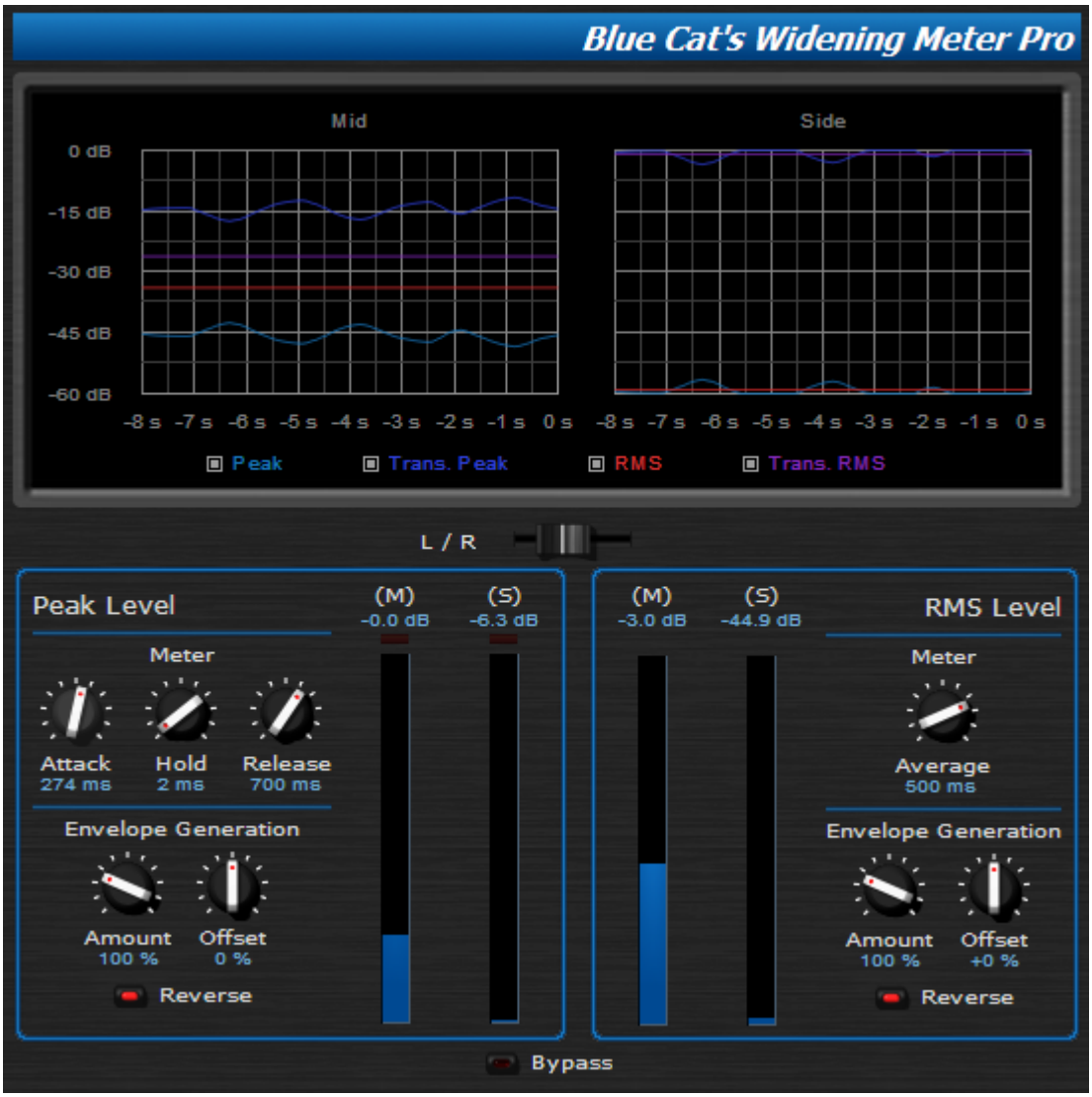
Blue Cat's Widening Meter Pro User Manual



BLUE CAT AUDIO

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The Widening Meter Pro Effect

Description

Blue Cat's Widening Meter Pro is a unique tool. It lets you monitor the Peak and RMS envelope of the mid and side parts of the audio signal and can be used to control other effects with this information:

- Monitor the envelopes evolution over time on a graph.
- Record the output and transformed output envelopes as automation curves and either assign them to other parameters of other effects or use them as reference information about your audio signal.
- Control other effects parameters in real time with these envelopes, thanks to the Widening Meter MIDI Output capability: you can now use any signal of any track to control any parameter of any other effect, in real time!

