# Blue Cat's Freeceiver User Manual







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

# Introduction

Blue Cat's Freeceiver is a free plug- in and application that can receive audio or MIDI streams sent over the network by Blue Cat's <u>Connector</u> and <u>Fader Hub</u> in real time.

Working with remote clients? You can send them audio and MIDI in real- time from your DAW without the need for them to acquire a license to our software. Freeceiver is 100% free, like all our <u>free software</u>!

Jamming with friends, recording a session or playing a live gig with Fader Hub? Get listeners connected for free with Freeceiver!

Available both as a plug- in and application, it lets you either stream and record into your favorite DAW, or simply play the stream straight into your speakers or headphones on whatever machine that is connected to the network. It is as simple as that!

You can also use it locally on the same machine as <u>Connector</u> or <u>Fader Hub</u> to stream audio from one application to another.



Typical applications: Network Audio, Network MIDI, Remote Collaboration, Remote Recording, Audio Streaming Client.

# System Requirements

# MacOS

- An Intel or Apple Silicon processor.
- Mac OS 10.9 or newer.
- For the plug- in, any VST / Audio Unit / AAX compatible application (64- bit) .
- For the standalone application, a Core Audio compatible audio interface.

### Windows

- An SSE2- enabled processor (Pentium 4 or newer).
- Microsoft Windows Vista, Windows 7, 8 or 10.
- For the plug- in, any VST / AAX compatible host software (32 or 64 bit).
- For the standalone application, an ASIO, MME or WASAPI compatible audio interface (ASIO recommended).

For more information about supported platforms, see our Knowledge Base.

# Installation

The standalone version does not require any host application and can be run without requiring any third party application.

The plug- ins versions cannot be run standalone: they require a host application (see the <u>System Requirements</u> 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.

### Мас

### 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 may have to right click on the installer and select "Open" instead of double clicking on the file to launch the installation if your computer is not connected to the Internet.

### 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):

- Standalone applications are installed in the / Applications folder
- 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.
- ~/ 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.

### **Standalone Application**

Once the application has been installed, simply double click on its icon to launch it. On Mac, the application will be located in the 'Applications' folder if using the default install location. On Windows, you will find it in the start menu.

The first time you launch the application, it will ask you if you want to configure the audio interface:



It is recommended to configure the audio interface before using the application, but you can still do it later by clicking on the "Edit/ Audio Setup" menu. This opens the Audio/ MIDI Preferences window reproduced below:

Audio/N	IIDI Preferences									x
General	MIDI In MIDI Out									
	Configuration:		Stereo	(2 in-2	2 out)			~		
	Driver Type:		ASIO					~		
	Audio Device:		ASIO Fireface USB <							
	Sample Rate:		44100 Hz 🗸							
	Buffer Size:		256					samples		
	Audio Inpu	ts					Audi	io Outputs		
01.	None		~	01.	Anal	og 1	(1)			$\sim$
02.	None		~	02.	Anal	og 2	(1)			$\sim$
	Tempo:		120.0					bpm		
	Time Signature:		4			7	4			
	[	Т	ap Tem	po Set	up				_	
			dio Engir			-				
	Estimated I/O Latency: 10.9 ms									
		R	estart A	udio E	ngine					
									_	
										Ok

If the default setup displayed in the panel does not correspond to your needs, you can do the following:

- Choose the appropriate I/ O configuration, if available.
- On Windows, choose the type of audio driver (ASIO is recommended. If you do not have an ASIO driver, we recommend using the <u>ASIO4AII</u> driver).
- Choose the driver to use for audio input and audio output, if available (with ASIO, you can only choose a single driver for both).
- Select the sample rate and buffer size. Increasing the size of the buffer uses less CPU but adds latency.
- Select the audio inputs and outputs to use with the software.
- You can also set the tempo and time signature if relevant.
- Click on "Tap Tempo Setup" if you want to tap tempo with a MIDI controller.

Changes are applied to the application in real time and saved when closing the preferences window. You can see the status of the audio engine at the bottom of the window, as well as the estimated i/ o latency (it depends on the sample rate, buffer settings and selected audio interface(s).

If the status of the engine is 'NOT Running', you may need to change the settings: try to increase the buffer size, change the sample rate (it might not be supported by the interface) or select another audio interface.

The MIDI In and MIDI Out panes let you select the MIDI devices to be used as input and ouput. You can either use them all, none, or select from a list:

Audio/M	IIDI Prefe	rences				×
General	MIDI In	MIDI Out				
			MIDI input devices:	All Vone All Selection		
					Ok	

Once the this has been setup, you can close the window and start using the application.

