



## Installing and using of the FM-8VB

## Installing and operating of SENSOFT 12.0.11

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## I. The FM-8VB at a glance

The FM-8VB card is a 32 engines FX card. This card is seen by the system as an 8 INPUTS **and** 8 OUTPUTS card.

4 FX engines are available between each input and output of the card. Depending of your needs the I/O, by pair, can be declared as a Stereo FX bay or 2 mono FX bays.

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Although 32 engines are available, the global resources of these engines can be strongly reduced if you use a lot of “greedy” effects, ie: 4 JustVerb (VB Audio Reverb) uses between 80 and 90 % of the complete resources of one card. In opposite, up to 32 Limitor or De-esser treatments can be assigned without using the complete resources of the DSP.

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In order to maximum simplify its use, we have imagined the utilization of the FX like you would do with your external bay. The FM-8VB provides you 8 Mono or 4 Stereo bays that you can use as standard FX (fed by an Aux and returning to some inputs channels of the desk) and/or inserted treatments. All the I/O configuration is managed thru the standard patch grids provided by Sensoft 12.

A TAP-TEMPO jack input is available front of the FM-8V card. This future option will allow to determine a global tempo thru a standard Tap Pedal. This global Tempo can be selected to automatically determine the Reverbs Pre-delay, the MultiTap Delay intervals, the Modulator frequency, etc...

## II. Installing of the FM-8VB card

The FM-8VB effect card can be installed in the Mix-Box of your system (Local rack of the Sy80, Back of the Sy48). It is planned that this module, in a close future, will work in a *DioCore*. As the module is detected by the system as an INPUT **and** an OUTPUT card you have to take care, when used with a Muxipaire Stage-Box, that no card is installed on the same slot (identified by its geographic letter) of the Stage-Box, ie: if a FM-8VB card is installed on the G slot of the Local Rack, no card can be installed on the slot G of the Stage-Box. Obviously, this restriction does not concern the *DioCore* where, in this example, any I/O module could be installed on the slot G.

## Installing of the FM-8VB card

Please to install your FM-8VB card, just follow the following steps :



1 – Remove the blank panel on the slot where you want to install your FM-8VB. Just make a quarter tour on the 4 screws.



2 – Slowly pull the panel and keep it fore an eventual future use.



3 – Insert the FM-8 card. The PCB must be carefully inserter in the 2 plastic guides.



4 – Strongly push the card to ensure a good and secured connection.



5 – Switch on the rack, the 4 Blue LEDs indicate that the card is correctly installed and powered.



Do the same operations to install a FM-8VB card in a Sy48 local rack.



### III. Installing of Sensoft 12

#### III.1 Minimum required configuration

Before installing Sensoft 12 be sure that your system is configured like following:

##### **A – Information available from the main mixing screen of Sensoft :**

- The current installed Sensoft version is 11.0 or 11.1

##### **B – Information available in the Patch IN or OUT grid of Sensoft, left selected TAB is “MUXI” and top selected TAB is “CONFIG” :**

- Your DSP version is 4.0.28 or 4.0.34
- The **Dio**ES module installed on the DSP card (Ethersound option) is in version 1.6
- Your MCOptical version is 7.0

##### **C - Information available on the Big Eprom of the SCOptical module :**

- Your SCOptical version (if you use a Stage-Box) is in version 4.0

##### **D – Information available in the Patch IN or OUT grid, left selected TAB is “DIO1” and top selected TAB is “CONFIG” :**

- Your Arc version (if you use a DioCore) is 1.28
- The **Dio**ES module of the ARC card is in version 1.6

Sensoft 12 is delivered with an installation USB key containing all the necessary files to install the System (Win XPE) and Sensoft 12.

If you want to install Sensoft 12 by using a previous version USB Key (Sensoft 11, Sensoft 10...) please follow the following steps :

**1 –** Insert the USB key in your Lap Top or Desk Top computer

**2 –** Copy on this Key the 3 files named *install.bat*, *update.bat* and *Sensoft.zip*. These 3 files are available from our Web Site (in SENSOFT12.0.ZIP downloaded file) or from the CD delivered with the Sensoft 12 upgrade kit. Say “Yes” when your system informs you that these 3 files will erase and replace the 3 existing files on your key.



- 2- As shown above, select the USB port. Validate with [ENTER].
- 3- At the root of the temporary Win98 boot, type “install c:” and validate with [ENTER]

```
Sed archiving for Boot Record from USB RMD-FDD..OK
D marrage de Windows 98...
Microsoft(R)Windows 98
(C)Copyright Microsoft Corp 1981-1999.

A:\>install c:_
```

This command installs the Sensoft version currently on the USB key. Once the installation is finished and “a:\>” is displayed on screen, you can reboot your console to immediately start using your new version of Sensoft 12.

When you first launch Sensoft, you are automatically invited to configure the software in order to adapt it to the platform on which it has been installed. Section III.4 explains this configuration window thoroughly.

### III.3 Updating, new “release”

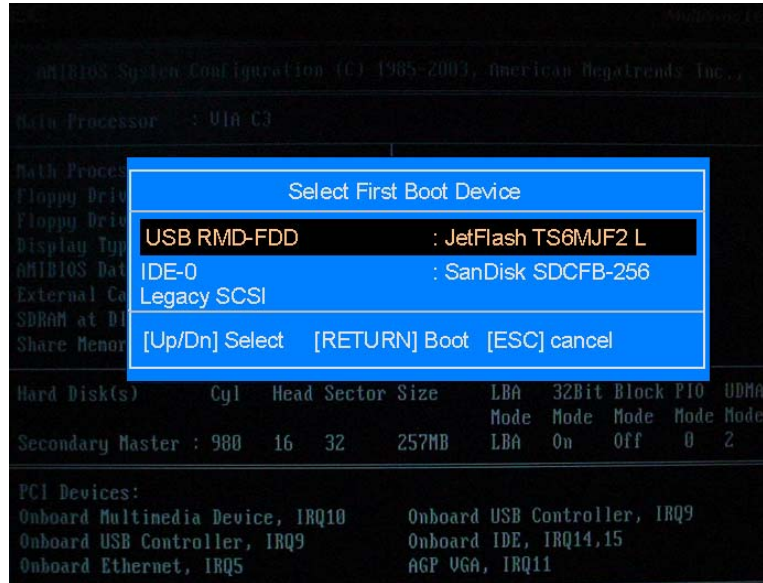
When updating a new release of Sensoft 12 you may retain your shows files on disc. Going back to an earlier version of Sensoft (i.e. Sensoft 11.x), a complete reinstallation will be necessary (see **section III.2**). Shows are not backwards compatible.

Switch your console off and follow the step by step procedure below to install Sensoft:

- 1- Insert your USB key in one of the console’s available ports. Launch the console and immediately press [F8] or [F11] to access the startup menu.

## Installing of Sensoft 12

**2-** As shown below, select the USB port. Validate with **[ENTER]**.



**3-** At the root of the temporary Win98 boot, type **“update c:”** and validate with **[ENTER]**



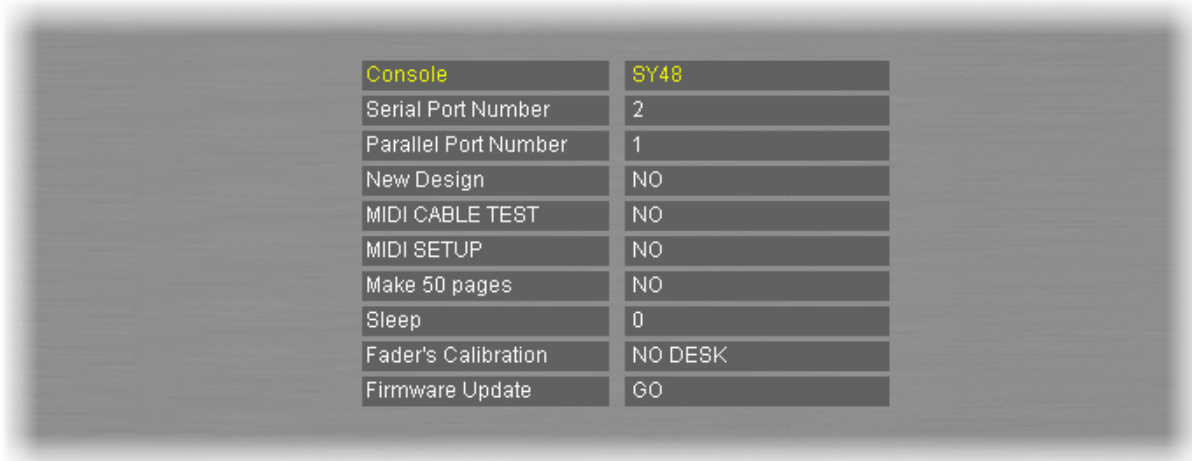
This command replaces the prior Sensoft release installed on your console with the one on the USB key. Once the installation is finished and “a:\>” is displayed on screen, you can reboot your console to immediately start using your new version of Sensoft 12.

An update retains parameters and all files residing on the console. Reconfiguring is unnecessary and, when launched, Sensoft will return to the last page used and all its parameters.



### III.4 Configuration

After a new installation, Sensoft displays the screen below so you can chose the platform and configure the system. To access this screen at anytime, go to **UTIL** menu's **ABOUT** and type the invisible password "**innova**".



This screen's purpose is to configure the console's elements for data exchange between PC, Mix Box rack and control surface. The parameters on this screen are important for your console and Sensoft software to function properly. Therefore, you must respect the indications that are outlined below. The consoles are delivered from the factory with optimized settings, and it is wise to keep them as they are. Our customer service department might ask you to change these during technical support.

Use the up and down arrow keys to select the parameters (highlighted in yellow), and the left and right keys to change the selected parameter's value.

#### **Console :**

**Sy80**, management of the Sy80 control surface, remote audio controller compatible with DSP Sy80 cards.

**GRAND LIVE**, management of the GL control surface, remote audio controller compatible with DSP Sy80 cards.

**Sy48**, management of the Sy48 control surface, remote audio controller compatible with DSP Sy48 cards.

#### **Serial Port Number :**

**Disable** for use on an Off-line PC, or without the console.

**2** for a Sy80, Sy48 and GL equipped with an 800MHz or 1GHz PC ISA800.

**3** and **4** reserved for specific usage

## Installing of Sensoft 12

When the chosen serial port detects the control surface, a yellow **RESET DESK** window is displayed and its 'channel control' panel buttons blink twice. On the system status line, on top of the screen, the red background **NO DESK** message, turns to a green background **DESK** message. If the serial port is not valid, the red background **NO DESK** status will remain. When controlling the console with an external PC, try all the port numbers until the console is detected.

### Parallel port Number:

**1** (default) for normal use of the console  
**DISABLE** for use on an Off-line PC, or without the audio rack.

### New Design :

**NO** (default), normal use  
**YES** reserved application

### MIDI CABLE TEST :

**NO** inactive, normal status  
**OK** or **BAD CONNECTION** when testing a MIDI cable connected between the IN and OUT port of the console.

### MIDI SETUP :

**NO** inactive, normal status  
**WAIT.** Loading the **SENSOFT\FILES80X\MIDI.CFG** text file.  
Transfer of a MIDI SYSEX file to initialize a Midi-Solutions R8 rack, giving you access to 8 'fader-start' relays compatible with the data sent by Sensoft. The characteristics of this equipment is available on the [www.midisolutions.com](http://www.midisolutions.com) web site. Also see section 6.0 of Sensoft 8's user guide for information on fader-starts

### Fader's Calibration :

**Press** the right arrow key [→] to launch a fader calibration process. Just follow the indications given by Sensoft.

### Firmware Update :

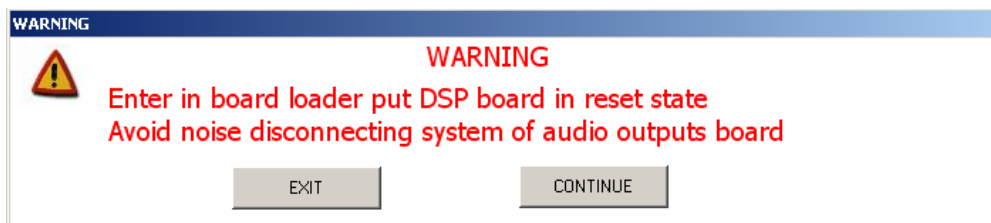
**Press** the right arrow key [→] to launch the firmware updater. This software allows to update the firmware of the DSP card, the UM-8PO card and the FM-8VB card. The procedure is explained on the following sections of this quick guide.

