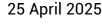
soundforce

SFC-8 User Manual





1. Intro

Thank you for purchasing the SFC-8 MIDI controller. It means a lot to me that you put your trust in my product. For the last months I certainly put a considerable amount of energy and time in this product to bring to fruition. I hope you will have a great experience using this device and that it will inject some fun in your music. Many new features will be integrated in the future and I am interested to get your feedback and requests: nicolas@sound-force.nl

2. Installation and start-up:

a. As a USB-MIDI device

The SFC-8 is a class-compliant USB-MIDI device which means that no drivers are necessary. The controller should directly be recognized by your computer when plugged-in. USB devices should preferably be connected directly to the computer USB ports. Please make sure that your USB ports/hubs are providing enough power to every single device in your configuration.

To use the controller with your DAW and plugins you need to make sure that the controller is set-up in your DAW. In some DAWs, Logic for example, it's automatic when you plug it in and you don't need to do anything. In others, you might need to turn on an option in the preferences. Please refer to your DAW manual for details.

The controller is sending by default MIDI CC messages and can be mapped to plugins using their MIDI mapping functions. To specify which instance of a plugin you want to control, simply route the MIDI to the right track. This is usually down by scrolling (or clicking) from one track to another and thus putting a specific track in "record-arm". In some DAW, you can specify which MIDI devices are used on a specific track, so you can filter per device and sometimes also per channel. Please refer to your DAW user manual for specific details.

b. As a DIN MIDI device

To power the controller, connect the USB cable to either a USB host, such as a computer, or a USB power block, such as a smartphone charger. Connect the SFC-8 DIN-MIDI output to the MIDI input of other gear you would like to control. Connect any MIDI keyboard or sequencer to the SFC-8 DIN-MIDI input. The incoming messages will be forwarded to both the USB-MIDI and DIN-MIDI outputs, along with all the sliders, pots and switches messages of the SFC-8 front panel. This eliminates the needs for any MIDI merger or other accessories. This also means that you could also use the SFC-8 as a MIDI to USB-MIDI interface if you don't own one.

3. USB-MIDI Troubleshooting on MAC:

If the device turns on (red LEDs are on and you can change the switches positions) but it is not recognized by the computer, please go through this guide completely. Please also try another USB cable, USB port and if possible another computer or OS. Before getting in touch for support, please confirm that the device is sending out MIDI correctly (or not) using a MIDI monitor (in google Chrome you can use the control panel app). If it does send MIDI messages as expected then the problem should be in the DAW and plugin configuration, make sure the controller is setup in your DAW and the plugin is mapped.

4. Loading configurations

There are 4 different configurations that can be saved and loaded on the controller. Those configurations allow the user to switch between plugins and synths during performance without the use of a computer. Every plugin or synth is different in terms of options and front panels, and especially hardware synths usually need specific MIDI CC mappings or even sysex implementations. Using the Chrome control panel app (see section 10), the user can save a configuration to 1 of the 4 slots and recalling them from the controller's interface.

The controller comes out of the box with 4 default configurations:

- 1 = Arturia V4
- 2 = TAL-J-8
- 3 = TAL-J-8 with positive modulation only on the MOD sliders
- 4 = Roland Cloud Jupiter 8

Other configurations available in the Control Panel as firmware v1.3:

- Roland Boutique JP-08
- Roland MKS-7

To load different configurations:

- press and keep down the Shift button
- one of the Arp Range switches will start blinking, this represents the currently selected configuration
- to select and load another configuration press another Arp Range switches (from 1 to
 4)
- the controller will reboot quickly

To save configuration to a slot see section 10.

5. Plugin-specific informations

The controller front panel layout was designed to fit as many Jupiter styled plugins as possible. As there are differences between different plugin interfaces, specific modes are needed to make the controller compatible with each plugin. As firmware v1.3, 3 modes are available for the Arturia Jup-8 V4, TAL-J-8 and Roland. The controller is shipped with those 3 modes in the default configurations, see section 4.

a. Switching between Arturia, TAL and Roland Cloud modes

This is the procedure for firmware v1.1:

- Press and keep the shift button down, 3 LEDs will start blinking
- Press and release once the ENV2 KEY FLW switch, the blinking LED will move up to the OFF position
- Release the shift knob and the controller is now in TAL mode
- To go back to Arturia mode, shift click the ENV2 KEY FLW switch again to move the blinking LED back down to the ON position.

