soundart

CHROMASONIC

Chameleon **MultiEffects Processor** Application

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www.soundart-hot.com

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Chapter

1 Overview

Chromasonic is a soundskin that turns your Soundart Chameleon multi-purpose DSP hardware into a professional audio multi-effects processor. Once Chromasonic is loaded by MIDI, the Chameleon behaves in exactly the same way as any other multi-effects unit.

1.1 Main features

You can run up to three stereo effects at any one time, and chain them together in a wide variety of ways. You can choose from:

- Two Tap Delay
- 5 Band Parametric Equalizer
- Compressor
- Limiter
- Noise Gate
- Tremolo
- Chorus
- Flanger
- Phaser
- Reverb (here you are restricted to only one instance at any time because it is the most sophisticated and DSP hungry of the effects)
- Autopanner
- WahWah
- 4-voice Pitch Shifter

You will also find the following features:

- Extensive signal routing capabilities

- Flexible system parameters configuration

- Tempo Sync (internal, external and tap) for the time based effects

- 128 user presets to store effect combinations permanently

- Factory bank with 64 presets included

- Compare preset function for checking what the stored preset sounds like in comparison to the one you have arrived at while editing

- Comprehensive MIDI implementation allowing you to modify parameters using external MIDI controllers, record parameter changes using a sequencer, and make/receive SYSEX dumps that store your own presets and configurations

- You can assign any of the Chameleon front panel Realtime controller pots to control virtually any internal parameter for hands on control and performance duties

- You can assign the standard MIDI Expression Controller (number 11) to virtually any effect parameter

- Signal meters - Input, Output and Gain Reduction (gain reduction meters only show when you are using the relevant effects - a Compressor, a Limiter, or a Gate - in one of the three FX Slots)

1.2 Sound Architecture

BASIC DESCRIPTION

Chromasonic can really be considered to consist of three separate effect units that are linked together in order into a string of processors (FX1, FX2 and FX3). They each receive mono signal inputs and generate stereo signal outputs once they have done their thing. The exact configuration of these three FX Slots is quite flexible and allows for a wide variety of routing options, and you can mix the effects back with the original unprocessed sound along the way.

As you work along the chain from FX1 > FX2 > FX3, you have more and more input options for each FX Slot.

THE ROUTING WORKS LIKE THIS

At the start of this chain, the mono input for FX1 can only be selected from the Chameleon physical audio inputs - either L, R or L+R (which means the Left and Right signals are summed together). You can control the volume of this input.

FX2 and FX 3 can receive their input in the same way. But they can also be set to receive signals from the output of any preceding FX Slot in the chain instead. That is to say, FX2 can also be set to receive processed signals from FX1, while FX 3 can also receive processed signals from FX1 or from FX2.

Once each FX Slot has 'done its thing' you can mix the processed signal back in with the input signal it receives, by adjusting the slots own 'Dry/Wet mix'. From here this stereo processed and mixed signal can then be sent on towards the output.

MIXING FOR THE OUTPUT

By adjusting the final Left and Right output levels that come from each FX Slot you can balance the three signals together on their way to the main output, both in terms of volume and stereo position.

But before the sounds leave the Chameleon, you have one last mixing option. If you think again for a moment of the mix of the three FX Slots as one whole processed signal, you can mix this back in with the original signal (the 'Dry Source'). This is the 'Global Dry/Wet mix'.

EXAMPLES AND DIAGRAMS

So as you can imagine it is possible to configure Chromasonic to run three different FX side by side, each taking the input signal, processing it and sending it to the output. Or you might configure it so that each FX Slot receives its signals directly from the previous one, adding more and more

layers of effects as it passes through the three FX Slots until FX3 sends it to the output. (This would be achieved by turning down to zero the output signals of FX1 and FX2 that are sent to the main output mix, but setting the inputs of FX2 and FX3 to 'listen' to the previous effect in the chain).

You could even configure it so that Chromasonic runs two mono effects totally independently - one type of effect over the left input signal and another over the right signal. This is because you have separate control over the left and right outputs for each FX Slot.

There is, of course, a whole world of mixing subtleties in between. The next figure shows a block diagram of the audio signal path inside Chromasonic as described above.
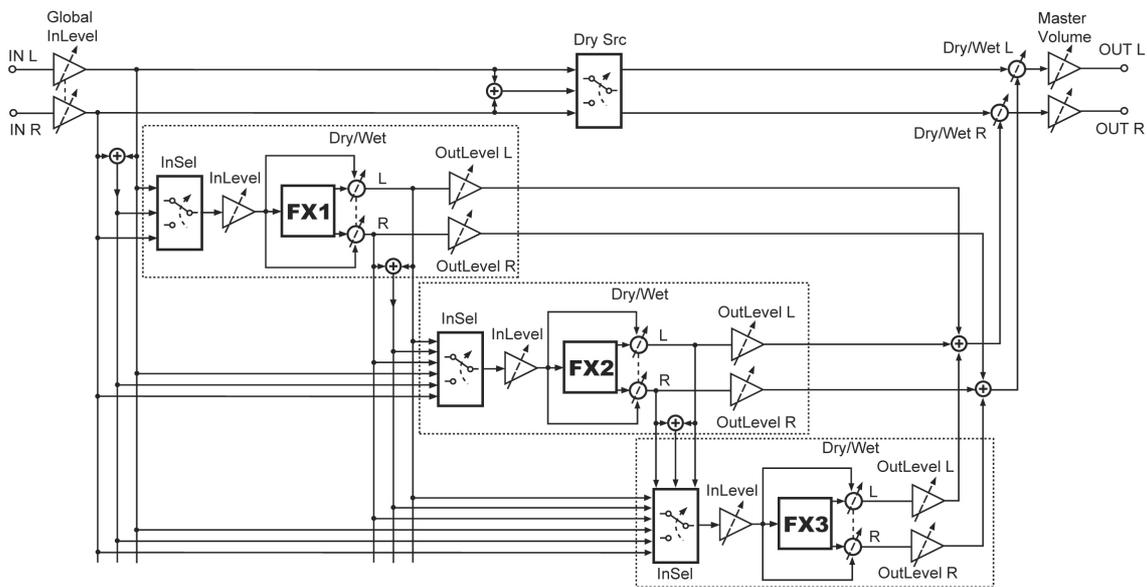
You can see that the three FX Slots are essentially identical, except that FX2 and FX3 have more and more input options.

On the right of the FX Slots you can see first the three signals being mixed together, and then this mix being balanced with the original Dry Source by the Global Dry/Wet mix just before the main output.

The very last thing in the chain, the Master Volume, is controlled directly from the Volume knob on the front panel of the Chameleon, as you might expect.

1.3 Getting Started

This section explains how to get started with Chromasonic for the first time.

1.3.1 Making the connections

In order to start using Chromasonic, you need first to have the Chameleon unit properly connected if you haven't already done so. Make sure that you have the Chameleon power supply (9V DC/1.2A) plugged to the device and connected to the AC mains. The following figure shows the Chameleon rear panel connections.
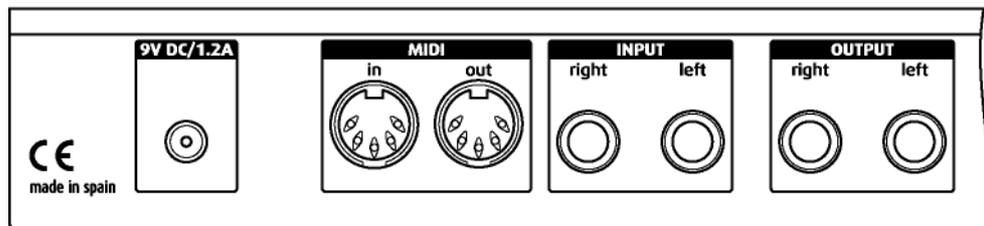
Before connecting the Chameleon to other units in your system, for safety ensure that the power to all units is off.

There are no real surprises here: to get sounds into Chromasonic connect your sound source outputs (amplifier, mixer aux bus sends, etc.) to the Chameleon audio inputs. To hear the results, now connect audio cables from the left and right Chameleon outputs to a suitable amplifier or mixing desk (line level inputs), or use your headphones using the front panel jack.

You also need to connect your MIDI sequencer to the Chameleon so that it can send and receive MIDI data. The MIDI OUT of your sequencer should be connected to the MIDI IN of the Chameleon, and the MIDI OUT of the Chameleon should be connected to the MIDI IN of your sequencer.

Once all connections are made, turn on the power of the Chameleon and all the other devices in your system.