#### IV. Update the DSP module to version 4.0.34

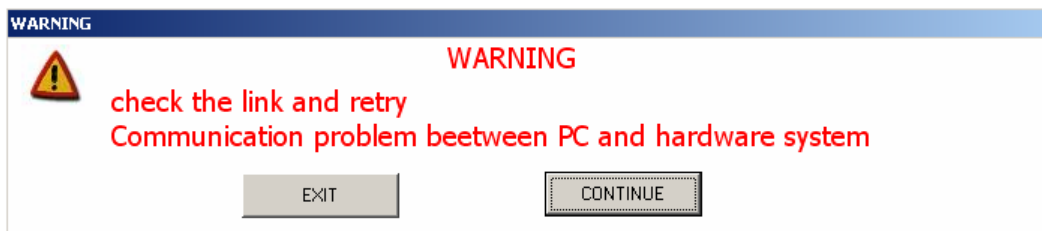
The firmware 4.0.34 has the big advantage to correct some recently discovered bugs on the DSP board. One of this concerns the Line I/O available on the SubD connectors of the DSP card. In some rare case, the device in charge of these I/O was not correctly initialised, the result is no sound on these I/O.

**1-** From the configuration screen (see section III.4), select the “Firmware Update” line and press the right arrows (→) to launch the firmware updater.

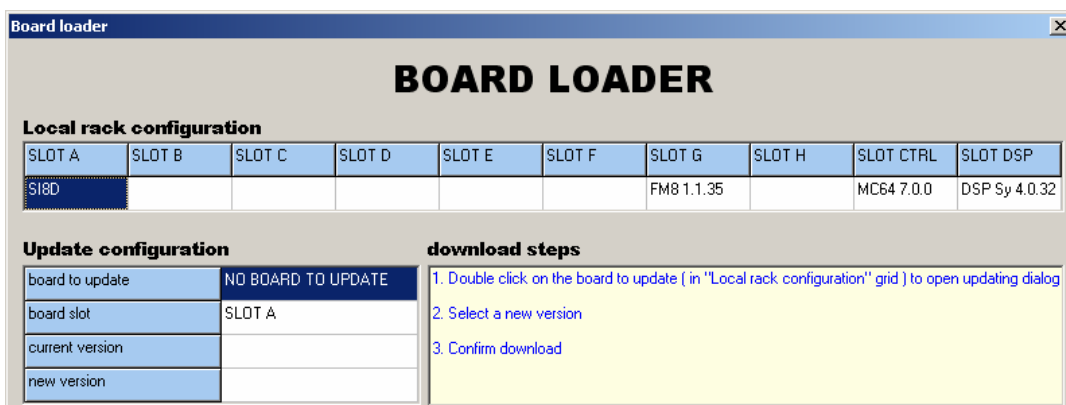
**2 –** A warning message explains to disconnect the outputs of the console to any powered audio system. During the programming process some hazardous noises could be generated by the DSP board, this could be dangerous for your ears and the speakers...



**3 –** If the communication between the PC and the audio racks module is impossible, the following message will appear. Please check the Audio rack powering, the Jeager cable connection etc...

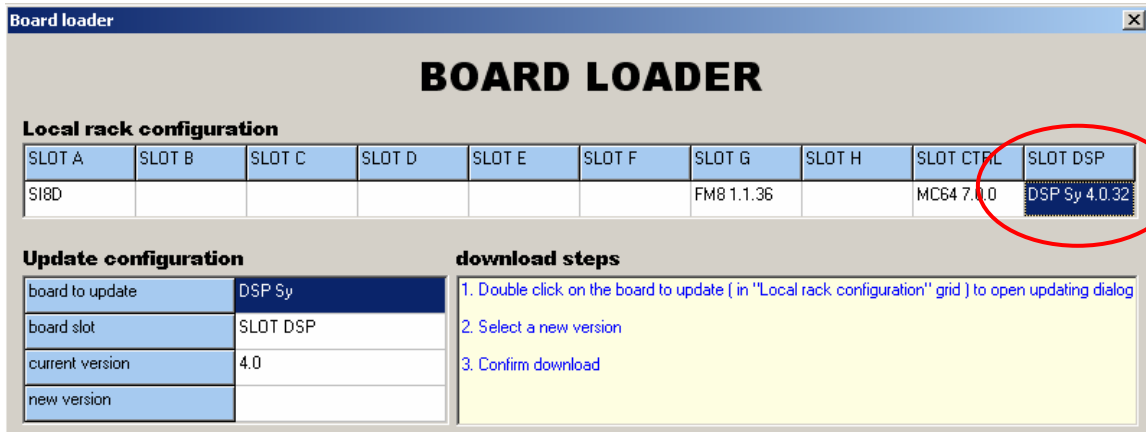


**4-** If everything is fine regarding the system and communication you should see the following screen.



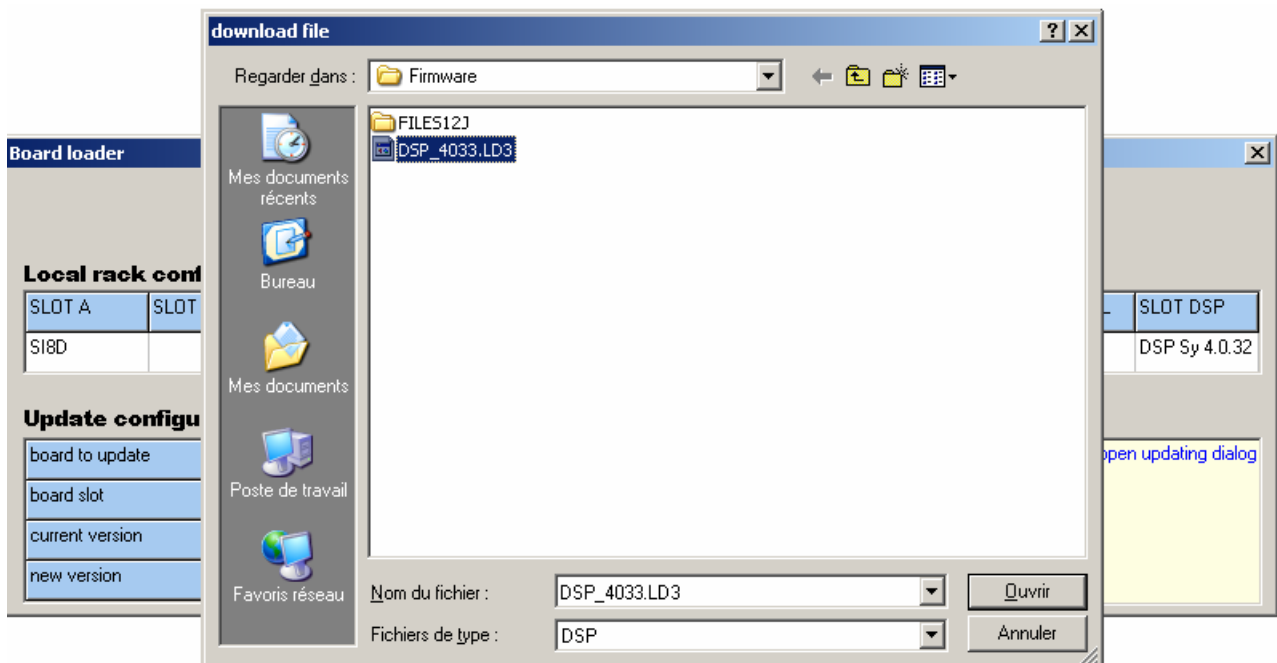
## Update the DSP module to version 4.0.33

5 – Select the DSP board slot and double click on it to launch the programming process.

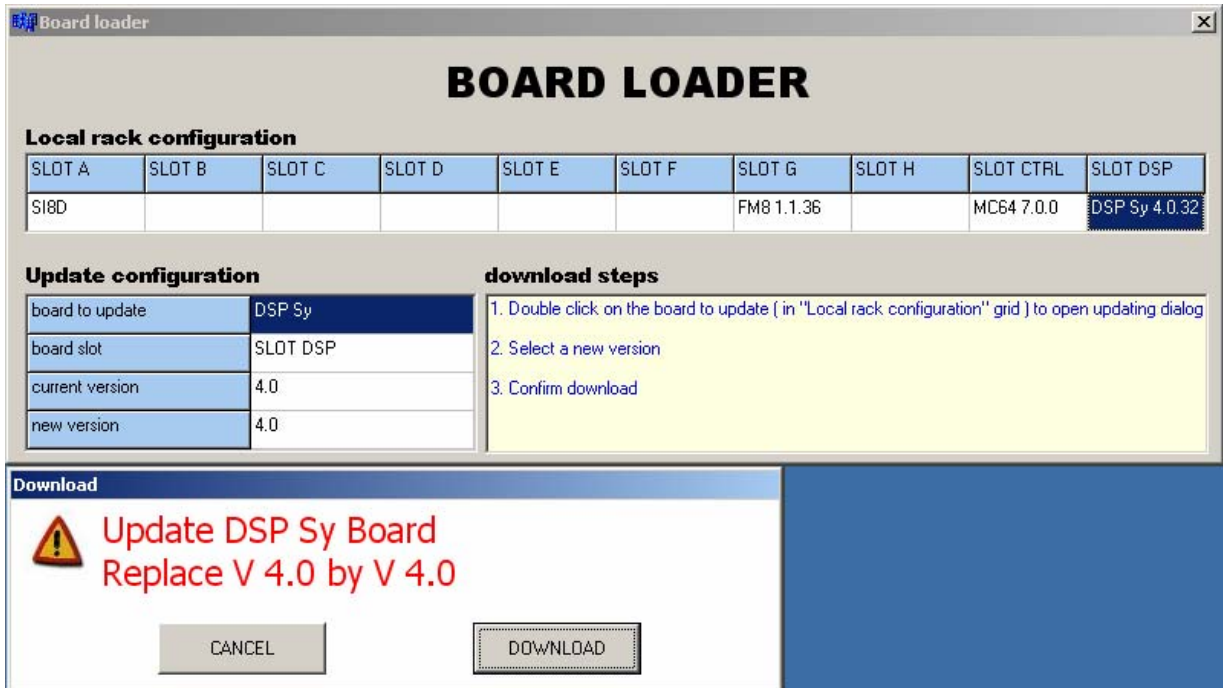


6 – A window invites you to select the firmware available in the “Firmware” directory of the Hard disk of the PC. This firmware is coming from the last time that you installed Sensoft (Sensoft 12.0 in this case). If you want to use a firmware downloaded from our Web Site, feel free to select a USB device containing this firmware.

