

Blue Cat's Widening ParametrEQ User Manual



"A powerful multi-band processor for stereo widening and narrowing"



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Note: An html version of this user manual is available online [here](#).

Description

Blue Cat's Widening Parametr'EQ is a 7 bands parametric Mid- Side equalizer based on Blue Cat's [Parametr'EQ](#) algorithms, enabling you to widen or narrow the frequencies of your choice.

This special 'widening' version offers two independent equalizers for the mid and side channels with instant frequency response display. But Blue Cat's Widening Parametr'EQ is much more than a standard mid/ side equalizer, since it lets you choose the position of the virtual center for the Mid/ Side matrix: you can really control where you want the equalization to take place in the stereo field. You can thus use this parametric mid/ side equalizer for many purposes: from simple standard equalizing anywhere in the stereo field to advanced multi- band stereo widening or narrowing.

The new non linear behavior and the included M/ S output brickwall limiter will also let you modify the dynamics response of this very special plugin.

For more information about the Parametr'EQ technology, please read Blue Cat's [Parametr'EQ plugin](#)'s description.

Additional information about stereo widening with mid/ side processing can be found in [this paper](#).

Main Features

- True WYSIWYG 7 bands parametric equalizer with independent mid/ side channels.
- Filters designed after analog circuits.
- The equalizer can be placed with great precision in the stereo field thanks to the 'center' parameter.
- Separate center/ sides equalizing for a precise customized multi band stereo widening/ narrowing effects.
- Non linear modeling: add some warmth or analog distortion to each EQ stage.
- Output brickwall limiter.
- Output peak meter.
- Oversampling for optimal sound quality, whatever your sampling rate.
- +-40 dB range for each band with customizable effective range.
- Automatic gain compensation.
- No latency.
- Real time display of the frequency response with precise measurement and zooming capabilities.
- Window Opacity Control: make the plugin window transparent.
- Smooth Bypass: activate/ deactivate the plugin with absolutely no noise.
- Undo/ Redo.
- Import/ Export presets and share them between the directX and VST versions.

Blue Cat Audio Standards:

- Supported platforms: **Mac- AU, Mac- RTAS, Mac- VST, Windows- DX, Windows- RTAS, Windows- VST, Win x64- DX, Win x64- VST.**
- Native DSP code for optimal performance.
- Skinnable user interface.
- **Smooth Update:** silent (zipper- free) parameters update.
- Full **automation** support (all parameters can be automated, with smooth and continuous update)
- **No CPU load on idle:** when the plugin is fed with silence, the processing smoothly shuts down, to optimize the CPU usage of your Digital Audio Workstation.
- Real time **MIDI control** with advanced settings (MIDI channel and CC numbers, with complete response curve control) and **MIDI learn.**
- Automation and MIDI output: record output parameters as automation curves or send MIDI CC messages to other plugins for powerful side chain effects.
- Smooth Bypass: activate/ deactivate the plugin with absolutely no noise.
- Undo/ Redo.
- Import/ Export presets in a host independent format.
- Any sample rate supported.

System Requirements

PC

- Microsoft Windows XP, Vista or Windows 7.
- Any DirectX / VST / RTAS compatible host software - 32 or 64 bit.

Mac

- An Intel or PowerPC processor.
- Mac OS X Leopard (10.5) or Snow Leopard (10.6).
- Any VST / Audio Unit (32/64-bit) / RTAS compatible application.

For more information about supported platforms, see our [FAQ](#).

Installation

Blue Cat Audio plugins 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 plugins in different locations.

Windows

Install

Both DirectX and VST versions provide an install program. Follow the steps of the wizard to install the plugin on your machine. During the installation you will be asked where you want the plugin(s) to be installed. For the VST version you should install the plugin inside the VST plugins 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 plugins.

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

Upgrade

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

Mac

Install

On Mac the plugins are available as drive images. After download, double click on the file to open it. You can then drag and drop the plugin file(s) to the shortcut that is provided within the image. It will install the plugin(s) for all users on the machine.

In case you do not have admin rights on your Mac or if you want to install the plugin(s) to another directory, just copy the files to the appropriate location. If required, more information is available in the README.txt file that is included in the package.

Upgrade

When a new version of the plugin is released, open the new image and copy the files over the previous ones. The new version will replace the older one.

The User Interface

The Widening ParametrEQ effect is delivered with several skins. Some of them display the controls for a given channel at a time (you need to manually switch to the other channel), and some other skins display the controls for both channels at the same time. We will have a closer look to the default “single channel at a time” skin, since the other ones provide the same controls but with a slightly different layout.



1. Activate each filter separately on the current channel. This enables you to lower CPU consumption if you do not activate all filters.
2. Controls for the filters and in/ out gain. You can select the shape of the filter (cut or shelf) for the low and high filters.
3. EQ response graph: this graph shows the global response curve of the EQ for each channel (blue curve for mid, red for side), and the response curve for the current filter you are manipulating (white curve).
4. Output Meters: the meters in the center (green/ red) show the output level of the plugin for the mid and side channels, and the blue meters on the left and right show the compression amount for each channel, when the output limiter is activated
5. Zoom: you can zoom the graph and sliders (change their range) by using either the blue slider on the left or clicking on the predefined range values (10, 20 or 40 dB). This allows you to precisely manage the range of your EQ.
6. Non linear behavior: these two sliders let you control the linear behavior of the filters. See the parameters section for more information.

7. Window Opacity management: use this slider to make the plugin window transparent (this behavior heavily depends on your host application).

8. Misc per- channel controls:

- Auto- Gain: the user interface automatically adjusts the input gain to prevent distortion for the current channel
- EQ control: shortcuts for all bands

9. When moving the mouse over the graph, the position of the mouse is displayed at this place so that you can exactly measure the EQ curve you are applying.

10. Misc general controls:

- Bypass: bypass the plug- in (with smooth bypass transition, as opposed to most host bypass functionality)
- Oversample: activate/ deactivate oversampling
- Limit:enable/ disable the output limiter

11. Channel switch: choose which channels controls you want to display (Mid or Side). This switch does not exist in the skins which display both channels at the same time .

12. Channels link control:

- the "on" switch enables/ disables the link between channels
- Absolute/ Relative: in absolute mode the values of the controls for both channels are identical, whereas in relative mode only controls variations are reported on the other channel (letting you setup a different EQ on each channel and then apply linked modifications for example).
- Normal/ Mirror: in mirror mode, the gain value for both channels are reversed. It is very handy when you want to use the EQ as a balance between channels.

13. Center Position: this control lets you choose the position of the virtual center for the M/ S matrix. It corresponds to the position of the mid channel in the stereo field. For more explanations about this control, please read [this Mid Side processing article](#).

The various elements of the user interface (knobs, sliders, button...) are simple and intuitive to operate, but more information about how to interact with them is available in the "[Plugins Basics](#)" chapter of this manual.

Operation

The EQ

To operate the EQ, you just need to activate the band you are interested in and move the slider and knobs to adjust the parameters of the filter. The EQ graph above is updated in real time. It is also possible to first adjust the filter curve visually (with the filter disabled) and apply the filter once it's setup. It is particularly useful in live situations where you may want the filter to be applied only when it's close to its final position. The activation of the filters is smooth and will not produce any artefact in the output.

This plugin offers independent settings for both channels. You can apply different EQ settings to the mid and side channels (see this [mid- side processing paper](#) for more information about what the mid and side channels mean for this particular EQ). It is however possible to link both channels in various way and thus control both channels from a single slider.

Dual channels

With no link between the mid and side channels you can use the plugin to shape the spectrum of the center and sides of a stereo track independently. You can for example choose to reinforce bass on the center of a mix, and boost the highs on the sides to make it feel wider without yet making it too artificial.

Single Channel

When the M/ S link is enabled and its mode set to "absolute", the plugin behaves just like a single channel EQ: both channels are processed with the exact same settings.