1.3.2 Loading the soundskin

The Chromasonic soundskin is contained into a MIDI file called 'Chromasonic_vX.X.mid' (where 'X.X' is the current version number of the soundskin). Like any other Chameleon soundskin, when you load Chromasonic you will wipe clean the memory of the Chameleon and use it for this new soundskin instead. So you have to first make sure you have saved your personal settings and user data stored in the soundskin you are about to replace with Chromasonic. You can save it by making a quick MIDI SYSEX dump.

Remember if you have an older version of Chromasonic or a different soundskin installed in your Chameleon you will lose your user data if you don't make a backup of it before updating the software version. Please read the important notice in the Appendix A to check how to save your work and load new soundskins into the Chameleon.

When you have loaded the latest Chromasonic, you can still reload again your old Chromasonic presets previously backed up by MIDI. The new software version will update the preset formatting of your presets if necessary.

Once the soundskin is loaded, it is ready to use and you can treat the Chameleon as if it was a regular multi-effects unit. By default, the soundskin comes loaded with the Factory presets bank, which provide a range of ready-to-use FX to choose from and are useful starting points for editing your own presets. Play around with these to take a quick overview of Chromasonic. Remember you can tweak many parameters straight away with the Realtime controllers on the front panel.

NOTE: Factory presets can be edited, modified and overwritten like any other preset, so all 128 available presets are considered as "user" presets and there are not the so called "ROM presets". So be careful how and where you save. However, don't worry about overwriting the Factory presets permanently. If you think you have made a total mess of everything the factory bank can be reloaded at any time.

However, the factory bank reload command will reset ALL the factory presets. So if you change one, and like it and save it, then change another, save it, but don't like it, if you want to return to the factory bank you will lose both. So an idea might be that when you make an interesting preset by adapting something from the factory bank, to always save it to an empty slot if you have one free. That way you retain the flexibility of being able to return to the factory bank at any time without too much pain...

Of course you could just as well overwrite the factory bank completely if you create something better. You could even save a MIDI dump of your presets and swap them with the other members of the Chameleon community via the forum on our website - http://www.soundart-hot.com.

2   Operating Modes

Chromasonic can work in four different operating modes. These are:

- **Preset Mode** : Typical preset sound navigation, for choosing between different FX set-ups stored in the memory.

- **Edit Mode** : For adjusting the routing and FX parameters of a particular preset.

- **System Mode** : For adjusting global parameters and functions that remain the same regardless of what preset you have loaded, e.g. screensaver modes, MIDI SYSEX dump requests, etc.

- **Assign Info Mode**: This is specifically for displaying information about the Realtime controllers (in the diagram below) - what they are set to control and what their current value is, etc.

Each of these Modes is described in detail in their own chapter, below.

THE NAVIGATION AND CONTROL BUTTONS

The following diagram highlights the main buttons and knobs used for controlling Chromasonic. These are referred to throughout this manual. The only controller not magnified here is the BIG DIAL on the left of the Realtime controllers, in the centre.
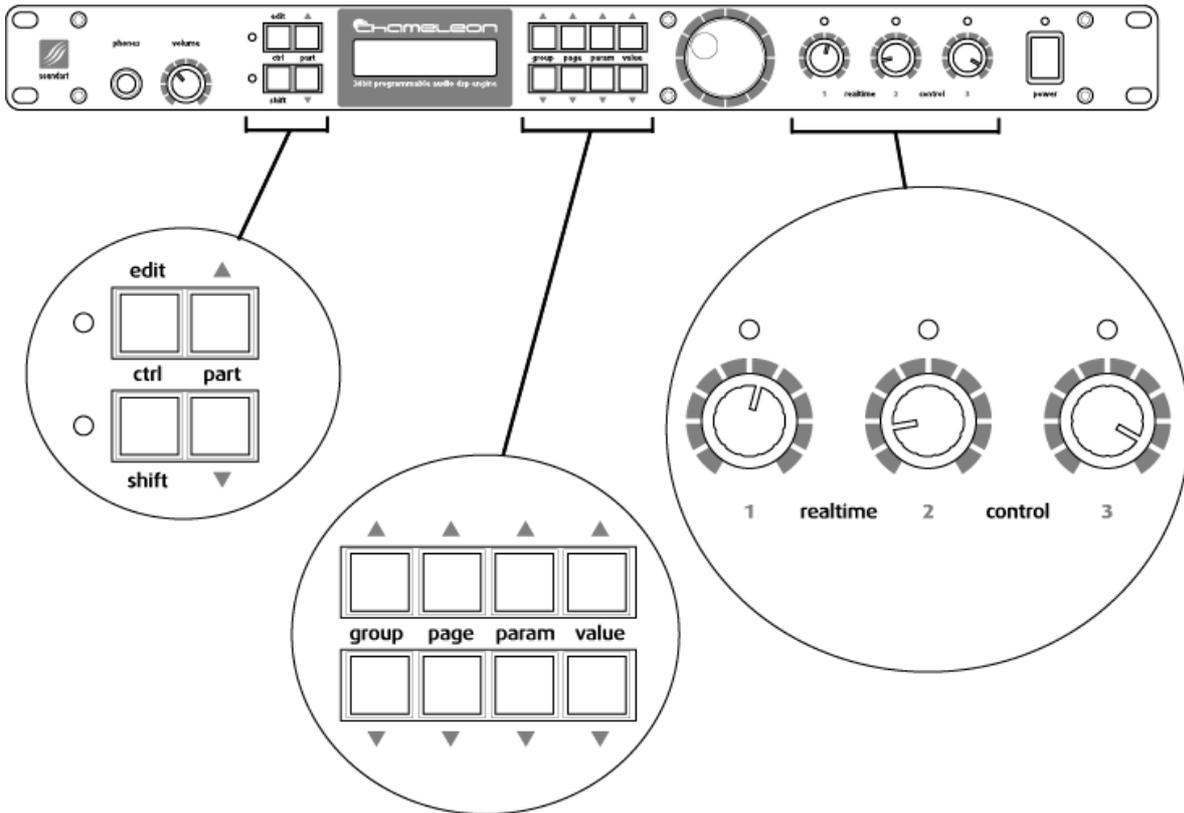
2.1 Preset Mode

Preset Mode is for selecting from the bank of 128 presets. A Chromasonic preset is a combination of FX settings, routings and other such parameter values stored in memory. When you switch on the Chameleon with Chromasonic loaded, it automatically defaults to this Preset Mode. (the default start-up preset number can be selected from the System Mode). From here you can enter the other modes easily.

2.1.1 The Main Display

In Preset Mode, the LCD display will show information about the currently loaded preset, as showed in the following picture.

```
001▶No name
▏▎▍▋▊█OFF█COM█REV1
```

Here's a detailed list of what you see.

The upper line:

- The upper line first displays the number of the currently selected preset, which represents the memory location. This number will blink if the preset is "dirtied" in any way - that is, the preset is somehow changed in relation to what is stored in the memory and it has not yet been saved. This can happen via MIDI, by moving an assigned front panel Realtime controller, or by editing something while in Edit Mode.

  So if you change preset without first saving what you have edited, you will lose all the changes you may have made. Equally, if you have ended up with an effects set up you don't like and want to return to the saved preset, simply use VALUE UP/DOWN to change to another a preset and back again to reload the original preset from memory again.

- You can then see the name of the selected preset beside the small arrow in the upper line, which was assigned when the preset was stored.

- In between the name and number, the small animated arrow will change its shape to a circular MIDI symbol whenever some MIDI data is received through the Chameleon MIDI input.

The lower line:

- The lower line first shows all the active signal meters on the left. The first meter is the stereo input signal. It shows the Input Level after it has been attenuated by the Input Level control, a global control you find in the System Menu. (You can also control the global input using the Realtime controllers - see page 31).

  Next to this there are the Gain Reduction meters. For each dynamics effect loaded, there's a small gain reduction meter, which is displayed as a slim bar which expands downwards as gain reduction increases. Up to three Gain Reduction meters can be shown at a time side by side, one for each FX Slot. When no dynamics effect is loaded into an FX Slot, its corresponding Gain Reduction meter will remain blank.

  Next is the Stereo Output signal meters, which display the stereo output level before it goes through the Master Volume control on the front panel. So if you turn down the Volume, the meters will still show the output signal generated by the FX Slots.

- Following the signal meters section, the name of the effect loaded in each of the slots is displayed. Each effect is represented by its slot number followed by a three-character abbreviation. The different possibilities are listed below. Routing status is not displayed here.

  - **OFF:** The FX Slot is disabled
  - **DLY**: Delay
  - **EQ5**: 5 band parametric EQ.
  - **COM**: Compressor
  - **LIM**: Limiter
  - **GAT**: Gate
  - **TRE**: Tremolo
  - **CHO**: Chorus
  - **FLA**: Flanger
  - **PHA**: Phaser
  - **REV**: Reverb
  - **PAN**: Autopanner
  - **WAH**: Wah-Wah
  - **PIT**: Pitch Shifter

- Finally, on the right of the lower line, the current potentiometer group (Pot Group) number is indicated, from 1 to 4. You can change this with the PART UP/DOWN buttons. To explain - there are the three physical Realtime controller potentiometers (or 'pots') that you can assign to internal parameters, and you can configure up to four sets of these pots, and cycle between them controlling up to 12 parameters - hence Pot Groups.

