



The Glue

Operation and Installation Manual

Written by Andrew and Emma Simper
updated 20 March 2015

Table of Contents

Installation And Authorisation.....	3
Mac OSX 10.8 or above.....	3
Windows XP or later.....	3
After installing.....	3
Authorisation.....	3
Software Updates.....	4
Technical Support.....	5
Operation.....	6
User interface overview.....	6
Signal Flow.....	7
Top Bar.....	7
A/B Button.....	7
About Button.....	8
Power Button.....	8
I/O Mode.....	8
Previous / Next Preset.....	8
Preset Menu.....	8
Managing Presets.....	8
Browsing And Loading Presets.....	8
Saving Presets.....	8
Save Settings As Default.....	9
View Sizes.....	9
Auto Loading Presets.....	9
Oversampling Menu.....	9
Copy To Others.....	10
Controls.....	10
Editing Values.....	10
Compression Meter.....	10
Peak LED.....	10
Threshold, Range, and Makeup Knobs.....	10
Threshold (dB): 0 to -40.....	10
Range (dB): 0 to Full (-82 dB).....	10
Makeup (dB): 0 to 40.....	11
Attack, Ratio, and Release Knobs.....	11
Attack (mS): 0.01, 0.1, 0.3, 1, 3, 10, 30.....	11
Ratio: 2, 4, 10.....	11
Release (S): 0.1, 0.2, 0.4, 0.6, 0.8, 1.2, Auto.....	11
Compression In, Mix, and Peak Clip In.....	11

Compression In (Switch): On, Off.....	11
Mix (%): Dry 0 to Wet 100.....	12
Peak Clip In (Switch): On, Off.....	12
Sidechain Section.....	12
Side-chain HP (Hz): Off, 20 to 2000.....	12
External Side-chain In (Switch): On, Off.....	12

Installation And Authorisation

Mac OSX 10.8 or above

Open the downloaded disk image and double click on “Install The Glue.pkg” and you will be guided through the installation process.

Windows XP or later

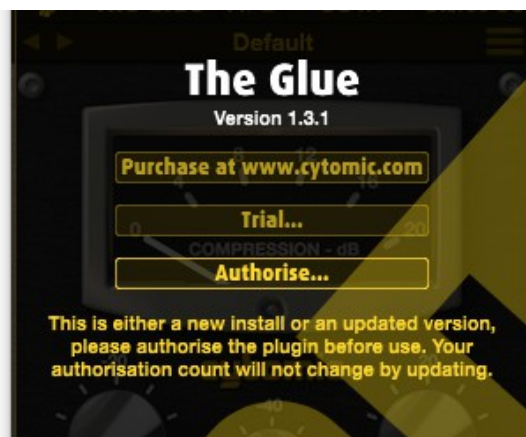
Unzip the downloaded zip file and double click on the file “Install The Glue.exe” and you will be guided through the installation process. If you are running a 32-bit version of Windows then only install the 32-bit version of The Glue.