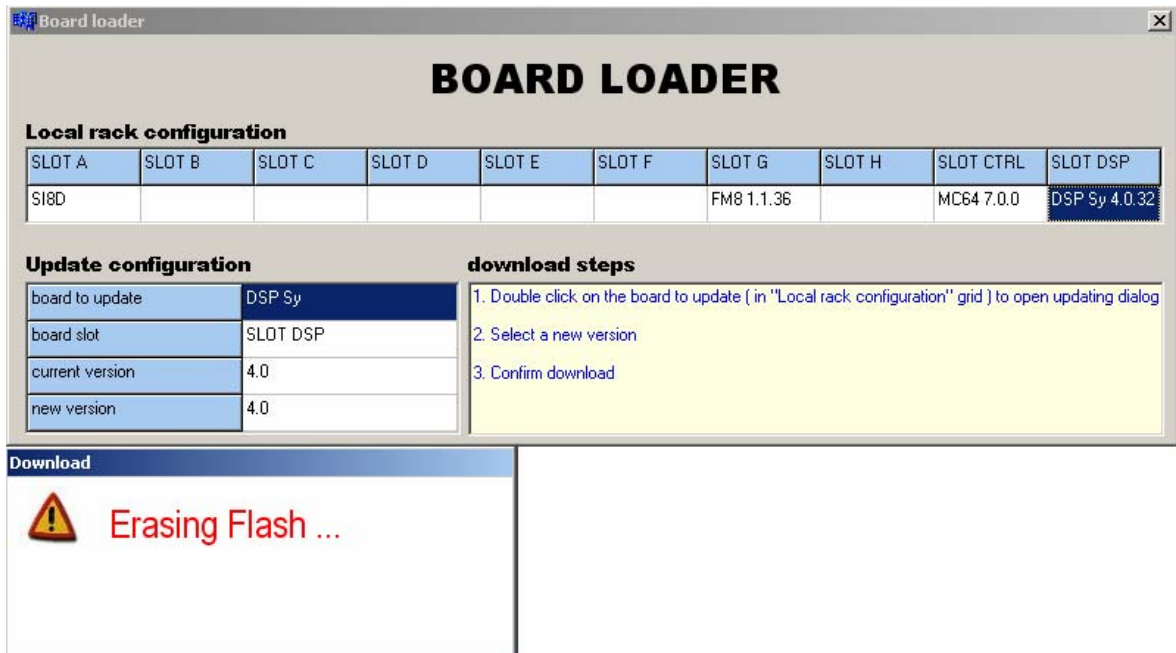
Select the **DSP\_4034.LD3** file corresponding to the 4.0.34 firmware version.



7 – Confirm that you will replace the actual firmware by the new one by pressing [DOWNLOAD] on the following message.



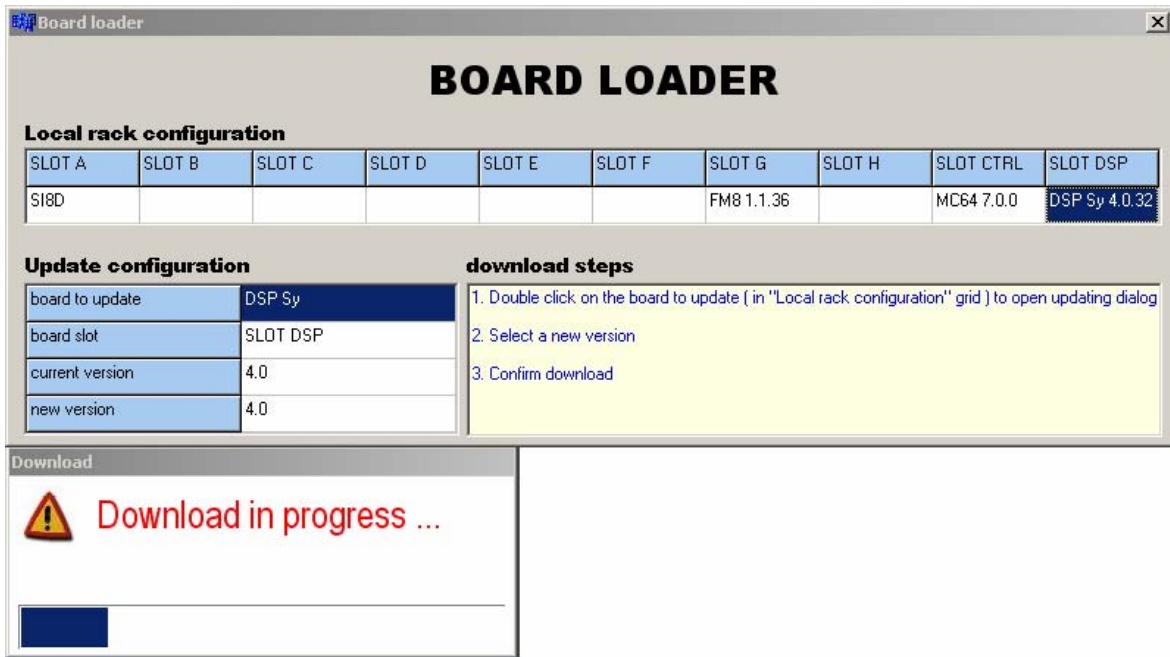
8 – Flash memory of the DSP is erased...



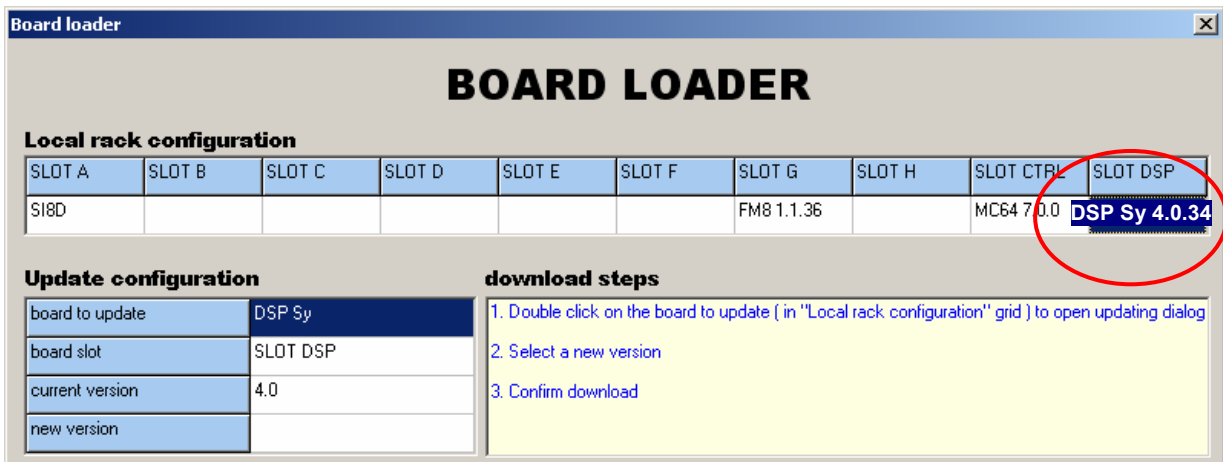


## Update the FM-8VB card to version 1.1.36

9 – The 4.0.34 firmware is loaded in the DSP flash memory...



10 – After the “SUCCESSFUL” message, your DSP is now programmed and updated.



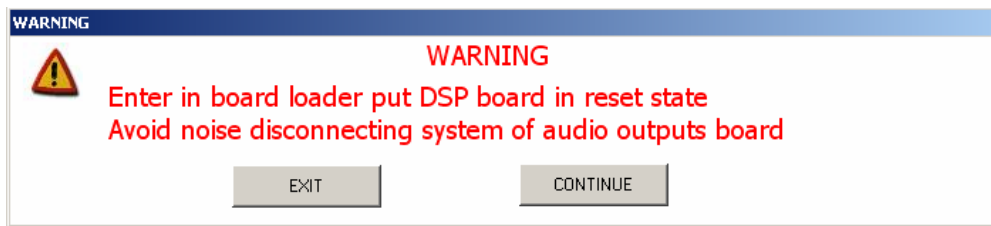
Exit from the updater software by closing the main window. This will re-launch Sensoft 12

## V. Update the FM-8VB card to version 1.1.38

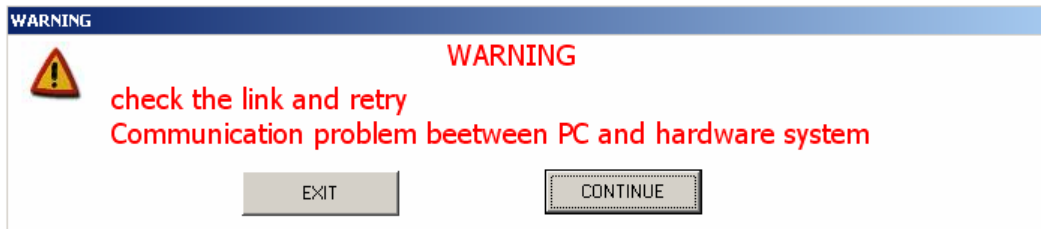
The Latest version of available firmware for the FM-8VB card is the 1.1.38. If your card is programmed with a previous version you should not accede to the latest set of plugins, so we strongly advise to always use the latest firmware for the FM-8VB card.

1- From the configuration screen (see section III.4), select the “Firmware Update” line and press the right arrows (→) to launch the firmware updater.

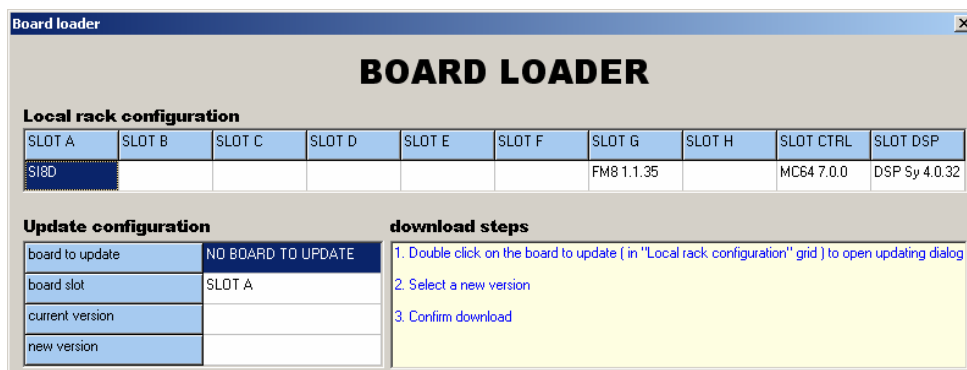
**2** – A warning message explains to disconnect the outputs of the console to any powered audio system. During the programming process some hazardous noises could be generated by the FM-8VB board, this could be dangerous for your ears and the speakers...



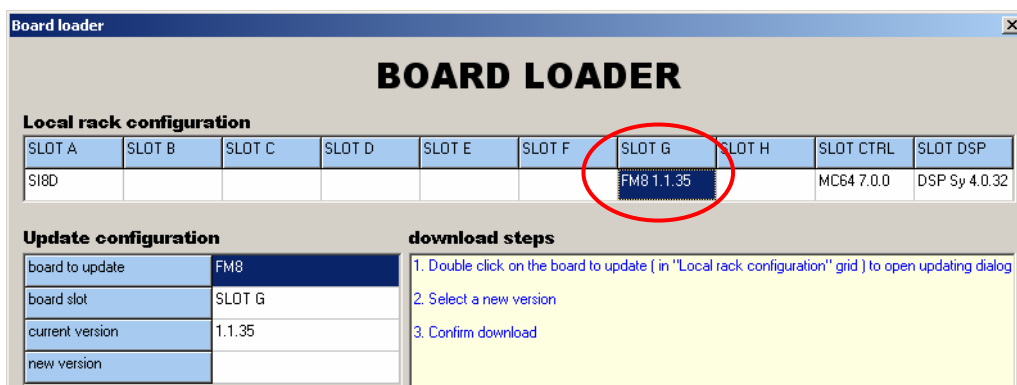
**3** – If the communication between the PC and the audio racks module is impossible, the following message will appear. Please check the Audio rack powering, the Jaeger cable connection etc...



