- in output will be audible (plug- in outputs are not summed).
- By default, all channels that are not used as outputs by the plug- in remain unchanged (copied from the same channels before the plug- in). For example, on a stereo configuration, if a mono plug- in is set to process only channel 1 and use channel 1 as output, channel 2 will remain unaffected. Select **"mute unused audio channels"** to mute these unprocessed channels instead.

The Preferences Pane
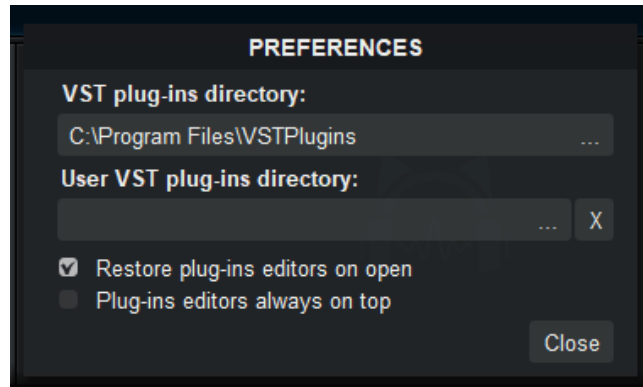
In the preferences pane, you can set the default VST plug- ins path by clicking on it or on the button labelled "...". This VST plug- ins directory is used for several purposes:

- It is the default directory that is opened when you want to load a VST plug- in.
- It is used as the root path when saving/ loading presets that include VST effects: the path of VST plug- ins is saved relatively to this root path, so that you can reopen your sessions on different machines that may have different VST paths (typically on a Mac and a PC).

If you happen to have your VST plug- ins installed in several paths, we advise you to choose the VST path that contains most of your plug- ins. You can then use the "User VST plug- ins directory" to define an extra location for plug- ins. This extra path will be used by the MB-7 Mixer plug- in as an alternative root path to load and save the plug- ins.

Please note that these paths are used for VST2 plug- ins only - they do not affect the location of VST3 plug- ins.

If the "Restore plug- ins editors on open" option is checked (default), when the MB-7 Mixer plug- in is opened, inserted plug- ins user interfaces will be restored at the same position as when the MB-7 Mixer plug- in was last closed. If the option is unchecked, all plug- ins user interfaces will be kept closed when re- opening the MB-7 Mixer plug- in, and their position on screen will not be saved.

Drag and drop support

The user interface supports drag and drop to manipulate plug- ins easily:

- drag and drop plug- ins between slots (copy or move).
- hold the alt key on Mac and Ctrl key on windows to copy (duplicate) a plug- in instead of moving it.
- drop the plug- in before another to insert it in the chain
- drag and drop plug- ins between several instances of Axiom or accross plug- ins (compatible with the latest preview of Late Replies, MB-7 Mixer and PatchWork).
- drag and drop .dll, .vst, .vst3, or .component files directly from the Finder or Explorer onto plug- in slots.
- drag and drop .plgnfo files (previously saved from the software) directly from the Finder or Explorer onto plug- in slots.

The various elements of the user interface (knobs, sliders, buttons...) are simple and intuitive to operate, but more information about how to interact with them is available in the "Plug- ins Basics" chapter of this manual.

Operation

This section decribes several common use cases for the plug-in. A complete list of the parameters exposed by the plug-in is available in the next section.

Setting the Crossover Points

Be it on a full mix or a single track, at this step your aim is to isolate particular frequencies to apply a specific treatment to it. The best way to adjust the frequency ranges is to use the "Solo" button of the monitoring section to hear the signal processed by each band.

This method also applies to selecting the appropriate filters slopes. You will usually avoid very steep filters (artifacts at the crossover points may be more prominent), but they can be useful to isolate very particular frequencies.

Using the plug-in as an Equalizer

Thanks to its flexible crossover filters and with the gain controls offered for each band, the plug-in can be used as a powerful equalizer with very good control over the response curve. Isolating bands using the solo button helps finding the right spot to boost or cut. The mute button will transform a band into a notch, high-cut or low-cut filter.

The additional grouping capabilities are very helpful to setup the balance between bands and boost/cust several portions of the spectrum simultaneously.

Using the Plug-in as a Stereo Enhancer

The extra features offered by the stereo version of the plug-in can help you control how the spectrum occupies the stereo field.

Using the Spread Control

As stated in the introduction, you may want to use the positive values of the spread parameter sparingly in order to avoid completely out of phase left and right signals. The mono button on the master section will help you check that your settings do not affect the mono part of the signal too much.

A common practice is to narrow the lower end of the spectrum (bass) to keep it centered. To do so, you just need to decrease the spread value on the lowest band. It may be necessary to use this technique on a full mix or on stereo instruments with strong stereo effects on the full spectrum.

Panning

Several panning techniques can be achieved very easily with the Blue Cat's MB-7 Mixer plug-in.

You may want to pan instruments in a mix without affecting the lower end of the spectrum (since you will probably want to keep it centered). A simple two-band setup will let you do that, panning only the higher end of the spectrum.

It is also possible to create interesting stereo effects on single instruments in order to widen their presence in a mix: just pan various parts of the spectrum differently (but try to keep the bass centered). Alternating left and right panning on a large number of bands can completely the transform the perception of an instrument.

While mixing, you may also encounter problems with instruments that fight for the same frequencies at the same location. In this case, you may want to pan differently the competing frequencies on both tracks and solve the conflicts.

Both panning and spread controls may also be used to fix recording issues (wrongly placed mics, unwanted room effects...) or revist an existing mix.

Creative Grouping for Optimal Workflow

The grouping features included in the plug- in can be used for a wide range of workflow enhancements. Below are typical examples where grouping can help work faster and more efficiently.

Single Instance

In a single instance you can group several frequency bands in order to move all of them in parallel with a single slider. Most of the time you will be using the "quick group" feature to quickly switch linking on and off.

If you are boosting the levels, you can also add the master slider to the group you are using, in reverse mode. This way it will compensate the overall increase in volume so that the output does not clip.

Multiple Tracks

If you are using the plug- in on several tracks, it can be very handy to use "global groups" to limit the number of controls that need to be moved to get the sound you are looking for. Typically, when adjusting the spectral balance between two tracks and their location in the stereo field, you can use several instances of the Blue Cat's MB-7 Mixer plug- in and link them together in reverse mode: panning a frequency range to the left on one track will pan it to the right on the other track and so on.

Pre and Post Adjustments on a Single Track

If you are using non linear processors (dynamics processors such as a compressor, a gate, an expander, or distortion, analog- style processing etc.), it is sometimes very useful to change the content of the spectrum before applying the effect, because it may respond very differently (for instance remove lower frequencies before a compressor).

In such a scenario you will usually apply an EQ before the non- linear effect. But the issue with that is that you will have to compensate the boosts and cuts with another EQ after the effect so that the overall spectrum remains unchanged. The process can become very tedious, and that's where using global groups with the Blue Cat's MB-7 Mixer can help: simply add all bands (+master) to the same global group on both instances (before and after the effect), switch all bands of one of the instances to reverse mode, and you are done: the instance after the effect now compensates the modifications applied to the spectrum by the first instance.

Applying Audio Effects to a Selected Frequency Range

In many cases, applying an audio effect to the full spectrum range may result in unwanted side effects (too much ringing the higher frequencies, increasing the DC offset etc.). With the MB-7 Mixer plug- in's ability to host third party plug- ins, you can select the frequency range to which you want to apply effects:

- Set the plug- in to use 3 bands.
- Bypass the upper and lower bands (1 and 3).
- Insert the VST or Audio Unit plug- in you want to use in the mid band (2).
- Tweak the crossovers to select the appropriate frequency range the effect should apply to.

The VST or Audio Unit effect will keep the upper and lower frequencies unchanged and will apply only to the selected range!

The example below shows the Blue Cat's Chorus plug- in applied between 200 and 2500 Hertz:
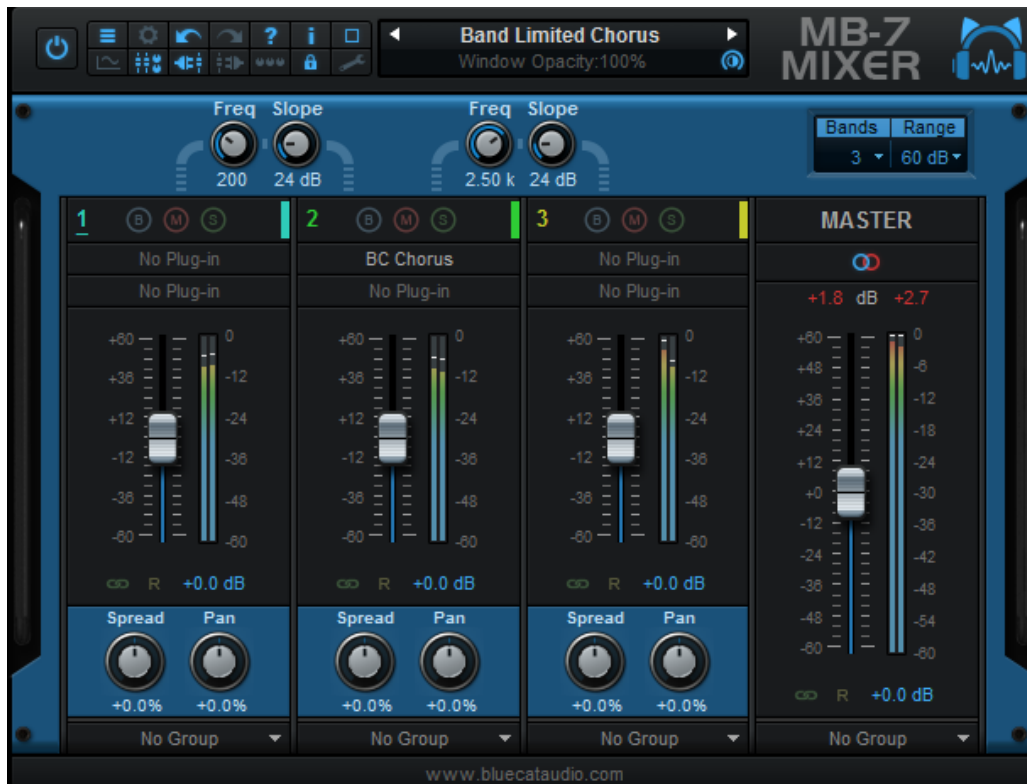
## Using the Plug- in as a Spectrum Inspector