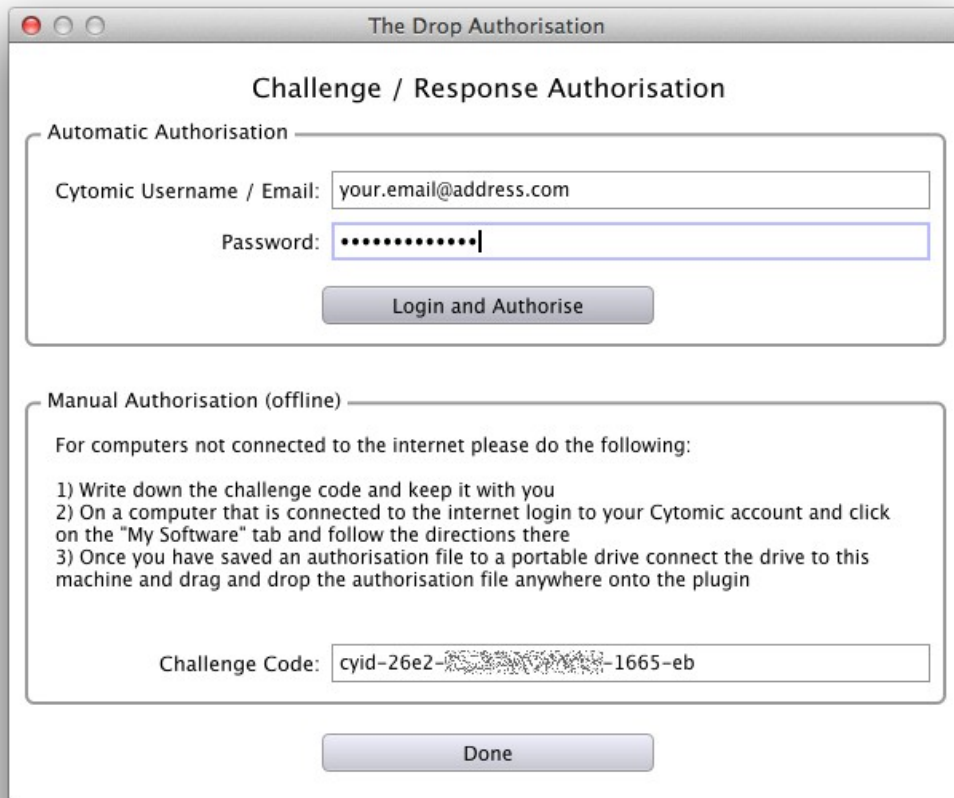
After installing

Try loading The Glue in your host of choice, if The Glue isn't found please try and “re-scan” your plugins if you host has this feature. If not then please contact support www.cytomic.com/contact .

Authorisation

When first loaded the plugin will display the about box as shown below. If not authorised the software will run in permanent Trial mode, the limitations are indicated by a dialogue box displayed after you click the “Trial...” button. If you have purchased The Glue you need to authorise it to run the full version. To do so click on the “Authorise...”.





Please replace “The Drop” with “The Glue” in the these screenshots. For computers connected to the internet fill in the “Automatic Authorisation” section of The Glue Authorisation dialogue. To do this enter your Cytomic username / email and your password, click on on the “Login and Authorise” button. If you are running a firewall make sure to allow The Glue to connect to the internet to authorise you machine.

For computers not connected to the internet write down the “Challenge Code” from the “Manual Authorisation (offline)” section at the bottom, then visit a computer that is connected to the internet, open the “Manual Authorisation (for computer with no internet access)” section below your serial number and follow the instructions listed.

The Drop

Serial Number	Authorisations Used
drprba-[blurred]-c458e6	3 of 5

▼ **Manual Authorisation (for computers with no internet access)**

To manually authorise a computer with no internet access please do the following:

1. enter your Challenge Code in the box below
2. click on the "Download Authorisation File..." button
3. save the file to a portable drive
4. connect the portable drive to the computer with no internet connection
5. open your DAW and the plugin you are authorising
6. drag the authorisation file anywhere onto the open plugin window

Challenge Code:
 cyid-26e2-[blurred]-1665-eb

Download Authorisation File...

Software Updates

Updates are periodically released, so please check back from time to time at Cytomic, or set your email notification settings of your Cytomic user account to be notified of updates. You can do this in the “My Account > Edit > Contact Information” section of your account.

Technical Support

If you have any trouble installing The Glue or using it in your host please contact technical support by sending an email to support@cytomic.com with the following information:

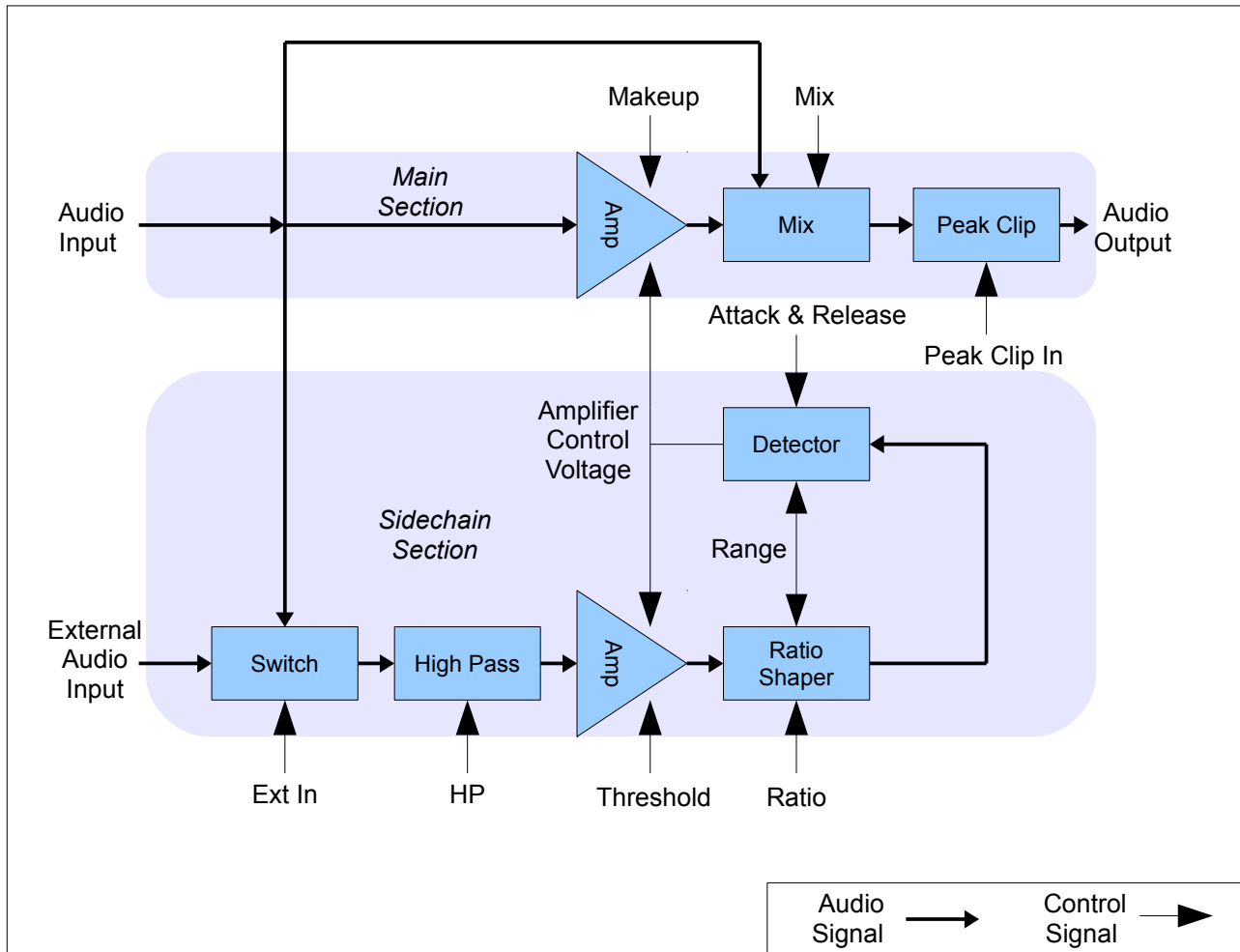
- Operating system and version (eg Win XP sp2 / Mac OS 10.5.6)
- CPU type (eg PPC or Intel Core 2 Duo)
- Host and version (eg Logic 8.0.2)
- Version and type of The Glue you are using (eg The Glue v1.1.2 Au)
- If you have a repeatable issue in using The Glue then please give a brief list of steps to reproduce the problem from a blank project with no other plugins but those that come with your host

Operation

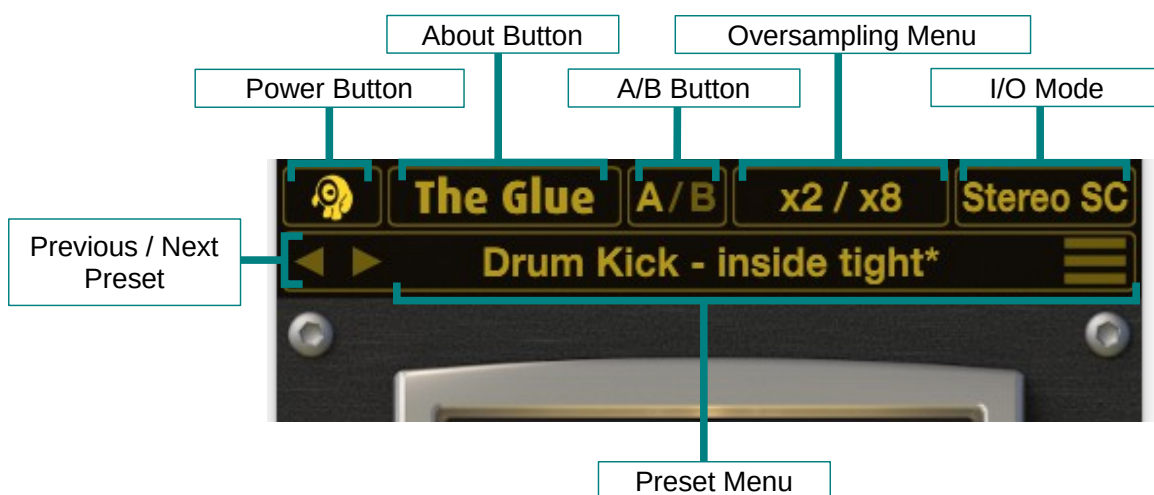
User interface overview



Signal Flow



Top Bar



A/B Button

This allows you to switch between two presets to compare them to one another, the active preset is shown in yellow and all operations on presets will only effect the active preset.