Multi Bands Widener/ Narrower

If you enable the Mid/ Side link in absolute mode and use the "Mirror" function the plugin will behave as a multiple bands widening/ narrowing balance. In this case you can choose to mask the side band controls and only use the mid controls. Pushing the cursor up will push the sound to the mid channel (narrowing the sound), whereas moving down will widen the stereo signal.

Apply the effect at a chosen position in the stereo field

If you use only the mid EQ, you will by default modify the center of the stereo field. Thanks to the "center" parameter it is possible to adjust exactly where in the stereo field you want the effect to occur (and not only in the middle).

Non Linear Mode

This EQ offers the ability to introduce non linearities in the signal chain: by default the EQ is transparent and operates as shown on the upper graph, but it is possible to activate the non linear behavior by increasing the "Non Linear" parameter value. It controls the amount of "non linearity" of each filter.

Once this is activated, you can choose the balance of distortion versus compression applied in every filter. This lets you control the type of color added to the EQ.

With extreme settings and extreme boosts this EQ becomes a powerful distortion unit, with different amounts of distortion spread across various parts of the spectrum. When using this capability extensively it is recommended to activate the "oversampling" function to limit unwanted artefacts, especially when boosting high frequencies.

The Output Limiter

In order to prevent from signal overshoot when manipulating the EQ, a simple brickwall limiter has been added at the end of the signal chain. We advise you to activate it when setting up the EQ. It can be deactivated later when you are confident with your settings.

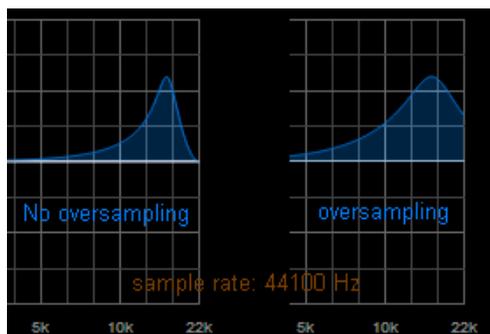
You can also use the limiter to alter the sound of your track and trigger it on purpose by boosting the input gain, even though it does not offer many settings.

About Oversampling

Thanks to oversampling, the plug- in internally works at a higher sample rate. This is particularly useful when working with high frequency content at lower sample rates (such as 44.1 kHz).

Running in oversampled mode has several effects on sound quality:

1. Filter curves are identical to analog filters when approaching the upper side of the spectrum:



2. Non- linear mode potential artifacts are reduced: when working in non linear mode with very high settings (100% Non-linear and 100% distortion for example), the plug- in may produce aliasing artifacts on high frequencies. Use oversampling to avoid these digital artifacts and produce a warmer sound. Note that the produced digital distortion can be interesting as well in some cases.

The drawback of oversampling is of course CPU hit, since the plug- in will have to convert audio data and process much more samples. Note that if your host is already running at 96 kHz you may not need to use the oversampling functionality.

Tip: Use Automation!

Since this plugin integrates the smooth update technology, you can use and abuse of automation to create time varying widening or narrowing filter effects. It is also possible to control these variations in real time thanks to the ability of the plugin to be controlled via MIDI, as shown in our MIDI Wah tutorials (see the [tutorials section](#)).

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

User Interface Basics

About Skins

Like all Blue Cat Audio plugins, Blue Cat's Widening ParametrEQ uses a skinnable user interface. It means that the appearance and behavior of the user interface can be entirely customized.

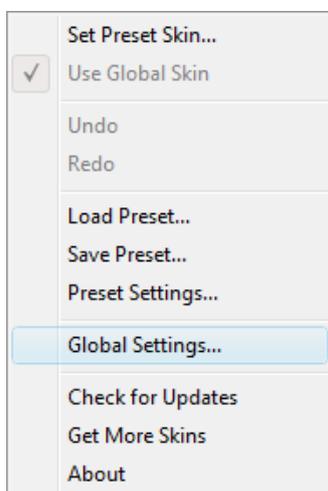
Especially with third party skins, the experience may be very different from the one offered by the default skins that we provide and which are described later in this manual. Our plugins and our skinning engine however have several standard features that will be available whatever your favorite skin. This is what this chapter will describe.

More information about custom skins can be found in the [skins section](#).

Main Toolbar and Menu

Menu

If you right click on the background of the plug-in, the following pop-up menu appears:



The description of the commands associated to each menu item are available below.

Toolbar

In some skins, an optional toolbar gives you access to the some of the functionalities of the main menu.

Icon	Name	Function
	Menu	Open the main menu
	Undo	Undo
	Redo	Redo
	Load	Load Preset
	Save	Save Preset
	Manual	User Manual
	About	About
	Website	Opens our website

Commands

The Commands available from the main menu or the toolbar are:

- **Set Preset Skin:** change the skin for the current preset.

- **Use Global Skin:** use the skin defined in the global settings for the current preset. This item is enabled only if a skin has been defined for the current preset.
- **Undo/ Redo:** undo or redo the latest modifications. This includes all changes made to the current preset settings.
- **Load Preset:** load preset from file.
- **Save Preset:** save current preset to file.
- **Presets Settings:** open the presets settings window. It enables you to change the skin and MIDI settings for the current preset.
- **Global Settings:** open the global settings window. It enables you to change the skin and MIDI settings that are used by default in all instances of the plugin.
- **User Manual:** open this user manual.
- **Check Updates:** check the updates for this software on our website.
- **Get More Skins:** get more skins for this software.
- **About:** displays the “about” dialog box.

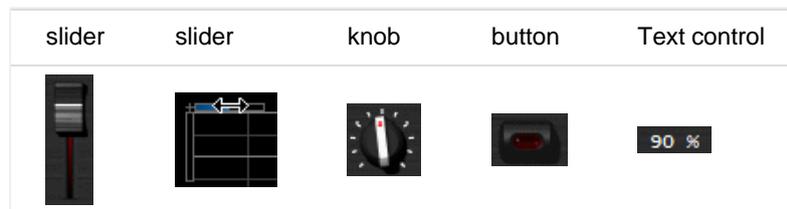
MIDI control

Blue Cat's Widening ParametrEQ can also be remotely controlled via MIDI using MIDI CC ("Control Change") messages if your host application supports it. It is possible to customize the channel, control numbers and range used for each parameter in the MIDI settings panel available from the main menu (see the [Plugin Settings](#) chapter for more details).

Controls

Examples

Here are a few examples of typical controls you will encounter in the user interface of our plugins:



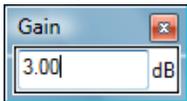
Interacting with Controls

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 plugins. 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

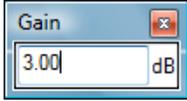
Various mouse movements will let you interact with the controls:

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 plugin):

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

More

Check our [online tutorial](#) for more screenshots and more examples of our plugins user interfaces.