### **Standalone Application: Network Server**

It is also possible to use the applications as a "slave" of another application that sends audio and MIDI with the <u>Connector</u> plug- in locally or over the network. To do this you should select the "Network Audio" driver type and "Connector Slave" driver.

Click on the button with 3 dots at the right of the driver name to access the connection settings (see the <u>Connector Manual</u> for more details):

	-	
Driv	ver Type:	Network Audio V
Au	dio Device:	Connector Slave ~
Sar	mple Rate:	44100 Hz $$
E	Connector Slave Se	ttings
	Display Name:	Blue Cat's Server
put	RECEIVE FROM	4
	Scope:	Eocal Host 🗸
1	Port:	8080
1	Resampling:	Fast $\lor$
	SEND TO	
	Scope:	Local Host $\sim$
	Port:	8081
		Cancel Ok

Note: in this mode, the application will not process audio unless some data is sent to it by an instance of the connector plug- in loaded into an active audio application.

### Audio Plug-Ins

Blue Cat Audio plug- ins cannot be run standalone, they require a host application (see the <u>System Requirements</u> 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.

# The User Interface

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

Blue Cat's ◀ **Internet Receiver (Fast)** () FREECEIVER  $\bigcirc$ 0 +0.0 dB **RECEIVE FROM** Thru Level Remote Session NETWORK 100 % Port: 8088 Drop Outs: 0 Drift: +0 ppm Rcv Level Buffering **Resampling:** Fast Drift Comp. Ν 💽 Υ uPnP Redirect N O Y 1024 Your IP: 192.168.0.100 100 % (23.2 ms) 100 % Name: Internet Receiver

The user interface of the software is similar to the Connector plug- in in Receive mode:

You can rename this instance by clicking on the "Internet Receiver" string at the bottom. Giving a name to the instance lets you then identify connection endpoints easily.

The Thru and Rcv level knobs adjust the levels of the input signal (audio that gets into the plug- in) and received signal (audio that is received by the plug- in, sent by <u>Connector</u> or <u>Fader Hub</u>).

### **Receiving Audio and MIDI**

The plug- in (or application) lets you receive audio and MIDI data from the same machine or on another computer.

It is a server that listens to incoming connections and accepts the first one (you cannot receive multiple audio/ MIDI streams in a single instance).

To accept connections, you need to first select if you want to connect from the same machine ("LOCAL HOST"), or from a different machine that is available on the network ("NETWORK").

You should then select the port the plug- in should be listening to (which corresponds to a physical network port).

Below are displayed the number of packet drop outs, and the drift ratio if any. It lets you know if you are having synchronization or buffering issues between this instance and the sending software. You can click on the dropouts count to reset it.

#### Advanced Receive Settings

When **buffering** is set "none", it means the plug- in will not perform extra buffering, to minimize latency. It may however not work when connecting several applications together, especially over a busy network. So you will have to manually setup the buffer (in samples). Several presets are provided for typical applications.

The larger the buffer, the safer the connection, but the latency will get longer. You can visualize the status of the buffer with the meter next to the buffering setting. When dropouts occur, increase the buffer length until dropouts count does not increase anymore.

If the sender and receiver are using different sample rates, the plug- in will automatically resample incoming audio and MIDI. You can adjust the quality of the **resampling**. Keep in mind that higher settings will consume more CPU, and the "Best" setting may also add a bit of latency.

If the sender and receiver are working on different machines or different audio interfaces that are not in sync, drifting may occur (sample rates are not exactly identical), resulting in dropouts in the long run. **Drift** is displayed in ppm (parts per million).

#### **Optimization Tips**

The reception buffer length should always be at least the same or larger than the sender packet size. using multiples of the audio buffer of the application is usually a good way to optimize the latency.

If source and destination are running on different machines or audio interfaces, it is strongly recommended to use drift compensation, even if the drift ratio seems to be minimal: clocks my vary over time, especially with temperature.

#### **Receiving From the Internet**

When receiving data from the Internet (WAN), the Internet router has to send the packets received on the specified port to your local machine ("Port Forwarding"). It can be configured manually (as explained in this tutorial), but if your Internet router supports the **UPnP IGD (universal Plug'n Play Internet Gateway Device)** protocol, Connector can do it automatically for you:

- Make sure that the router supports UPnP and that it is enabled (some routers may have it disabled by default).
- Enable uPnP in the Connector instance(s) expecting to receive data from the Internet.
- Wait for a few seconds until the public IP address of the Internet router is displayed (or an error message in case of failure).