About Button

Shows the version number and registration information, as well as credits.

Power Button

With the power off you hard bypass The Glue and can save on cpu because all processing is suspended. If latency producing oversampling is currently enabled a constant delay is still applied to your signal by bypassed to avoid host clips and pops as much as possible.

I/O Mode

Shows if Stereo or Mono processing is occurring and if the also adds an “SC” to show the host supports the external side-chain feature of The Glue.

Previous / Next Preset

Cycles through all presets stored in your preset folder sorted in alphabetical order.

Preset Menu

This menu allows you to manage your presets and can be opened by clicking anywhere on the preset name. Operations work on the currently selected preset, which is either A or B. The arrows on the left hand side can be used to jump to the next and previous preset.



Managing Presets

You can copy and paste presets between different open copies of The Glue, or even email a friend your preset as plain text by pasting it into you email program. You can also copy the current preset to the other one, which is handy when you are about to make an edit to a preset you like and want to be able to compare your changes.

When you load or save preset the dialog boxes open at a default location, and you can open this folder in Finder/Explorer by picking “Show Presets Folder”. Any presets you want to have quickest access to save into this folder.

Browsing And Loading Presets

When you select “Load...” from the preset menu a file dialog box is opened.

The presets that come with The Glue are put in a folder called “Factory Bank 1”, but you can copy your favourite presets into the default preset folder for quicker access.

Saving Presets

When you select “Save...” from the preset menu a file dialog box is opened and you can update the name of your preset before saving, which also updates the preset name in the plugin.

Save Settings As Default

Select this menu item to make your current settings for all the knob and button positions and oversampling settings and make the the default ones that are loaded when you create another copy of The Glue. If you have already saved default settings for preset slot A and or B then you may need to delete those files for since the Save Settings As Default just saves the “Default” file in your preset folder and discussed in the Auto Loading Presets section.

View Sizes

Preset view sizes can be recalled via the different view size menu items, but the entire interface can be smoothly scaled in size using the resizer control on the bottom right.

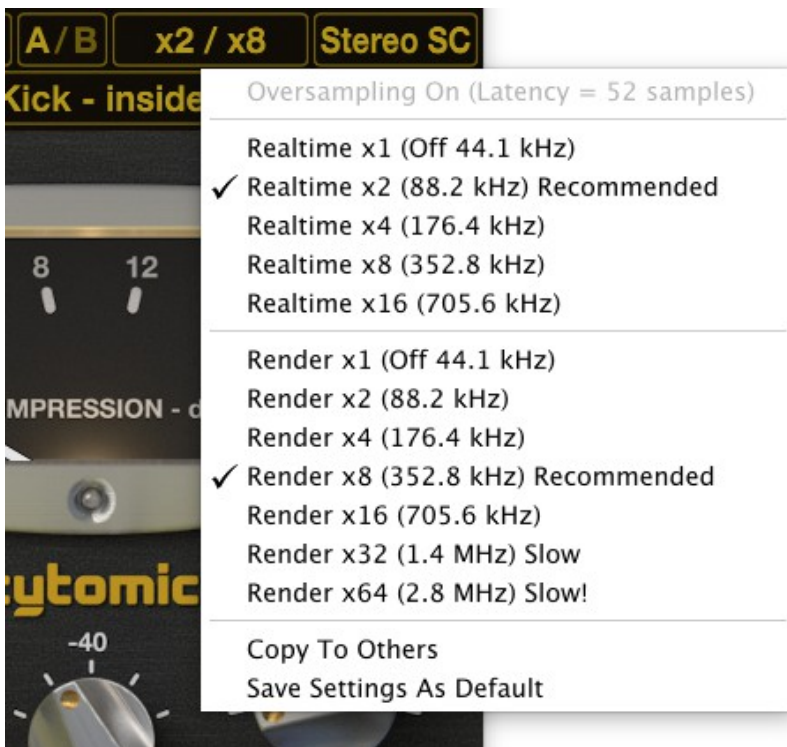
Auto Loading Presets

You can auto load presets by saving a preset in the root of your preset folder with the following names:

- “Default A” will auto load into the A preset slot
- “Default B” will auto load into the B preset slot
- “Default” will autoload into both A and or B if they don't have their own autoload preset already

Oversampling Menu

To improve the quality of audio processing can use oversampling. This takes extra CPU and introduces latency but can help the clarity of high frequencies. Oversampling is the process of up-sampling the input signal it to a higher sample rate, then processes at this higher rate, then down-samples it back to the original rate. This helps reduce aliasing caused by both compression and the Peak Clip function.



You can select between Off, x2, x4, x8, and x16, which uses approximately x1, x3, x5, x9, and x16 respectively the CPU of what The Glue normally uses. Shown in brackets is the resultant sample rate, and at the top of the menu is the number of samples latency that will be introduced by the oversampling. The later is important if your host doesn't support automatic latency compensation, or if you want to manually delay the audio yourself for any reason.

To make life easier if you switch the sample rate in your project, the multiplier is defined in terms of a base rate of 44.1 kHz or 48 kHz. So a setting of x2 will mean you get a minimum quality of 88.2 kHz or 96 kHz processing. So if your project is already at 96 kHz, as shown in the picture below, you can see that setting a multiplier of x2 means no oversampling will be done since your project is already at the

desired rate.

There are two different oversample amounts you can set: Realtime is what you hear with regular playback and monitoring in your DAW, and Render is used when you do an offline bounce or track freeze. The Glue will automatically switch between the two oversampling settings for you, and inform the host of any latency changes so the oversampled track remains locked in phase accurate position with the rest of your audio.

Copy To Others

Use this command to copy the current oversampling settings to all other copies of The Glue that are open. This is a quick and easy way to update old settings or to try out different levels of oversampling and see how it improves audio quality in your song.

Controls

Editing Values

You can edit the values of knobs in the following ways:

1. Drag up and down on controls to increase or decrease their value
2. Mouse wheel on controls to increase or decrease their value
3. Double click in the center of a knob to enter the exact text value of a knob
4. Double click on the outer ring of a knob to snap one of the notched values.

Compression Meter

Shows the amount of compression occurring to your signal in a roughly RMS sense. Click on the meter to toggle displaying of a yellow peak needle, which shows the true peak of compression applied.

Peak LED

This shows is the output signal level is near full scale. The LED will glow yellow when the Peak Clip In button is disabled, which indicates a clean but loud signal. When the Peak Clip In button is on then the LED turns Red, and indicates clipping is occurring to your signal.

Threshold, Range, and Makeup Knobs

Threshold (dB): 0 to -40

This control adjusts when compression starts. For more compression turn the knob clockwise to a more negative value.

Range (dB): 0 to Full (-82 dB)

The Range Knob is a very useful addition to the original design, it allows you to limit the depth of compression and maintain a more natural sound. Since transients typically have the highest peaks in audio the Range Knob has a large effect on their sound, but also limits the total compression depth possible.

After analysing the SSL 4000* circuit it was found that various control voltages were limited at a fixed amount. The Range Knob provides a way to vary this limiting action which is such a key aspect in why the analog compression circuit sounds so good.

Any setting can be made more subtle with the Range Knob. It allows you to still grab the sound early but then off to not over-compress. This makes a great alternative to parallel compression with the Mix Knob.

As a guide use values from -60 dB to -80 dB to emulate the original characteristics of the compressor, and values of around -15 dB to -40 dB as an alternative to using the Mix knob.

* Trademarks of Solid State Logic used to identify the circuits and sounds analysed to develop The Glue. Cytomic is not an associate or affiliated with SSL in any way, and the use of third party trademarks do not imply any endorsement of Cytomic products.

Makeup (dB): 0 to 40

This gain is applied to the main compression amplifier, but pre mix control and Peak Clip. The action of the compressor will turn the volume down when the signal is above the Threshold, so use this knob to increase the signal level again that has been lost.

As a rough guide you can look at the needle and match the Makeup Knob to the peak amount of gain reduction being applied.

Attack, Ratio, and Release Knobs

Attack (mS): 0.01, 0.1, 0.3, 1, 3, 10, 30

This controls the speed at which compression is applied. At fast settings transients will be decreased more quickly, and at slower settings the compression will take longer to act so the more of the peak pass through the compressor unaltered.