The plug- in includes a premium spectrum analyzer that lets you see the spectral content of a track. It can be used in combination with the solo button of one or several bands to isolate parts of the spectrum and check with your ears what's going on.

The peak level meters available on each band are also very helpful to monitor the spectrum and check for unwanted frequencies.

Setting up the Plug- in as a MIDI Side Chain Destination

Thanks to its zipper- free MIDI controllable and automation- capable parameters, the plug- in can be used as a destination of a MIDI side chain.

A typical application is multiband side- chain compression/ expansion/ gating, using the Blue Cat's MB-5 Dynamix plug- in as a side chain source to control the gain of various bands of an instance of the Blue Cat's MB-7 Mixer plug- in:
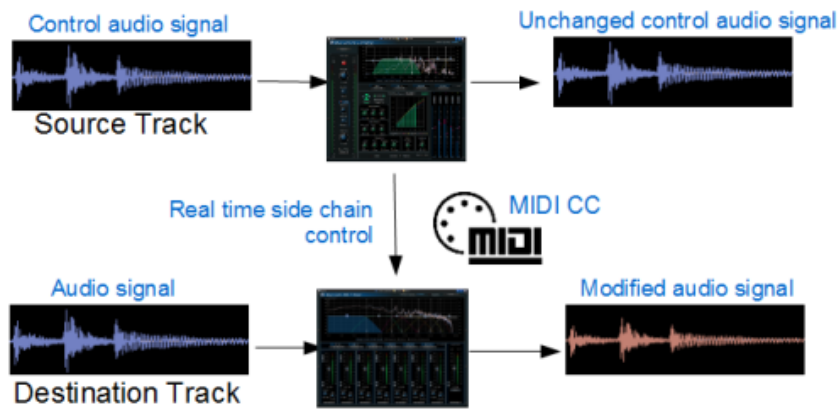
A complete step by step tutorial about this topic is available on our website. It explains how to setup the plug-in for such tasks.

Since MIDI events are sent to VST plug-ins inside the MB-7 Mixer plug-in, it is even possible to use a similar technique to control plug-ins inside the plug-in!

For other types of side chain applications, we also have many plug-ins that can output parameter values to be reused with another plug-in such as this one.

Using the Plug-in as a MIDI Side Chain Source

The plug-in is also able to output MIDI or automation data (individual band and master levels). You can reuse these parameters for side chain effects as explained above.

Using the Plug-in as a VST/ AU bridge

Since the plug-in is able to host VST and Audio Unit plug-ins and is available in multiple formats, it can be used to host VST and AU plug-ins in a DAW that does not support the VST or AU formats. When used in broadband mode, the plug-in will simply operate as a VST or AU plug-in bridge, with additional gain and stereo controls, like a simple channel strip.

Blue Cat Audio Plug- Ins Basics

This chapter describes the basic features that are common to all our plug- ins. If you are already familiar with our products, you can skip this part.

User Interface Basics

About Skins

Like all Blue Cat Audio plug- ins, Blue Cat's MB-7 Mixer uses a skinnable user interface. It means that the appearance and behavior of the user interface can be entirely customized.

Especially with third party skins, the experience may be quite different from the one offered by the default skins that we provide. However, our plug- ins and our skinning engine have several standard features that will be available whatever your favorite skin.

More information about custom skins can be found in the skins section.

The Main Toolbar

In most skins, an optional toolbar at the top of the user interface gives you access to the main options and settings of the plug- in:
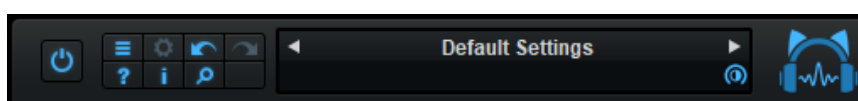
Smooth Bypass

On the left, the power button can be used to smoothly bypass the plug- in.

Presets Area

At the center of the toolbar, you can see the current preset area (the "Default Settings" box). It displays the name of the current preset, with a "*" at the end if it has been modified since loaded.

The arrows on the left and right let you navigate thru the (factory and user) presets available for the plug- in.

Clicking on the preset name opens the presets menu which lets you manage the presets of the plug- in.

Using the knob on the bottom right of this area, you can reduce the **opacity** of the window, and make it transparent (the actual result may depend on the host application). Additional messages may appear in the area next to this knob, depending on the plug- in.

Commands

The icons in the toolbar give you access the to the following commands that are detailed in the next paragraph:

Icon	Name	Function
	Menu	Open the main menu
	Control Settings	Display the controls settings menu (to manage automation and MIDI control, as described here).
	Undo	Undo
	Redo	Redo
	Manual	User Manual
	About	About
	Zoom	Scale the user interface (from 70% to 200%).

The Main Menu

The main menu is available from the main toolbar, or if you right click anywhere on the background of the plug- in:
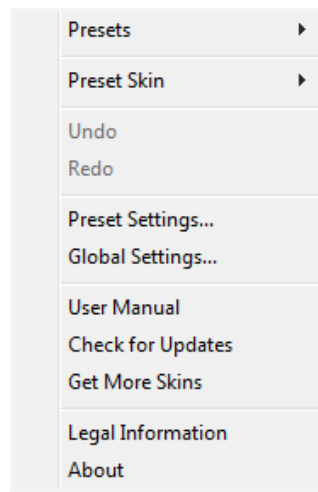
- **Presets**: opens the presets menu to manage presets.
- **Preset Skin**: opens the skins menu to choose the skin for the current preset and manage alternative skins for the software.
- **Undo/ Redo:** undo or redo the latest modifications. This includes all changes made to the current preset settings such as MIDI or automation preferences.
- **Presets Settings:** open the presets settings window. It lets you change the skin, MIDI and automation settings for the current preset.
- **Global Settings:** open the global settings window. It lets you change the skin, MIDI and automation settings that are used by default in all instances of the plug- in (if not overridden by the current preset).
- **User Manual:** open this user manual.
- **Check for Updates:** opens up our website to let you check if any update for this software is available.
- **Get More Skins:** get more skins for this software.
- **Legal Information**: browse licensing and misc legal documents.
- **About:** displays the "about" dialog box.

Controls

Examples

Here are a few examples of typical controls you will encounter in the user interface of our plug- ins:
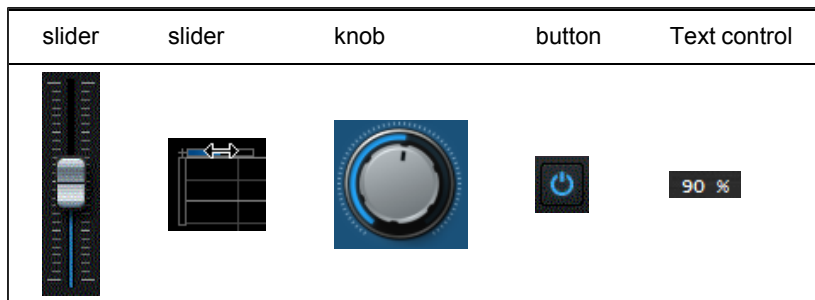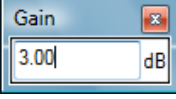
Interacting with Controls

You can interact with the controls of the plug- in interface either with the mouse or the keyboard.

Setting the keyboard focus on a control (so that it responds to key strokes) may be automatic (when you pass the mouse over it it gets focus) or manual (you have to click on the control to set the focus on it). Note that all host applications behave differently regarding keyboard handling. In some applications you may not be able to use all keys described later in this manual to interact with our plug- ins. It is usually made obvious to you to know the active surfaces of the skin (the places where you can click with the mouse): the mouse cursor usually changes when you can do something on a control. In the default skins delivered with the plug- in, the cursor changes to a small hand or an arrow to tell you when your mouse is over an active control.