Roland Cloud is not available in firmware v1.1. Few things are different between the 2 modes. For example, some switches have different amount of positions. Some messages polarity needed to be inverted. For the user, this is not important, just make sure you are in the right mode for the right plugin.

This is the procedure for firmware v1.3:

From firmware v1.3, the mode is saved with the configurations using the control panel. See section 4 and 10 to load and save configurations to 1 of the 4 slots in the controller's memory. Arturia, TAL and Roland cloud modes are available as default out of the box, see section 4 to switch between them.

b. Arturia Jup-8 V4

From firmware 1.6, a greatly improved integration with the latest Arturia JUP-8 V (Vcollection 8/9/10/11) plugin can be accessed thanks to simple and easy to copy file(s). The controller can now receive sysex data from the plugin when presets or instances are changed in the DAW. On the controller side, the data is loaded to the interface and the controller can update the front panel. It can also request the sysex interface dump on demand if needed, this is needed when a DAW will not trigger certain events correctly. This integration works thanks to Arturia's XML system that was implemented for their own line of MIDI controllers. This functionality won't be available for other plugins unless developers program special functions to implement this. Special thanks to Marie from Arturia for taking the time to explain me how it works.

Set-up:

First make sure that the SFC-8 is in the Arturia configuration (see section 4).

To start using this integration, <u>download</u>, <u>unzip the support file</u>. Check which version you are using in the Arturia ASC and choose the right folder. Follow the instructions in the README file. There are versions released in 2024 that caused problems and cannot be supported. Only the versions specified in the README files are supported.

After copying the XML file(s), restart the plugin if it was open and then in the plugin interface click on the cogwheel, then in the MIDI tab choose the SFC-8 in the MIDI controller dropdown. This will auto-map the plugin to the SFC-8 default CC map and turn on automatically the 2-way integration.

Behaviour to expect:

The plugin will "dump" all its interface data to the controller in few scenarios:

- · when a new plugin instance is created
- when the standalone version is opened (if the SFC-8 is checked on in the Audio MIDI Settings)
- when changing presets
- when switching tracks/instances
- when requesting it using the KEY MOD WHOLE switch

The plugin will send a single sysex message when a plugin control is moved or touched using the mouse as well. If the controller is updated with firmware 1.6, it will ingest the plugin data and the LEDs will be set to mirror the plugin. The pot data is also ingested and they are 3 behaviors possible, see below.

DAW specifics:

Switching instances happens differently in every DAW so please refer to your DAW's manual and documentation to do this. Usually it involves selecting another track and making sure that the arm record function goes with it. Please note that switching tracks (using the Arm Recording switch) to open a new instance in Ableton is problematic. The previously opened GUI is not properly closed and thus the functions in the plugin framework are not triggered correctly when a new instance is opened. This is not a problem related to Arturia software or SoundForce controllers. The easy workaround for this is to firstly switch tracks, then to manually request the sysex data dump from the plugin to the controller with the KEY MODE WHOLE switch.

Special key combinations:

From the controller, you can change the presets:

backward: KEY MODE DUAL switch

• forward: KEY MODE SPLIT switch

You can also manually request the sysex dump from the plugin to the controller with the KEY MODE WHOLE switch. This is especially handy if you notice that the sysex dump is not triggering when switching tracks/instances, for example in Ableton as mentioned above.

Pot behavior options:

When the received pot data from the plugin differs from the actual pot positions on the controller, discontinuities can appear if this is not dealt with. Similar to Ableton take over modes, they are 3 options that can be set while holding the SHIFT button down and pressing the RANGE switch to cycle through the 3 options:

- **Jump**: the controller will send instantly its new physical slider value and the slider in the plugin will do a jump
- **Pick-up**: the controller will only send new slider values after the physical slider has reached the plugin slider position. The LEDs on top of the SHIFT and USER switches will blink to let you if you need to go down (SHIFT blinks) or up (USER blinks)
- Scaling: the controller will rescale the values sent to the plugin elastically so that a move on the controller matches the range of a move on the plugin control. Only smooth transitions are created. As soon as the control reaches one extremities (0 or 127), the scale is back to the normal 1:1 proportion.

To switch between those behaviors hold SHIFT pressed. The VCO SYNC LEDs will start to blink. Pressing the VCO SYNC switch you can switch between the 3 options:

- VCO2 LED = Jump
- OFF LED = Pick-up
- VCO1 LED = Scaling.