You can thus achieve real time side chain processing for stereo enhancement very easily. Just download the freeware Gain Suite plug-ins and you are ready to go!

Additional information about stereo widening with mid/side processing can be found in this paper.

Parameters

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

Param id	***Name***	***Unit***	***Description***
dsp.input0	Bypass		Bypass the effect.
dsp.input1	Center	%	Center position in the stereo field for the Mid/Side channels computation -100% is full left, +100% is full right.
dsp.input2	Attack	ms	Attack time for the Peak Follower.
dsp.input3	Hold	ms	Hold time for the Peak Follower.
dsp.input4	Release	ms	Release time for the Peak Follower.
dsp.input5	Reverse		Reverse the transformed output peak envelope.
dsp.input6	Amount	%	Amount for the transformed output peak envelope.
dsp.input7	Offset	%	Offset for the transformed output peak envelope.
dsp.input8	Clip Reset		Reset the clip output attribute.
dsp.input9	Max Reset		Reset the maximum peak output attribute.
dsp.input10	Average	ms	RMS computation time.
dsp.input11	Reverse		Reverse the transformed output RMS envelope.
dsp.input12	Amount	%	Amount for the transformed output RMS envelope.
dsp.input13	Offset	%	Offset for the transformed output RMS envelope.
dsp.input14	Max Reset		Reset the maximum RMS output attribute.

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

Param id	Name	Unit	Description
dsp.output0	Peak (M)	dB	Peak Envelope (mid channel).
dsp.output1	Transformed Peak (M)	dB	Transformed Peak Envelope (mid channel).
dsp.output2	Clip (M)		The audio signal clipped (mid channel).
dsp.output3	Clip Memory (M)		Memory of the clip information (mid channel).
dsp.output4	Max Peak (M)	dB	Maximum Peak value (mid channel).
dsp.output5	RMS (M)	dB	RMS Envelope (mid channel).
dsp.output6	Transformed RMS (M)	dB	Transformed RMS Envelope (mid channel).
dsp.output7	Max RMS (M)	dB	Maximum RMS value (mid channel).
dsp.output8	Peak (S)	dB	Peak Envelope (side channel).
dsp.output9	Transformed Peak (S)	dB	Transformed Peak Envelope (side channel).
dsp.output10	Clip (S)		The audio signal clipped (side channel).
dsp.output11	Clip Memory (S)		Memory of the clip information (side channel).
dsp.output12	Max Peak (S)	dB	Maximum Peak value (side channel).
dsp.output13	RMS (S)	dB	RMS Envelope (side channel).
dsp.output14	Transformed RMS (S)	dB	Transformed RMS Envelope (side channel).
dsp.output15	Max RMS (S)	dB	Maximum RMS value (side channel).

The param id field is used when designing a new skin. See the Skins section for more information.

Curves

The Widening Meter Pro also provides visual feedback about the input signal with output curves. The Output curves are the following:

Curve id	Name	Units	Description
dsp.output_curve0	Peak (M)	dB/s	Peak Envelope of the mid channel over time.
dsp.output_curve1	Transformed Peak (M)	dB/s	Transformed Peak Envelope of the mid channel over time.
dsp.output_curve2	RMS (M)	dB/s	RMS Envelope of the mid channel over time.
dsp.output_curve3	Transformed RMS (M)	dB/s	Transformed RMS Envelope of the mid channel over time.
dsp.output_curve4	Peak (S)	dB/s	Peak Envelope of the side channel over time.
dsp.output_curve5	Transformed Peak (S)	dB/s	Transformed Peak Envelope of the side channel over time.
dsp.output_curve6	RMS (S)	dB/s	RMS Envelope of the side channel over time.
dsp.output_curve7	Transformed RMS (S)	dB/s	Transformed RMS Envelope of the side channel over time.

Controls

Blue Cat's Widening Meter Pro plug-in uses a skinnable user interface. The appearance and behavior of the user interface can thus change a lot depending on the chosen skin. This section will expose you the different controls you may encounter in these skins and the way they can behave. A well designed skin should be easy to use anyway.

You can control the plug-in via MIDI Control Change messages as well and customize the way you interact with MIDI messages. See the main menu section for more information.

Controls examples

Here are a few examples of possibles controls you may encounter in the user interface:

				
fader	slider	knob	button	Text control

General Behavior

Setting the keyboard focus on a control (so that it receives key events) 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).