Mouse

Various mouse movements will let you interact with the controls:

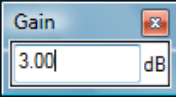| Mouse Interaction	Action
Left Click	Acquire focus and start dragging or push (button)
Left Click + Alt Key	Set the value to default
Left Double Click	Acquire focus and launch the "fine tuning" edit box (except button):
Right Click	Set the value to default
Mouse Wheel	Increment or decrement the position (focus required)
Mouse Drag	Change the control position depending on mouse movement (except button)

Keyboard

All control widgets support the following keys (note that some of them are caught by the host and thus never forwarded to the control. For example in Steinberg Cubase SX you cannot use the arrow keys to control the plug- in):

Keys Common to All Controls

Key	Action
Up Arrow	Small increment of the position (up or right)
Down Arrow	Small increment of the position (down or left)
Left Arrow	Same as Down Arrow
Right Arrow	Same as Up Arrow
Page Up	Large increment of the position (up or right)
Page Down	Large decrement of the position (down or left)
+	Small increment of the value of the control
-	Small decrement of the value of the control
d	Set to default value (same as mouse right click)
e	Opens the 'fine tuning' window to precisely set the parameter:
SHIFT	When the key is down, the fine tuning mode is on, and you can modify the value with better precision when moving the mouse, the mouse wheel or using the keyboard. Just release the key to get back to the normal mode.

Keys Specific to Buttons

Key	Action
Enter	Pushes the button

Presets

To get started with the plug- in and discover its capabilities, a couple of factory presets are provided. You can also save your own presets and recall them later for other projects. Our plug- ins propose a full- featured preset manager to let you save, browse, organize and recall its presets.

The Presets Menu

The presets menu can be opened from the main menu or the main toolbar. It displays the list of presets available for the plug- in as well as commands to load, save or organize presets:
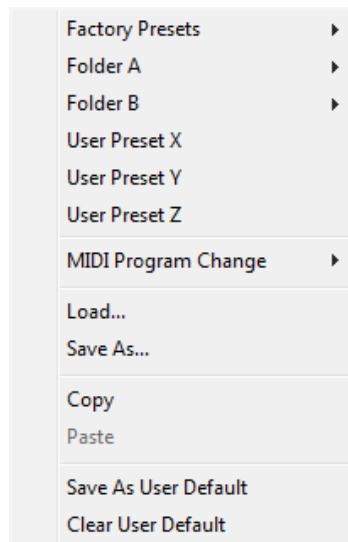

- **Factory Presets:** shows the list of factory presets delivered with the plug- in.
- **"Folder A" to "User Preset Z":** user presets and categories.
- **MIDI Program Change:** activate MIDI Program Change support (see below).
- **Load:** load preset from file.
- **Save:** save current state to last loaded user preset.
- **Save As:** save current preset to a file.
- **Copy** copy preset to the system clipboard.
- **Paste** paste preset from the system clipboard, if available.
- **Save As User Default:** save the current state as the default preset. This preset is used every time a new instance of the plug- in is created.
- **Clear User Default:** reset the default preset to its factory state: this makes the plug- in forgets the custom settings you might have saved as a default preset.

More about Presets

There are two types of presets: factory presets (read only) that are provided with the plug- in, and user presets that can be created and stored by the user.

The user presets are stored in a subdirectory of the documents folders of your profile ("Documents" on Mac, and "My Documents" on Windows): Blue Cat Audio/ [Plug- in Name]/ Presets. Each preset is stored as an individual file. You can create folders and subfolders in the Presets directory to classify your presets, as shown in the example below:
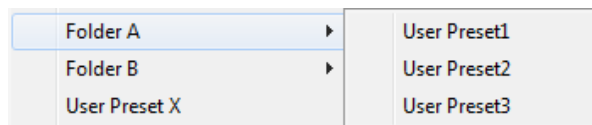
If you save a preset named "Default" in the root Presets directory, it will override the factory default preset (that's what "Save As Default" does). To restore the factory default preset, you can just remove this file or use the "Reset Default" command.

MIDI Program Change

It is possible to load presets remotely using MIDI "Bank Select" and "Program Change" messages. To enable this feature, select a MIDI channel to receive the events from in the MIDI Program Change menu item from the presets menu:
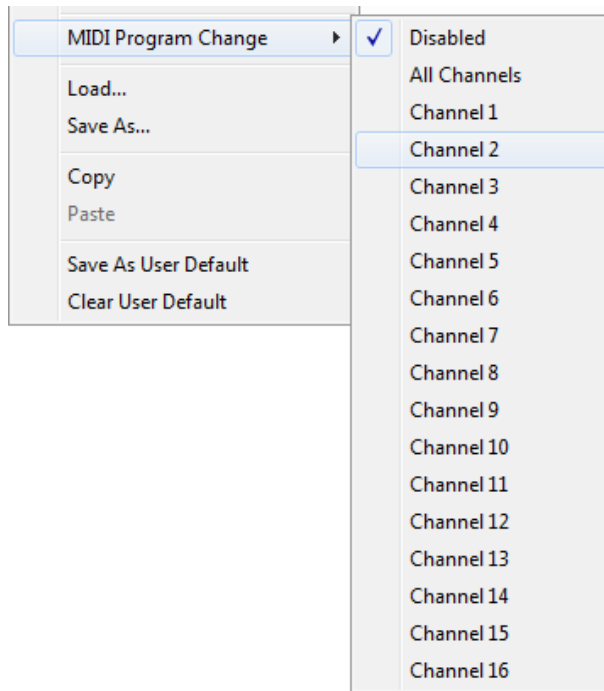
This setting is saved for each plug- in istance with your session but not in presets (except for the default preset, using the "Save as User Default command"). Once activated, the plug- in menu will display the bank number followed by the preset number for each preset:

Every root folder is considered as a new bank, starting with the factory presets (bank 0). Program and bank numbers may change while you add folders and presets, so you should be careful when naming them if bank and program numbers matter to you. It is recommended to use folders to make this task simpler. As a side note, sub folders do not define additional banks (all presets contained in sub folders are associated with the current bank.

As specified by MIDI, bank select messages are not used until a program is actually selected.

MIDI Implementation note: the software supports all types of Bank Select methods. You can use either MIDI CC 0 or MIDI CC 32 to select banks. If both are used simultaneously, they are combined together so that you can use more banks (in this case CC0 is LSB and CC32 is MSB, and actual bank number is 128*CC0+CC32).

MIDI and Automation Control

Blue Cat's MB-7 Mixer can also be remotely controlled via MIDI using MIDI CC ("Control Change") messages or automation curves, if your host application supports it. It is possible to customize the channel, control numbers, range and response curve used for each parameter in the settings panel available from the main menu (see the Plug- in Settings chapter for more details).

MIDI and Automation Settings Menu

The main menu

Most skins also provide the ability to change MIDI and automation settings directly in the main user interface. Clicking on the control settings icon in the main toolbar opens the following menu:
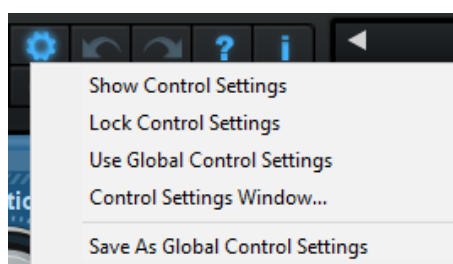
- **Show Control Settings:** show direct access to individual control settings for each parameter in the user interface (see next paragraph).
- **Lock Control Settings:** lock the current controls settings for MIDI and automation so that they remain unchanged when loading presets.
- **Use Global Control Settings:** ignore the current MIDI/ automation settings and use the global settings instead.
- **Control Settings Window:** display the control settings window, to change control settings for all parameters.
- **Save As Global Control Settings:** save the current settings as global settings (used by default, when no specific MIDI/ Automation setting has been set for the cuirrent preset).

Individual Control Settings

When this feature is activated using the "Show Control Settings" item in the MIDI and Automation Settings menu, dropdown menu buttons appears next to the main controls displayed by the plug- in:
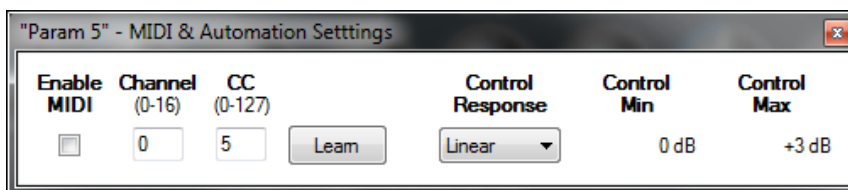

Clicking on this button shows the MIDI/ Automation settings menu:
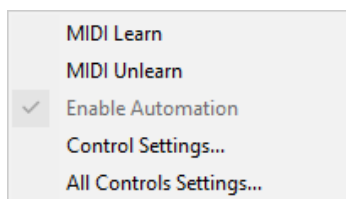
- **MIDI Learn:** launches MIDI learn mode for the control: touch your MIDI controller and the control will learn from it the MIDI channel and CC number. To end the learn mode, reopen this menu and deselect the option.
- **MIDI Unlearn:** deactivates MIDI control for this parameter.
- **Control Settings:** launches the advanced settings panel described below. This controls the settings for the current preset.
- **All Control Settings:** display the control settings window, with access to all parameters.