  So the Pot Group number helps you know what you are doing with the Realtime controllers over on the right of the front panel. See Sections 2.2.3 and 2.2.4 to know more about Realtime controllers and Pot Groups.

SOFTWARE VERSION

In Preset Mode, by pressing the SHIFT key and holding it down you can see a page that tells you the soundskin name and version number. As you let go of the SHIFT key you return to Preset Mode.

2.1.2 Working in Preset Mode

By using the keys VALUE UP and VALUE DOWN or the BIG DIAL, you can navigate through the bank of stored presets.

When you hold a key or move the BIG DIAL, the three character effects abbreviations on the lower line of the display will blink indicating that you are changing the current preset but that the new one has not been loaded yet. When you release the key or the BIG DIAL, the word will stop blinking indicating that the new preset has been loaded. This all takes place quite quickly.

Note that it is possible to 'lock' the BIG DIAL in System Mode to avoid accidental Preset changes in a live situation (see tables on section 2.3). You would then only be able to change preset using VALUE UP or DOWN. (This way you don't worry about looking like a fool as you are tweaking the Realtime controllers and the effect preset suddenly changes...!)

The LED lights above the Realtime controllers will be lit if they are assigned to control anything. (Remember to note the active Pot Group).

2.1.3 Changing to other modes

TO GO TO EDIT MODE

The EDIT key has two uses: when pressed and released immediately, the operating mode will change to the Edit Mode. Here you can edit the settings for the preset you are using. The second use is to go to System Mode...

TO GO TO SYSTEM MODE

If the EDIT key is pressed and held down for a moment, the operating mode will change to System Mode. Here you can edit the global system parameters.

TO GO TO ASSIGN INFO MODE

The combination of keys SHIFT+PAGE UP or SHIFT+PAGE DOWN in Preset Mode puts the system into Assign Info Mode. Here you can see detailed info about the status of all the Realtime controllers. To leave this mode press SHIFT. See section 2.4 for more details on Assign Info mode.

2.2 Edit Mode

This mode allows you to "go inside" the current preset and modify all the parameters. As you leave Edit Mode by pressing EDIT again, you will be given the option to save what you have been doing (see section 2.2.6 for more information on saving your edits).

As in Preset Mode, (where the number blinks) you can easily see if the preset has been modified from the original stored in memory. In Edit Mode this is indicated by the LED next to the EDIT key blinking instead.

2.2.1 Working in Edit Mode

THE DISPLAY

```
●FX1:  Reverb       1
▮Type        [ Hall]
```

As well showing you the menus and parameters of the preset, the screen also displays at all times the Input and Gain Reduction signal meters and the Pot Group indicator. However in Edit Mode they have moved about a little from where they were in Preset Mode:

- The MIDI input activity icon has moved slightly to the left it is shown at the very left side of the upper line.

- the current Pot Group number is now shown on the right of the upper line.

- We have put the Gain Reduction meters next to this on the right hand side of the upper line. Remember that they are active only if you are using a dynamics effect in one of the three FX Slots.

- The Stereo Input meter has not moved it is still displayed where it was before, on the left side of the lower line. Note that the output meter is not displayed in Edit Mode.

NAVIGATION

Navigating this mode is quite easy, with parameters grouped together into logical menus, which you can browse through to access and modify parameters. The LCD display always tells you where you are as you navigate.

You move around with the three pairs of keys named GROUP UP/DOWN, PAGE UP/DOWN, and PARAM UP/DOWN. You actually adjust things using the final pair VALUE UP/DOWN and/or the BIG DIAL.

In Edit Mode, the menus have the following structure:

- **GROUP** (GROUP UP and GROUP DOWN keys)

  The group buttons move you between the three slots FX 1, FX 2, FX 3 and a small set of COMMON mixing parameters. The name of the current group is shown in the upper left line of the Display.

- **PAGE** (PAGE UP and PAGE DOWN keys)

  For each of the Slots FX 1, FX 2 and FX 3 these keys move you between two areas - the 'routing' configuration area (for choosing how the signals flow through the FX Slot) or the effect 'parameters' editing area (for changing the set up of the effect itself).

  In the COMMON 'page' these buttons do nothing as there is only one 'page'.

- **PARAMETER** (PARAM UP and PARAM DOWN keys) The name of the current parameter is shown in the lower line of the Display, aligned to the left.

  These controls will generally take you through the list of parameters available for editing in the particular page you have navigated to. There is only one subtle exception to this:

  If you have chosen to enter the PARAMS page of an FX Slot, so that you can set up the effect itself, the first parameter you can edit is the type of effect you want to use for that slot. For instance this might be REVERB.

  Then, as you press PARAM UP, you will travel through the list of REVERB parameters available.

  The thing to note is: if you travel back down to the bottom of the list (using PARAM DOWN) and change the effect type to something else, e.g. DELAY, as you go back up the list again you will see a different set of parameters that now correspond to the new effect that you have loaded.

  In this sense the PARAM list is dynamic here, as it changes according to what effect type you select.

For clarity, we have laid out all the menus that you navigate through in the tables below, with additional descriptions. The first table shows the whole structure of EDIT MODE, and the following subtables show more specifically the different parameters you find for each effect type once it is loaded, and a brief description for each effect.

This is actually a lot of words to describe something that is quite intuitive once you have used it even very briefly!

- **VALUE** (VALUE UP and VALUE DOWN keys and/or BIG DIAL)

  All the other buttons described above are for navigating around the software. With VALUE UP/DOWN and/or the BIG DIAL you actually change the value of something. The current state of the parameter you have navigated to is shown between animated brackets on the lower line of the Display.

So for example, if we show you again the figure we showed at the start of this section, you can see that:

the GROUP is "FX1"

the PAGE is "Reverb" (as we are in the effects editing area)

the reverb effect PARAMETER is "Type"

the VALUE is "Hall", and with the VALUE UP/DOWN buttons and/or the BIG DIAL you could choose between "Room", "Stage", "Plate"...

Over the following pages we have laid out all the parameters, which show the menu structure clearly.

Operating Modes

Group	Page	Parameter	Value	Description
FX1	PARAMS	FX Sel This is where you select the FX type to put into this Slot (as listed on the right - you pick the effect using VALUE UP/DOWN)	Off	The FX Slot is turned OFF. NOTE: To choose this state you can press SHIFT + VALUE DOWN from anywhere in the list. SHIFT + VALUE UP will reactivate the FX Slot again. See section 2.2.2 for more details
			Reverb	Spatial effects such as Halls as Rooms
			Delay	Multiple echo type effects
			ParamEQ	For boosting and cutting certain frequencies
			Compressor	For controlling dynamics, commonly used for "pulling down" the loudest part of a sound
			Limiter	A heavy for of compression for "flattening" a signal and avoid its level to exceed a threshold
			Gate	If the signal level falls below a certain point, the signal is cut completely. Commonly used for making the quietest passages completely silent to cut out unwanted noise
			Tremolo	Modulates the signal volume at a specified speed and depth, producing a "wobbling" sound
			Chorus	Adds one or several voices each with a slight variation of pitch and delay, creating a double voice effect
			Flanger	Similar to the Chorus, but with very short delays, and feedback to create a sound with a swirling frequency pattern
			Phaser	It uses an allpass filter to shift the phase of the input signal whose output is mixed with the original. It also uses feedback, producing a "whooshing" sound
			AutoPan	Moves the sound around in the stereo field
			WahWah	Uses a controllable bandpass filter to create that classic sound
			Pitch shifter	Up to 4 voices that change the pitch up or down. They can be also placed individually within the stereo field
		From FX Sel above, if you press PARAM UP you will start to navigate through the list of parameters for that particular effect (See Table 2)	With VALUE UP/ DOWN you can edit the effect parameter values	See section "NAVIGATION" on section 2.2.1 for details
	ROUTING	Active	On - Off	Turns the whole FX Slot On / Off. This is the same as pressing SHIFT+VALUE DOWN from within the FX Sel list. See section 2.2.2 below for more details
		InSel	In L + R / In L / In R	Here you choose the input source for the FX Slot
		InLevel	0 - 127	For adjusting the input source volume
		OutLevelL	0 - 127	For adjusting the left output volume
		OutLevelR	0 - 127	For adjusting the right output volume
		Wet/Dry	0% - 100%	Balances the FX Slots processed output with the input signal it has processed