Blue Cat's Widening ParametrEQ 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 EQ settings can be controlled by the following input parameters:

Param id	Name	Unit	Description
General			
dsp.input0	Bypass		Bypass the effect.
dsp.input1	Center	%	Center position in the stereo field for the Mid/ Side matrix: -100% is full left, +100% is full right.
dsp.input2	Limiter On		Activate the output brickwall limiter.
dsp.input3	Oversample		Activate oversampling. When on, the audio signal is oversampled for the internal computation. This makes filter curves symmetric for high frequencies even if you use low sample rates and reduces artifacts when using very high non linear and distortion settings.
dsp.input4	Non Linear	%	When non zero, selects the amount of non linearity of the filters.
dsp.input5	Comp- Dist	%	When non linearity is enabled ("Non- Linear" set to a non zero value), this parameter controls the non- linear behavior of the filters. When set to 0%, the filters have a compression- like behavior and when set to 100% they sound more like tube distortion.
dsp.input6	Clip Reset (M)		Reset output meter clip information.
General (Mid Channel)			
dsp.input7	Pre- gain (M)	dB	Input Gain of the plugin (before entering the filtering stages).
dsp.input36	Post- gain (M)	dB	Output Gain of the plugin (after the filters, but before the output limiter).
Low (Mid Channel)			
dsp.input8	Low Active (M)		Activate/ deactivate low filter.
dsp.input9	Low Frequency (M)	Hz	Cut- off frequency of the low filter.
dsp.input10	Low Gain (M)	dB	Gain of the low shelf filter
dsp.input11	Low Mode (M)		0: Low shelf, 1: Low cut
High (Mid Channel)			
dsp.input12	High Active (M)		Activate/ Deactivate high shelf filter.
dsp.input13	High Frequency (M)	Hz	Cut- off frequency of the high shelf filter.

dsp.input14	High Gain (M)	dB	Gain of the low shelf filter
dsp.input15	High Mode (M)		0: High shelf, 1: High cut
Band filters (Mid Channel)			
dsp.input16	Mid 1 Active (M)		Activate/ Deactivate band filter 1.
dsp.input17	Mid 1 Frequency (M)	Hz	Cut- off frequency of the band filter 1.
dsp.input18	Mid 1 Bandwidth (M)	Hz	Cut- off frequency of the band filter 1.
dsp.input19	Mid 1 Gain (M)	dB	Gain of the band filter 1.
(...)	<i>Repeated for all band filters until band filter 5.</i>		
General (Side Channel)			
dsp.input37	Pre- gain (S)	dB	Input Gain of the plugin (before entering the filtering stages).
dsp.input66	Post- gain (S)	dB	Output Gain of the plugin (after the filters, but before the output limiter).
Low (Side Channel)			
dsp.input38	Low Active (S)		Activate/ deactivate low filter.
dsp.input39	Low Frequency (S)	Hz	Cut- off frequency of the low filter.
dsp.input40	Low Gain (S)	dB	Gain of the low shelf filter
dsp.input41	Low Mode (S)		0: Low shelf, 1: Low cut
High (Side Channel)			
dsp.input42	High Active (S)		Activate/ Deactivate high shelf filter.
dsp.input43	High Frequency (S)	Hz	Cut- off frequency of the high shelf filter.
dsp.input44	High Gain (S)	dB	Gain of the low shelf filter
dsp.input45	High Mode (S)		0: High shelf, 1: High cut
Band filters (Side Channel)			
dsp.input46	Mid 1 Active (S)		Activate/ Deactivate band filter 1.
dsp.input47	Mid 1 Frequency (S)	Hz	Cut- off frequency of the band filter 1.
dsp.input48	Mid 1 Bandwidth (S)	Hz	Cut- off frequency of the band filter 1.
dsp.input49	Mid 1 Gain (S)	dB	Gain of the band filter 1.
(...)	<i>Repeated for all band filters until band filter 5.</i>		

Output

The Widening ParametrEQ plug-in provides visual feedback and measurement of the equalizer behavior with output parameters.

Param id	Name	Unit	Description
dsp.output0	Compression (M)	dB	Compression of the output limiter for the mid channel.
dsp.output1	Peak (M)	dB	Output peak value of the audio signal at the plug-in output. for the mid channel
dsp.output2	Clip (M)		Clip information for the audio signal at the plug-in output for the mid channel.
dsp.output3	Compression (S)	dB	Compression of the output limiter for the side channel.
dsp.output4	Peak (S)	dB	Output peak value of the audio signal at the plug-in output for the side channel.
dsp.output5	Clip (S)		Clip information for the audio signal at the plug-in output for the side channel.

Note: the param id field is used when designing a new skin. See the [skins section](#) of this manual for more information.

Blue Cat's Widening ParametrEQ Curves

The Widening ParametrEQ plug-in also provides visual feedback about the response curve of the equalizer with output curves:

Curve id	Name	Description
Mid Channel		
dsp.output_curve0	Frequency Response	Global frequency response of the equalizer.
dsp.output_curve1	Frequency Response (dB)	Global frequency response of the equalizer (decibels)
dsp.output_curve2	Low Frequency Response (dB)	Frequency response of the low shelf filter.
dsp.output_curve3	High Frequency Response (dB)	Frequency response of the high shelf filter.
dsp.output_curve4	Mid 1 Frequency Response (dB)	Frequency response of the band pass filter 1.
dsp.output_curve5	Mid 2 Frequency Response (dB)	Frequency response of the band pass filter 2.
dsp.output_curve6	Mid 3 Frequency Response (dB)	Frequency response of the band pass filter 3.
dsp.output_curve7	Mid 4 Frequency Response (dB)	Frequency response of the band pass filter 4.
dsp.output_curve8	Mid 5 Frequency Response (dB)	Frequency response of the band pass filter 5.
Side Channel		
dsp.output_curve9	Frequency Response	Global frequency response of the equalizer.
dsp.output_curve10	Frequency Response (dB)	Global frequency response of the equalizer (decibels)
dsp.output_curve11	Low Frequency Response (dB)	Frequency response of the low shelf filter.
dsp.output_curve12	High Frequency Response (dB)	Frequency response of the high shelf filter.
dsp.output_curve13	Mid 1 Frequency Response (dB)	Frequency response of the band pass filter 1.
dsp.output_curve14	Mid 2 Frequency Response (dB)	Frequency response of the band pass filter 2.
dsp.output_curve15	Mid 3 Frequency Response (dB)	Frequency response of the band pass filter 3.
dsp.output_curve16	Mid 4 Frequency Response (dB)	Frequency response of the band pass filter 4.
dsp.output_curve17	Mid 5 Frequency Response (dB)	Frequency response of the band pass filter 5.

Note: the curve id field is used when designing a new skin. See the [skins section](#) section for more information.

Plugin Settings

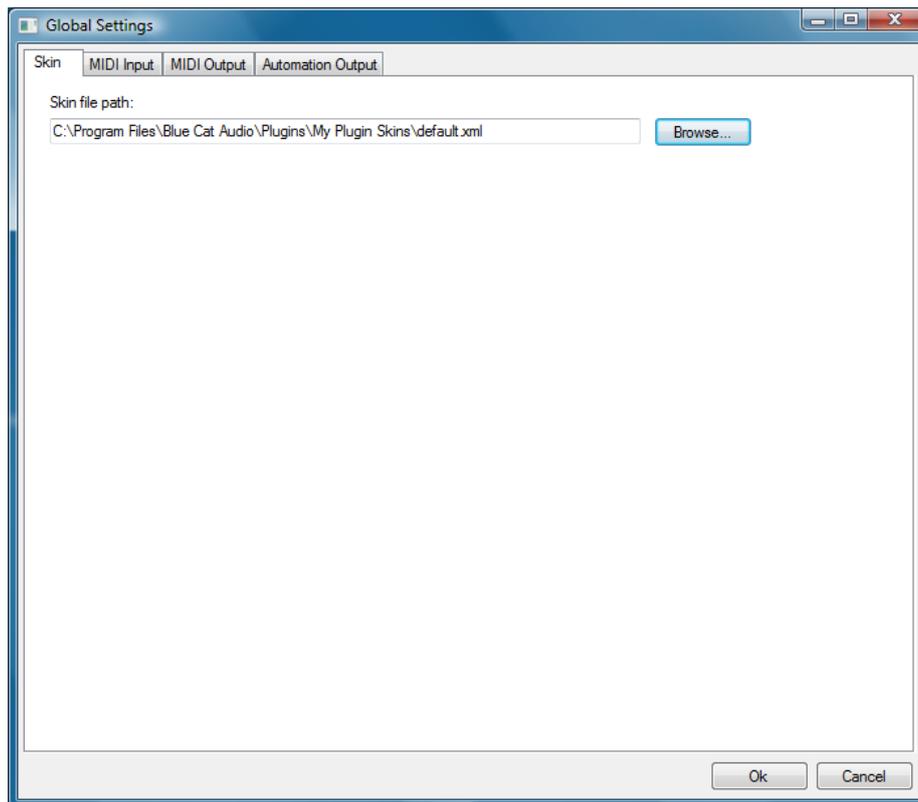
In addition to the controls offered in the main user interface, Blue Cat's Widening ParametrEQ has various settings that let you fine tune the behavior of the plugin. You can choose to change these settings either for the current preset or globally for all instances of the plugin.