**4**- If everything is fine regarding the system and communication you should see the following screen.



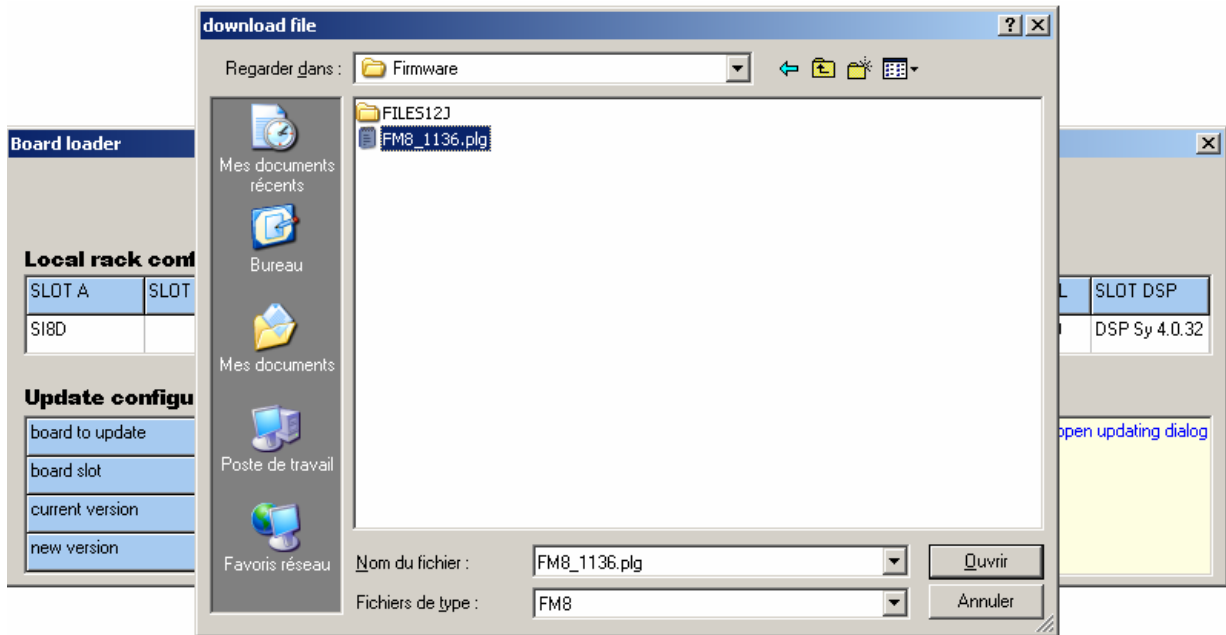
**5** - Select the FM-8VB board slot and double click on it to launch the programming process.



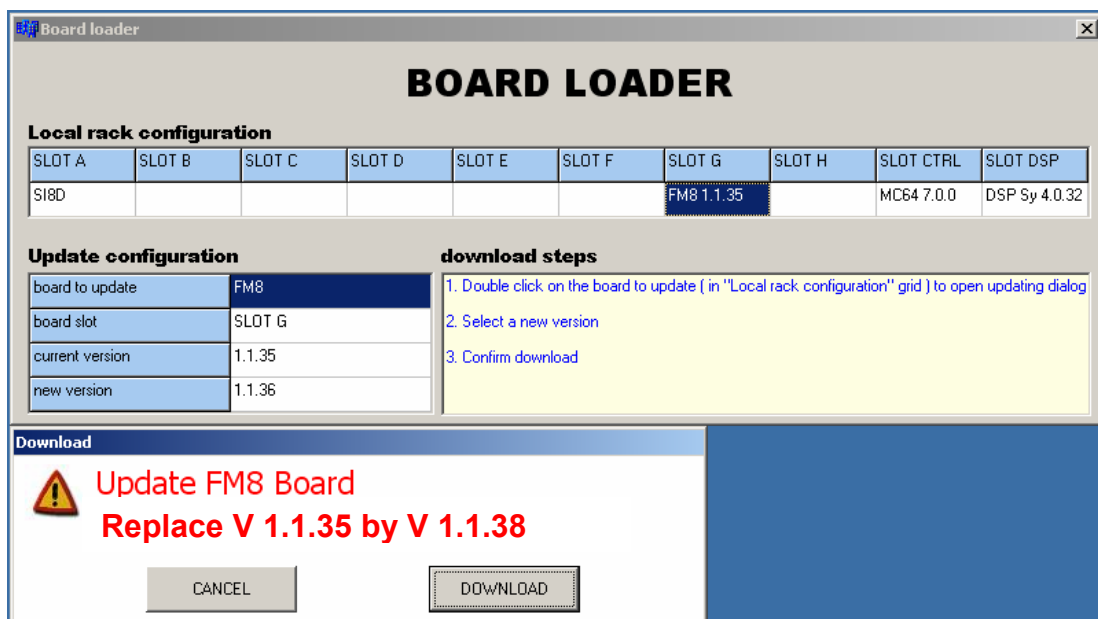
## Update the FM-8VB card to version 1.1.36

**6** – A window invites you to select the firmware available in the “Firmware” directory of the Hard disk of the PC. This firmware is coming from the last time that you installed Sensoft (Sensoft 12.0.11 in this case). If you want to use a firmware downloaded from our Web Site, feel free to select a USB device containing this firmware.

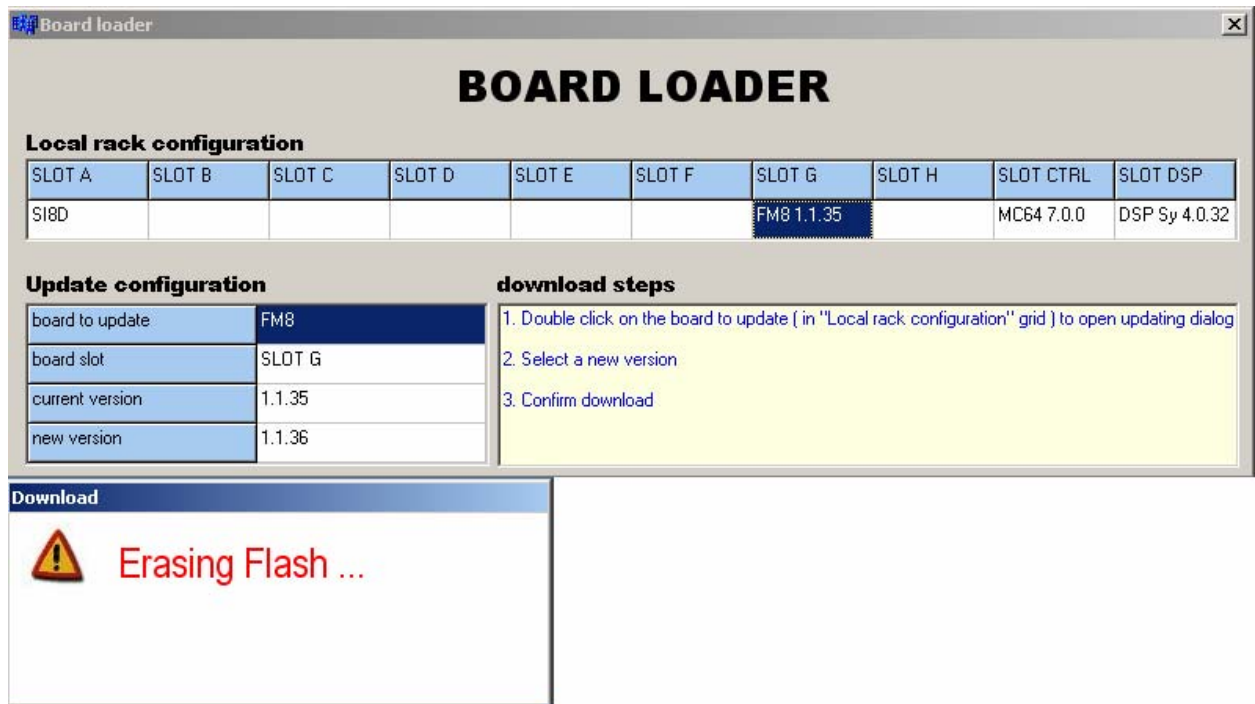
Select the **FM8\_1138.plg** file corresponding to the 1.1.38 firmware version.



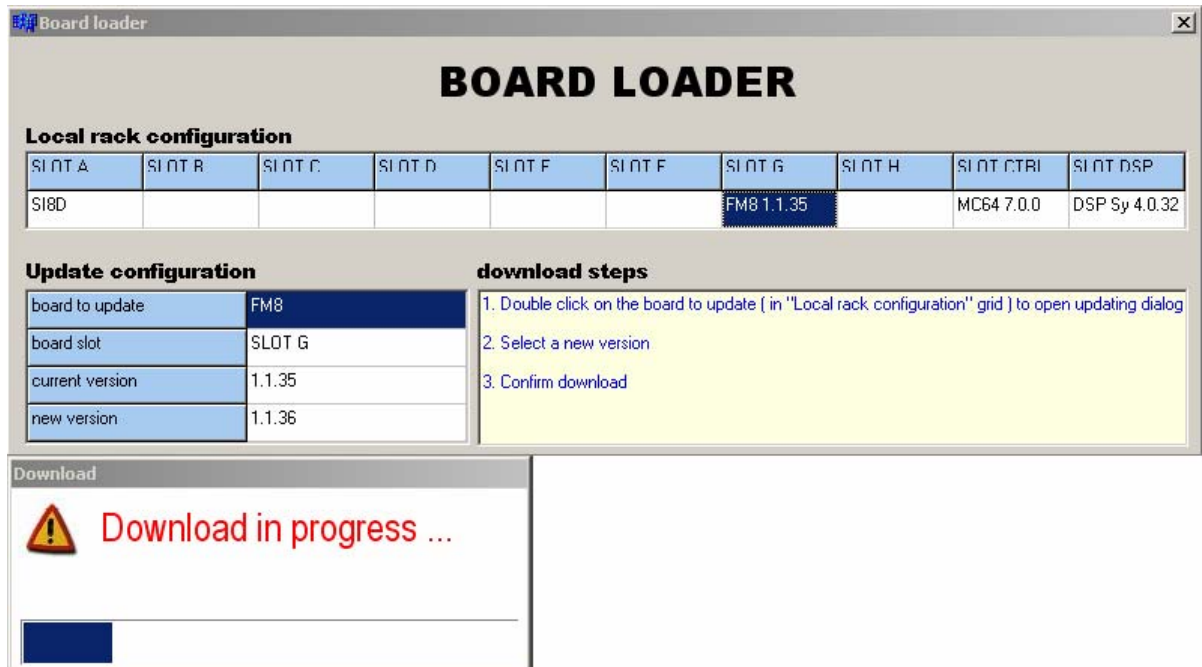
**7** – Confirm that you will replace the actual firmware by the new one by pressing **[DOWNLOAD]** on the following message.



8 – Flash memory of the FM-8VB is erased...

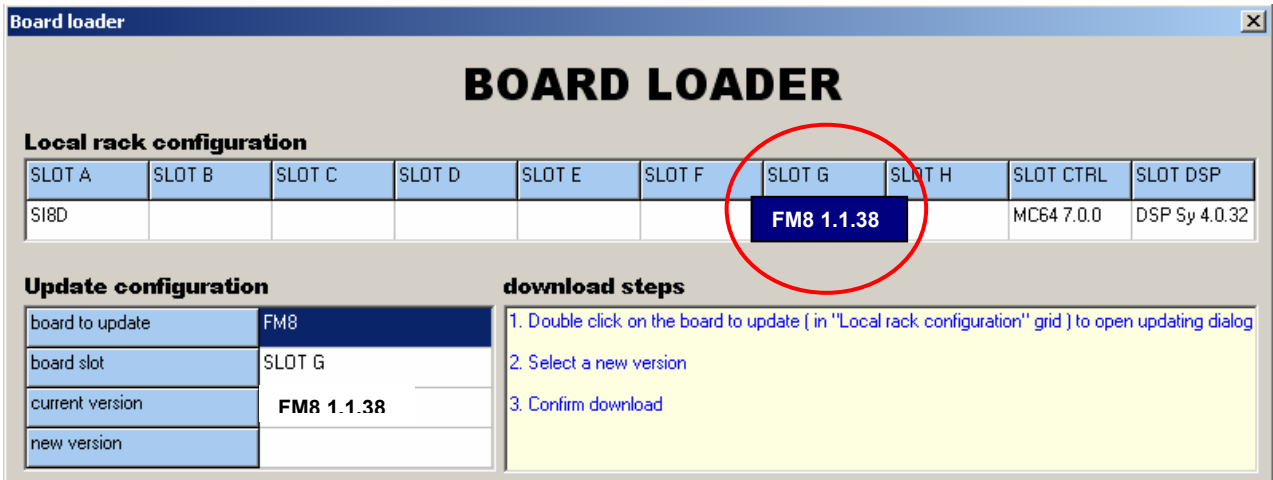


9 – The 1.1.38 firmware is loaded in the FM-8VB flash memory...