Group	Page	Parameter	Value	Description
FX2	PARAMS	FX Sel This is where you select the FX type to put into this Slot (as listed on the right - you pick the effect using VALUE UP/DOWN)	Off Reverb Delay ParamEQ Compressor Limiter Gate Tremolo Chorus Flanger Phaser AutoPan WahWah Pitch shifter	See above...
		From FX Sel above, if you press PARAM UP you will start to navigate through the list of parameters for that particular effect. This is shown in more detail in Table 2	With VALUE UP/ DOWN you can edit the effect parameter values	See section "NAVIGATION" on section 2.2.1 for details
	ROUTING	Active	On - Off	See above...
		InSel	In L + R In L In R Exf1 L+R Efx1 L Efx1 R	
		InLevel	0 – 127	
		OutLevelL	0 – 127	
		OutLevelR	0 – 127	
		Wet/Dry	0% - 100%	

Group	Page	Parameter	Value	Description
FX3	PARAMS	FX Sel This is where you select the FX type to put into this Slot (as listed on the right - you pick the effect using VALUE UP/DOWN)	Off Reverb Delay ParamEQ Compressor Limiter Gate Tremolo Chorus Flanger Phaser AutoPan WahWah Pitch shifter	See above...
		From FX Sel above, if you press PARAM UP you will start to navigate through the list of parameters for that particular effect. (See Table 2)	With VALUE UP/ DOWN you can edit the effect parameter values	See section "NAVIGATION" on section 2.2.1 for details
	ROUTING	Active	On - Off	See above...
		InSel	In L + R In L In R Exf1 L+R Efx1 L Efx1 R Exf2 L+R Efx2 L Efx2 R	
		InLevel	0 – 127	
		OutLevelL	0 – 127	
		OutLevelR	1 – 127	
		Wet/Dry	0% - 100%	
Common		Wet/Dry L	0% - 100%	These controls balance the whole mix of all three FX Slots for left and right with the original physical input signal – the Dry Source
		Wet/Dry R	0% - 100%	
		Wet/Dry Link	On – Off	Links the left and right Wet/Dry controls together for stereo control. (This is generally best left ON, unless you want to create specific stereo FX or dual mono set-ups.)
		Dry Source	Stereo In L In R In L+R	This selects what the FX are to be mixed with using the Global Wet/Dry mix controls

As explained in the subsection 'NAVIGATION' above, for **FX1**, **FX2** and **FX3**, depending on the effect type loaded the parameter menus show different things. The following sections below give a brief introduction to each type of effect, its potential uses and descriptions of the parameters you can edit once it is loaded.

REVERB

A reverb effect is used to recreate digitally the spatial effects that occur when sound bounces around inside different types of spaces. It is an extremely useful effect to use in music production as our ears are actually very aware of a sense of space, as we use them everyday to navigate our surroundings. Reverbs are for instance commonly used to add depth and space to vocals or to bind the various instruments in a mix together.

FX Type	Parameter	Value	Description
Reverb	Type	Hall/Room/Plate/Stage	Choose your general reverb type
	Size	Small/Medium/Large	Choose its size
	Reverb Time	0,01s - 15s	Controls how long the reverberation takes to die away to nothing
	Predelay	0ms - 127ms	In many real spaces there is an audible gap between the sound and the reverberation that returns from bouncing off the walls. For instance, if you clap your hands in a large church, you might hear a clap straight from your hands in front of you followed later by the reverberated sound that is coming back from having bounced off the large, distant stone walls. As sound takes around 1/3 second to go 110 metres it can be quite noticeable. This parameter is for recreating this phenomenon in your reverb setups.
	Absorption	0% - 100%	This adjusts the perceived reflectivity of the "walls", which is a frequency dependant phenomenon. For instance carpeted walls are more "absorbent" than stone walls and therefore reflect less soundwaves. A lowpass filter is used to simulate the higher frequencies being absorbed more and more.
	HFDecay	0% - 100%	The lower the % value, more the high frequencies of the reverberation are taken away
	LFDecay	0% - 100%	The lower the % value, more the low frequencies of the reverberation are taken away
	TailLev	0% - 100%	Reverberation phenomenon is split into two types of reflection - EARLY reflections, the ones that bounce off the surfaces and come straight back at you, and the TAIL, which is all the sounds that come from the other reflections that bounce all over the space many times before you hear them, taking a certain time to die away.With these two controls you can balance the levels between these two aspects of the reverb.
	EarlyLev	0% - 100%	

DELAY

Some of the earliest delay FX machines were loops of tape that would record a short clip of sound and play it back via play heads that were located further round the loop. By mixing itself back into the input (feedback) further echoes could be introduced, and by changing the position of the playback head or the speed of the tape created different delay times.

Although these tape delays sounded beautiful, the controls of the modern digital delay can be far more accurate and you can do a lot more with them. The Chromasonic digital delay has two delay lines that can be set up independently, synchronised to MIDI and staggered in time in relation to each other. If you want to recreate the classic tape delay sound, start by using the hi cut to colour the sound darker and darker.

FxSel	Parameter	Value	Description
Delay	Sync 1	On / Off	You can set the MIDI clock sync ON or OFF for each delay line. When the sync is OFF, you can set the delay time in milliseconds, from 1 millisecond to 10 seconds (9999ms)When sync is ON, you have a range of tempo based options for synchronising the delay to your MIDI tempo e.g. 1/4 notes, 1/8 note Triplets, etc
	Delay Time 1 (When Sync 1 is Off)	0ms - 9999ms	
	Clock 1 (When Sync 1 is On)	Off - 2 Bar	
	Sync 2	On / Off	
	Delay Time 2 (When Sync 2 is Off)	0ms - 9999ms	
	Clock 2 (When Sync 2 is On)	Off - 2 Bar	
	Offset	0ms - 400ms	This creates a constant time difference between the two delays, shifting delay 2 later in time by the selected amount
	Feedback 1	-100% .. +100%	Without any feedback, the delay unit will just reproduce the input signal once, after the desired amount of time. But if you feed a portion of the delayed sound back into the input of the DELAY, it will create more than one echo. For sounds that repeat several times before dying away, set the feedback somewhere between 0% and 50%. Above 50% you start to get a feedback loop that builds and builds until you have total noise as the DELAY builds up in layers. When feedback is negative, the signal in the feedback loop is inverted before being sent back to the input, meaning that it will be effectively subtracted from the original input rather than added.
	Feedback 2	-100% .. +100%	
	Level 1	0% - 100%	This sets the volume of the each delay line
	Level 2	0% - 100%	
	Pan 1	50Left - 50Right	This sets the stereo position of each delay line
	Pan 2	50Left - 50Right	
	Lo Cut	10Hz - 2kHz	This cuts the low frequencies, which means the delayed sounds get thinner and brighter
	Hi Cut	2kHz - 20kHz	This cuts the high frequencies, which means the delayed sounds get darker and darker.

PARAMETRIC EQ

This parametric EQ is set up to have 5 bands. You use it like a tone control, to pick out 5 certain frequency areas and then decrease or enhance the volume there using the GAIN control. E.g. boost the bass and add light to the high range. You also have control over the amount of impact on the surrounding frequencies so you could for instance create general emphasis of the highs or zone in on a specific problem noise at a certain frequency.

The band named as 'Lo' is a shelving lowpass filter, then there are three peaking bandpass filters named 'B1', 'B2' and 'B3' and finally there is a shelving highpass filter named 'Hi'.

Fx Type	Parameter	Value	Description
ParamEQ	LoGain	-12dB .. +12dB	The 'Lo' band will operate on all sounds below the selected frequency (FREQ), while the 'Hi' band will operate on all sounds above the selected frequency. SLOPE controls the abruptness of the change between the selected lo or high area and the rest of the frequency spectrum nearby.The three bands in the middle will affect the sound around the selected frequency. The bandwidth (BW), like slope, determines how much of the surrounding frequencies are included. A low bandwidth means that you are zooming in on very specific frequencies, whereas a high bandwidth means you will affect a whole range of frequencies centred around the selected band
	LoFreq	20Hz - 5kHz	
	LoSlope	0,1oct - 1oct	
	B1Gain	-12dB .. +12dB	
	B1Freq	20Hz - 8kHz	
	B1BW	0,1oct - 4oct	
	B2Gain	-12dB .. +12dB	
	B2Freq	20Hz - 8kHz	
	B2BW	0,1oct - 4oct	
	B3Gain	-12dB .. +12dB	
	B3Freq	20Hz - 8kHz	
	B3BW	0,1oct - 4oct	
	HiGain	-12dB .. +12dB	
	HiFreq	500Hz - 20kHz	
	HiSlope	0,1oct - 1oct	

COMPRESSOR

A compressor is commonly used to subtly help control the dynamics of a sound (its loudness). The loudest parts of a signal are 'pulled back' if it gets too loud. Usually the sound ends up tighter and easier to work with in a mix.