The public IP address is the address to type in the sender software used to send the audio/ MIDI data on the other side of the Internet.



When closing Freeceiver, the port will automatically be closed.

In case of failure, you may want to try other port numbers (some routers limit the range of ports that can be forwarded - typically below 4000, or above 16300, 32000 or even 40000), and check that UPnP is properly enabled on the router. There is usually a section on the router to check the list of ports that have been forwarded using the IPnP IGD protocol.

Note: UPnP is only available for the "Network" connection type.

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 <u>"Plug- ins Basics" chapter</u> of this manual.

# Overview

The signal flow in the plug- in is the following, with IN and OUT to and from the host application (or audio interface, when using the app):



An instance of the software is identified by its port. If you are using the same port number on the same machine or in the same application for multiple instances, there can be conflicts between endpoints, and the connection will fail.

### Firewalls

When using the plug- in to receive data on a network, you may have to enable the selected ports in your firewall. Local transmission between applications or inside a single application usually do not require to open any port on the firewall.

# **Connecting Apps Together**

Freeceiver is the ideal free companion to <u>Connector</u> and <u>Fader Hub</u>. Since Freeceiver is available as an application, you can easily receive audio from any app on the same computer or on the network and listen to it on your speakers or headphones.

It can also receive MIDI events and send them to external devices connected to the computer, without the need to launch a more complex application such as a Digital Audio Workstation (DAW).

# Working With Clients Remotely

When working with clients remotely, you may want to have them listen to your sessions straight from your DAW while doing modifications to a project. Freeceiver lets you do that easily, and for free, if you have <u>Connector</u> and <u>Fader Hub</u> to send the streams.

Just place one of them on the master bus in your DAW, and connect it to the Freeceiver application(s) that have been launched by clients on their computers (either on a local area network if working in different rooms, or thru the Internet). They will hear your mix in real time, with pristine uncompressed sound, as if they were in the same room.

**Note:** since a little bit of latency is not an issue here, it is advised to increase the buffer size on the Freeceiver side, to make sure that no dropout occurs during a listening session. It also means that you can have someone listen to your DAW on the other side of the earth without any problem.

### **Live Streaming**

Freeceiver can also be used to receive live streams from Fader hub or Connector. If you are playing live with a band and want to send audio in real time to several listeners, it's easy. They can install the Freeceiver app and listen to the streams directly.

For public streaming and to integrate with other tools, you can also use Freeceiver inside the <u>OBS application</u> to stream audio (maybe with video too) publicly on the Internet, as shown <u>in this video</u> (the videos shows Connector, but it works with Freeceiver as a receiver too).

### **Remote Recording**

It is also possible to use Freeceiver as a remote recording tool. Just use the plug- in version on an aux track in your favorite DAW, and have someone use Connector or Fader Hub to send their audio in real time straight into your DAW, from whatever remote location!

These are just a few examples of what you can do with Freeceiver as a network audio receiving tool. The good news is that it is fully free, so anyone can use it without a license for <u>Connector</u> or <u>Fader Hub</u>.

# **Main Features**

The standalone application will let you process audio data coming from the inputs of the audio interface and stream it to its output, in real time, without the need for a third party host application. The application also receives MIDI events from all MIDI input interfaces available on the machine, without any particular configuration required.

The core features of the application are the same as the plug- ins versions, except that the application can run on its own.

It is worth noting that user presets are shared between the standalone application and the plug- ins versions, so that presets can be reused between standlone and plug- in sessions.

# **Application Preferences**

	Configuration:		Stereo	(2 in-2	2 out)			~	
	Driver Type:		ASIO					~	
	Audio Device:		ASIO F	irefac	e US	В		×	
	Sample Rate:		44100	Hz				~	
	Buffer Size:		256					samples	
	Audio Inpu	uts					Audi	o Outputs	
01.	None		~	01.	Ana	log 1	l (1)		~
02.	None		~	02.	Ana	log 2	2 (1)		~
	Tempo:		120.0					bpm	
	Time Signature	:	4			1	4		
		1	Tap Tem	po Set	tup				
		Estima	dio Engir ted I/O I	Latend	y: 10	).9 m	IS		
		R	Restart Audio Engine						

The audio/ MIDI setup for the application is decribed in details in the first launch chapter.