**10** – After the “**SUCCESSFUL**” message, your FM-8VB is now programmed and updated.

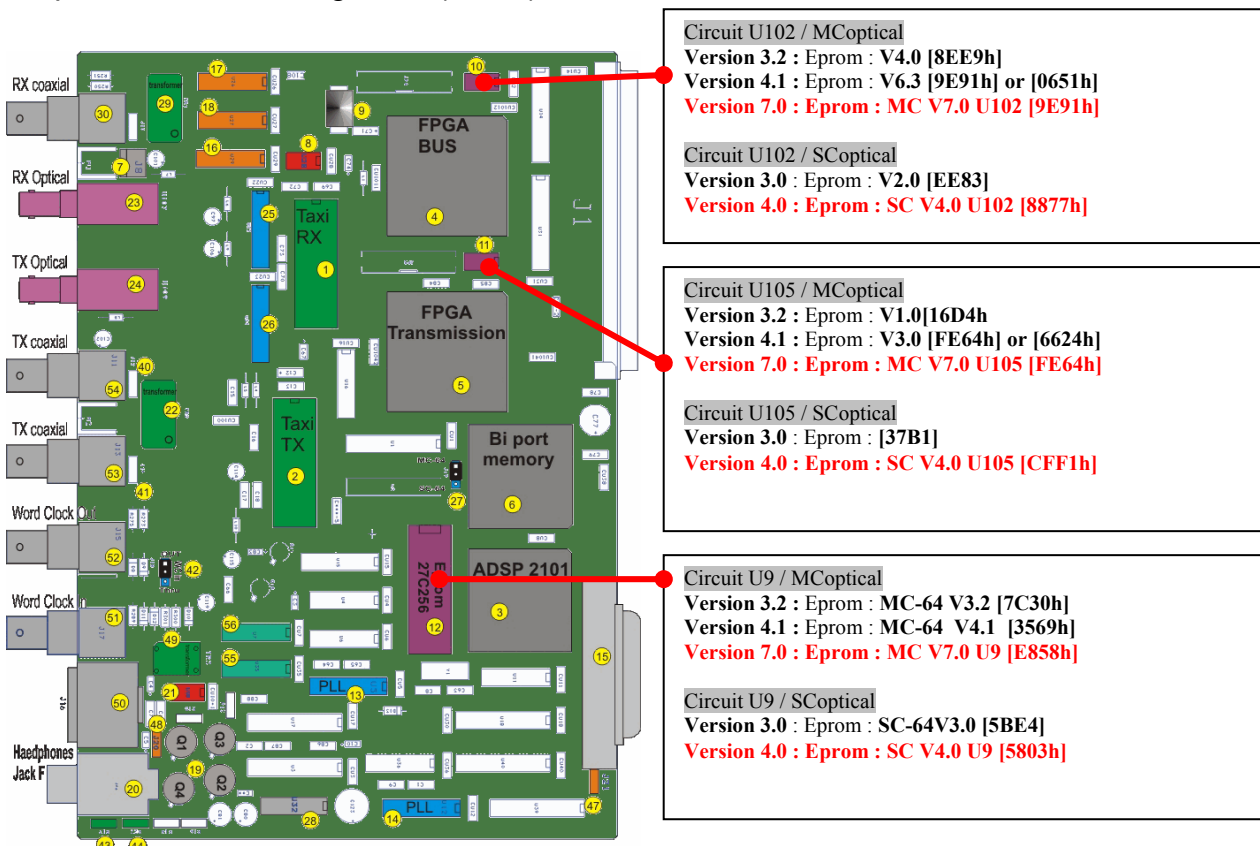
**Repeat all of these steps for all the FM-8VB modules of your system.**



Exit from the updater software by closing the main window. This will re-launch Sensoft 12.

## VI. Upgrade your MC and SCoptical

To work properly under **Sensoft 12** it is necessary that the MCOptical of your system is in version **7.0** and the SCoptical (if a Stage-Box is used) is in version **4.0**. Three EPROMs on each card determine this firmware version. Please check that, on your system, they correspond to the following chart (in red) :





## VII. Update your ARC card and DioES modules

The procedures to update the Arc card and DioES (Ethersound modules of the DSP and the ARC) firmwares are available as a PDF file from our website (<http://www.innovason.com>) or in the CD delivered with the Sensoft 12 upgrade kit.

As explained in the **section III.1**, the ARC version must be **1.28** and the DioES version must be **1.6**.

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### A few words regarding the ARC card of your DioCore

Reminder : to see the ARC card version just go to the **Patch IN** or **Patch OUT** window, on the left side select the TAB “**DIO1**” and on the top select the TAB “**CONFIG**”. You can see in the audio racks the version of ARC card, as well as the version of the DioES module.

If your ARC version is lower than **1.28**, please contact our technical services (see coordinates at the end of this quick guide). In some case it would be useful to proceed to an exchange of your module.



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**Now that your entire system is UP TO DATE and SENSOFT 12.0.11 is installed, it is time to discover and operate the FM-8VB card.**

### VIII. Configure the Stereo/Mono status of the FM-8VB

The FM-8VB is an 8 Inputs and 8 Outputs audio cards. The difference with the other I/O card is that no physical connector is available on the front plane of the FM-8VB. This is because the objective of this card is to process some internal busses of your console. All the audio busses of the system can be applied to an internal processing of the FM-8VB and then benefit of a 4 treatments bay.

Between each Input and Output of the FM-8VB there are 4 processing engines. Each of them is able to receive one of the plugins available from a choice list. So we have a totality of 32 engines on the card.

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The capability to attribute a plug-in to each engine of the card is strongly conditioned by the power of the used treatments. I.e: the reverb and mutli tap delay effects need a big part of the DSP power to work, so don't be surprised if the system refuse to attribute more plugins if you have already assigned 4 Reverb, 2 compressors and 2 de-essers...

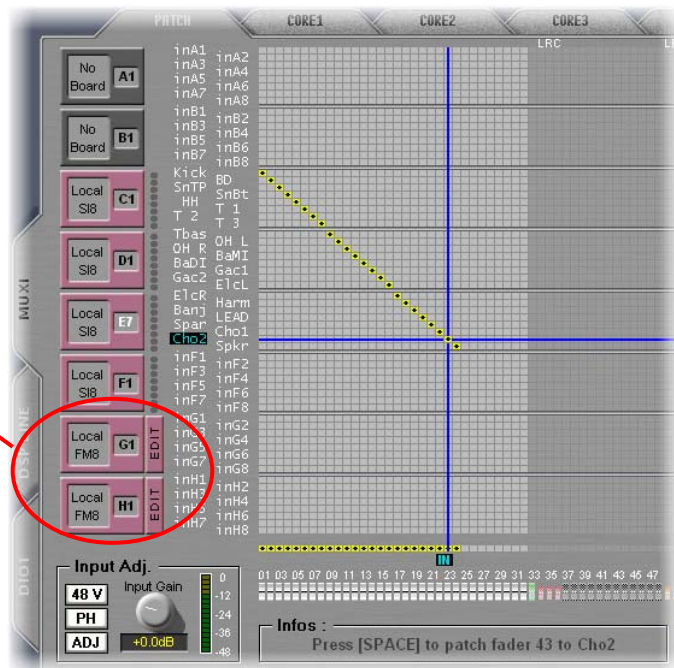
Fortunately you have no limitation regarding the number of FM-8VB that you can use in your system. So, it could be cleaver, in some cases, to define one FM-8VB for the FX treatments and an other card for all the dynamics treatments.

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The Input and Output of the FM-8VB can, by pair, be declared as a stereo bay of treatment. To manage that, just follow the following steps :

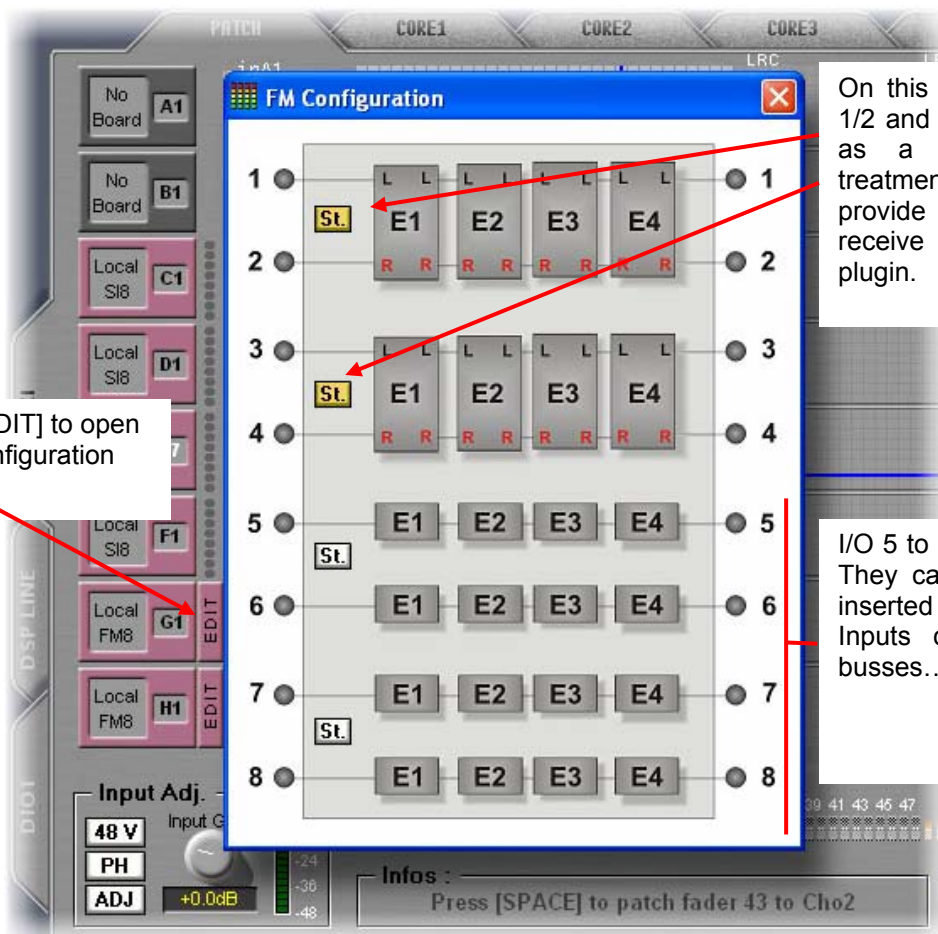
**1 – Goto the Patch IN or Patch OUT grid**

Two FM-8VB cards are installed in our example system.



**2 – On the right side of the card that you want to configure, click on the EDIT button**

Click on [EDIT] to open the FM Configuration window



On this example, the I/O 1/2 and 3/4 are declared as a stereo bay of treatments. Each bay provide 4 engines to receive FX or Dynamic plugin.

I/O 5 to 8 are mono bays. They can, eventually, be inserted on some mono Inputs channels or Mix busses...

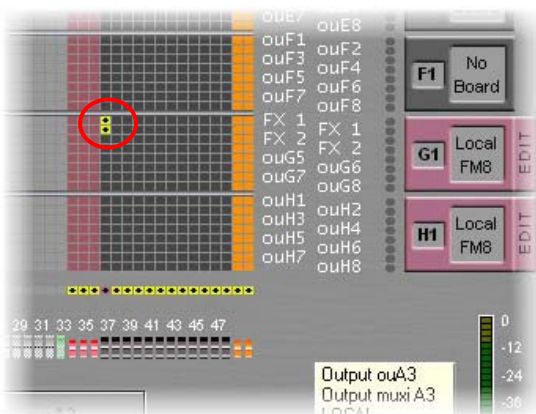
## Using an FX Bay fed by an Aux

### IX. Using an FX Bay fed by an Aux

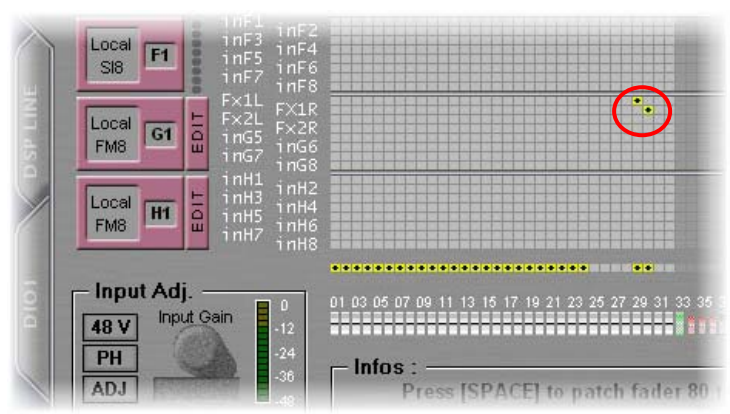
As explained before, the FM-8VB has to be managed like you would do with an external Bay. So, to create an FX bay fed by an Aux and returning to some input faders it is very simple, just follow the steps below...