Advanced MIDI and Automation Settings

You can completely customize the way the plug- in is controlled by automation and MIDI. For a global view of all parameters at a time, you can use the Plug- in Settings window for the current preset which is available from the main menu.

MIDI Settings:

- **Enable MIDI**: enable/ disable the MIDI control of the parameter.
- **Channel**: MIDI Channel for the parameter control. If set to 0, the plug- ins will accept Control Change Messages from all MIDI Channels (MIDI Omni mode).
- **CC**: Control Change Number.
- **Learn**: click on this button to activate the MIDI learn functionality. When it is activated, you can move your MIDI controller, and the plug- in will automatically set the MIDI Channel and CC Number.

MIDI and automation settings:

- **Response**: response curve of the MIDI or automation control: from very fast to slow control.
- **Min**: minimal value of the parameter when MIDI controlled or automated.
- **Max**: Maximum value of the parameter when MIDI controlled or automated.

Note: if the Min value is higher than the Max value, the response curve will be reversed: increasing the control value will decrease the parameter value.

Note: if you double click on the parameter text control boxes for the max and min values, a "fine tuning" edit box will appear and let you change the min and max values with more precision:
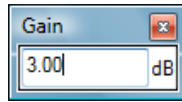
MIDI and Automation Output

Blue Cat's MB-7 Mixer can also generate MIDI CC Events or automation curves thanks to its output parameters.

You have access to the same settings for the output parameters as you have for input parameters using the dropdown menu, except that you can also enable or disable automation.

The output parameters MIDI and Automation Menu:
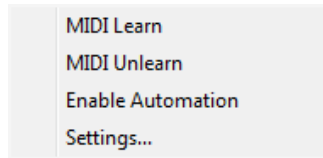
The advanced output parameters MIDI and Automation settings window:
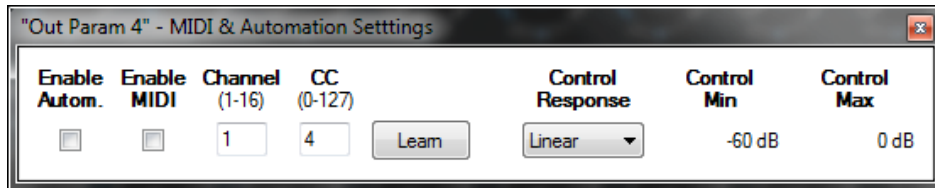
More

Check our online tutorial for more screenshots and more examples of our plug- ins user interfaces.

Blue Cat's MB-7 Mixer Parameters

All parameters described below can be automated and controlled via MIDI if your host application supports it. You can precisely define this behavior in the settings panels described later in this manual.

Input

The input parameters of this plug- in are the following:

Name	Unit	Description	Comment
General			
Bypass		Bypass the effect.	
Bands		Number of Bands.	
For each band (band index: i)			
Bi Bypass		Bypass the effect for this band.	
Bi Mute		Mute this band.	
Bi Solo		Solo this band (listen to the band).	
Bi Gain	dB	Gain for this band.	
% Spread	%	Stereo spread for this band (stereo version only). Set to -100% for mono only, and to +100% for opposite phase.	
Bi Pan	%	Pan value for this band (stereo version only). Set to -100% for full left panning, and to +100% for full right panning.	
Bi Reset Max		Changing the value of the parameter resets the max peak value recorded for this band.	
Freq i - i +1	Hz	Center frequency for the crossover between this band and the next one.	
Slope i - i +1	dB/ Octave	Slope for the crossover between this band and the next one. Controls the separation between bands (the higher the sharper the separation).	
Master Section			
Gain	dB	Master output gain.	
Spread	%	Stereo spread for the master output. Used for mono compatibility check (ranges only from -100 to 0%).	
Reset Max		Changing the value of the parameter resets the max peak value recorded for the master output.	

Output

Mono and stereo versions of the plug- in offer almost the same outputs. The main difference is that the stereo version exposes the same value twice (one of each channel), except if not specified.

| Name	Unit	Description	Comment
For each band (band index: i)			
Bi Peak	dB	Measured peak level for this band.	_(L) and (R) for the stereo version_
Bi Peak Hold	dB	Local Maximum value of the Audio level over time for this band. This value is automatically reset by the plug- in on a regular basis.	_(L) and (R) for the stereo version_
Bi Max Peak	dB	Maximum value of the Audio level over time for this band (can be reset by "Bi Reset Max" parameter changes) for both channels.	_(L) and (R) for the stereo version_
Master Section			
Peak	dB	Measured peak level at the output of the plug- in.	_(L) and (R) for the stereo version_
Peak Hold	dB	Local Maximum value of the Audio level at the output of the plug- in. This value is automatically reset by the plug- in on a regular basis.	_(L) and (R) for the stereo version_
Max Peak	dB	Maximum value of the Audio level over time at the output of the plug- in (can be reset by "Reset Max" parameter changes) for both channels.	_(L) and (R) for the stereo version_

Plug- in Settings

In addition to the controls offered in the main user interface, Blue Cat's MB-7 Mixer has various settings that let you fine tune the behavior of the plug- in. You can choose to change these settings either for the current preset or globally for all instances of the plug- in.

The Global Settings Window

The settings available in this window **apply to all instances of the plug- in, for all presets**, if not overridden in the presets settings. Consider these settings as "default" settings.

General

You can change the default skin for all instances of the plug- in: write the skin file path in the text edit box or click on the button to open a file chooser dialog. If you have several instances of the plug- in opened in your session, you will have to re- open the user interfaces of these plug- ins to see the skin change.
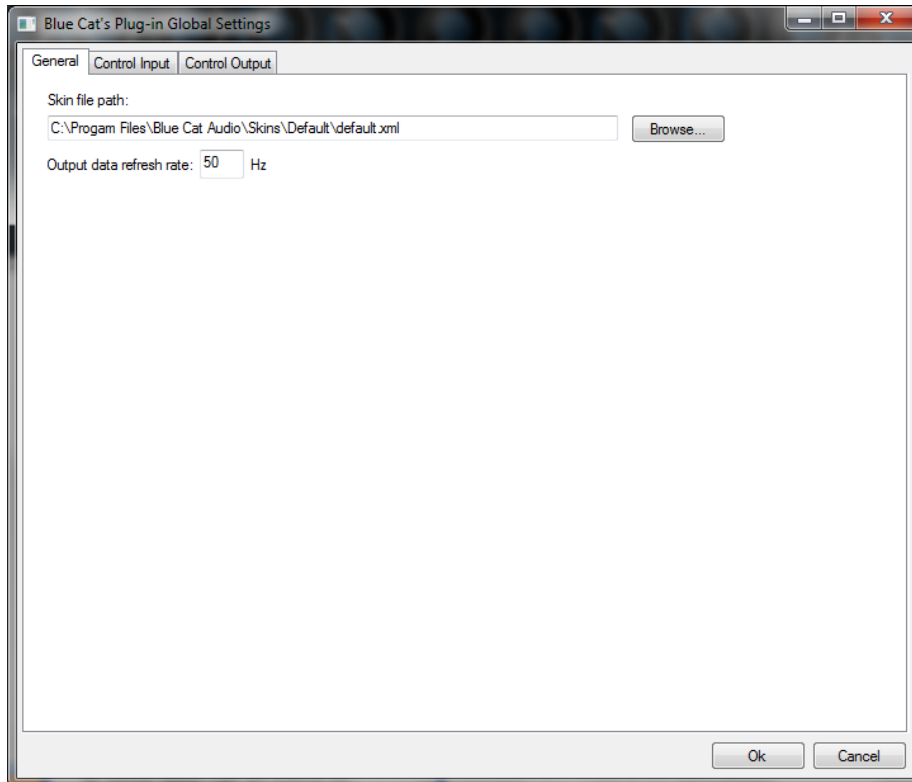
The output data refresh rate can also be customized for all instances of the plug- in. It controls the refresh rate of non- audio data produced by the plug- in (parameters, curves...). It also controls the refresh rate of output MIDI CC messages or output automation data. The higher the refresh rate, the better precision, but also the higher cpu usage (some host applications may also have trouble recording MIDI data at high refresh rates). The default value is 50 Hz.

Global Control Input Settings (MIDI and Automation)

The plug- in offers a couple of settings that affect the way it is controlled by MIDI messages or automation. While the first settings only apply to MIDI control, the "Control Response", "Min" and "Max" settings apply to **both automation and MIDI control**.

For each parameter you can define a default MIDI channel and CC number. You can then control the plug- in with an external MIDI controller or one of our plug- ins that generate MIDI messages.

The settings below are available for each plug- in parameter.

MIDI Settings:

- **Enable MIDI**: enable/ disable the MIDI control of the parameter.
- **Channel**: MIDI Channel for the parameter control. If set to 0, the plug- ins will accept Control Change Messages from all MIDI Channels (MIDI Omni mode).
- **CC**: Control Change Number.
- **Learn**: click on this button to activate the MIDI learn functionality. When it is activated, you can move your MIDI controller, and the plug- in will automatically set the MIDI Channel and CC Number.