The configuration window above can be displayed using the Edit/ Audio Setup menu item. More information about the various fields can be found in the <u>first launch</u> chapter.

# **Application Menu**

The application menu gives you access to the following commands:

- Edit/ Undo: undo last change.
- Edit/ Redo: redo last undone change.
- Edit/ Audio Setup: open the preferences window.

# **Keyboard Shortcuts**

To speed up operation, several keyboard shortcuts are available in the standalone application:

### **On Windows**

- CTRL +Z: undo.
- Shift CTRL +Z: redo.
- CTRL +P: open the preferences window.

#### • ALT +F4: quit the application.

#### On Mac

- CMD +Z: undo.
- Shift CMD +Z: redo.
- CMD +, or CMD +P: open the preferences window.
- CMD +Q: quit the application.

# Troubleshooting

### No Sound

if you cannot hear anything coming out of the software, you need to check the audio configuration: open the preferences window (Edit Menu / Audio Setup command), and check that the audio engine is running. If it is not running, you may need to select another audio interface or change the buffer and sample rate settings. If it is running, you may want to select another audio interface or differnt audio inputs and outputs.

### **Cracks and Pops**

If you can hear unwanted "cracks" and "pops" during the performance, you may be experiencing audio dropouts, because the application is using too much CPU. You can try to increase the buffer size in the preferences window to reduce CPU usage, and close other applications that are currently running.

# 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 Freeceiver 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.

Some plug- ins may also propose you to **manually select the audio I/ O** inside the plug- in (bottom left of the presets area), regardless of the host configuration. It can be useful for example to save CPU by selecting mono to stereo configurations (instead of full stereo sometimes chosen by default by the host), or add extra channels to manage side chain internally, when the host does not provides any side chain input. Please note that this does not change the number of I/ O seen by the host application.

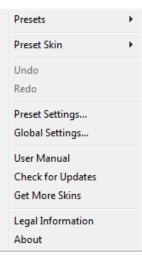
#### Commands

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

lcon	Name	Function
	Menu	Open the main menu
\$	Control Settings	Display the controls settings menu (to manage automation and MIDI control, as described <u>here</u> ).
	Undo	Undo
	Redo	Redo
?	Manual	User Manual
i.	About	About
Q	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:

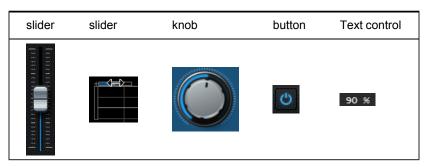


- Presets: opens the presets menu to manage presets.
- Preset Skin: opens the skins menu to choose the skin for the current preset and manage alternative skins for the software.
- Undo/ Redo: undo or redo the latest modifications. This includes all changes made to the current preset settings such as 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.

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**

Кеу	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**

Кеу	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 <u>main menu</u> or the <u>main toolbar</u>. 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 plugin 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:

Folder A	۲	User Preset1
Folder B	۲	User Preset2
User Preset X		User Preset3

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:

MIDI Program Change 🔹 🕨	$\checkmark$	Disabled
Load		All Channels
Save As		Channel 1
Saverian		Channel 2
Сору		Channel 3
Paste		Channel 4
Save As User Default		Channel 5
Clear User Default		Channel 6
		Channel 7
		Channel 8
		Channel 9
		Channel 10
		Channel 11
		Channel 12
		Channel 13
		Channel 14
		Channel 15
		Channel 16

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:

tory Presets
k01 •
1k02
Preset1
Preset2
Preset3

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 Freeceiver 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 <u>main menu</u> (see the <u>Plug- in Settings</u> 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:



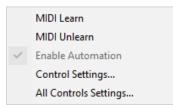
- Show Control Settings: show direct access to individual control settings for each parameter in the user interface (see next paragraph).
- Lock Control Settings: lock the current controls settings for MIDI and automation so that they remain unchanged when loading presets.
- Use Global Control Settings: 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 <u>Plug- in Settings</u> window for the current preset which is available from the main menu.

"Param 5" - MIDI & Automation Setttings									
Enable MIDI	Channel (0-16)	СС (0-127)		Control Response	Control Min	Control Max			
	0	5	Leam	Linear 💌	0 dB	+3 dB			

**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:

Gain	<b>×</b>
3.00	dB

# More

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

# **Plug- in Settings**

In addition to the controls offered in the main user interface, Blue Cat's Freeceiver 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 <u>presets settings</u>. 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.