This preference is saved in the controller and loaded when the device is plugged in.

PAN SPREAD:

The SFC-8 BAL rotary pot has been assigned to JUP-8V PAN SPREAD.



c. TAL-J-8

The TAL plugins don't have a mapping preset system but the MIDI mapping is saved within the plugin presets. You can find a mapped default preset on the support page, save/overwrite that preset as your default preset. But please note, and this is from the TAL-J-8 manual: The plug-in normally keeps the mapping when changing the preset as long as the preset does not have its own mapping. To always avoid losing the mapping when changing presets, you can turn on the LOCK option on the top-right section of the plugin. Another important option to turn on is the PANEL option, this makes sure that both panel can be MIDI-controlled based on the panel currently selected (upper or lower).

From firmware 1.7, a greatly improved integration with the latest TAL J-8 1.7.2 (or higher) plugin can be accessed thanks to Patrick from TAL. Make sure that the SFC-8 is in the TAL configuration (see section 4), load the mapped preset and activate LOCK as explained above, then turn on the "SFC 8 MIDI CONTROLLER" option in the plugin menu. The controller can now receive CC data from the plugin when presets or instances are changed in the DAW. On the controller side, the data is loaded to the interface and the controller can update the front panel. It can also request the interface data on demand if needed, this is necessary when a DAW will not trigger certain events correctly. This functionality won't be available for other plugins unless developers program special functions to implement this. Special thanks to Patrick from TAL for his work on this integration.

Behaviour to expect:

The plugin will "dump" all its interface data to the controller in few scenarios:

- when a new plugin instance is created
- · when the controller is plugged in
- · when changing presets
- when switching tracks/instances
- when manually requesting it using the User 5 switch

DAW specifics:

Switching instances happens differently in every DAW so please refer to your DAW's manual and documentation to do this. Usually it involves selecting another track and making sure that the arm record function goes with it. Please note that switching tracks (using the Arm Recording switch) to open a new instance in Ableton is problematic. The previously opened GUI is not properly closed and thus the functions in the plugin framework are not triggered correctly when a new instance is opened. This is not a problem related to TAL software or SoundForce controllers. The easy workaround for this is to firstly switch tracks, then to manually request the sysex data dump from the plugin to the controller with the user 5 switch.

Special key combinations:

From the controller, you can change the presets:

backward: USER 3 switchforward: USER 4 switch

You can also manually request the sysex dump from the plugin to the controller with the USER 5 switch. This is especially handy if you notice that the data dump is not triggering when switching tracks/instances, for example in Ableton as mentioned above.

Pot behavior options:

When the received pot data from the plugin differs from the actual pot positions on the controller, discontinuities can appear if this is not dealt with. Similar to Ableton take over modes, they are 3 options that can be set while holding the SHIFT button down and pressing the RANGE switch to cycle through the 3 options:

- **Jump**: the controller will send instantly its new physical slider value and the slider in the plugin will do a jump
- **Pick-up**: the controller will only send new slider values after the physical slider has reached the plugin slider position. The LEDs on top of the SHIFT and USER switches will blink to let you if you need to go down (SHIFT blinks) or up (USER blinks)
- Scaling: the controller will rescale the values sent to the plugin elastically so that a move on the controller matches the range of a move on the plugin control. Only smooth transitions are created. As soon as the control reaches one extremities (0 or 127), the scale is back to the normal 1:1 proportion.

To switch between those behaviors hold SHIFT pressed. The VCO SYNC LEDs will start to blink. Pressing the VCO SYNC switch you can switch between the 3 options:

- VCO2 LED = Jump
- OFF LED = Pick-up
- VCO1 LED = Scaling.

This preference is saved in the controller and loaded when the device is plugged in.

Modulation sliders:

The TAL plugins have few modulation sliders that have bipolar modulation control: VCF ENV MOD, VCF LFO MOD, VCF KEY FLW, VCA LFO MOD, VCO MODULATOR LFO MOD and VCO MODULATOR ENV1 MOD. You can spot those with the yellow line and 10/-10 range in the plugin interface. In Firmware V1.1 in TAL mode, the SFC-8 is only sending MIDI CCs from 63 to 127 in order to control only the positive modulation range. So the inverted/negative range is not reachable with the controller. But from Firmware V1.3, TAL mode is now sending 0-127 on all sliders and a TAL UNIPOLAR MOD ONLY have been added to the firmware and control panel. Out of the box, the TAL mode with bipolar controls of the MOD sliders is saved in configuration 2. And the TAL mod with positive modulation only is in configuration 3.