MIDI and automation settings:

- **Response**: response curve of the MIDI or automation control: from very fast to slow control.
- **Min**: minimal value of the parameter when MIDI controlled or automated.
- **Max**: Maximum value of the parameter when MIDI controlled or automated.

(generic screen shot, does not correspond to the actual plug- in parameters)

Note: if the Min value is higher than the Max value, the response curve will be reversed: increasing the control value will decrease the parameter value.

Note: if you double click on the parameter text control boxes for the max and min values, a "fine tuning" edit box will appear and let you change the min and max values with more precision:
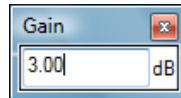
Global Control Output Settings (MIDI and Automation)

You can set the same properties for the output parameters as for the input parameters: in this case, they may trigger MIDI CC messages or generate automation curves when modified. Since it's output, you cannot set the channel to MIDI Omni, so you must choose a channel.

Output parameters can also generate automation curves in most host applications. You can enable automation for any output parameters you are interested in (see the "Enable Autom." checkbox).
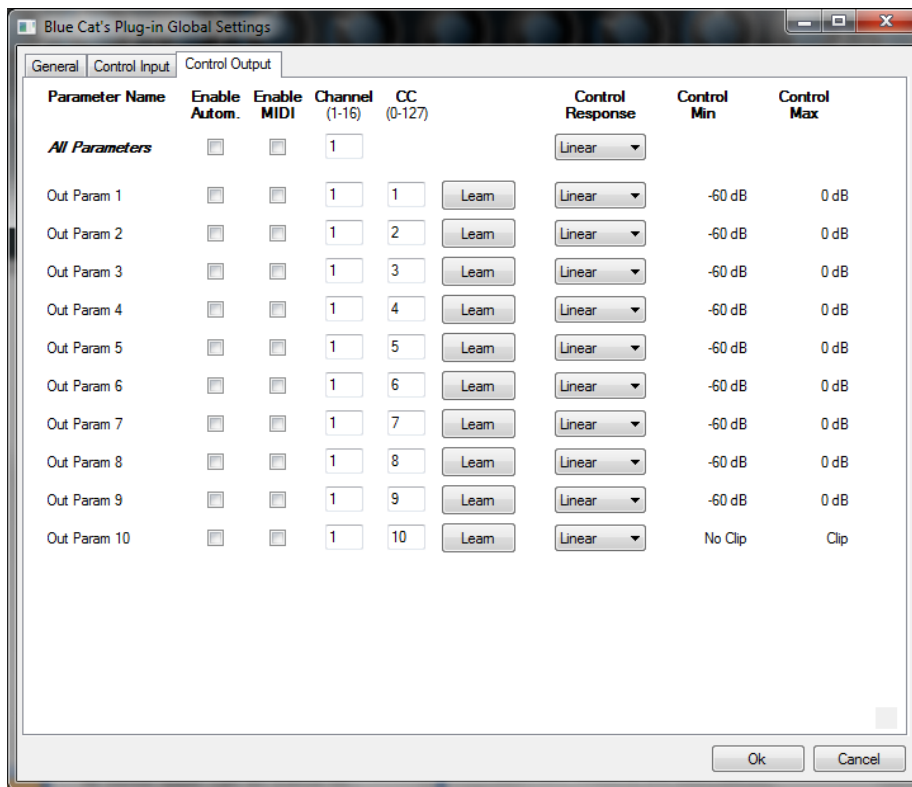
(generic screen shot, does not correspond to the actual plug- in parameters)

Note: if the Min value is higher than the Max value, the response curve will be reversed: increasing the control value will decrease the parameter value.

Note: if you double click on the parameter text control boxes for the max and min values, a "fine tuning" edit box will appear and let you change the min and max values with more precision:
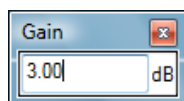
The Current Preset Settings Window

In this window you can change the settings *for the current preset of the current instance of the plug- in only*.

Preset Skin

You can choose to use the global skin setting or to change the skin for the current preset. This way you can have different skins for different instances of the plug- in in the same session in order to differentiate them.
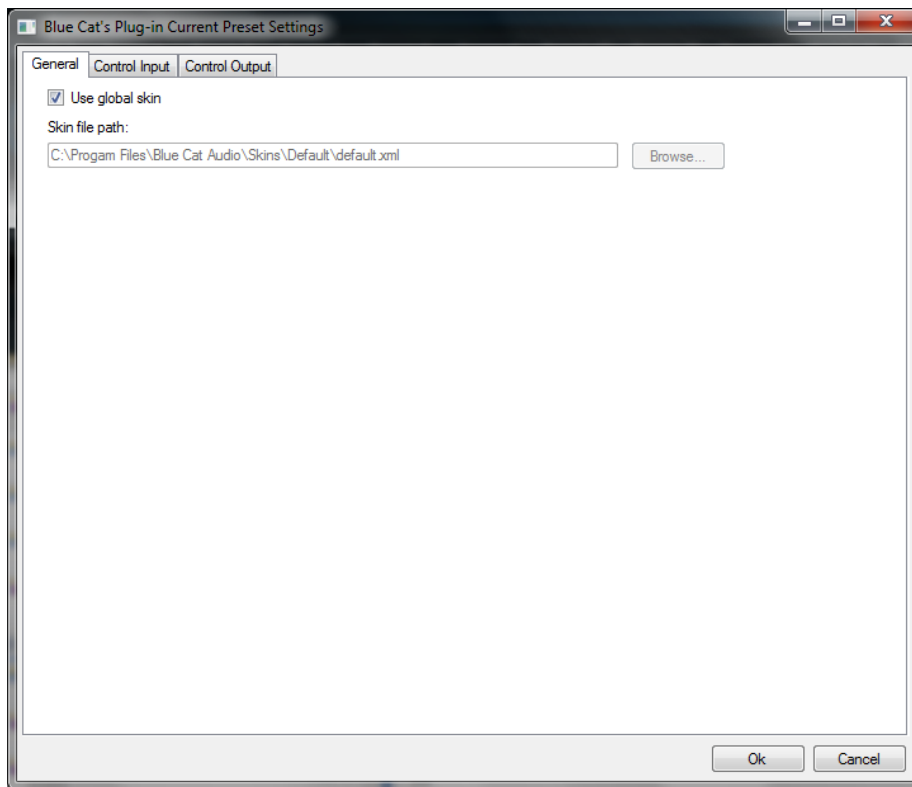
Preset Control Input Settings (MIDI and Automation)

Use the global settings or override them for the current preset. The parameters are the same as for the global input settings.
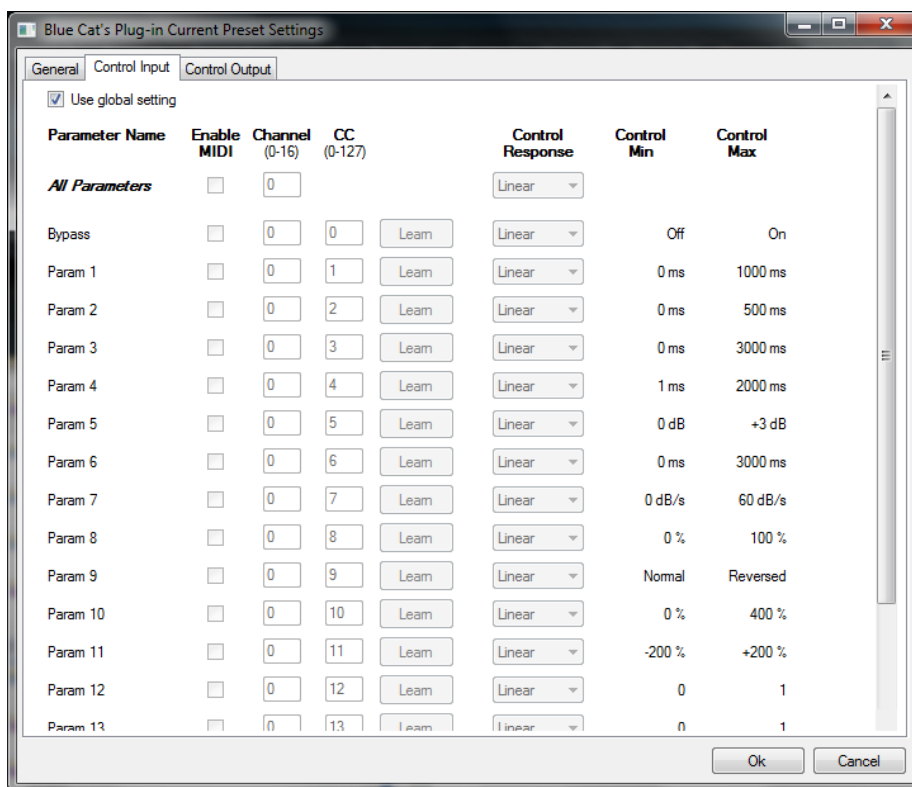
(generic screen shot, does not correspond to the actual plug- in parameters)

Preset Control Output Settings (MIDI and Automation)