Blue Cat's Plug-in Global Settings	
General Control Input	
General Control Input Skin file path: Collegeneral File Alter Collegeneral Defention of the three terms	
C:\Progam Files\Blue Cat Audio\Skins\Default\default xml	Browse
Output data refresh rate: 50 Hz	
	Ok Cancel

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.

Blue Cat's Plug-in Glob	al Settings							×
General Control Input	Control Out	put						
Send MIDI events	when paran	neters value:	s change					1
Parameter Name	Enable MIDI	Channel (0-16)	CC (0-127)		Control Response	Control Min	Control Max	
All Parameters		0			Linear $\vee$			
Bypass		0	0	Leam	Linear $\vee$	Off	On	
Param 1		0	1	Leam	Linear $\lor$	0 ms	1000 ms	
Param 2		0	2	Leam	Linear $\vee$	0 ms	500 ms	
Param 3		0	3	Leam	Linear $\vee$	0 ms	3000 ms	
Param 4		0	4	Leam	Linear $\lor$	1 ms	2000 ms	
Param 5		0	5	Leam	Linear $\vee$	0 dB	+3 dB	
Param 6		0	6	Leam	Linear $\lor$	0 ms	3000 ms	
Param 7		0	7	Leam	Linear $\vee$	0 dB/s	60 dB/s	
Param 8		0	8	Leam	Linear $\vee$	0 %	100 %	
Param 9		0	9	Leam	Linear $\checkmark$	Normal	Reversed	
Param 10		0	10	Leam	Linear $\lor$	0 %	400 %	
Param 11		0	11	Leam	Linear $\vee$	-200 %	+200 %	
Param 12		0	12	Leam	Linear V	0	1	
							Ok	Cancel

(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:



"Send MIDI events when parameters values change": activate this option when using a control surface that accepts MIDI events as input. MIDI messages will be sent to the output of the plug- in when the user change the parameters values in the user interface, to keep the software and the controller in sync. MIDI is only sent for parameters that are activated for MIDI control.

# 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.

Blue Cat's Plug-in Current Preset Settings	
General Control Input	
✓ Use global skin	
Skin file path:	
C:\Progam Files\Blue Cat Audio\Skins\Default\defaultxml Browse	
	Ok Cancel

# 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.

Blue Cat's Plug-in Curr	ent Preset S	Settings						x
General Control Input	Control Out	put						
🔽 Use global setting								1
Send MIDI events	when paran	neters values	change					
Parameter Name	Enable MIDI	Channel (0-16)	CC (0-127)		Control Response	Control Min	Control Max	
All Parameters		0			Linear $\vee$			
Bypass		0	0	Leam	Linear $\vee$	Off	On	
Param 1		0	1	Leam	Linear $\lor$	0 ms	1000 ms	
Param 2		0	2	Leam	Linear $\lor$	0 ms	500 ms	
Param 3		0	3	Leam	Linear $\sim$	0 ms	3000 ms	
Param 4		0	4	Leam	Linear $\lor$	1 ms	2000 ms	
Param 5		0	5	Leam	Linear $\lor$	0 dB	+3 dB	
Param 6		0	6	Leam	Linear $\lor$	0 ms	3000 ms	
Param 7		0	7	Leam	Linear $\lor$	0 dB/s	60 dB/s	
Param 8		0	8	Leam	Linear $\lor$	0 %	100 %	
Param 9		0	9	Leam	Linear $\lor$	Normal	Reversed	
Param 10		0	10	Leam	Linear $\lor$	0 %	400 %	
Param 11		0	11	Leam	Linear $\lor$	-200 %	+200 %	
								Grand
							Ok	Cancel

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

# About Skins

Blue Cat's Freeceiver 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\_Freeceiver

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 <u>preset settings page</u> 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 <u>main menu</u>. 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:

	Default
	Light
	Custom Skins   Other
✓	Use Global Skin Load
	Save As Global Skin

- 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 <u>global settings</u> pane. The current preset skin can be changed in the <u>preset settings page</u>.

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

# More...

This manual only covers the basics of Blue Cat's Freeceiver. Our website offers many additional resources for your Blue Cat's Freeceiver 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 Freeceiver 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 Freeceiver <u>skins page</u> to get the latest skins.

# Updates

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 Freeceiver has been updated, or subscribe to our <u>Newsletter</u> to be informed of the latest news about our products.

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

# Versions History

**V1.0** (2024/02/15) First version.

### Thanks again for choosing our software!