The Global Settings Window

The settings available in this window apply to all instances of the plug-in, for all presets. Consider these settings as “default” settings.

Global Skin

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.

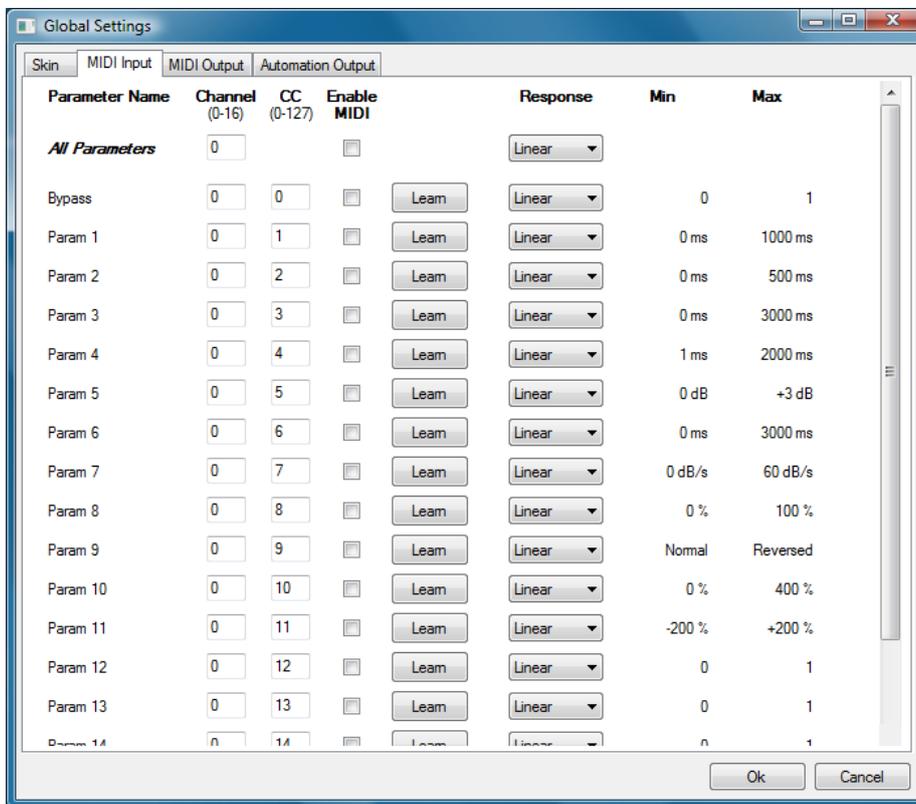


Global MIDI Input Settings

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 following settings are available for each plug-in 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.
- Enable MIDI: enable/ disable the MIDI control of the parameter.
- Response: response curve of the MIDI control: from very fast to slow control.
- Min: minimal value of the parameter when MIDI controlled.
- Max: Maximum value of the parameter when MIDI controlled.



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

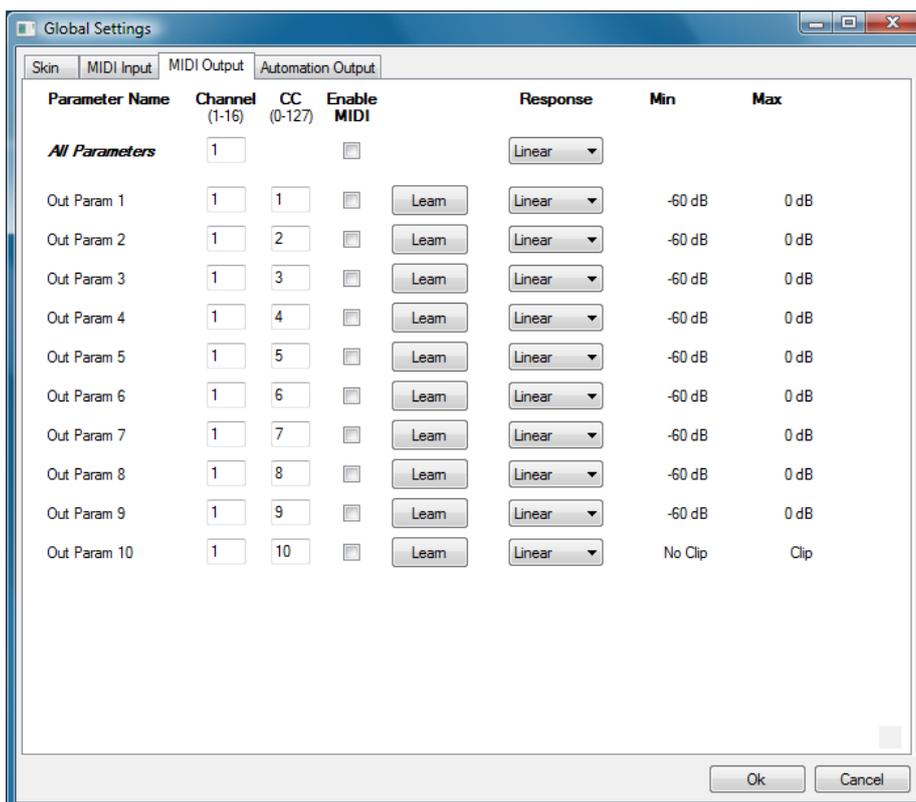
Note: if the Min value is higher than the Max value, the response curve will be reversed: increasing the MIDI controller value will decrease the parameter value.

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:



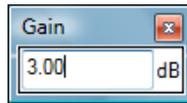
Global MIDI Output Settings

You can set the same properties for the output parameters: they may trigger MIDI CC messages when modified. Since it's output, you cannot set the channel to MIDI Omni, you must choose a channel:



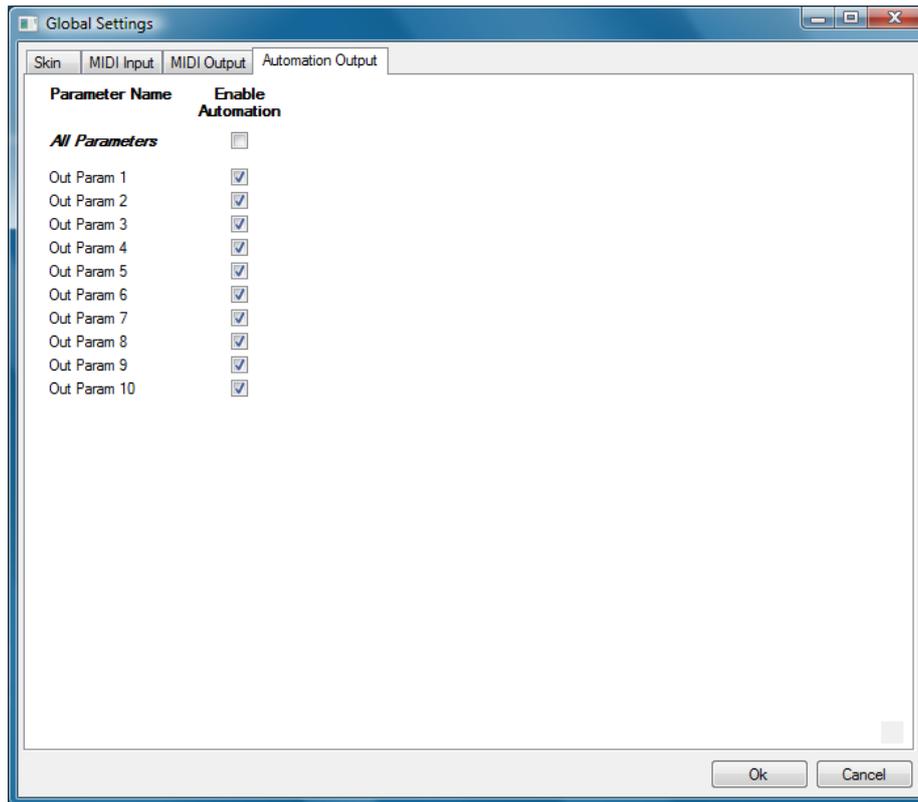
Note:if the Min value is higher than the Max value, the response curve will be reversed: increasing the MIDI controller value will decrease the parameter value.