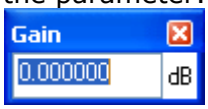
It is usually made obvious to you to know the active surfaces of the skin (the places where you can click): the mouse cursor usually changes when you can do something on a control. In the default skins delivered with the plug-in, the cursor changes to a small hand to tell you when your mouse is over an active control.

Keys

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 us the arrow keys):

Common behavior

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

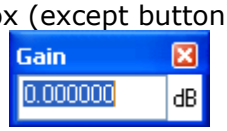
Key	Action
d	Set to default value (same as mouse right click)
e	Opens the 'fine tuning' window to precisely set the parameter: 

Button specific behavior

Key	Action
Space Bar	Pushes the button
Enter	Pushes the button

Mouse

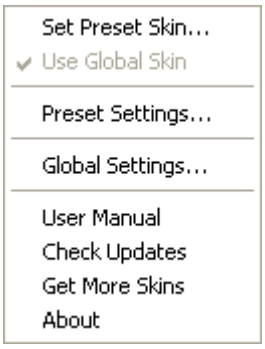
You can change the value of the parameter with the mouse:

Mouse Event	Action
Left Click	Acquire focus and start dragging or push (button)
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)

Main Menu & Settings

The Main Menu

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



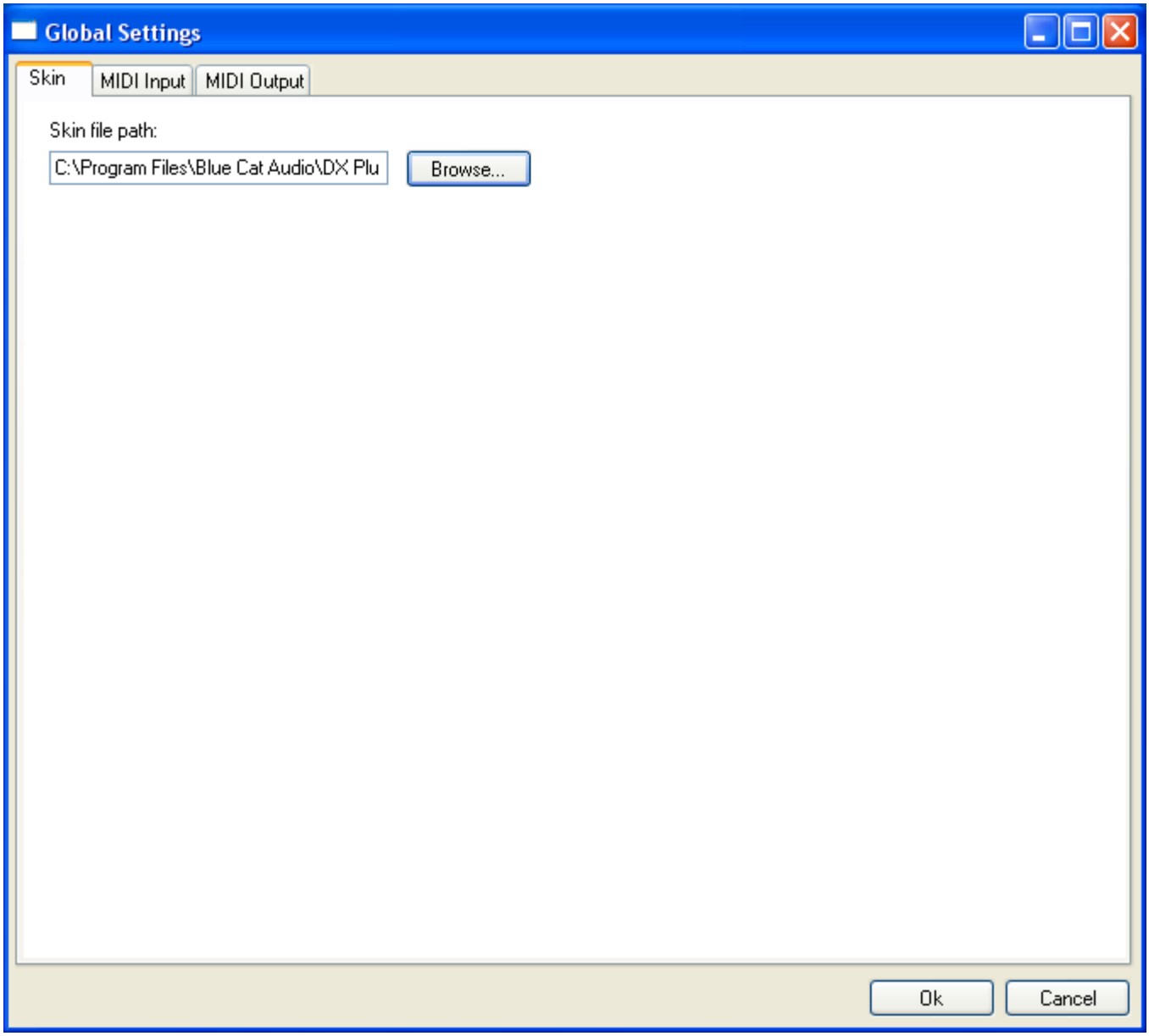
The Commands are the following:

- 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.
- Presets Settings: open the presets settings window. It enables you to change the skin and MIDI settings for the current preset.
- Global Settings:
- 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.

The Global Settings Window

The settings you change 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

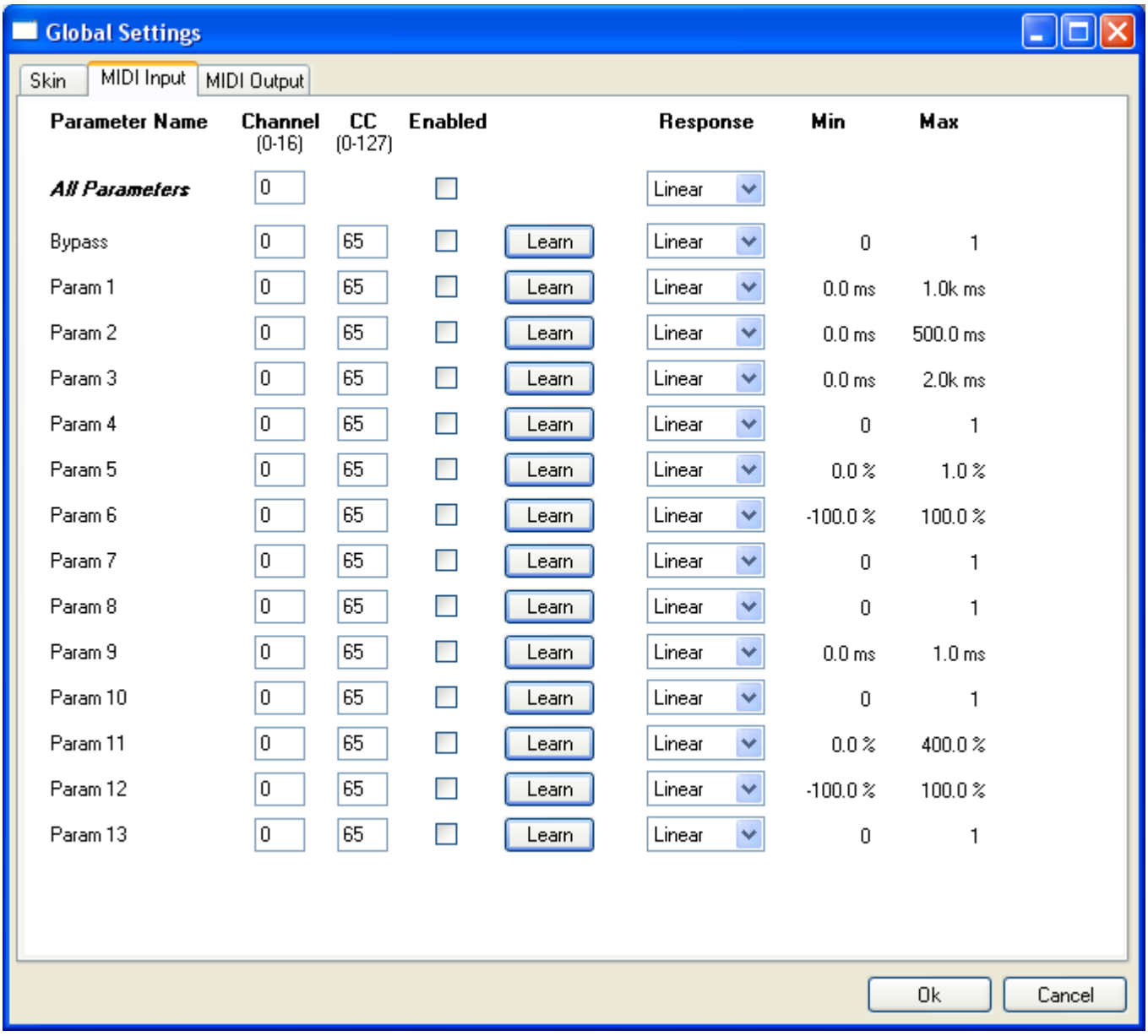
For each parameter you can define a default MIDI channel and CC number. You can then control the plug-in with an external MIDI controller or one of our plug-ins that generate MIDI messages.