Use the global settings or override them for the current preset. The parameters are the same as for the global output settings.
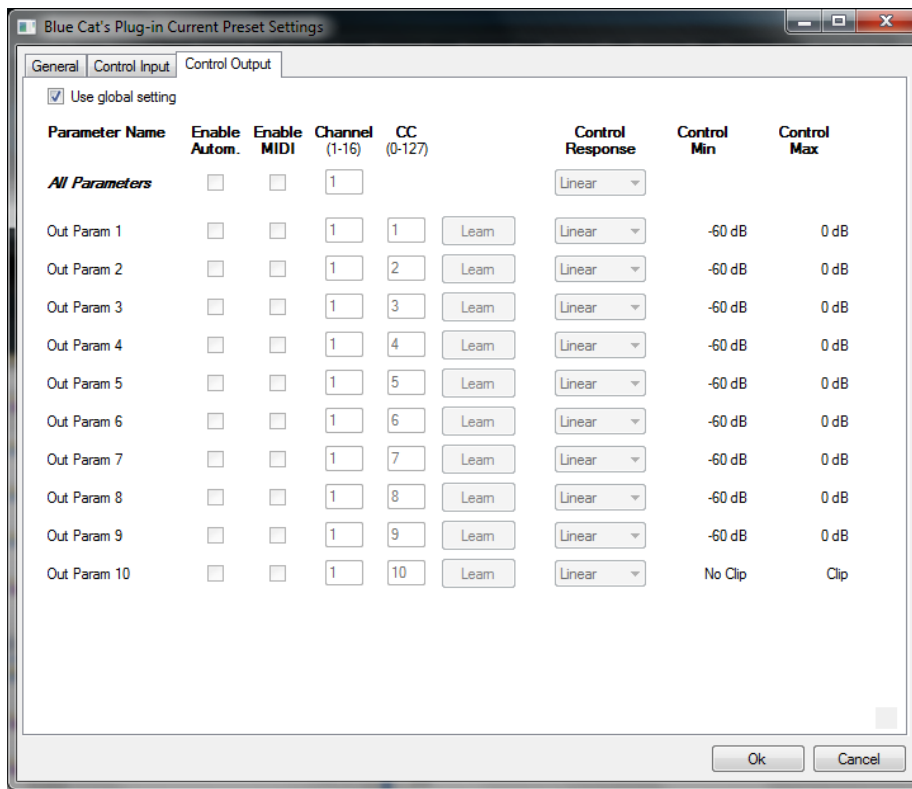
Parameter Name	Enable Autom.	Enable MIDI	Channel (1-16)	CC (0-127)		Control Response	Control Min	Control Max
All Parameters	☐	☐	1			Linear ▾		
Out Param 1	☐	☐	1	1	Learn	Linear ▾	-60 dB	0 dB
Out Param 2	☐	☐	1	2	Learn	Linear ▾	-60 dB	0 dB
Out Param 3	☐	☐	1	3	Learn	Linear ▾	-60 dB	0 dB
Out Param 4	☐	☐	1	4	Learn	Linear ▾	-60 dB	0 dB
Out Param 5	☐	☐	1	5	Learn	Linear ▾	-60 dB	0 dB
Out Param 6	☐	☐	1	6	Learn	Linear ▾	-60 dB	0 dB
Out Param 7	☐	☐	1	7	Learn	Linear ▾	-60 dB	0 dB
Out Param 8	☐	☐	1	8	Learn	Linear ▾	-60 dB	0 dB
Out Param 9	☐	☐	1	9	Learn	Linear ▾	-60 dB	0 dB
Out Param 10	☐	☐	1	10	Learn	Linear ▾	No Clip	Clip

Blue Cat's MB-7 Mixer integrates Blue Cat's skinning engine that allows you to customize the user interface. You can download alternate skins for your plug- in at the following address:

http:// www.bluecataudio.com/ Skins/ Product_MB7Mixer

If you don't find a skin that fits your need or if you want a custom one, you can choose to create your own skin.

Choosing the Skin

There are two ways to select the skin of your plug- in: you can change the default (or 'global') skin, or change the skin for the current preset only (either in the preset settings page or from the main menu). The global skin applies to all plug- in instances (choose this one if you want to use the skin used by default, regardless of the session or preset), whereas the current preset skin only applies to the current preset of the current plug- in instance (use this one if you want to change only the skin for the current session/ preset).

Note: in some host applications, the plug- in window won't resize automatically when you choose a skin with a different size. In this case, just close the window and re- open it: it will be displayed with the right size.

The Skins Menu

The skins menu can be opened from the main menu. It displays the list of skins available for the plug- in as well as commands to manage the skin used by default when no preset skin has been selected:
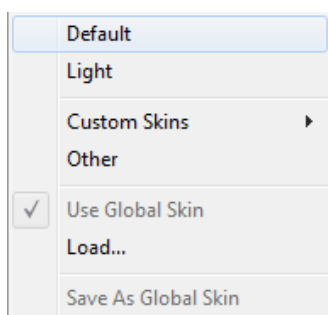
- **First Section - Factory Skins:** shows the list of factory skins delivered with the plug- in ("Default" and "Light" in this example).
- **Second Section - User Skins:** shows the list of user skins that have been installed in the Documents Skins folder for the plug- in (see below).
- **Use Global Skin:** use the global skin for the current preset/ session (unloads any custom skin previously selected for the current preset).
- **Load:** opens a file browser dialog to manually select the skin from the file system.
- **Save As Global Skin:** use the current preset skin as the global skin (loaded by default if no preset skin has been defined).

Installing User Skins

To select user skins directly from the skins menu, install them in the "Skins" directory available in the plug- in's documents folder:

[Your Documents Folder]/ Blue Cat Audio/ [Plugin Name]/ Skins/

The skin engine will scan this folder for new skins (xml files) and display them in the menu. *The skin files should be in the root skins folder or in a subdirectory inside this folder: subdirectories are not scanned recursively*.

Other Methods to Select Skins

You can also select the skins in the settings panels available from the main menu:

The global skin (used by default if no preset skin has been selected) can be changed in the global settings pane. The current preset skin can be changed in the preset settings page.

Create a Custom Skin

You can create custom skins for your plug- in in order to adapt it to your exact needs. You can change its look and feel and make it completely integrated in your virtual studio!

Just read the Blue Cat's Skinning Language manual and download the samples for the tutorial on http:// www.bluecataudio.com/ Skins. You can get ready to create your own skins in a few minutes. You can then share your skins on our website.

This manual only covers the basics of Blue Cat's MB-7 Mixer. Our website offers many additional resources for your Blue Cat's MB-7 Mixer plug- in and is constantly updated, so keep an eye on it! You will find below a few examples of available resources.

Tutorials

Many Tutorials are available on our website. They cover a wide range of topics and host applications.

You can find here a list of tutorials related to the Blue Cat's MB-7 Mixer plug- in.

Extra Skins

We encourage our customers to propose their own skins for our products and we often propose alternative skins to let you choose the one that best suits your needs. You can check Blue Cat's MB-7 Mixer skins page to get the latest skins.

Updates

As you can see in the history log below, we care about constantly updating our products in order to give you the latest technology available. Please visit our website often to check if Blue Cat's MB-7 Mixer has been updated, or subscribe to our Newsletter to be informed of the latest news about our products.

Note: minor version updates are available from the same location as the original full version download (**link received by email upon purchase**). The demo version publicly available on our website will not let you register.

You can also follow us on twitter, facebook and instagram for almost real time updates notification, and subscribe to our YouTube channel to watch the latest videos about our software.

Versions History

V3.42 (2022/03/28)
- Native Apple Silicon (M1) version can now load 64- bit Audio Units that are not compatible with Apple Silicon (via the MacOS bridge).
- Presets can now be loaded via MIDI even when the user interface is closed.
- Fixed MPC Beat plug- in not loading.
- Fixed VST3 version not always loading properly in Ableton Live 11.
- Fixed latency compensation changes not always picked up by host applications.
- VST3: Fixed parameters update issues in Studio One when bouncing tracks.
- Fixed VST & VST3 automation not recording properly in some hosts (Cubase 11, Ableton Live).

V3.41 (2021/10/19)
- Single Installer on Mac (all plug- ins formats).
- Apple Silicon (M1 processor) support.
- Dropped 32- bit support on Mac.
- Now requires MacOS 10.9 and newer.
- Improved MIDI & automation control settings with lock, reset and "save as global setting" capabilities.
- Fixed issues with Wah and Pitch Bender effects when using cheap MIDI controllers not updating values fast enough.
- VST3: fixed random crash in Ableton Live 11 upon load.
- Fixed a crash when loading some VST3 plug- ins that define a bypass parameter beyond the last automatable parameter.

V3.4 (2021/05/04)
New Features & Improvements:
- Up to 7 times more processing power with the **new** multicore engine that processes each band on a separate core.
- New DSP workload meter that displays the DSP activity and CPU load.
- Added MIDI control support (MIDI CC messages) for Next and Previous Preset commands, with MIDI learn.
- Reduced time to load the MB-7 Mixer or any built- in plug- in.
- Multiple DSP performance improvements.
- Level meters and spectrum analyzers are not updated anymore when the user interface is closed, reducing CPU usage.
- Reduced the number of threads used by the plug- in.
- Improved global and preset settings window loading time on Windows.
- Added ability to select the plug- in to load when a shell plug- in file is dragged and dropped onto a slot.
- Full unicode support.
- Preset files can now be dropped onto the preset LCD area to be loaded.
- Native Apple M1 version available as a preview.