An extra time of 0.01 has been added to the Attack times so The Glue can be used for limiting applications.

Ratio: 2, 4, 10

The Ratio controls how much compression to apply once the signal has passed the Threshold level and the Attack has allowed the compression to start acting. The Ratio numbers are sometimes confusing since they are a measure of slope rather than a percentage. This is outlined in the table below:

Ratio	Equivalent Percentage	Gain reduction for per 10 dB over threshold
2	50%	$10 \times 0.5 = -5$ dB
4	75%	$10 \times 0.75 = -7.5$ dB
10	90%	$10 \times 0.9 = -9$ dB

So as you can see a ratio of 10 is very steep, in fact a ratio of 20 would only give you an extra -0.5 dB of gain reduction per 10 dB over the threshold, and an infinite ratio would only give you an extra -1 dB over a ratio of 10.

Because of the structure of The Glue the knee shape is linked to Ratio, a ratio of 2 has a soft knee, 4 has a medium knee and 10 a sharper knee.

Release (S): 0.1, 0.2, 0.4, 0.6, 0.8, 1.2, Auto

The Release time is how quickly the compressor returns the compressed signal back to its original volume. Some extra times have been added to that of the original. If you are looking for the 0.3 Second release time of the original unit this is equivalent to the 0.2 Second time on The Glue – the actual time is in between the two.

The Auto setting actually uses two times, a slow one as a base compression value, and a fast one to react to transients in the signal. You will see this from the needle, the minimum value of compression rises to match the overall volume of your source material and is slow to release, but the needle moves quickly up and back to this baseline amount. The Auto Release can be too slow to react to very large variations in source material, but generally is a useful way to tame a wide range of material in a gentle way.

Compression In, Mix, and Peak Clip In

Compression In (Switch): On, Off

This switch sets the compression applied and Makeup to 0 dB which in effect bypasses the compression action. There are still some DC blocking high pass filters and optionally the Peak Clip still in the signal chain, and the rest of the compressor is still in action, so you can quickly compare the effect the compressor is having on your

dry signal.

Mix (%): Dry 0 to Wet 100

This control mixes the dry signal phase accurately with the compressed signal pre Peak Clip so you can achieve parallel compression amounts.

The knob shows you a linear percentage of operation, which fine adjustment on either end and more coarse adjustment near 50% which more closely matches a dB gain knob.

Peak Clip In (Switch): On, Off

Warning: The Peak Clip distorts your signal so if you are unsure as to its use we recommend leaving it disabled! You may also want to consider using the overampling feature of The Glue for improved audio quality if you want to use the Peak Clip.

The Peak Clip is not a limiter, it is a fixed waveshaper. It is in effect a zero attack time, zero release time peak level compressor which fixed infinite ratio and medium knee. It is linear up -2.0 dB then has a smooth curve to -0.5 dB and then is horizontal. The maximum level of -0.5 dB is useful so signals aren't pushed too hard which can possibly cause inter sample overshoot on playback.

Care must be taken when using the Peak Clip not to distort the signal too much. It is useful for applications with have large transients that need taming and is ideal in combination with the Range Knob, which will stop the compressor from over reacting to these transients. When in use make sure to toggle the Peak Clip Button on and off and to make sure there is minimal audible difference between it being used or not.

For critical applications where distortion needs to be minimised it is recommended that you use two copies of The Glue, the first one with a limiting setting to tame the peaks, and the second one with the regular compression you want to apply.

Sidechain Section

Side-chain HP (Hz): Off, 20 to 2000

This filter allows for adjusting how the detector reacts to low frequencies. It is a gentle -6 dB per octave high pass filter that only acts on the sidechain signal, either internal or external. A value of around 200 Hz is recommended to reduce pumping caused by low frequencies.

For more surgical filtering please use the external sidechain facility, which is described next.

External Side-chain In (Switch): On, Off

This button allows you to use any signal you want as the input to the detector. You can use the same signal as the main signal but apply any filtering or EQ you desire, which is useful for more surgical and corrective use of The Glue – for example in de-essing.

Another use for it is to apply a musical rhythm from one signal to another, for example a drum pattern can impart volume changes on a synthesizer part.

The Glue declares an extra set of inputs to the host, for the mono version this will be input 2, and for the stereo version this will be input 3+4. Please consult your host documentation for how to route audio to these extra inputs of The Glue.