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.

- Enabled: 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.

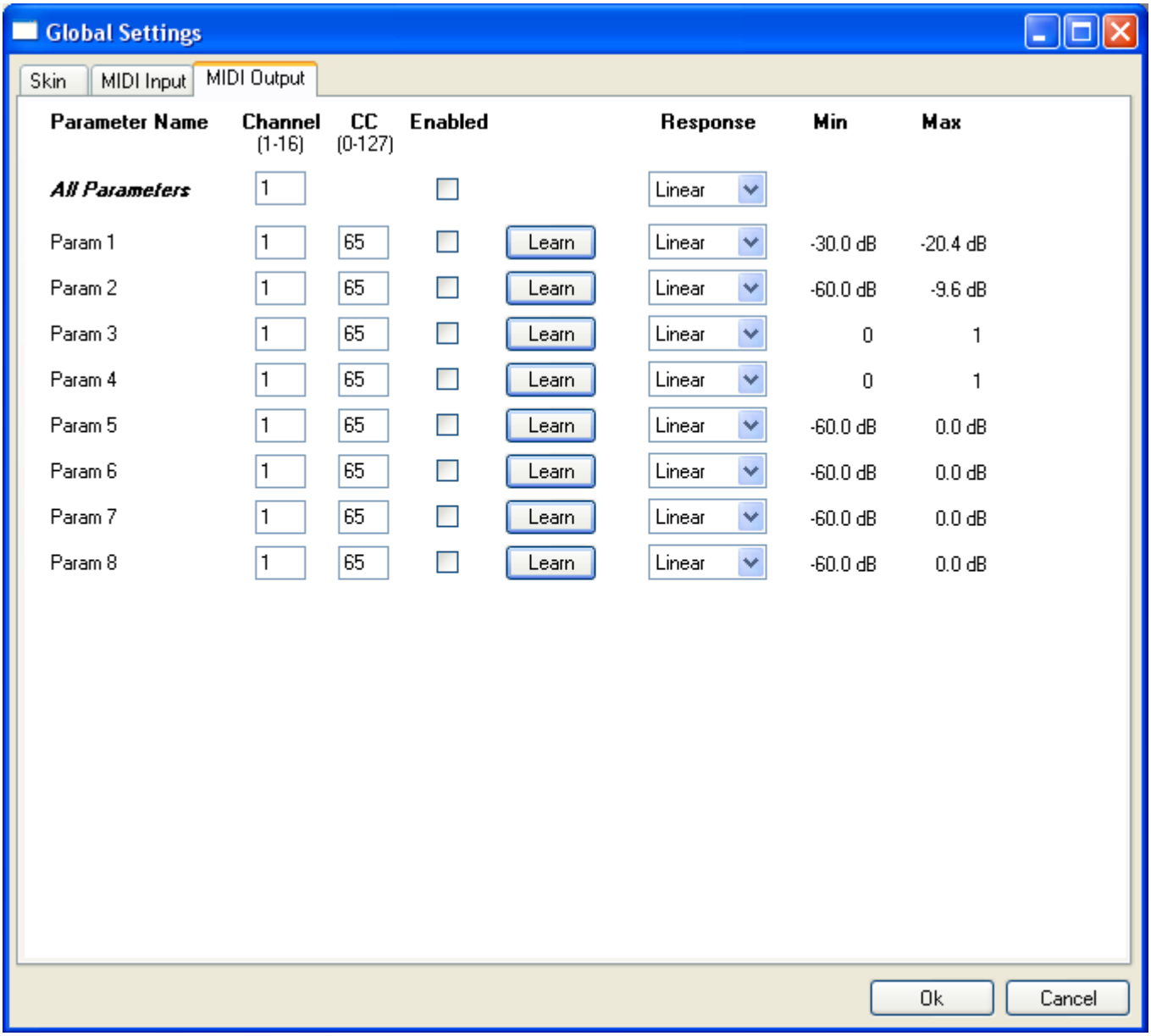


(generic screen shot, does not correspond to the actual plug-in parameters)