For instance, when a singer belts out one part of a phrase, and whispers another, compression can be used to even out the levels so that the jump is not so extreme. Mastering houses will also usually compress a mix to make it have weight and 'punch'. However these days the process is also used with extreme settings for many creative production effects. A 'pumping' effect can be achieved with drums for instance, where the compression is so strong that the loudest parts are slammed down and the quiet passages in between the beats swell into the foreground as the compression decays

Fx Type	Parameter	Value	Description
Compressor	Threshold	-90dB - 0dB	The compression will 'kick in' once the sound reaches a certain loudness - the THRESHOLD. The lower the threshold the sooner the effect will start working. Then, the compressor will compensate by 'pulling back' the volume, more and more as the sound gets louder, so it will not get as loud as quickly. The higher the RATIO the more severe the compression. The ATTACK controls how quickly the effect reacts, and the RELEASE controls how long it takes to 'let go'. The CURVE controls whether at the threshold point the effect kicks in immediately (hard) or more gradually (soft), and finally the GAIN control can be used to bring the overall volume back up again if needed. The Gain Reduction meter will show graphically the amount the volume is being pushed down, as well as helping you gauge visually the attack and release times
	Ratio	off - inf:1	
	Curve	Soft / Hard	
	Attack	0,3ms - 100ms	
	Release	10dB/s - 99dB/s	
	Gain	-100dB .. +30dB	

LIMITER

A limiter is like a severe compressor, and it has parameter ranges more suited to tightly holding signals from passing beyond at a certain volume or threshold.

Fx Type	Parameter	Value	Description
Limiter	Threshold	-90dB - 0dB	The limiter principle is quite similar to the compressor, and its parameters are basically the same. The main difference is that the gain reduction curve of the limiter is specially shaped to obtain better results with loud signals that exceed the threshold very frequently
	Ratio	off - inf:1	
	Attack	0,3ms - 100ms	
	Release	20ms - 7s	
	Gain	-100dB .. +15dB	

GATE

A gate is commonly used to clean up a signal, especially where there is background noise. At a certain point as the volume of the signal drops the gate will 'close' and no longer allow any sound to pass through. But it can also be used with very creative results depending on what you pass through it.

FxSel	Parameter	Value	Description
Gate	Threshold	-90dB - 0dB	THRESHOLD sets the signal level at which it open and closes. The ATTACK and RELEASE control how quickly the gate responds, and so also how responsively it behaves as the signal fluctuates around the threshold point. RATIO sets the attenuation below the threshold depending on the input signal level
	Ratio	off - inf:1	
	Attack	0,5ms - 100ms	
	Release	20ms - 7s	
	Gain	-100dB .. +15dB	

TREMOLO

The Tremolo effect automatically 'wobbles' the volume of the signal, at a controllable speed and depth. It is a classic effect for a Fender Rhodes style keyboard but can be used in many different ways, especially if you synchronise it to your MIDI clock.

FxSel	Parameter	Value	Description
Tremolo	Shape	Triangle / Square / Sine	The SHAPE control determines what contour the 'wobble' will have, and the DEPTH control decides how extreme the effect is. The effect can be synchronised to the MIDI clock or set at a certain speed in Hertz (cycles per second). When the SYNC is OFF, you can set the speed in Hertz. When SYNC is ON, you have a range of tempo based options for synchronising the speed to your MIDI tempo e.g. 1/4 notes, 1/8 note Triplets, etc
	Sync	On / Off	
	Speed (When Sync is off)	0,05Hz - 20Hz	
	Clock (When Sync is On)	1/32nd - 2Bar	
	Depth	0% - 100%	

CHORUS

A chorus effect is used to 'thicken' the signal by reproducing the same sound on top of itself several times with a very slight delay and pitch change. Controls are added to make these extra voices move about in pitch over time.

FxSel	Parameter	Value	Description
Chorus	Speed	0,15Hz - 30Hz	SPEED controls the rate of movement, DEPTH controls how much the effect moves, DELAY controls the difference in time with the original, and VOICES allows you to choose between two and four layers of chorus
	Depth	0% - 100%	
	Delay	0ms - 50ms	
	Voices	Dual / Quad	

Operating Modes

FLANGER

The Flanging effect is said to have been originally created when engineers ran two tape machines in sync with the same thing on them, and them run a thumb over the 'flange' of a reel-to-reel tape machines, forcing each one to slow down alternately, and thus changing the pitch of the sound and causing all sorts of interference patterns when the signals were mixed together again.

The Chromasonic Flanger reproduces the signal on top of itself and it moves the sound around in pitch, drifting it slightly higher or lower than the original, causing the same effect.

FxSel	Parameter	Value	Description
Flanger	Sync	On / Off	The DELAY sets the time difference between the two signals (it controls how much the pitches fluctuates). FEEDBACK sets the amount of either positive or negative feedback. DEPTH controls how extreme the effect is. The effect can be synchronised to the MIDI clock or set at a certain speed in Hertz (cycles per second). When the SYNC is OFF, you can set the speed in Hertz. When SYNC is ON, you have a range of tempo based options for synchronising the speed to your MIDI tempo e.g. 1/4 notes, 1/8 note Triplets, etc
	Speed (When Sync is off)	0,15Hz - 30Hz	
	Clock (When Sync is On)	1/32nd - 2Bar	
	Depth	0% - 100%	
	Feedback	-100% .. +100%	
	Delay	0,1ms - 25ms	

PHASER

A phaser reproduces the same signal on top of itself, while modulating the frequency phase difference between the two (thus causing a frequency dependant delay between both signals). The result is that certain frequency components are eliminated and others are enhanced as the phase relationship changes over time, which is usually controlled by an internal LFO.

FxSel	Parameter	Value	Description
Phaser	Sync	On / Off	FEELING controls the tonal quality, and DEPTH controls how extreme the effect changes. The RANGE controls what frequency area are effected most. The effect can be synchronised to the MIDI clock or set at a certain speed in Hertz (cycles per second). When the SYNC is OFF, you can set the speed in Hertz. When SYNC is ON, you have a range of tempo based options for synchronising the speed to your MIDI tempo e.g. 1/4 notes, 1/8 note Triplets, etc
	Speed (When Sync is off)	0,05Hz - 9,45Hz	
	Clock (When Sync is On)	1/16th - 2Bar	
	Depth	0% - 100%	
	Range	MidFreq / LowFreq	
	Feedback	-100% .. +100%	
	Feeling	Warm / Smooth / Bright	

AUTOPAN

This simple effect takes the sound and moves it around in the stereo field automatically using an internal LFO.

FxSel	Parameter	Value	Description
AutoPan	Shape	Triangle / Square / Sine	You can choose the contour of the movement with the SHAPE control, and the DEPTH controls how extreme the effect is. It can also be synchronised with MIDI clock. When the SYNC is OFF, you can set the speed manually in Hertz. When SYNC is ON, you have a range of tempo based options for synchronising the speed to your MIDI tempo e.g. 1/4 notes, 1/8 note Triplets, etc
	Sync	On / Off	
	Speed (When Sync is off)	0,05Hz - 20Hz	
	Clock (When Sync is On)	1/32nd - 2Bar	
	Depth	0% - 100%	

WAH WAH

The WahWah effect is a classic guitar and keyboard effect, popularised by classic foot pedals that allowed instrumentalists a further means of expression. It consists of a Band pass filter with unity gain in the centre frequency and bandwidth, whose centre frequency can be moved up and down between two fixed limits.

FxSel	Parameter	Value	Description
WahWah	Mode	Normal / Auto / LFO	In NORMAL mode it will operate as a classical WahWah. The only parameter available will be VALUE, which corresponds to the position of the footpedal. The effect can be controlled manually or by assigning VALUE to a realtime controller or to the MIDI Expression Controller. In AUTO mode, the louder the input signal, the more the filter will open. VALUE determines the general filtering point, lower or higher. SENSITIVITY controls how much the auto mode reacts to the input volume
	Value	0 - 10	
	Sensitivity (When Mode is Auto)	0 - 10	
	Sync (When Mode is LFO)	On / Off	The Wah Wah can also be controlled by and LFO. Then VALUE controls the lower value of frequency and DEPTH controls how much the filter will open from that point in time to the LFO. It can be synchronised to MIDI if you wish. When the SYNC is OFF, you can manually set the SPEED time in Hertz. When SYNC is ON, you have a range of tempo based options for synchronising the speed to your MIDI tempo e.g. 1/4 notes, 1/8 note Triplets, etc.
	Speed (When Sync is off)	0,05Hz - 20Hz	
	Clock (When Sync is On)	1/32nd - 2Bar	
	Shape (When Mode is LFO)	Triangle / Square / Sine	
	Depth (When Mode is LFO)	0% - 100%	

PITCH SHIFT

This effect reproduces several times the original signal at higher or lower pitches. You can create everything from subtle harmonies to chipmunks and monster deep voices. It also works well on instruments such as drums, while on pianos it can create a honky tonk effect if detuned just a little.