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 Automation Output Settings

If your host application does not let you choose which parameters to record as automation curves, you may need to choose the automation enabled parameters in the plugin itself. In this pane you can decide which output parameters of the plugin will record automation, for all instances of the plugin:



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

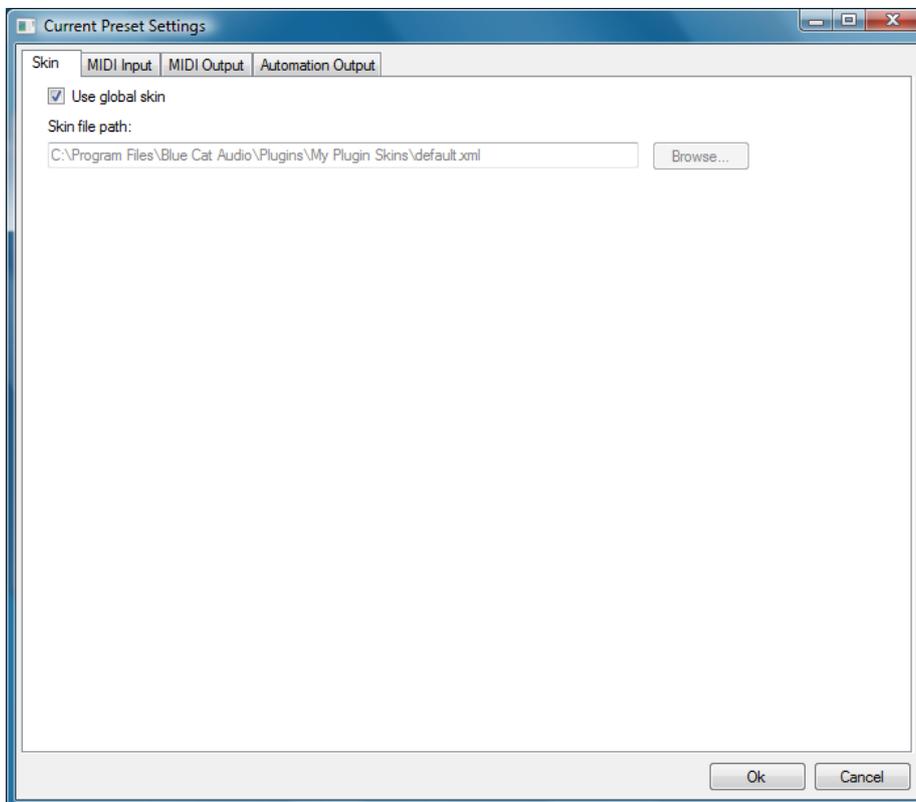
All parameters are disabled by default. Click on the check box to enable/ disable automation for a parameter.

The Current Preset Settings Window

This window lets you change the settings for the current preset of the current plug- in only.

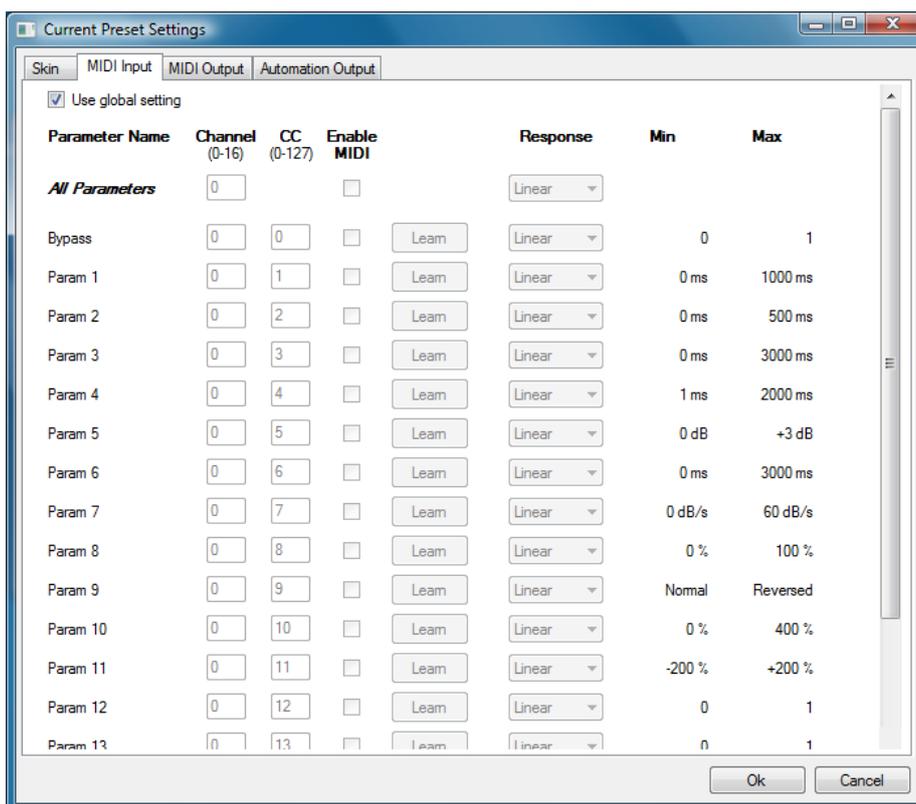
Preset Skin

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 MIDI Input Settings

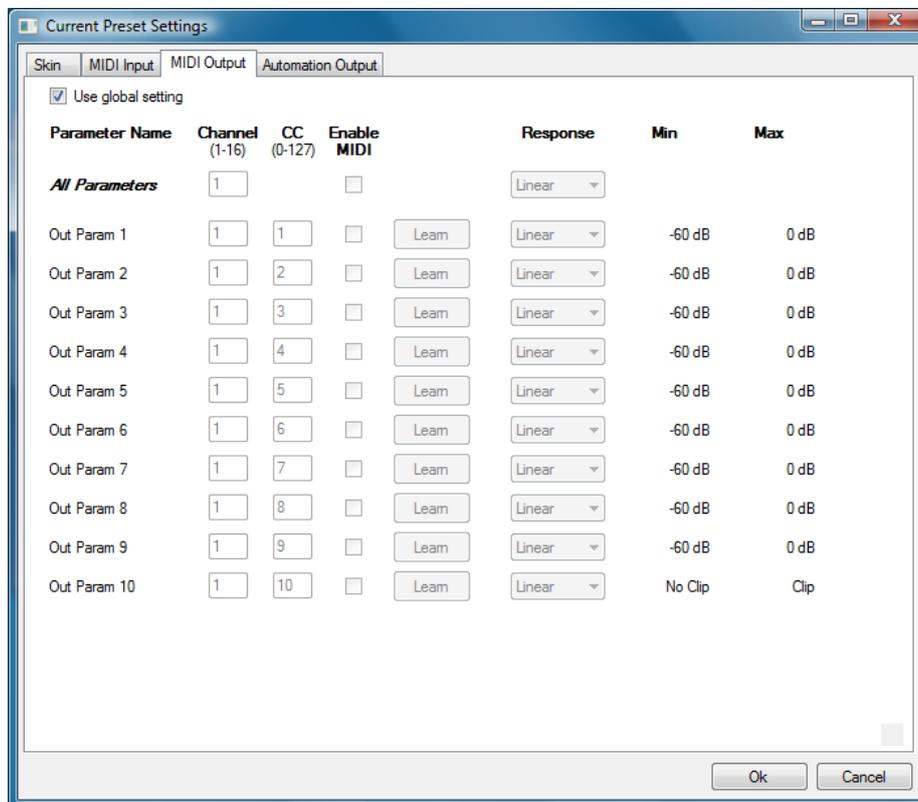
Use the global settings or override them for the current preset. The parameters are the same as for the [global MIDI input settings](#).