VCO bend switches:

Please note that the VCO1/2 bend ON/OFF switches are different in the TAL plugin interface. It is in this case a 3-position switch: VCO1 — BOTH — VCO2. So you can never turn it off completely using the switches, to do that please push down the VCO BEND slider. 1 of the VCO BEND switch will always stay on to reflect the working of a real physical 3-positon toggle switch. Please note that by default both of the VCO BEND switches are on at start-up, but you can change that in a preset, see section 8. The CC number for the VCO BEND 3-positon switch can be changed in the control panel using the SW26 VCO 2 BEND ON/OFF value.

d. Roland Cloud Jupiter-8

The Roland Cloud Jupiter is available from firmware version 1.3. It is by default in configuration 4 out-of-the-box. Simply shift-click ARP RANGE 3 to acces it.

The Roland plugin has a fixed and specific MIDI map. When you select the Roland Cloud Jupiter-8 profile in the control panel all the CCs are filled with the required values and every usable SFC-8 control is assigned to something.

Some of the Roland Cloud Jupiter-8 parameters are left unassigned:

BEND RANGE: CC 41 BEND GAIN: CC 49 VCA TONE: CC69 EFFECT TYPE: CC70 DELAY TYPE: CC72 REVERB TYPE: CC73

If you want to use them anyway, you can use leftovers SFC-8 controls to control them. You can recognize the unused SFC-8 controls in the control panel, as they are marked with CC 127. Just change from 127 to your desired CC and save it again.

Most of the mapping is very logical and the interface behavior has been custom made to fit the plugin with the SFC-8 front panel as the basis. Still a few assignments might be less obvious for example:

Roland Cloud Jupiter-8 parameter	Corresponding physical SFC-8 Control
EFFECT TONE	MASTER TUNE
EFFECT DEPTH	DETUNE
DELAY TIME	VOL pot
DELAY LEVEL	BAL pot
REVERB TIME	USER1 pot
REVERB LEVEL	USER2 pot
LFO TRIG ENV	LFO SYNC switch
TEMPO SYNC	ARP RATE INT EXT switch

Please note, you can change any CC you want to fit your needs. Just remember the Roland plugin will only react to the original fixed CCs. If you want to reset the CC list, just reload the Controls Panel in your browser and select the Roland Cloud Jupiter-8 profile again.

MIDI implementation chart (no available from official Roland sources): https://audiosex.pro/threads/roland-jupiter-8-cloud-midi-cc.30812/

6. Recall

When the synth/plugin parameters and the physical controller parameters are in all different positions, it is sometimes preferable to "push" the state of the controller to the plugin interface. That way nothing is jumping around when you start moving the controls and it helps getting the controller and plugin synced up when you get starting. Recall is reading every control and sending a pack of CC messages to the plugin.

To launch the recall function, double press the "**SHIFT**" switch on the bottom right side in the controller. The full front panel LEDs will do an animated cycle.

7. Preset system

The SFC-8 has 5 banks of 4 presets to save and load your sounds. It is built using the Arpeggiator mode and range switches. It doesn't offer the most practical interface but it is done on purpose to avoid the need of dedicated switches and screen to keep the controller more compact.

a. Loading a preset

- Press and release the load switch
- 1 of the Arpeggiator mode LEDs will blink, this represents the selected bank
- You can now change the bank by pressing any of the Arp modes (from OFF to Rand)
- Now you can select 1 of the 4 presets with the Arp Range switches (from 1 to 4)
- The preset will load and the full interface will perform a LED light cycle
- As a preset is loaded, the full interface is sent out as a packet of MIDI messages to sync the plugin or hardware synth with the controller, this is similar to the recall function

You can cancel the operation anytime by pressing and releasing the load switch again.