Note: if 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:



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

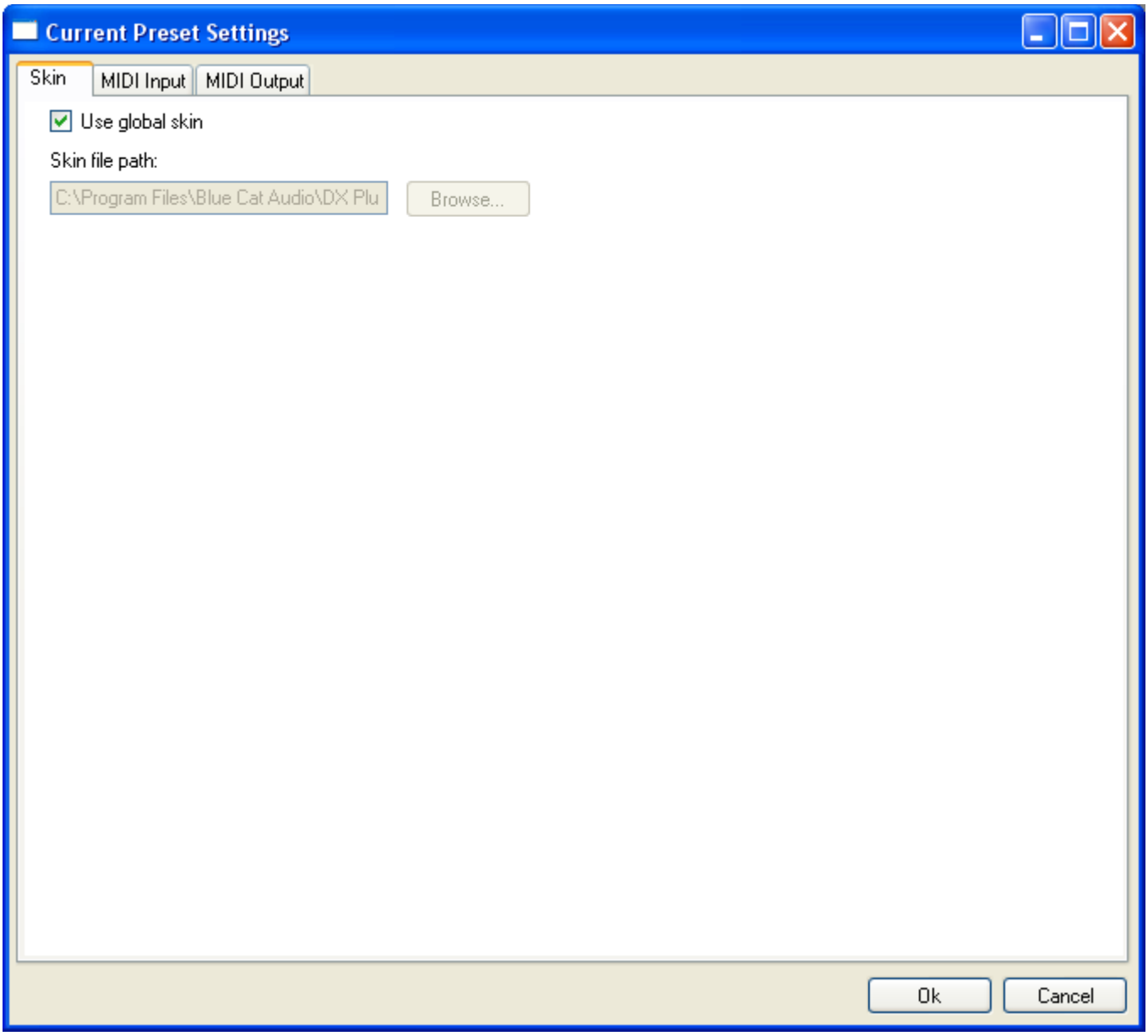
Note: if you double click on the parameter text control boxes for the max and min values, a "fine tuning" edit box will appear and let you change the min and max values with more precision:

Current Preset Settings Window

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

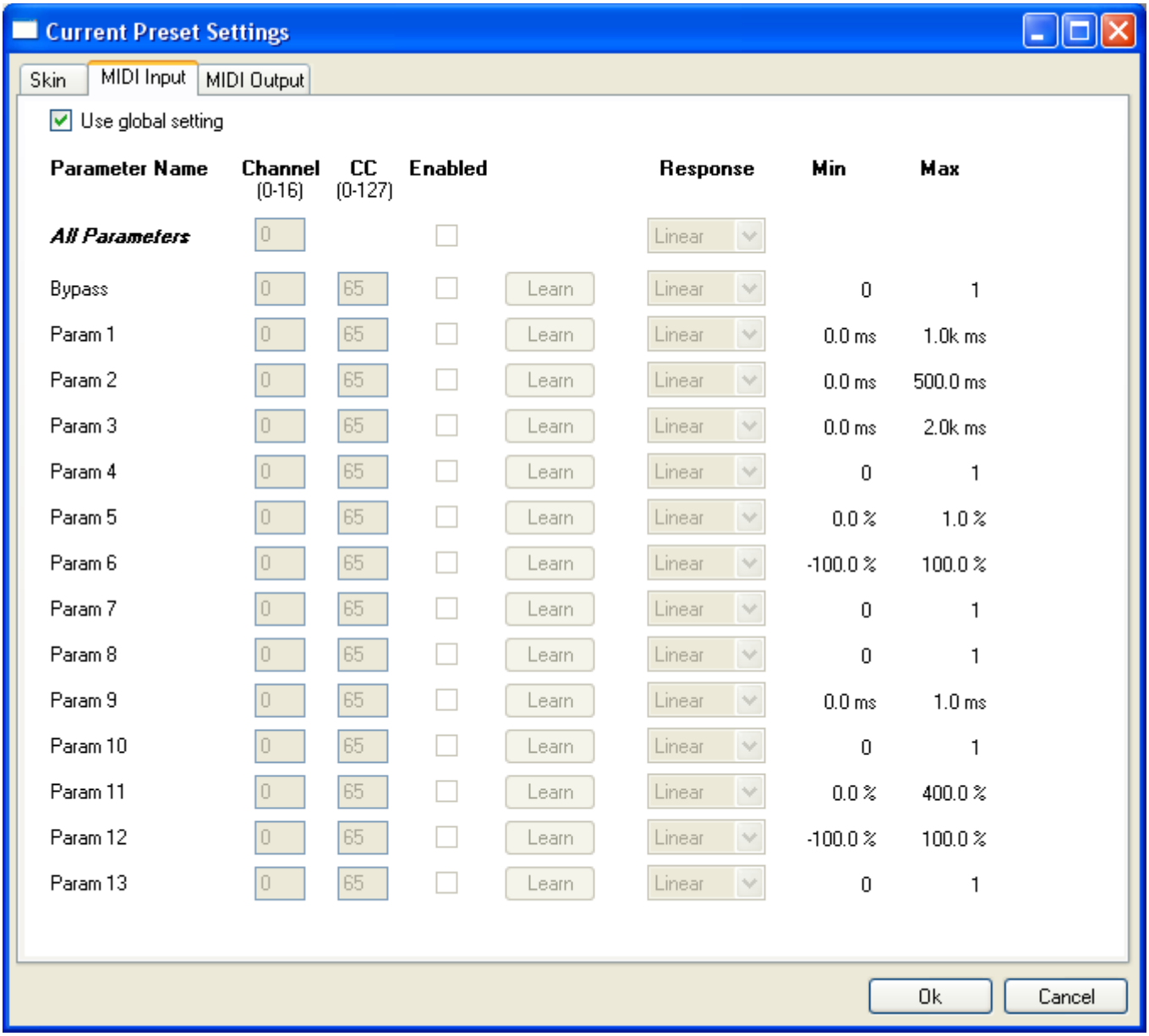
Skin

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.