Fixes:
- Fixed host loop end value not properly passed to hosted plug- ins, for the VST2 version.
- Fixed several crashes upon load for multiple third party plug- ins (mostly VST3).
- Fixed MIDI control for hosted plug- ins not always working when fed with silence.
- Fixed VST3 (and sometimes VST) version freezing Ableton Live upon save on Windows.
- Fixed harmonizer and Pitch Shifter built- in plug- ins that did not always flush their buffer upon bypass (short sounds could be heard when getting out of bypass)

V3.33 (2020/10/05)

New Features & Improvements:
- **Tail spillover**: activate tail spillover from the toolbar to play effects tail when bypassed (available for the plug- in itself or built- in delays and reverbs).
- Arrow keys can now be used to navigate presets, in the main view or in the presets browser.
- The opacity of the tone map window can now be adjusted for built- in effects.
- Smoother presets switching.
- Improved smooth plug- in bypass (faster and smoother transition).
- New high resolution graphics for knobs and sliders.
- Reduced disk footprint.

Fixes:
- Fixed: the state of some VST2 plug- ins (which do not save their state as chunks) were not be restored properly if their number of parameters had been changed (e.g. FabFilter Pro- Q's latest update).
- Fixed: several issues with hosted plug- ins bypass (graphical glitches, untriggered bypass...).
- Mac: fixed GUI performance issues on native P3 displays and improved performance on other displays.
- Mac: fixed mouse wheel that required large movements to change parameter values.
- Mac: fixed mouse cursor flickering issues.
- Mac: fixed Esc key not closing fine edit parameter dialog.
- Mac: fixed keyboard not responding in registration panel in some host applications (LUNA, Garage Band...).
- Mac: fixed demo version that could hang Logic when reloading projects using the plug- in.
- Mac Audio Unit: fixed plug- in listing in some host applications (Plogue Bidule...).

V3.32 (2020/01/06)

New Features & Improvements:
- Navigate presets and create new tones easily with "Tone Maps" for 9 built- in effects: Chorus, Flanger, Phaser, Wah, Sweep Filter, EQ, Freq Shifter, Reverb and Waveshaper.
- New presets for the built- in wah plug- in.
- Built- in EQ: improved impulse response convolution performance (long reverb tails are now supported, with low CPU usage).
- Mac: faster GUI rendering on recent Mac OS systems (up to 5x faster).

Fixes:
- Mac: fixed user interface not properly shown on retina displays in some applications built with the 10.14 Mac OS SDK (Cubase 10.5 for example).
- Mac: fixed settings panel rendering issues in dark mode on Mac OS Mojave and newer.
- Fixed issue with some VST3 plug- ins that failed to initialize when loaded (Roland Cloud VST3)
- Fixed built- in Wah plug- in that could exceed selected range in reverse mode.

V3.31 (2019/07/23)

- Fixed crossovers slope not properly displayed (actual slope was *twice the slope on display*) and fixed factory presets accordingly.
- Fixed an issue with hosted plug- ins editors not always restored in the right position in Cubase on Windows.
- Changing the slope of lowpass and highpass filters in the built- in EQ is now smoother.

V3.3 (2019/06/20)

New features:
- New presets browser with built- in search.
- MIDI Program Change preference is now saved into session instead of global preferences, so each instance can now use different MIDI channels. It is also saved in the user default preset.
- VST3: added program change support for VST3 plug- in format.
- VST3: added MIDI output support for VST3 plug- in format.

Built- in plug- ins:
- New Level (volume control) and Micro EQ built- in plug- ins.
- Added a gain parameter to several built- in plug- ins to avoid volume changes when switched on/ off (pitch and frequency shifters, modulation effects, delays).
- Increased knobs precision for pitch shifter and waveshaper built- in plug- ins for smoother control.

Third party plug- ins host:
- VST and VST3 plug- ins previously displayed as missing because of name changes are now relocated automatically (Waves major updates, 32 and 64- bit plug- ins with different names etc.)
- Improved auto- relocation performance when a large number of plug- ins have moved.
- VST3 Host: added MIDI output and program change support for recenlty updated VST3 plug- ins.

Other fixes and improvements:
- VST: the user interface is now properly resized in Cubase on Windows.
- Mac: fixed issue with Magic Mouse that could trigger drag and drop instead of mouse click.
- Spectrum analyzer display will not take priority over DAW or other plug- ins user interfaces.
- Miscellaneous user interface performance improvements.

V3.2 (2018/11/20)

- Drag and drop support (same as in our [video](#) for [PatchWork](#)):
  - drag and drop plug- ins between slots.
  - hold the alt key on Mac and Ctrl key on windows to copy (duplicate) a plug- in instead of moving it.
  - drop the plug- in before another to insert it in the chain.
  - drag and drop plug- ins between several instances of the MB-7 Mixer or across plug- ins (compatible with the latest version of PatchWork, Late Replies and Axiom).
  - drag and drop .dll, .vst, .vst3, or .component files directly from the Finder or Explorer onto plug- in slots.
  - drag and drop .plgnfo files (previously saved from the software) directly from the Finder or Explorer onto plug- in slots.
- Built- in EQ plug- in can now load and manipulate impulse responses (IR).
- Spectrum analysis is now performed in the background and does not affect audio performance.
- Improved performance of the built- in EQ plug- in.
- Improved performance when saving preset/ session with many built- in plug- ins.
- Fixed: effect tail not processed anymore when just inserted on a track (avoids using CPU when not necessary).
- Fixed: built- in multitap delay plug- in could get out of sync in some host applications.
- Fixed: sweep filter, flanger and tremolo plug- ins could fail to initialize rate when using tempo sync and loaded from an MB-7 Mixer preset.

V3.1 (2018/06/18)

- The GUI can now be zoomed from 70% to 200%.
- Added 28 built- in plug- ins borrowed from the [Late Replies](#) plug- in.
- New spectral manipulation and sound design presets using the built- in effects.
- Last loaded preset is now remembered in session and displayed in the presets menu.
- Plug- in state can now be reverted to the last loaded preset.
- Default preset now also saves the state of locks (when using "save as user default").
- Major presets loading improvements: hosted plug- ins are now reloaded only when changed, and updated otherwise. Improves performance and audio rendering when loading presets using the same plug- ins.
- Faster GUI loading / instantaneous GUI display after it has been opened once.
- New option to keep plug- ins windows always on top.
- Performance and memory usage improvements.
- Mac: new installer.
- VST3: factory presets are not exposed to the host application anymore.
- Fixed minor compatibility issues with Mac OS High Sierra.
- Fixed host keyboard shortcuts lost when a sub plug- in is opened (in several host applications).
- Fixed sub- plug- ins automation overwritten when using touch mode in some hosts.
- Fixed: changing bypass in the Audio Unit version did not update host application's bypass state.
- Fixed: bypass buttons are now in sync with the hosted plug- ins' state.
- Win: fixed copy/ paste that sometimes stopped working until next app restart.
- Dropped support for legacy RTAS and DirectX plug- ins formats.

V3.0 (2017/02/23)

- Brand new GUI design, with improved usability and touchscreen support.
- Favorite plug- ins and their settings can be saved to be quickly reloaded later from a menu.
- Unused channels for each hosted plug- in can now be muted (instead of default pass- thru).
- Load/ save native VST, VST3 or AU preset files.
- Presets and parameters menus are now split in sub menus instead of a single list.
- Additional user VST path to locate VST plug- ins is now available.
- Missing VST & VST3 plug- ins are now automatically relocated.
- Copy/ paste and save band settings (including plug- ins) as sub- presets.
- Map sub plug- ins parameters to automate them in host or control them with MIDI.
- Lock GUI state to prevent changes when loading presets.
- Band Controls Groups can now be identified by colors.
- Adjust contrast for spectrogram display.
- Spectrogram now keeps history when resized.
- Import spectrum curves for EQ compare & matching, and export EQ curves to share with other Blue Cat Audio plug- ins.
- Now supports retina displays on Mac (text and graphs using high resolution).
- Now compatible with most recent Audio Units (Waves for example).
- Changed demo limitations: up to 5 instances allowed, bypass time changed to half a second, and bypass parameter is not affected anymore.
- Fully compatible with previous versions of the plug- in.
- Dropped support for Windows XP and Mac OS X 10.6 and earlier.

V2.54 (2016/12/29)

- Fixed MIDI channel issue with VST3: MIDI channel for note events was offset by one in the VST3 plug- in version and when hosting VST3 plug- ins.
- Improved perfomance when loading presets.
- Increased fine edit window width (opens when double clicking on a control).
- Fixed random crash in Cubase.
- VST: fixed random latency compensation issues upon project load or when loading plug- ins while not playing.
- VST: fixed bypass issue when using reverse range in MIDI/ automation settings.
- (Mac AU) Fixed latency compensation issues in Logic, on project load, or when loading plug- ins while not playing.
- (Mac AU) Fixed GUI display issues when changing size in Ableton Live.
- (Windows) new graphics for Windows installer.