FxSel	Parameter	Value	Description
PitchShift	Voices	1 - 4	Using the VOICES parameter you can set it to create up to four voices. Each voice has its own controls: PITCH, for setting the pitch change in cents, which are 1/100th of a semitone. You can go up or down one octave (+/-1200 cents) DELAY creates a time difference of up to 1/2 second (500 milliseconds) between the voices. PAN places a voice within the stereo field, and LEVEL controls its loudness in relation to the others
	Pitch 1	-1200cents - 1200cents	
	Pitch 2	-1200cents - 1200cents	
	Pitch 3	-1200cents - 1200cents	
	Pitch 4	-1200cents - 1200cents	
	Delay 1	0ms - 500ms	
	Delay 2	0ms - 500ms	
	Delay 3	0ms - 500ms	
	Delay 4	0ms - 500ms	
	Pan 1	50 Left - 50 Right	
	Pan 2	50 Left - 50 Right	
	Pan 3	50 Left - 50 Right	
	Pan 4	50 Left - 50 Right	
	Level 1	- inf .. 0 dB	
	Level 2	- inf .. 0 dB	
	Level 3	- inf .. 0 dB	
	Level 4	- inf .. 0 dB	

2.2.2 Activating/Deactivating an Effect Slot

DEACTIVATING THE WHOLE EFFECT SLOT

In Table 1 above, one of the options in the list of FX types is OFF, the deactivated state. You don't, however, access the OFF state by scrolling through the list to find it.

For this version we think it more useful to be able to switch off the slot directly from any of the FX types you have loaded and set up. If you had to scroll through the list you would lose your edits. By turning it OFF directly using the shortcut below you can always reactivate it later if you wish and carry on where you left it.

So:

> to turn it OFF press SHIFT + VALUE DOWN (deactivate)

> to turn it ON again press SHIFT + VALUE UP (activate)

You will notice that in the Routing pages there is the menu option to activate the slot, and this is exactly the same function and will display the same state.

ACTIVATING A 'BLINKING' REVERB IN A FX SLOT

If you try to load a Reverb into an FX slot, and you find that the name blinks instead of loading it means there is a reverb currently activated in another FX Slot. Remember that the reverb algorithms employed in Chromasonic, as in many other quality FX units, are very DSP intensive. So you can activate one FX Slot with a reverb effect at any one time.

To confirm that you do want to move the reverb to the new FX Slot press SHIFT+VALUE UP. This will deactivate the reverb in the other slot at the same time.

(Take care to note your routings as you do this because the newly deactivated slot will then sit in 'limbo' with its reverb selection blinking, but no sound will pass through the FX Slot until a new FX type is chosen for it. This means that if the FX Slots that follow it are receiving their input from it, they will receive nothing, unless its Dry/Wet mix is less than 100%).

2.2.3 The Real-Time Controllers

The Realtime controllers allow you hands on control of almost any parameter. Every preset can have its own unique Realtime controller set up. As well as for live performance they can be used for intuitive editing.

For instance, while editing a preset, if you loaded into an FX Slot a Reverb, you could then assign three of the parameters, say PreDelay, Rev Time and Absorption to the three controllers. Then you could tweak the parameters simultaneously, focusing on the sound while finding the 'sweet spot' - without thinking in numbers or staring at the screen.

The Realtime controllers also send out MIDI controller data, so you record any parameter edits into you sequencer effortlessly in the same manner.

This is all really easy, as assigning parameters is a very quick process:

In Edit Mode:

1. Find the parameter you want to assign.

2. Press SHIFT while turning one of the pots.

WHAT HAPPENS AS YOU ASSIGN

The value of the parameter won't change but a message "P x assigned" will be shown in the Display for a few seconds. "PX" refers to which pot you are assigning - P1, P2 or P3. It will also show the assigned parameter name and where it comes from (FX1, FX2, FX3 or Common). To remark that a potentiometer is assigned, the LED above it will lit on.

```
 _____
|                                |
|   P1 Assigned           1      |
| ▪I FX1 Depth                   |
|_____|
```
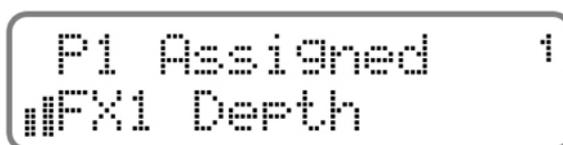
If you want to assign the same pot to different parameter, simply repeat the process.

You can also un-assign a pot by pressing the SHIFT key and turning the pot all the way to the left. The Display will show this message: "P x unassigned" and its LED will turn off to show that this potentiometer is free.

Once a parameter is assigned to a controller, its value can be modified outside of Edit Mode as well. When you move it, the screen will always briefly show you details of what you are doing.

Note that there are some specific parameters that cannot be assigned. If you try to assign them, the display will show the following message:

```
This param cant
be assigned
```

Note that if you have assigned a pot to a parameter of a particular effect, e.g. a Compressor's Threshold, but then you change effect type to say a Limiter, the pot will become inactive. But if you change the effect type back to a compressor, it will be able to control the Threshold again, as before.

This memory of where you had assigned the pot will of course be wiped once you reassign the pot to something else.

Before you go ahead and do all this, do read the next section about the 'Pot Groups' concept so that you see how to assign up to nine parameters to the controllers.

MIDI EXPRESSION PEDAL CONTROL

You can assign a MIDI expression controller (number 11) to any parameter just like the Realtime controllers. The whole mechanism behaves in exactly the same way as the Realtime controllers. Simply Hold down the SHIFT key and move the Expression pedal when you are looking at a parameter you want to assign.

2.2.4 Potentiometer Groups

Instead of just three Realtime controllers to play with, in this version of Chromasonic you can now assign up to nine controllers to whatever parameter you like, split into three sets or 'Pot Groups' that you can toggle between.

You can use PART UP and PART DOWN while in any mode to switch Pot Group, and in Edit Mode the current group is displayed by the small number on the right hand side.

There are actually four Pot Groups, with the last group permanently controlling a set of common parameters that are very useful get at instantly from the front panel. These are (for Pot Group 4):

- Pot 1 = Global Input Level

- Pot 2 = Dry/Wet Mix Left

- Pot 3 = Dry/Wet Mix Right

Note that if you have Dry/Wet link activated in the Common menu both Pot 2 and 3 will have the same effect.

So when you are assigning, you should of course always keep an eye on what Pot Group you are in. As you change Pot Group you can see if a pot has been assigned to something as the LED above it will lit.

2.2.5 Comparing your Edits with the stored Preset

In Edit Mode, it is possible to compare at any time the preset you are editing with the last version stored in flash. You do this by pressing SHIFT + PART DOWN. Then, the stored version of the preset will be loaded to show how it was before your changes, and to remind you that you are in this mode a little "C" on a black background will appear on the top right of the display.

```
FX1: Reverb   01
▮▮[Size    [Medium]
```
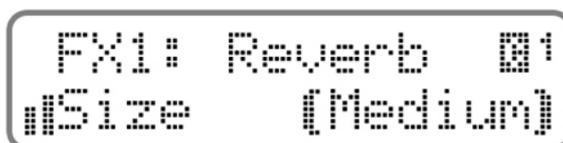
When comparing a preset, you can navigate through all the parameters of the original preset, whose values will be displayed as they are stored, but it is not possible to modify anything.

Pressing SHIFT + PART DOWN again will return you to the modified version and the little "C" will disappear. This can be done as many times as you like while in the Edit Mode.

2.2.6 Finishing and Preparing to Save Edits

To exit the Edit Mode and return to the Preset Mode, press the EDIT key again. If at this point any of the parameters of the current preset have been modified, you will be asked if you want to store the modified preset to memory. You can choose whether you want to overwrite the old preset or save it with a new name / new location.

So it will ask you if you want to store the altered preset like this:

```
   Preset changed
▮▮[Save changes ]
```
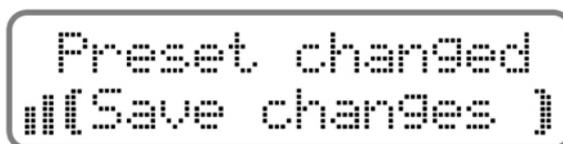
By pressing VALUE UP and VALUE DOWN you can select between:

- (Save Changes)

  This option will take you to the next dialogue described in the next section, for naming and numbering your preset.