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

Preset MIDI Output Settings

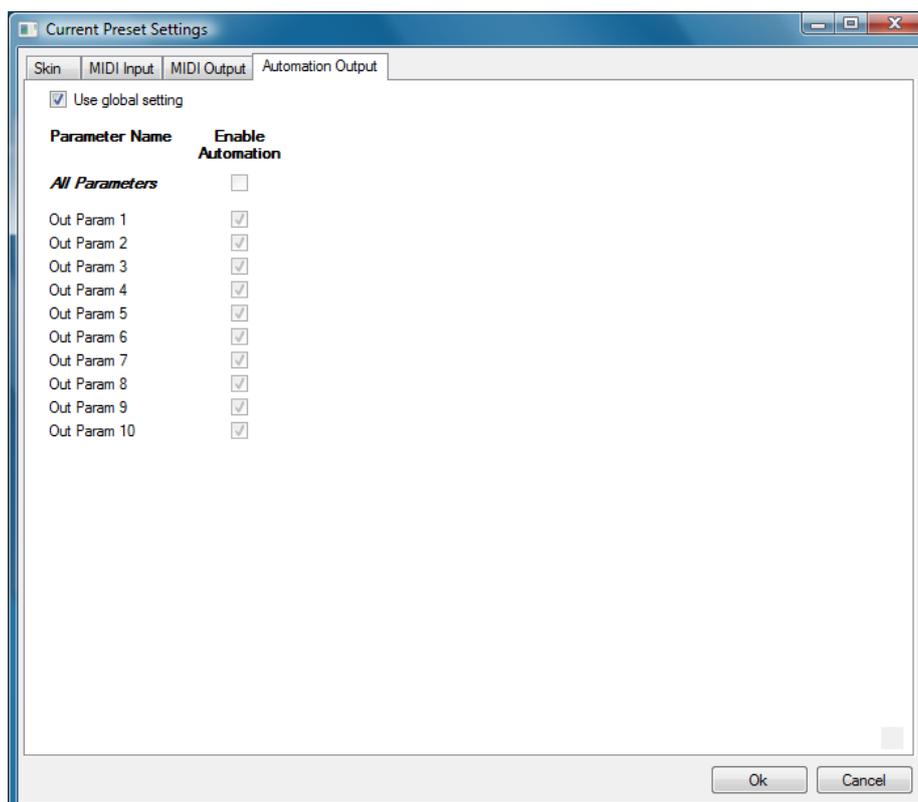
Use the global settings or override them for the current preset. The parameters are the same as for the [global MIDI output settings](#).



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

Preset Automation Output Settings

Use the global settings or override them for the current preset. The parameters are the same as for the global automation output settings:



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

About Skins

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

[http:// www.bluecataudio.com/ Skins/ Product_WideningParametrEQ](http://www.bluecataudio.com/Skins/Product_WideningParametrEQ)

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

Changing the Skin

You have two ways to change the skin of your plug-in: you can change the default (or 'global') skin in the [global settings](#), 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, whereas the current preset skin only applies to the current preset of the current plug-in instance.

See the main menu for more information about how to access these options.

On some hosts 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.

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](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](#).

Automation Output

When I use the plugin, my host application is slowed down and I get audio drop-outs. How can I solve this problem?

If your host application does not let you select the parameters for which you want to record automation, it might be doing some extra work for handling the output parameters generated by the plugin. A solution is to disable the output parameters you do not use in the Preset or Global settings/ Automation Output pane.

When I use the plugin, my host application draws many automation curves on the current track and yet I have not touched any control on the plugin. How can I avoid that?

If your host application does not let you select the parameters for which you want to record automation, it will record automation for all the output parameters generated by the plugin. You can disable the output parameters you do not use in the Preset or Global settings/ Automation Output pane.

I am trying to record automation curves as shown in the tutorials but it does not work. What do I have to do?

If your host application lets you select the parameters for which you want to record automation, check that the parameters you want to record are enabled. You also need to check that the plugin automation output is enabled for these parameters. Check the Preset or Global settings/ Automation Output pane and select the parameters you want to record.

When I use the plugin in a project, every time I save the project, my application shows it as unsaved right away. How can I solve this issue?

This plugin produces automation output, and some host applications consider that any change to one of the output parameters is a change for the project. In order to solve this problem, and if you do not use the automation output capability of this plugin, you can disable automation output from the plugin settings panel (Global or Preset Settings/ Automation Output pane: uncheck all parameters).

MIDI Output

How can I enable the MIDI output of the plugin?

If your host application supports it, you can choose to send MIDI CC messages based on the output parameters computed by the plugin. The feature is not enabled by default, so you need to go to the current preset settings (of the global settings if you want to enable this for all instances - not recommended) and open the "MIDI output" pane. For each parameter you are interested in, enable MIDI output and select the appropriate channel and CC number. The plugin will then send MIDI messages to the host application. Check our [tutorials](#) for a detailed explanation of MIDI output routing in your favorite host.

Plug-ins Formats

What are DirectX (DX), Audio Unit (AU), RTAS and VST plugins?

VST, Audio Unit, RTAS and DirectX plugins are software components that can be used in "Host" Software (such as Cakewalk Sonar, Steinberg Cubase or Wavelab, Sony Vegas, Logic Pro, Garage Band, Ableton Live, Pro Tools...) in order to perform some MIDI and/ Or Audio real-time Processing tasks. To be more precise what we usually call DirectX plugins is actually a "DirectShow Filter". VST is owned by Steinberg, DirectX by Microsoft while Audio Units is the property of Apple Computers and RTAS is owned by Digidesign.

How can I use your plugins?

Download and install a host software, then download and install the plugins from our page. They will appear in the host "effects" menu. If you are using a DirectX host with our MIDI controllable plugins and they do not show up in your host list, you might need to use our freeware [DXi Manager](#). Note that our plug-ins are sometimes shown in the "MIDI controllable audio effects" or "soft synths" sections in some host applications.

Where can I find a host?

There are many commercial or freeware hosts that will suit your needs. You can find a long list of applications [here](#). You can also use demos of Cubase, Wavelab, Ableton Live, Tracktion, or Sonar software, which are usually available on the companies websites. On the Mac, Garage Band is part of the system and can be also used to host our Audio Unit plugins.

What are the main differences between DX, VST, RTAS and Audio Units?

VST is a protocol that works on several platforms (Mainly Windows, MacOS, BeOS, and some Linux platforms use it as well) whereas DirectX is Microsoft Windows only, and Audio Units are available only on the Mac. RTAS is available on Mac and PC,

but only for Pro Tools products (Digidesign). VST, RTAS and Audio Units are dedicated to Audio processing whereas DirectX (DirectShow) enables you to manage any kind of streamed media (audio video, compressed data...).

What is the difference between DXi and DX effects?

DXi effects are MIDI controllable DirectX plugins. It's the same as DX effects plus MIDI control.

Which version (VST, Audio Unit, RTAS or DX) should I use in my host application?

Here is a list of host software and the version we recommend you to use. Many other applications are supported, check your application user manual to choose the best version (AU stands for "Audio Unit" and DX for "DirectX"):

Host Application	Plug- in Version
Cakewalk Products (Sonar, Project5...)	DX
Sony Products (Vegas, ACID, Soundforge)	DX for old versions, VST for new
Steinberg Products (Cubase, Nuendo, Wavelab)	VST (Mac or PC)
Ableton Live	VST (Mac or PC)
Adobe Audition	any
EnergyXT	VST
Magix Samplitude	VST
Digidesign Pro Tools	RTAS if available, any otherwise (RTAS adapter required)
Apple applications (Logic Pro, Logic Express, Garage Band...)	AU
...	