Warning: because of a bug of the initial VST3 release, this new version may not work with existing sessions that used the VST3 format. See [this blog post](#) for more details and how to fix it.

V2.53 (2016/05/10)

- **VST3 plug- ins hosting**.
- Fixed VST3 version crash in Wavelab 9.
- Fixed issue with parameters precison in VST3 version.
- Improved automatic I/ O configuration for VST and VST3 versions.

V2.52a (2016/03/04)

- (VST only) Fixed a crash when loading the VST version in Ableton Live.

V2.52 (2016/03/03)

- VST3 plug- in format support, with improved external sidechain compatibility for Cubase and Nuendo.
- Fixed a crash with some VST plug- ins using long preset names (SonicCharge Microtonic).
- Windows: fixed a crash with some plug- ins that display a modal dialog when opened (Valhalla plug- ins).

V2.51 (2015/07/16)

- Last loaded preset can now be saved directly from the presets menu without having to select the file.
- VST: fixed latency compensation reporting in Cubase (no need to re- enable the plug- in to update the latency anymore).
- AAX & RTAS: fixed feedback loop that could occur in bypass mode when the plug- in was inserted before another one.

V2.5 (2015/04/29)

New Features:
- External side chain support: side chain input can be used by sub plug- ins on each band.
- Sub plug- ins audio i/ o routing: connect the inputs and outputs of each plug- in to any channel (enabling multi- mono or creative side chain usage).
- Latency is now compensated for individual channels when a plug- in is processing only a subset of all available channels.
- GUI- less plug- ins support: a generic user interface is now provided for VST or AU plug- ins that do not include a graphical editor.
- Presets can now be selected using MIDI Program change and bank select messages (can be activated with the presets menu/ MIDI Program Change item).
- Factory and user skins can now be selected directly from the plug- in menu.
- Improved crossovers precision and performance.
- Improved presets and session load/ save performance (up to 4 times faster in some situations).
Fixes and compatibility improvements:
- Fixed issue with Izotope Audio Units that were configured as mono effects on stereo tracks.
- Fixed issue with some Audio Unit instruments that did not produce any sound (IK Multimedia, Kontakt...)
- Fixed crashes during auto save with Kontakt 5 in Pro Tools 11.

V2.4 (2014/10/20)

New Features:
- Missing VST plug- ins can now be relocated if not found.
- The plug- in now saves missing plug- ins' state so that they can be restored later.
Fixes and compatibility improvements:
- Fixed issue on Mac when loading sessions created on Windows using VST plug- ins in sub- directories.
- Fixing compatibility issues with several plug- ins that used to crash when unloaded (Image Line, MeldaProduction, Catanya...).
- VST Plug- in name is now displayed when loaded from a missing VST shell bundle (instead of just the name of the bundle).
- (Mac) Fixed randrom crashes when using keyboard shortcuts in the host application to switch between plug- ins or tracks.
- (Mac) Fixed crash introduced in 2.3 when trying to load missing VST plug- ins.
- (Mac) Fixed crash after closing the editor of an Audio Unit plug- in loaded with SoundRadix's 32Lives.

V2.3 (2014/07/03)

New Features:
- Audio Unit hosting support: Audio Units can now be loaded into the plug- in on Mac.
- Plug- ins can now be cut from a slot for cut/ paste operations.
Improvements:
- User interface loading or resizing is now faster.
- Reduced the size of windows installers.
Fixes and compatibility improvements:
- Fixed undo/ redo compatibility issues with some plug- ins.
- (Mac) Fixed random crashes when unloading some plug- ins on Mac (Waves plug- ins for example).
- (AAX) Fixed inaccurate transport information reported to sub plug- ins when stopping playback in Pro Tools.

V2.2 (2014/04/23)

New Features:
- Plug- in instance Renaming: it is now possible to give a name to each instance of a plug- in.
Improvements:
- Improved performance of undo tracking when loading presets for plug- ins with many parameters.
Fixes and compatibility improvements:
- Fixed keyboard stealing issue in many host applications when sub plug- ins editors are opened (except 32- bit applications on Mac).
- Fixed compatibility issue with Pro Tools 9 on Mac (random crashes).
- Fixing crashes with some plug- ins requesting information while being opened.

V2.11 (2013/12/03)

Plug- ins compatibility improvements:
- Improved compatibility with plug- ins that do not support sample rate changes (Nebula).
- Improved compatibility with synths or effects that internally use VST presets banks: the entire state was not properly restored with the session (Nexus, Korg Legacy series or D16 Sigmund for example).
  Other improvements:
- Reduced the plug- in's memory usage so that more instances can be used in a session.
- Windows VST Installer now remembers where the plug- in was initially installed to simplify upgrades.

V2.1 (2013/10/25)

New features:
- Bypass and display editor commands are now directly available from buttons in the plug- in slots.
- Plug- ins editors can now be restored on open (position on screen is now saved in session and presets), with an option in the preferences to disable restoration.
- Copy/ paste plug- ins between slots using the system clipboard (you can copy paste between instances, or in different applications).
- Copy/ paste the plug- in's current state from the presets menu using the system clipboard.
- "Center Plug- in Editor" command to bring back plug- ins editors that may be lost on the screen.
- Improved support for plug- ins with multiple I/ O configurations (the number of channels is now passed to the plug- ins).
- (Mac) Inserted plug- ins window do not follow the MB-7 Mixer window anymore.
- (Mac) plug- in version number is now available when using "Get Info" in the Finder.

Fixes:
- (Mac) RTAS version could cause some GUI issues in Pro Tools with some plug- ins (blank windows).
- (Mac) About window does not show up first in the corner of the screen.
- (Win) Alt- Click on a control now resets the value to default in Pro Tools, as expected.

V2.04 (2013/09/30)

Plug- ins Compatibility Improvements:
- Fixed: some reverb plug- ins used to have their tail cut.
- Fixed: some VST plug- ins sometimes prevented Pro Tools from exiting (Kontakt 5 for example).
- Fixed: when inserting plug- ins with different latencies on different bands, tempo and MIDI events were not always in sync.

V2.03 (2013/09/23)

New Features:
- Tempo sync support for hosted plug- ins.
- AudioSuite support (offline processing) for the AAX version.

Plug- ins Compatibility Improvements:
- Some plug- ins that required tempo sync used to crash on load.
- Fixed compatibility issues with FabFilter plug- ins.

V2.02 (2013/09/13)

New Features:
- Added support for plug- ins bundled into a VST Shell.

Bug Fixes:
- Some plug- ins used to crash when reloading a Pro Tools session in Pro Tools 11.

V2.01 (2013/09/10)

Bug Fixes:
- When inserting soft synths in the plug- in, no output was produced when the plug- in was fed with silence.

V2.0 (2013/09/05)

New Features:
- Brand new, fully customizable user interface:
  - New look and feel.
  - Show only what you need.
  - New color or greyscale overlayed spectrogram view.
  - Multiple display sizes.
  - Customizable gain range.
  - Improved readability.
  - Animated transitions.
- Multiband VST Hosting:
  - Apply VST effects to a selected frequency range.
  - Add up to 4 VST plug- ins on each band.
  - Pre and post fader plug- ins slots.
  - Integrated latency compensation engine, with real time host reporting.
  - Optional undo/ redo integration.
  - VST Presets Management.
  - Bypass inserted plug- ins individually.
- New integrated presets manager:
  - Load/ save presets from the plug- in's user interface.
  - Organize presets with folders.
  - Customize the default preset.
  - Exchange presets easily.
- Automation range and response curve can now be customized for each parameter (in and out).
- Automation and MIDI settings (channel, MIDI learn etc.) are now accessible from the main user interface.

Improvements:
- New presets to get started faster.
- The windows installer now automatically detects the most appropriate VST install path.
- License is now shared between plug- ins types (register only once for all formats).
- Improved value display in fine edit window.
- Improved parameters display on control surfaces.

Optimizations and Performance Improvements:
- Improved parameters precision (now stored as 64- bit).
- More compact presets format (uses less space and loads faster).
- Smaller binaries on Mac (dropped PowerPC support).

Bug Fixes:
- (RTAS) Fixed parameters control with EUCON control surfaces in Pro Tools.
- Fixed user interface issues in Final Cut Pro X.

- Fixed keyboard stealing issue in Digital Performer 7 on Mac.
- Fixed copy/ paste keyboard shortcut issues in the registration panel on Mac.

Note: this new version can be installed side by side with the previous version for backward compatibility reasons. Installing this new version won't break your previous projects.

V1.1 (2013/06/27)

- 64- bit AAX support for Pro Tools 11.

V1.1 (2011/08/31)

- A "dual channel" version of the plug- in is now available. It can process the left/ right or mid/ side channels separately.
- Output data rate (MIDI CC or automation) can now be customized, from 20 to 500 Hz.
- Increased the default output data rate (from 20 to 50 Hz) for smoother side chaining and more precise spectrum display.
- Windows: improved settings dialog loading time.
- Mac: user interface performance improvement (up to 20% lighter on cpu).

V1.0 (2011/04/06)

First release.

Thanks again for choosing our software!

See you soon on www.bluecataudio.com!