- (Don't Save)

  This will dump you back into Preset Mode, without saving. Your edits will remain in place (but if you change preset you will lose them). You can come and go between Edit Mode and Preset Mode like this as often as you like, as your preset will still be modified - the number will blink to remind you of this - and you will still be able to store it later. Note that SHIFT also acts like a 'cancel' command, and will abort the saving dialogue and return to the Preset Mode without storing in just the same way.

▪ (Discard Edits)

If you don't like what you have been creating and you would like to return straight away to the original saved version of the preset, choose this.

Once selected, press EDIT to proceed. If you want to start over with the original preset from memory, from Preset Mode you can also use VALUE UP/DOWN to change to another preset, and then change back to load the original sound from memory.

QUICK SAVE

Also, while in Edit Mode, if you are sure you want to save your preset, just press and hold the EDIT key down and it will let you save it straight away without asking. This is also useful if you haven't changed anything but want to save it to a new location (otherwise the Edit button wouldn't normally ask you if you want to save it as you have made no changes, and would simply take you back to Preset Mode).

2.2.7 Naming and Numbering

So once you have chosen to save the preset, the next screen will allow you to set the name and number of the preset you are saving. By default the current preset number and name will be shown.

First you can change the number, then the name. Use the BIG DIAL or the VALUE UP and VALUE DOWN keys to alter the value, and the EDIT key to move to the name field to edit that (The active field is enclosed between two animated brackets).

```
 ┌─────────────────────────────┐
 │    Write 001 to             │
 │ ▮008[Dark Hall  >           │
 └─────────────────────────────┘
```
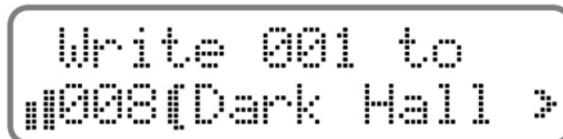
When the Name field is selected, you edit the name using these keys, whose function temporarily change:

▪ VALUE UP & DOWN

These choose from the different characters available (from numbers to capital letters and symbols).

▪ PARAM UP & DOWN

These move you around left or right within the name. You can use up to 12 characters for the name.

▪ PAGE UP & DOWN

These let you jump back to the preset number field from the preset name field and back again.

- PART UP or DOWN

  If you are saving to another location, by default the name and number of that location will be shown. However, if you wish to use the original name of the source preset you are copying to the new location, you can do so using the PART UP and DOWN keys. You will then be prompted to confirm this request, and the VALUE UP and VALUE DOWN keys will temporarily choose between "Y" or "N". The EDIT key will execute and the SHIFT key will cancel.

Once finished, press the EDIT key to store the settings, or press the SHIFT key to cancel the operation.

IMPORTANT

NEVER TURN OFF THE CHAMELEON IMMEDIATELY AFTER SAVING A PRESET. THE WHOLE FLASH MEMORY IS BEING ACCESSED AND YOU COULD LOSE **ALL** YOUR PRESETS. HOWEVER IF YOU LEAVE TURNING THE UNIT OFF UNTIL THREE SECONDS **AFTER** IT HAS FINISHED SAVING THE PRESET YOU WILL NEVER HAVE ANY PROBLEMS.

An example of this situation might be if you want to shut down your system for the night. You might be saving your preset, and then immediately powering down the unit. Just wait a couple of seconds longer and you won't get a shock in the morning...

To explain, this is because we have designed the system to be as smooth to use as possible. So while you are working, you are disturbed by the saving process for as short a time as possible, because some of the saving is finalized in the background. In reality this should never be a problem, even though you should have regular back-ups of all your presets anyway, because you need to make SysEx backups every time you change SoundSkin...

2.3 System Mode

The System Mode is entered when pressing and holding the EDIT key when in Preset Mode. In this operating mode you can modify several global parameters and access different utility functions. These parameters are independent of whatever preset you might have loaded. The tables below outline all the functions.

This section also includes the pages where you perform the all-important MIDI System Exclusive (SYSEX) dumps that safeguard your presets before you might load a new soundskin instead of Chromasonic.

The screen looks like this:

```
◉SYSTEM: Dump
▮▮[Full Bank      ]
```

and you simply select from the different SysEx dump types (using PARAM UP and DOWN) and then press VALUE UP/DOWN to execute. If your MIDI sequencer has been put into record first, you can record the data as it streams out from the Chameleon and save it as a MIDI file, just like the other Chameleon files from us that you use to load soundskins and presets. To reload these back into Chromasonic later you simply play them to the Chameleon on any MIDI channel and the Chameleon will do the rest.

Be careful to start your sequencer before you execute a system exclusive MIDI dump, and not to stop your sequencer before it has finished.

The table on the following pages shows all the available system parameters.

| Page	Parameter	Value	Description
Sync	Tempo	65 .. 192 BPM	Sets the internal tempo rate
	SyncMode	Internal External Auto	SyncMode defines the source of the MIDI clock to synchronize the tempo dependant effects. When set to internal, the MIDI clock is generated internally using the Tempo specified in the next parameter or using the Tap parameter. If set to external, the clock is extracted from the incoming MIDI stream and the Tempo is calculated from it. The Auto Mode is used to automatically change between external and internal tempo: if the system receives incoming MIDI clock, then it will follow the external tempo. If there is not incoming MIDI clock, then the system will use the internal tempo.
	Tap (if SyncMode is internal)	Do it...	When SyncMode is set to Internal, it is possible to adjust the tempo by pressing the Shift key at the desired tempo rate
MIDI	MIDI Thru	On / Off	When on, the Chameleon will echo out instantly of the 'MIDI OUT port all information that it receives at the MIDI IN port
	MIDI Chan	1 .. 16	Defines which MIDI channel is used to process incoming MIDI (Program Changes and Controllers) messages, and to send them.
	MIDI ID	0 - 127	If you have more than one Chameleon, and you want to send SysEx information to them independently on the same MIDI chain, you can uniquely identify them using this setting
	Rx CtlChg	On / Off	Chromasonic will respond to MIDI controller change messages when this parameter is On and ignore them when Off
	Tx CtlChg	On / Off	When this is "on", whenever you adjust a parameter, Chromasonic will transmit the corresponding MIDI controller change message. Useful if you want to record a performance with the real time controllers
	Rx PrgChg	On / Off	Will respond to program change messages (for changing preset)
	Rx PrgChg	On / Off	Chromasonic will transmit a program change messages whenever you change preset

Page	Parameter	Value	Description
Setup	LockEnc	On / Off	When playing with the real-time controllers, it is possible to knock the big dial by accident, which could mean changing preset in Preset Mode. This option switches off the big dial in Preset Mode so that during a gig you don't accidentally change preset and sound stupid. Aren't we nice.
	WetDry	Preset/Global	When this parameter is set to Preset, the common parameter Wet/Dry can be different for each preset, and changing it will affect the preset. When set to Global, the Wet/Dry of each preset is overriden and all the presets will have the same Wet/Dry ratio. In this case, changing the Wet/Dry of a preset won't change the preset stored
	Pot Mode	Free / Catch	When this parameter is set to Free, changing the assigned realtime controllers will affect the parameters immediately, no matter if the current potentiometer position actually matches the parameter value. This can imply sudden and abrupt changes in the parameter value wich can be highly noticeable to the ears. When this parameter is set to "Catch", changing a realtime controller won't affect the paramater until the potentiometer value actually matches the parameter value. This will produce smoother changes in the sound, although response can be slower
	Start Pr	1 .. 128	This parameter defines the default preset number that will be loaded at startup
	ScrnSaver	Off/1m/3m/ 5m/15m	Sets the waiting interval without panel activity for displaying the Screen Saver.
Levels	Input	-inf dB .. 0 dB	Control the input signal level that goes into Chromasonic
Utility	Init Preset	Do it...	You can reset a preset's parameters (but without losing it's name) so you can start again. Note: you still have to save the changes for it to be permanent
	Factory Bank	Do it...	This will wipe your user presets and initialise all presets back to the Factory settings. Unlike Init Preset this will happen straight away. Careful...
	Reset Bank	Do it...	This will wipe your user presets and initialise all presets back to identical defaults. Unlike Init Preset this will happen straight away. Careful...
Dump	Preset	Do it...	SysEx dumps are MIDI code that the Chameleon will send to your MIDI sequencer to save the internal settings of a SoundSkin for safekeeping. Place your sequencer in record and then use the VALUE UP key to execute. This sends the current preset
	Full Bank	Do it...	This sends the whole bank of presets
	Global Data	Do it...	This sends the rest of the set up data for Chromasonic, such as the parameters in this table.
	Total	Do it...	Sends a dump of everything. This is the safest to use. You should make a Total dump regularly to make sure you never lose all your finely tuned presets and your beloved configuration
Info		Version	For your information
		Serial No	For your information
		About	For your information

2.4 Assign Info Mode

This mode is for keeping track of what the realtime controllers are assigned to and the position you last left them in, without having to adjust anything.