#### IX. 1 A stereo Bay fed by a Mono Auxiliary

In our example, we are going to create a stereo FX bay fed by a Mono Auxiliary bus. For that, one Aux fader and 2 Inputs faders will be used on the surface to manage and accede to the edition of this bay.



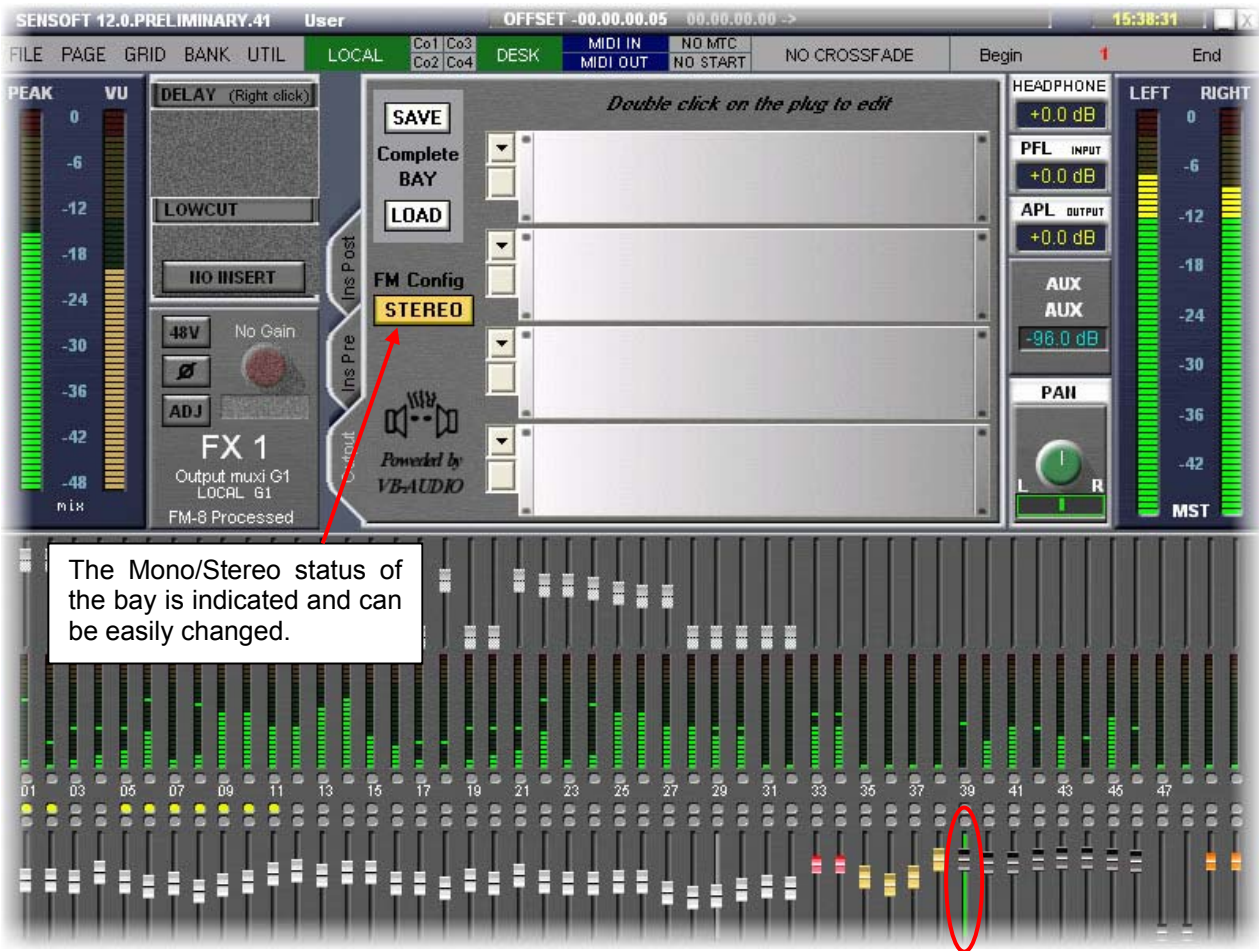
In the Patch OUT grid, patch the AUX fader to the 2 inputs of our stereo bay (input 1L and 2R).



In the Patch IN grid, patch the L, R return of the stereo bay on 2 inputs faders.



Return to the main mix window and select the Aux patched to our stereo bay. If you activate the [output] tab, the Bay and its 4 racks is displayed.



The Mono/Stereo status of the bay is indicated and can be easily changed.



On each rack of the Bay, a list allows to chose a treatment among the 10 available today. A little number indicates the number of this treatment which could be used with one FM-8VB. This gives you an idea of the resources used for a plug in.

It is up to you to configure your complete treatment bay as up to 4 plugins can be daisy chained in the bay.



## Using an FX Bay fed by an Aux

Below is a view of the stereo Bay where 4 different plugins have been applied on the 4 racks.



The **[Output]** Tab allows to view and parameter the processing offered by the output card where the selected bus is patched. In the case above we see the FX Bay processing because the selected Aux is patched to a FM-8VB.

If we select an Aux patched on a UM-8PO output card, the **[Output]** Tab allows to accede to the processing offered by the UM-8PO, including the Geq.



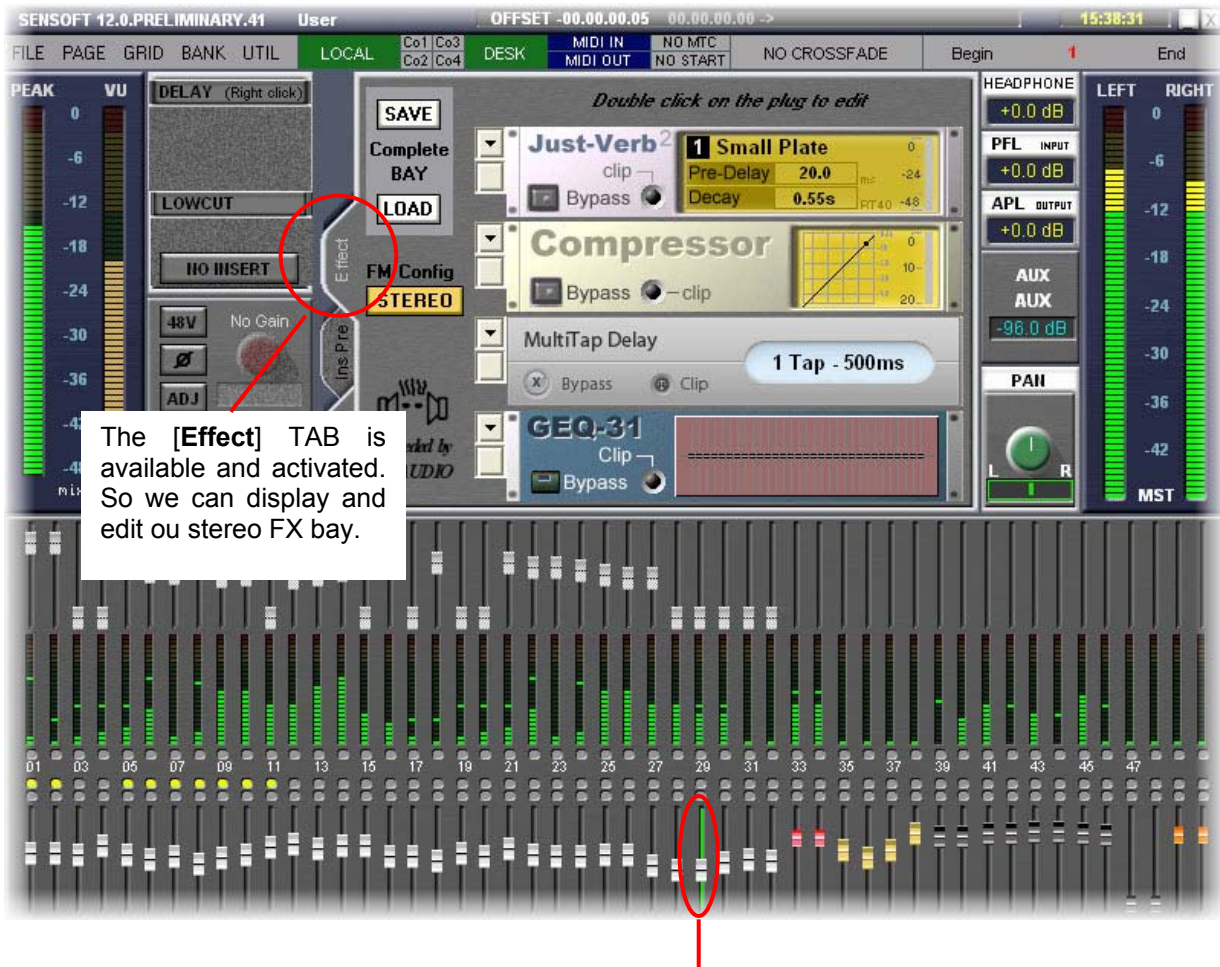
On the example above, the selected Aux is patched to a UM-8PO output. So we can accede to the output processing by activating the **[Output]** Tab.

It is also possible to display and modify our stereo FX bay directly from the Input channels where the return outputs of the Bay have been patched. Whatever the Left or the Right selected input, if the **[Effect]** Tab is activated you will always show you the FX bay corresponding to the FM-8VB I/O.

On the picture below one of the stereo return bay input channel is selected and the **[Effect]** Tab is activated. As you can see, the same Bay than the one displayed when the Aux Send was selected just before, is displayed. This makes sens, as the Auxiliary and the Inputs returns are patched to the same Bay, corresponding to the I/O 1 and 2.



## Using an FX Bay fed by an Aux



One of the Input corresponding to our Stereo Bay return is selected.

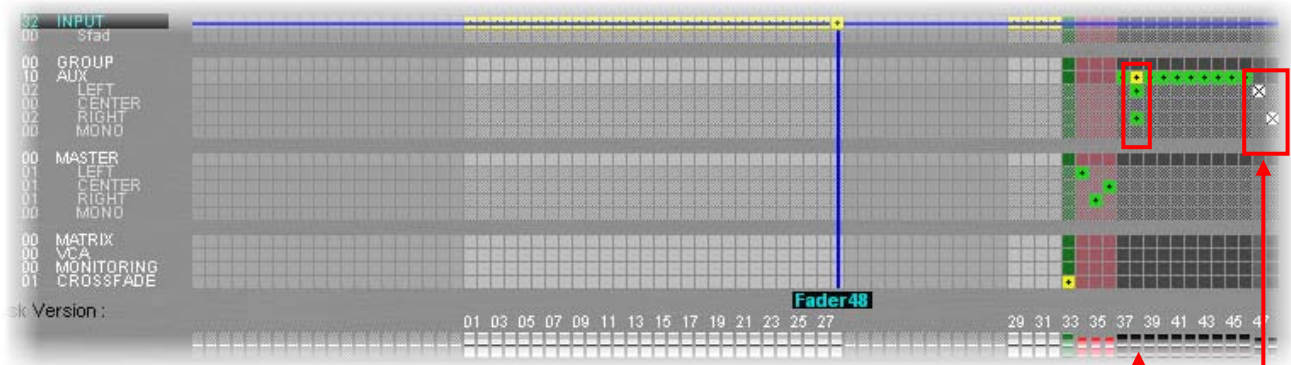
If, when the Input channel is still selected, you switch to the [Channel] Tab, you will display and edit the Channel processing of the console. This processing is applied to the return of the Bay.