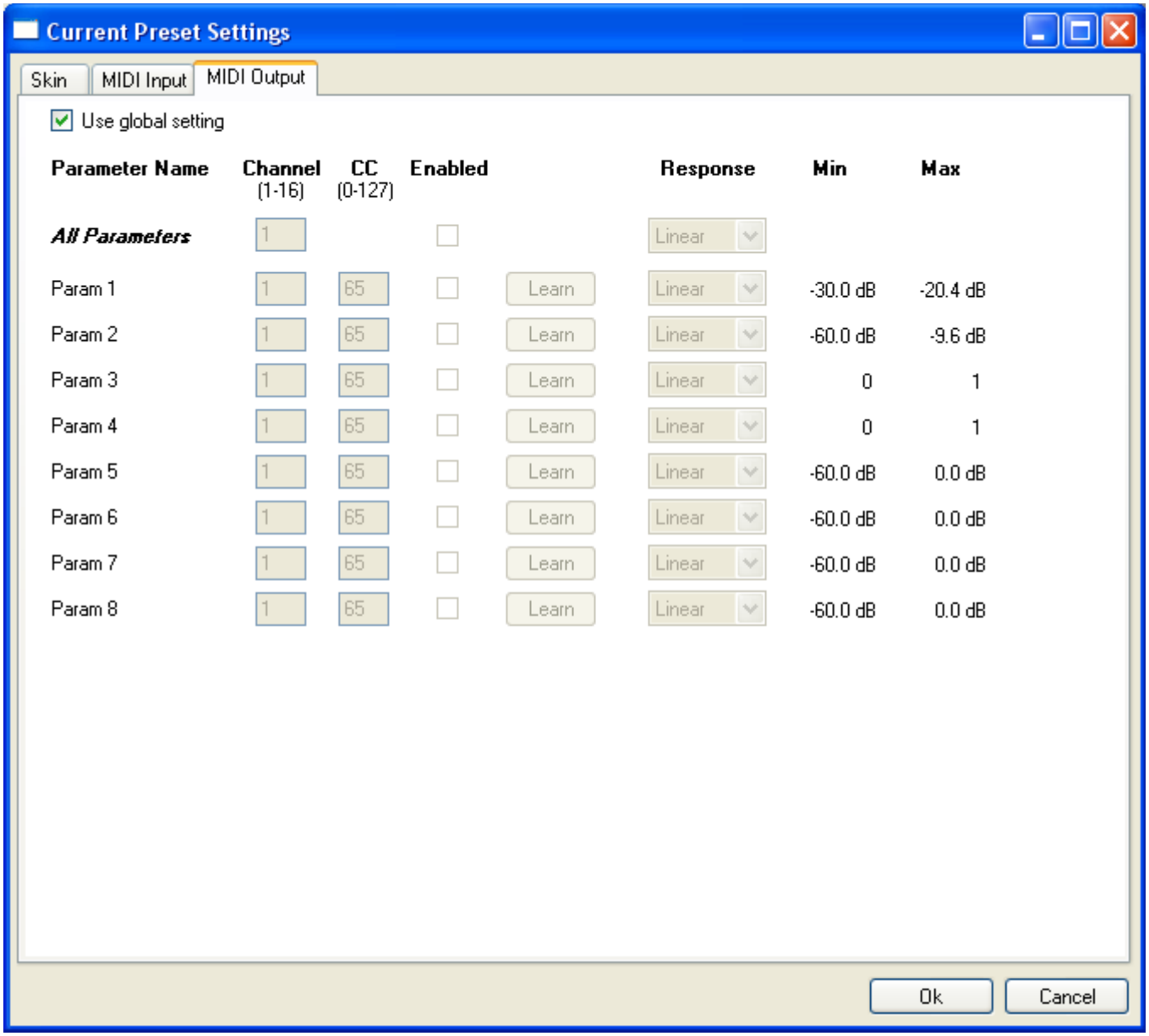
Preset MIDI Input Settings

Use the global settings or override them for the current preset. The parameters are the same as for the global MIDI input settings.



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.



Skins

About Skins

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

http://www.bluecataudio.com/Skins

If you don't find a skin that you like or if you want to use your graphic skills, 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. 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 to see how to access these options.

On some hosts the plug-in window won't resize automatically. 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. Change its look and make it integrated in your virtual studio!

Just read the Blue Cat's Skinning Language user 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. Show your talent and share your knowledge with the users community!

Troubleshooting

Installation

I have installed my plug-in and it does not show up in my host application

First check that you application supports Direct X or VST plug-ins.

If you are using the Direct X version, check that your host application supports DXi plug-ins (MIDI-enabled Direct X plug-ins). If it does not, it may remove it from the Direct X plug-ins list (some applications such as Sony Vegas 5 and Cool Edit Pro are known to do this). In this case, use our freeware DXi Manager 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.

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.

Other Questions

For any other issue with this software, please check our FAQ and Community forum.

More

This manual only covers the very basics of the Widening Meter Pro. For more information and tips about how to use the Widening Meter Pro, please check our website for the latest tutorials.

Upgrades, tutorials, more skins and plug-ins are available on our website:

www.bluecataudio.com