You can go into Assign Info Mode at any time from the System, Preset or Edit Mode, by pressing SHIFT + PAGE UP. In this mode, all the information related to the Realtime controllers and the Expression controller is displayed, like the parameter, FX slot and so on.

You can also see the position it was last left in, so it is possible to line up the pots to match these values before you exit. The little arrows on either side of the value will tell you if you are above or below. A small icon in the top left corner of the screen will also indicate the position of the pot. It will blink until the physical pot matches the position in memory. Of course, moving the Controllers in this way doesn't modify anything.

```
eP1: ▨Tremolo   1
Depth       [75%]
```

So it is just for checking the settings for all the controllers.

To navigate:

- Use PART UP and DOWN to change between Pot Groups 1 to 4 and the Expression pedal info screen. (shown by a small 'E')

- Use PAGE UP and DOWN to change between Pots 1, 2 and 3 in each Pot Group.

To exit this mode and go back to the mode you were working in, just press SHIFT.

A   Loading Soundskins

IMPORTANT NOTICE !!!

Chameleon soundskins are stored in the internal Flash memory together with the user data (sounds, presets, banks, soundskin configuration). When changing soundskin or updating an existing one we recommend to follow the instructions below to ensure a safe swap between different Chameleon soundskins or version updates without losing any of your user data. With different soundskins it is possible that the exact configuration of commands to execute the dump may differ, but for Chromasonic it goes like this:

- Connect the MIDI OUT of the Chameleon to the MIDI IN of the Sequencer/Recorder machine. Be sure that the MIDI Channel and Port settings are properly selected. Disabling the MIDI clock is recommended.

- In system mode select the **MIDI DUMP** page: and use PARAM UP to choose a **Total** dump to save all your settings.

- Start recording MIDI data in the Sequencer/Recorder and then, send the SysEx information by pressing VALUE UP or DOWN. In a few seconds all the user information of the soundskin stored inside the Chameleon will be recorded as SysEx data in the Sequencer/Recorder. When MIDI activity ends, all the data has been send. SysEx should not be filtered.

- Stop the Sequencer/Recorder and Save the MIDI file.

Now that you have stored the total user data of the existing soundskin, you can load the new soundskin or version update inside the Chameleon safely. Follow the instructions below.

MIDI OUT

MIDI IN

Chameleon

SHIFT

MIDI Sequence/Player
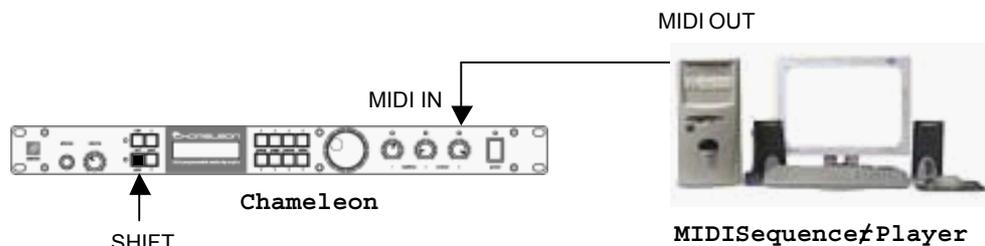
- Power up the Chameleon with the Shift Key held down, to put it in ready mode to accept the new soundskin. It will show this message:

```
┌─────────────────────────────┐
│                             │
│   Chameleon #01             │
│      (WAITING)              │
│                             │
└─────────────────────────────┘
```

- Connect the MIDI OUT of your MIDI Sequencer/Player machine (for example, a computer with a MIDI interface) to the MIDI IN of the Chameleon and Play the <u>Application MIDI File</u> containing the new soundskin or version update. It's recommended to disable the MIDI clock in the MIDI Sequencer/Player. If everything is connected properly, the following screen will be displayed showing an increasing block counter.

```
┌─────────────────────────────┐
│                             │
│   Receiving MIDI            │
│     0123 of 0756            │
│                             │
└─────────────────────────────┘
```

- When the counter arrives at the last block the Chameleon will ask you to store the soundskin in the internal Flash memory: this must be confirmed by pressing the SHIFT key within 20 seconds in order to accept the received data. If you don't press SHIFT the Chameleon will simply return to the "Waiting" state. If you do press the SHIFT key to accept, the soundskin will be burned in the internal FLASH memory. Don't turn off the Chameleon during this step or you will have to start again.

  If any problem happens during the downloading process, the display will show "**BAD DATA**" or "**TIME OUT**". To solve this, try setting a lower tempo in the sequencer (e.g. 90 BPM)

```
┌─────────────────────────────┐
│                             │
│   Receiving MIDI            │
│    **TIME OUT**             │
│                             │
└─────────────────────────────┘
```

After the process has been successfully completed, the Chameleon will power-up automatically, loading the new soundskin, which will need a few seconds to be fully operative after reconfiguring all the internal resources to it's needs. It is at this stage that all the old presets of the previous soundskin are wiped out.

It is therefore vital that you save all your precious work by doing a MIDI dump BEFORE you load a new soundskin, even if it is just a version update.

NOTE: There's no risk of damaging the Chameleon with wrong or corrupted data, as the Chameleon simply won't accept it. In case of error, the old soundskin will remain unharmed.

B   Midi Implementation

MIDI CONTROLLERS

The following table shows the parameters mapped to MIDI Controllers, whose value can be changed using standard MIDI control change messages (0xBn, ctrl, value).

For any of the three FX Slots, the parameters are displayed as Param0, Param1, and so on. The actual parameter modified will depend on the effect that is loaded at any time (see table 2). Trying to modify a parameter controller that does not exist for a specific effect will not cause any effect.

MIDI Ctrl	Chromasonic Parameter
7	Master Volume
11	Expression
16	FX1 Param0
17	FX1 Param1
18	FX1 Param2
19	FX1 Param3
20	FX1 Param4
21	FX1 Param5
22	FX1 Param6
23	FX1 Param7
24	FX1 Param8
25	FX1 Param9
26	FX1 Param10
27	FX1 Param11
28	FX1 Param12
29	FX1 Param13
30	FX1 Param14
32	FX1 Param15
32	FX1 Param16
33	FX1 Param17
34	FX1 Param18
35	FX1 Param19
36	FX1 Param20
37	FX1 Param21

38	FX1 Param22
39	FX1 Param23
40	FX1 Param24
41	FX1 Param25
42	FX1 Routing Active
43	Fx1 Input Select
44	FX1 Input Level
45	FX1 Output Level L
46	FX1 Output Level R
47	FX1 Wet/Dry
48	FX1 Effect Select
49	FX2 Param0
50	FX2 Param1
51	FX2 Param2
52	FX2 Param3
53	FX2 Param4
54	FX2 Param5
55	FX2 Param6
56	FX2 Param7
57	FX2 Param8
58	FX2 Param9
59	FX2 Param10
60	FX2 Param11
61	FX2 Param12
62	FX2 Param13
63	FX2 Param14
64	FX2 Param15
65	FX2 Param16
66	FX2 Param17
67	FX2 Param18
68	FX2 Param19
69	FX2 Param20
70	FX2 Param21
71	FX2 Param22
72	FX2 Param23
73	FX2 Param24
74	FX2 Param25
75	FX2 Routing Active
76	Fx2 Input Select
77	FX2 Input Level
78	FX2 Output Level L
79	FX2 Output Level R
80	FX2 Wet/Dry
81	FX2 Effect Select
82	FX3 Param0
83	FX3 Param1
84	FX3 Param2
85	FX3 Param3

86	FX3 Param4
87	FX3 Param5
88	FX3 Param6
89	FX3 Param7
90	FX3 Param8
91	FX3 Param9
92	FX3 Param10
93	FX3 Param11
94	FX3 Param12
95	FX3 Param13
96	FX3 Param14
97	FX3 Param15
98	FX3 Param16
99	FX3 Param17
100	FX3 Param18
101	FX3 Param19
102	FX3 Param20
103	FX3 Param21
104	FX3 Param22
105	FX3 Param23
106	FX3 Param24
107	FX3 Param25
108	FX3 Routing Active
109	Fx3 Input Select
110	FX3 Input Level
111	FX3 Output Level L
112	FX3 Output Level R
113	FX3 Wet/Dry
114	FX3 Effect Select
115	Common Wet/Dry L
116	Common Wet/Dry R
117	Common Wet/Dry Link
118	Common Wet/Dry Source

PROGRAM CHANGE

Sending a standard MIDI program change (0xCn, program number) message to the Chameleon will cause the soundskin to load the preset with the number of the program. Preset numbers in Chromasonic have the range 001 to 128.