## IX. 2 A stereo Bay fed by a Stereo Auxiliary

This exercise presents no difference compared to the previous one (the Stereo Bay fed by a Mono Aux) except that we are going to feed the 2 L,R inputs of our Bay with the 2 L,R busses of a stereo Aux.

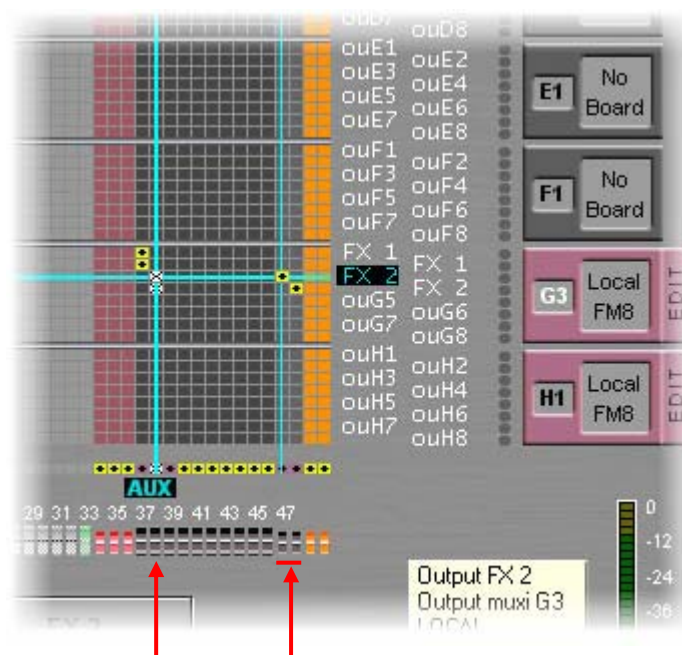
Goto the PCB window ([ALT]+[C]) and create a stereo Aux.



This Fader is an Aux (yellow patch point) and is Stereo because it uses a Left and a Right resource (2 green patch points).

To be authorized to create some stereo Auxes you must, first, declare 2 faders as the Left and Right deployment zone for the stereo Auxes. These faders will allow to patch and to adjust the Left and the Right buss of the stereo Auxes.

Goto the Patch OUT grid and patch the Left and Right busses of the Aux to the inputs 3 and 4 of the FM-8VB card (which were previously declared as a stereo bay).

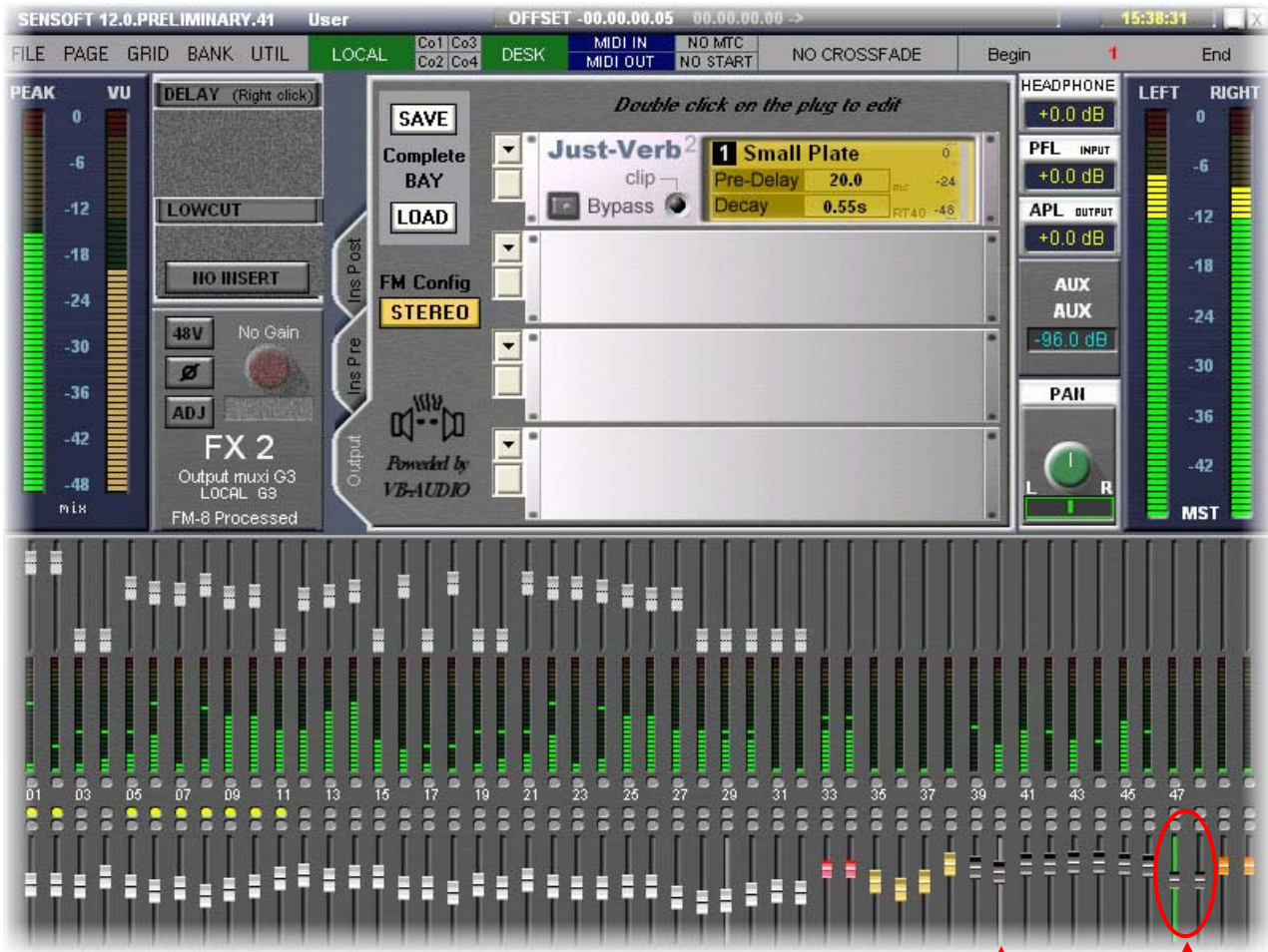


The Left and Right busses of our stereo Aux are available on the deployment zone (2 faders) declared in the PCB windows. First, select the Aux fader, then select and patch the Left buss followed by the right one.



## Using an FX Bay as an inserted processing

You can select the Aux Fader or the Left or Right resources faders of the Aux, this will show you, when the [Output] Tab is activated, the FX bay.



The Stereo Aux fader  
The 2 Left and Right busses of the Stereo Aux

### X. Using an FX bay as an inserted processing

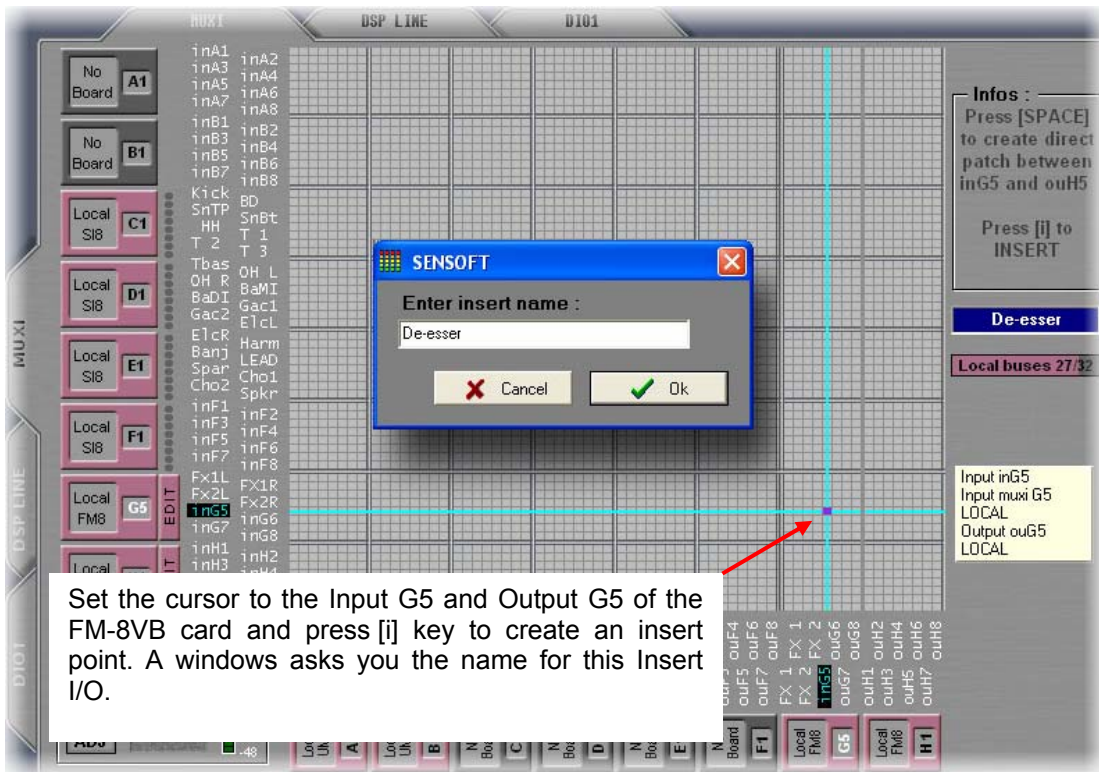
The resources of the FM-8VB can be used as an inserted processing on the inputs or mixing busses.

#### X. 1 Using a MONO inserted bay

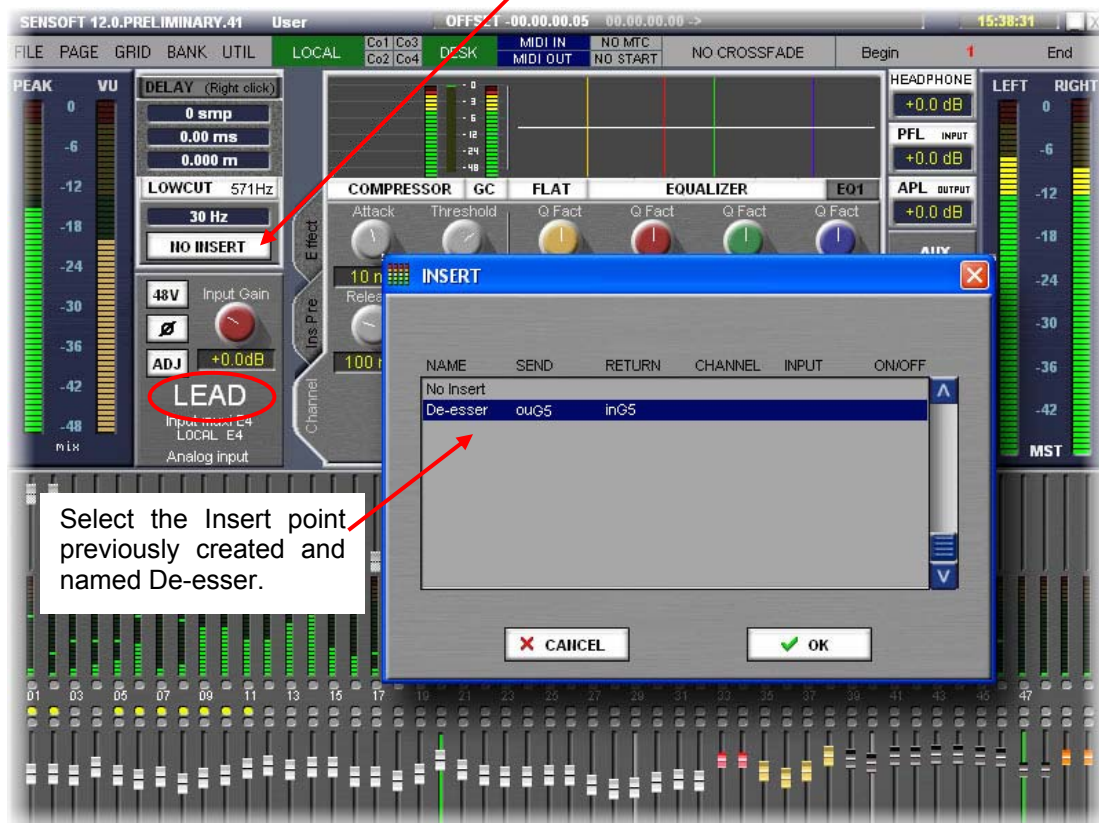
In this example we are going to insert a de-esser on the LEAD channel. We will use the input 5 and output 5 of the FM-8VB for that.