Please note that if the select preset is empty, the ARP LEDs with animate from 4 to OFF to indicate that the preset couldn't be loaded.

b. Save a preset

- Press and release the save switch
- 1 of the Arpeggiator mode LEDs will blink, this represents the selected bank
- You can now change the bank by pressing any of the Arp modes (from OFF to Rand)
- Now you can select 1 of the 4 presets with the Arp Range switches (from 1 to 4)
- The preset will be saved. The controller needs 1 second to do the save and afterwards the full interface will perform a LED light cycle

You can cancel the operation anytime by pressing and releasing the save switch again.

c. Clear a preset

- Press and release both the save and load switches
- 1 of the Arpeggiator mode LEDs will blink fast, this represents the selected bank
- You can change the bank by pressing any of the Arp modes (from OFF to Rand)
- Now you can select 1 of the 4 presets with the Arp Range switches (from 1 to 4)
- The preset will be cleared. The controller needs 1 second and afterwards the range LEDs will perform a fast LED light cycle twice

You can cancel the operation anytime by pressing and releasing the load switch again.

d. Behavior after loading a preset

When loading a preset, the user will be in a situation where most of the controller sliders and pots are in a different position then the MIDI data just loaded from the preset and sent to either a plugin or a hardware synth. The SFC-8 has 3 modes to define the behavior of the controller when a slider or pot is moved after loading a preset. There are 3 options:

• Jump:

When a slider/pot is moved, the controller will send instantly sends its new physical slider/pot value and the control in the plugin/synth will do a discontinuous jump.

Pick-up:

The controller will only send new slider/pot values after the physical control has reached the plugin or synth slider/pot position. The LEDs Save/Lower and Load/Upper switches will blink to let you know if you need to go lower (Lower blinks) or higher (Upper blinks). After the controller silder/pot has reached the plugin/synth position, then the controller will start to send the new messages.

Scaling:

The controller will rescale the values sent to the plugin elastically so that a move on the controller matches the range of a move on the plugin/synth control. Only smooth transitions are created. As soon as the control reaches one extremities (0 or 127), the scale is back to the normal 1:1 proportion.

To switch between the options:

- press and keep down the shift button
- press and release the VCO Sync switch
- VCO2 LED blinking = Jump
- OFF LED blinking = Pick-up
- VCO1 LED blinking = Scaling

8. Default start-up state of the controller interface

To change the default start-up state of the controller, you can change the Preset 1 in the Off Bank. After it is saved for the first time, it will be loaded by default at start-up. It's loaded but not sent out at start-up, if you'd like to send it out as a packet use the recall function by double pressing the shift switch.

9. Hardware specific information

a. JP-08 implementation

To use the controller with the JP-08, use the control panel to save the JP-08 profile in your desired configuration slot (1 to 4). The interface and CC map is then automatically changed to fit the JP-08 parameters list and MIDI map as well as possible.

In the control panel, you can see some SFC-8 controls CC'd are set to 127. Those are leftovers inactive controls that are not used by the JP-08. If you move an inactive control LEDs will flash to let you know. By default, all the controls with CC number 127 won't be sending any messages. If you still want to use them, for example with another MIDI/USB device, change the CC to something else then 127 and MIDI CC messages will then be sent out. Make sure you are choosing CC numbers outside the JP-08 fixed MIDI map otherwise you will have overlap.

The JP-08 VCO2 WAVE selection is sine, saw, pulse, low sine, low saw, low pulse. But the controller has a 4 position switches including an extra noise waveform. The noise wave has been left out and you can use the VCO2 RANGE switch (norm or low) to switch between the 6 JP-08 options, with the switch on "low" you can access the low waveforms and with the switch on "norm" you can access the normal waveforms.

Some JP-08 parameters were not present in the SFC-8 interface and some leftover controls have been assigned to them:

Roland J:-08 parameter	Corresponding physical SFC-8 Control
Chorus	Range preset buttons: • 1 = Chorus off • 2 to 4 = Chorus modes 1, 2, 3
Delay level	Vol rotary pot
Delay time	Bal rotary pot
Delay feedback	Master tune rotary pot
Bend range	VCO Bend slide pot

MIDI implementation chart: https://www.tinyloops.com/doc/roland_jp08/midi.html

b. MKS-7 implementation

When using the MKS-7 configuration, the interface is fitted automatically to the MKS-7 sysex implementation as found in its manual. Sysex messages are sent out of the USB and DIN-MIDI ports and only the controls present in the MKS-7 are active.

Changing the MIDI channel allows you to control the 3 different blocks. To change the channel, use the Range switches 1-3:

- Range 1: BassRange 2: Chord
- Range 3: Melody

This order is equivalent to the order of the different blocks on the front panel. Please note that the Rhythm doesn't have parameters controllable using sysex.