In general, we recommend using VST over Audio Unit on Mac (when both are supported), particularly for the plugins that can output automation or MIDI CC messages.

Where can I find more information about this topic?

- www.steinberg.net
- www.microsoft.com
- www.kvraudio.com
- www.apple.com
- www.digidesign.com

Installation

I have installed my software and it is not listed as an application. Why? What can I do? How can I launch it?

Most software you can purchase on this website is plugins for host applications. It means you need another application to use it. See the "Plug- ins Formats" section in this FAQ for more information.

I have installed my plug- in and it does not show up in my host application. What can I do?

First check that you application supports DirectX, Audio Unit or VST plug- ins.

If you are using the DirectX version, check that your host application supports DXi plug- ins (MIDI enabled DirectX plug- ins). If it does not, it may remove it from the DirectX plug- ins list (some applications such as Sony Vegas 5 and Cool Edit Pro are known to do this). In this case, use our [DXi Manager free utility](#) and disable the MIDI capabilities of the plug- in. You may need to reinstall the software again before it shows up into your host application. For more information about this topic please read our [DXi in Sony Vegas](#) tutorial (it is applicable to other applications than Sony Vegas).

If you are using the Direct X version and your host application supports DXi, check that the plug- in does not appear in the 'virtual synth' or 'synthesizers' category. If you wish not to use the MIDI capabilities of the plug- in and use it as a regular Direct X plug- in, you can download the freeware [DXi Manager](#) and disable the MIDI capabilities of the plug- in.

Why are there two plug-ins called xxxx(Mono) and xxxx(Stereo) installed ?

"Mono effects" (which are effects that do not make any difference between left and right channels) are bundled this way for performance reasons. Some developers just deliver a stereo Version which also processes (twice) mono streams. The "(Mono)" plug-in is to be used with mono streams, and the (Stereo) one with stereo streams. The effect itself is the same in both cases but the number of processed channels is different: this may drastically improve performance for CPU intensive plug-ins.

How do I uninstall my plug-ins?

Open the Windows configuration panel/ Add Remove Programs, and choose 'Remove' on the corresponding plug-in. If you have installed the VST plug-in zip file version, just delete the corresponding dlls.

Why do your plugins need an installer on Windows? Do they modify the registry or system settings? Why not providing just a dll?

Our plugins require several additional files for default settings, skins and miscellaneous data. We provide an installer for our customers convenience. Our installers do not modify the system settings or the Windows registry, except for the DirectX versions registration. Our installers won't harm your system.

Software Version

How do I know the version of the plug-in I am using?

You can see the version information in the about box: right click on the background of the plug-in user interface and select "About". The product version is also available in the Windows Add/ Remove Programs Window.

Why do newer versions of a plug-in override older ones (they have exact same name and IDs)?

Because newer versions improve previous ones. When a new version is released, older versions are not supported anymore. In some cases the new versions may be installed as new products (compatibility reasons, major changes...), but it is explicitly documented on the product page.

A new minor version of a product I purchased some time ago is available. Where can I download the update?

The new version can be downloaded from the same place where you downloaded the original version. All information is contained in the email you received when you purchased the product. Your registration number has not changed either.

Upgrade

A new minor version of my plugin has been released. Where can I download it?

When you purchased the plugin, an email containing the information to download and register your software has been sent to you. You can download the new version from the exact same location as the first time.

I have downloaded a new version, do I need to uninstall the previous version?

No, you don't, except if it's specified on the product page, in the "history" section. Just run the installer and it will upgrade your software.

Automation

What is "Parameters Automation"?

The parameters of an effect can be automated in most host software. It means that you can record the changes you do during playback or recording so that it's replayed when playing back again. It's a way of sequencing parameters changes the same way you do with Audio or MIDI data.

What is "Smooth Update"?

When changing parameter values in real time or replaying a song where parameters have been automated, our plugins compute intermediate values between parameter changes in order to avoid "clicks" and "pops" that may occur otherwise. It results in a non audible smooth parameters update and lets you freely use automation or MIDI control to change the effects in a song.

Do your plug-ins support MIDI Control?

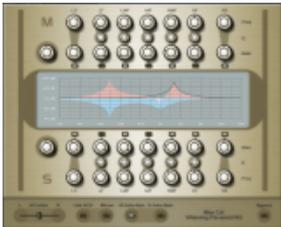
Yes they do. They offer precise control over the mapping of MIDI Control Change (CC) messages to parameter values: you can adjust both the channel and CC number as well as the response curve of the control. Since some of our plug-ins are also capable of creating MIDI CC from the audio signal, they can all be connected for real time signal- dependent audio effects. See our [MIDI Control in Sonar](#) tutorial for an example.

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

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 Widening ParametrEQ [skins page](#) to get the latest skins.

Copper



Product: [Widening ParametrEQ](#)

Description: A completely re- designed layout for the Widening ParametrEQ. *[Note: this skin is not compatible with Blue Cat's Widening ParametrEQ 3]*

Author: Stefan Windus

Download: [Skin Copper.zip](#)

Silver



Product: [Widening ParametrEQ](#)

Description: New layout and silver color for the Widening ParametrEQ. *[Note: this skin is not compatible with Blue Cat's Widening ParametrEQ 3]*

Author: Stefan Windus

Download: [Skin Silver.zip](#)

Tutorials

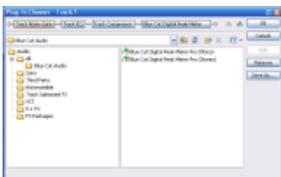
Many [Tutorials](#) are available on our website. They cover a wide range of topics and host applications. You will find below a list of tutorials that are related to the Blue Cat's Widening ParametrEQ plugin. An updated list is also available [online](#).

Tutorial - Customize the Colors of your Plugins



This tutorial shows how to customize the FreqAnalyst Pro plugin's user interface by changing the color of the displayed curves. It is a very basic skinning tutorial. All you need to know is how to exp...[\[Read More...\]](#)

Tutorial - Using DXi plug- ins in Sony Vegas



This tutorial will teach you how to use any DXi plug- in in Sony Vegas: Sony Vegas does not support MIDI automation, so if your plug- in supports the MIDI Dxi protocol, it is removed from the plug- ins l...[\[Read More...\]](#)

Tutorial - Real Time (Side Chain) Dynamic Equalizing



This tutorial shows how to perform side chain dynamic equalizing with the Dynamics plugin product and the Stereo ParametrEQ stereo equalizer plugin. The destination track can of course be the same ...[\[Read More...\]](#)

Tutorial - Export Plugin Presets to Share them with the Community



This tutorial shows you how to export your presets in order to share them with the community on the Blue Cat Audio website. This tutorial uses Blue Cat's Stereo Triple EQ for the demonstration bu...[\[Read More...\]](#)

Tutorial - Analyze and Enhance the Spectrum of your Mix



This video tutorial shows how to use Blue Cat's FreqAnalyst Pro plugin to check the spectrum of your mix and help you modify it. The gearwire.com team demonstrates some of the functionalities of the...[\[Read More...\]](#)

Tutorial - Mixing Session With Blue Cat Audio Plugins



This video tutorial shows how to use Blue Cat Audio plugins in a simple mixing session. The gearwire.com team demonstrates the use of Blue Cat's Dynamics, ParametrEQ and Widening ParametrEQ. ...[\[Read More...\]](#)

Tutorial - Getting Started with Plugins User Interface



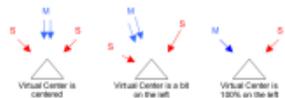
Get used to the user interface features of Blue Cat Audio products! They have been designed for an optimal workflow, so here are the tips and tricks to save time. All these functionalities are explain...[\[Read More...\]](#)

Tutorial - Using MIDI Control in Sonar



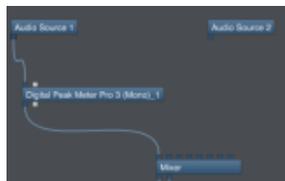
This tutorial will help you understand how to use parameters MIDI control in Cakewalk Sonar. It is applicable to any DXi plug-in (MIDI enabled DirectX plug-in)...[\[Read More...\]](#)

Tutorial - Mid Side Processing



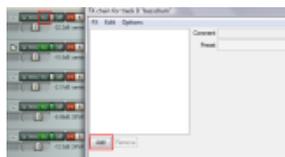
Mid / Side processing explained. Download this tutorial as a pdf file ...[\[Read More...\]](#)

Tutorial - Using MIDI Connectivity in a Modular Host (Plogue Bidule)



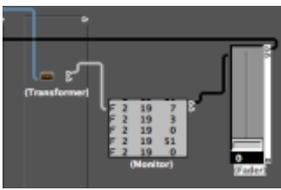
This tutorial shows you how to use the MIDI connectivity of our plugins in a modular host such as Plogue Bidule. We are using the Mac version of Bidule in this tutorial. The scenario here is very sim...[\[Read More...\]](#)

Tutorial - Using Blue Cat Audio plugins connectivity in Reaper



This tutorial shows how to use our plugins MIDI connectivity within Reaper. We use Blue Cat's Dynamics plugin as an example, but you can use any other audio plugin which provides output parameters, su...[\[Read More...\]](#)

Tutorial - Connecting plug-ins together in Logic for advanced side chain effects



This tutorial shows how to use the connectivity capabilities of our plugins within Logic. We use Blue Cat's Peak Meter Pro plugin (DPMP) as an example, but you can use any other audio plugin which provides output...[\[Read More...\]](#)

Tutorial - Using Blue Cat Audio plugins connectivity in Pro Tools



This tutorial shows how to use the MIDI connectivity of our plugins within Pro Tools. We use Blue Cat's Peak Meter Pro plugin as an example, but you can use any other audio plugin which provides output...[\[Read More...\]](#)

Tutorial - How to Use the Free Presets Available on this Website



This tutorial shows you how to get and load free presets for your favorite Blue Cat Audio plugin. This tutorial uses Blue Cat's Dynamics for the demonstration but is applicable to all our plugins...[\[Read More...\]](#)

Updates

As you can see in the [history log](#) below, we care about constantly updating our products in order to provide you with the latest technology available. Please visit often our website to check if Blue Cat's Widening ParametrEQ has been updated, or subscribe to our [Newsletter](#) to keep you informed with the latest news about our products.

Versions History

- | | |
|------------|---|
| 2010/05/04 | <p>V3.5</p> <ul style="list-style-type: none"> ◦ RTAS plugin format support for Pro Tools (Mac and Windows). ◦ 64- bit applications support for Windows DX and VST under Windows x64. ◦ Mac AU 64- bit format support (compatible with 64- bit Logic 9.1 on Snow Leopard) ◦ Space bar does not trigger plug- in buttons anymore (avoids conflict with transport control in most applications). ◦ Demo version now displays a nag screen only once per session, and only when opening the user interface of the plug- in. ◦ Fixed MIDI learn issues. ◦ Mac: fixed user interface crashes in some hosts under Snow Leopard. ◦ Mac: fixed keyboard/ mouse focus issues in some hosts. ◦ Mac: fixed multiple screens issue. ◦ Mac- AU: fixed settings lost issue when doing offline rendering in some applications. ◦ Mac AU: output parameters routing now works for more than one instance in Logic Pro's Environment. ◦ Mac AU: fixed output parameters that could exceed defined range and not record properly as automation curves. |
| 2009/05/05 | <p>V3.41</p> <p>Mac VST update: fixed incompatibility issues with Cubase 5 on Mac.</p> |
| 2009/03/09 | <p>V3.4</p> <ul style="list-style-type: none"> ◦ Mac Audio Unit support. ◦ Mac VST Support. ◦ New Windows installer (you should uninstall any previous version before installing this new one). ◦ New documentation. ◦ Minor user interfaces changes. |
| 2008/03/28 | <p>V3.3</p> <ul style="list-style-type: none"> ◦ Skins loading performance improvement. ◦ Misc user interface performance enhancements. ◦ Improved parameters display in host application and settings window. ◦ Fixed a crash on certain configurations while opening the global settings window. ◦ Settings window is now faster to open. ◦ Installer now registers the VST plugin to avoid registration issues in some host applications. |
| 2007/09/17 | <p>V3.2</p> <ul style="list-style-type: none"> ◦ Undo/ Redo. ◦ Load/ Save presets in a host- independent format: you can now share presets between the directX and VST versions. ◦ New toolbar to access main functionalities. ◦ Blue Cat's Skinning Language 1.3.4 support. |

2007/06/04

V3.1

- Frequency ranges have been enlarged.
- Skins update: some sliders did not have the color of the corresponding channel.
- Bug fix (VST): in some hosts, when a loading a project the parameters where not properly restored and the response curve was flat.
- Bug fix (skinning): knobs did not display the disabled state image.

2007/05/21

V3.0

- New audio engine:
 - Non- linear behavior with analog compression and distortion at each EQ stage.
 - Output brickwall limiter for output protection or compression effect.
 - Oversampling capability for optimal sound quality, even with low sampling rates.
 - New low cut and high cut filters.
 - Smooth bypass: activate each band of the EQ with absolutely no noise.
- New GUI design and Blue Cat's Skinning language 1.3.2 support:
 - Streamlined user interface with simplified controls for optimal workflow.
 - Zooming: adjust the dB range of the EQ and the response curve graph.
 - Frequency response measurement: new mouse coordinates display.
 - New output level meter.
 - Window Opacity Management: make the plugin window transparent.
- Less restricted demo version.
- Performance improvements:
 - Faster skin loading.
 - Reduced memory consumption when several instances are loaded.
- *Note:* due to the number of changes in this new version, it is installed as a new plug- in. If you have a previous version installed and do not want to keep it, just uninstall it manually.

2006/11/29

V2.1

- Now supports Blue Cat's Skinning language 1.2.4.
- Parameters can be fine tuned when the shift key is down, which offers a .1 dB gain resolution.
- CPU efficiency improvement: no processing occurs when input is silent.
- Settings window now loads faster.
- (Bug fix): in some plug- in adapters (such as FxPansion's VST to RTAS adapter) the GUI did not display properly when first loaded.
- (Bug fix): when reinstalling the software in another directory, the "skin not found" message was displayed.

2006/10/18

V2.0

- Brand new skinnable graphic user interface using [Blue Cat's skinning language](#) v1.2.3.
- Advanced MIDI control with customizable parameters curve response and MIDI learn.
- Performance and precision improvement of the filters algorithms.
- All parameters can now be fine tuned thanks to a text- edit popup window that appears when double clicking on user interface widgets.
- User Manual accessible from plug- in UI.
- DX version: the factory presets are now available from the host standard presets view (for hosts that support static presets)
- *Warning:* because it now supports MIDI events, the DirectX plug- in may appear in the "Synth" or "DXi" category instead of "effects" in some hosts (such as Cakewalk Sonar). If it does not appear in you host, you might want to use our [DXi Manager](#) to de- activate MIDI features.
- *Warning:* this new version breaks the presets compatibility, and is thus installed as a new plug- in. If you have a previous version installed and do not want to keep it, just uninstall it manually.

2005/06/13

V1.1

Brand new GUI based on customer feedback.

2005/05/19

V1.0

First release.

Thanks again for choosing our solutions!

See you soon on www.bluecataudio.com!



BLUE CAT AUDIO