Only certain controls are active. If you move an inactive control LEDs will flash to let you know. Here is the list of active controls for the MKS-7 and its equivalent SFC-8 control when necessary:

Active analog sliders:

LFO RATE
LFO DELAY
VCO MODULARTOR LFO -> DCO LFO
VCO MODULARTOR PWM -> DCO PWM

VCF CUT VCF RES

VCF ENV

VCF LFO

VCF KEY FLW -> VCF KBD

VCA LEVEL

ENV A

ENV D

ENV S

ENV R

VCO1 CROSS -> SUB LEVEL

• The following sliders are used as ON/OFF switches, move them fully up or down:

HPF CUT -> HP FILTER ON/OFF
VCF VELO SENS -> VCF Dynamics affection
VCA VELO SENS -> VCA Dynamics affection
VCA LFO MOD -> VCA Gate/ENV

• Switches active (the switches with the lit LEDs are active in MKS-7 mode):

ENV1 POLARITY

VCO1 RANGE -> DCO RANGE

VCO MODULATOR PWM -> PWM SOURCE

USER 3 -> SAW ON/OFF

USER 4 -> PULSE ON/OFF

USER 5 -> NOISE ON/OFF

ENV2 KEY FLW -> CHORUS ON/OFF

Fully MIDI implementation chart can be found at the end of the MKS-7 manual: http://cdn.roland.com/assets/media/pdf/MKS-7_OM.pdf

10.Control panel

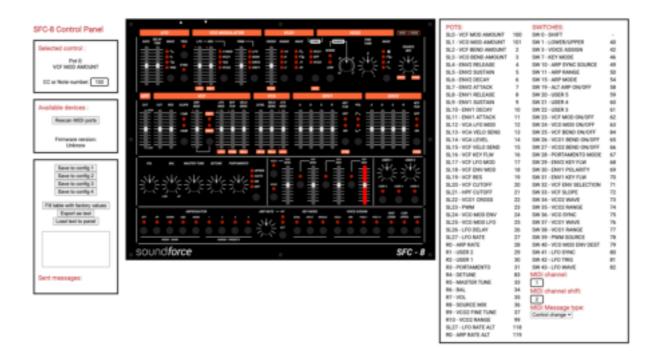
The Control Panel is a Google-Chrome app that allows you to save CC maps and modes to 1 of the 4 configurations slots in the controller memory. Once it is saved, you can load them without a computer as explained in section 8.

As firmware v1.3, the SFC-8 has 5 modes:

- Arturia JUP-8 V4
- TAL J-8
- Roland Cloud Jupiter-8
- Roland Boutique JP-08
- Roland MKS-7

Each mode has a different interface behavior that will fit the destination plugin or hardware as much as possible. In some modes, a predefined CC map or sysex implementation is automatically loaded.

In the modes using CC messages, you can click on each control and change the CC message number. In some situations, certain CCs are highjacked by DAWs and hard routed to specific functions, so some edits are necessary.



How to use the control panel:

- First plug in your SFC-8
- Then open the control panel in Google Chrome latest version
- The device should be recognized and the message "Connected to SFC-8" will be displayed on the left middle container. The firmware version will also be displayed.
- Choose your desired mode in the "plugin or hardware type" dropdown menu
- If desired click on a switch/pot/slider in the front panel image and change its CC number in the left field. Only do this when necessary.
- When you are done with your changes, click "Save to config #"

You have 4 different configurations available. To load configurations from the controller on the fly, see section 8.

You can save a MIDI map on your computer:

- click Export as text
- · click in the filled text field
- copy and paste that list of comma-separated numbers
- save that on a text file on your computer

Similarly, you can copy a saved text field from a text file and paste it in the control panel text field. Then click "Load text to panel".

You can go back to the default CC values with "Fill table with factory values" or reloading the page and choosing the mode in the dropdown again.

11. User sliders and switches:

Please note that there are extra "User" pots and switches that you can map to whatever you want. For example, an other plugin reverb wet/dry or an FX return fader level.

12.UPPER/LOWER switches:

To switch between UPPER/LOWER, press and keep down the SHIFT switch then press and release either the UPPER or LOWER switch. As firmware v1.3, the controller doesn't keep separate sets of interfaces states of the UPPER and LOWER section. Please let me know if that's desirable: nicolas@sound-force.nl

13.LEDs brightness:

Holding down the shift button, you can change the LEDs brightness turning the ARP RATE pot.