The first step consists to create the Insert Send and Insert Return I/O. This operation is made thru the Direct I/O patch grid ([F10]).

Goto the Direct I/O patch grid, and create an Insert send and return I/O using the **Input G5** and **Output G5** of the FM-8VB.



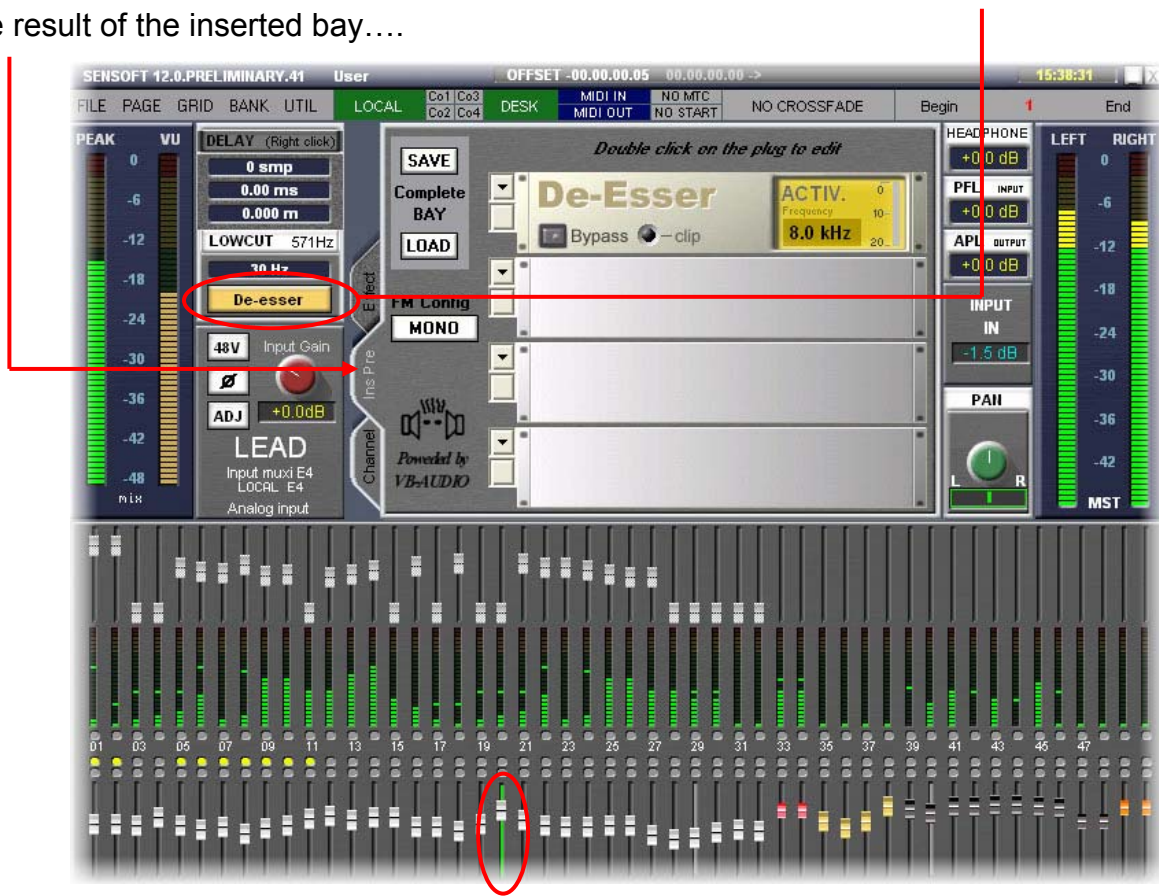
Return to the main Mix Window, select the **LEAD** channel and click right on the **[INSERT]** button to open the list of available Insert I/O.





## Using an FX Bay as an inserted processing

Activate the **[Ins Pre]** Tab to edit the inserted bay. You can now select the De-esser plug in to apply a De-essing on the LEAD vocal. Don't forget to activate the **[INSERT]** button to hear the result of the inserted bay....

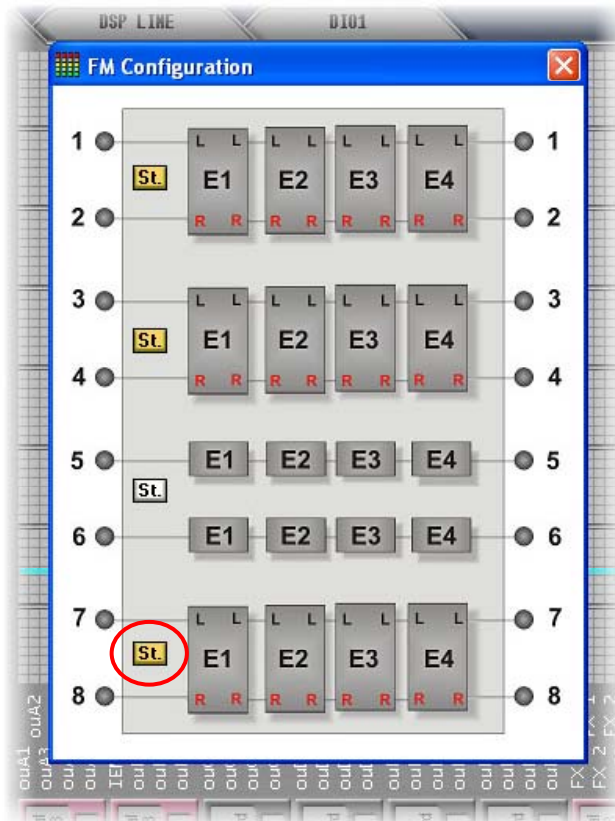


## X. 2 Using a Stereo inserted Bay

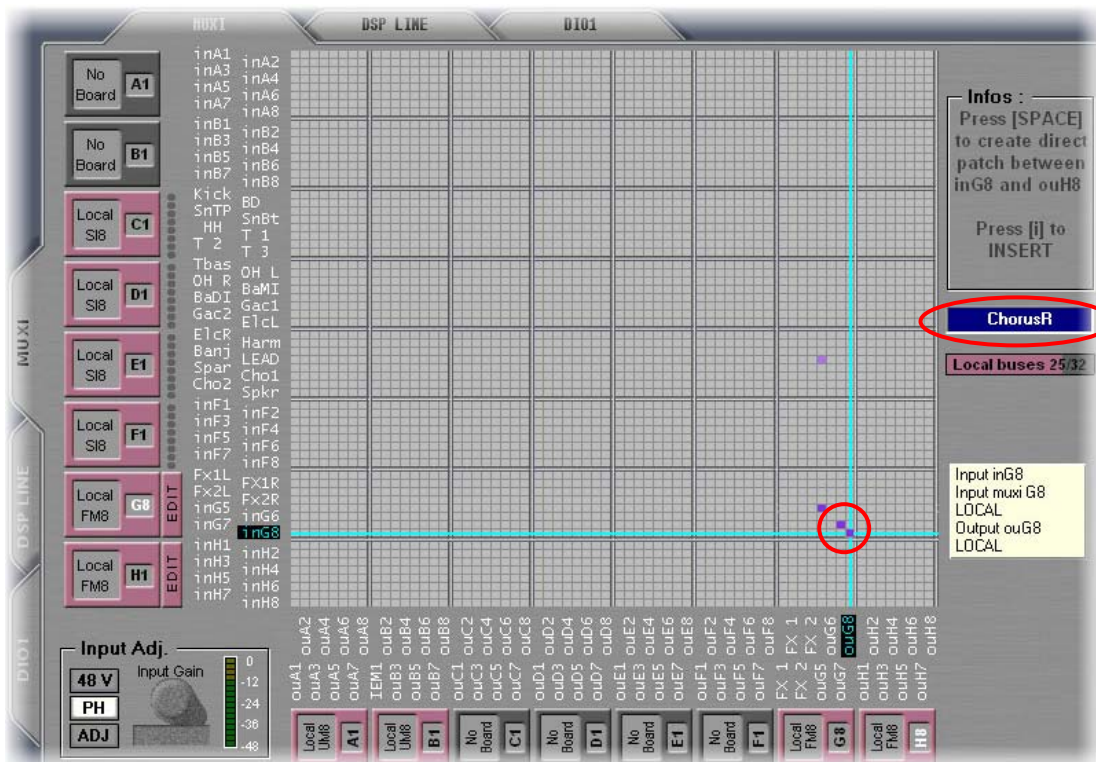
In this example we are going to insert a Stereo Chorus on a, originally, mono Guitar microphone.

As the FX return applied on the Guitar is Stereo, we are going to split the Microphone on 2 input faders. One of this input will be applied to the Left channel of the Chorus and the other one will be applied to the Right channel of the Chorus.

We are going to use the Stereo Bay using the I/O 7 and 8. For that, please configure the 4 engines between Input 7 and 8 and outputs 7 and 8 as a stereo Bay.

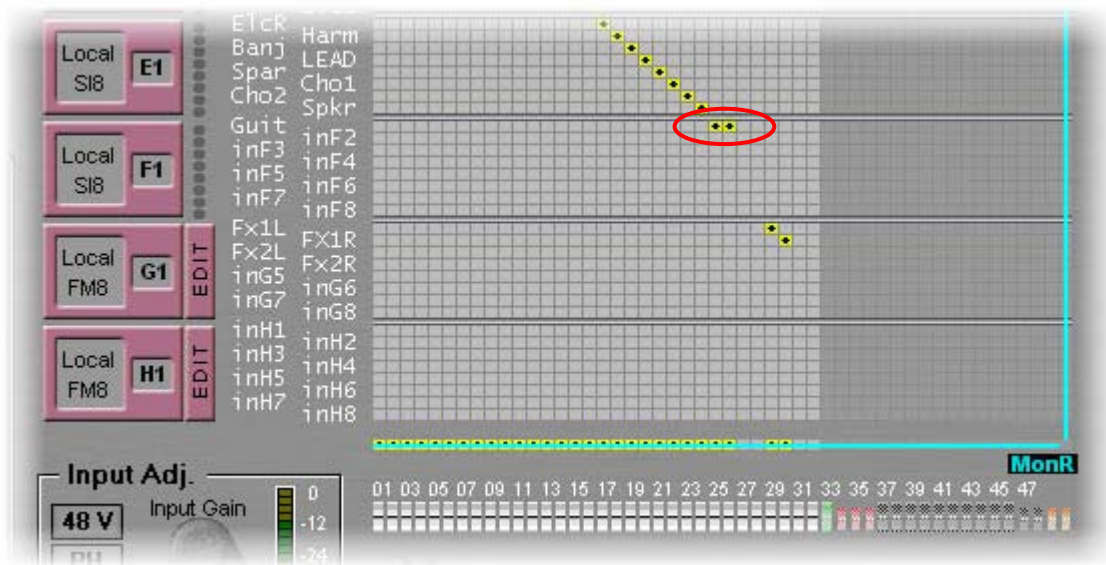


Then create 2 insert points. One using the Input G7 and Output G7 of the FM-8VB, name it "Chorus L". The other will use the Input G8 and Output G8 of the FM-8VB and can be named "Chorus R".

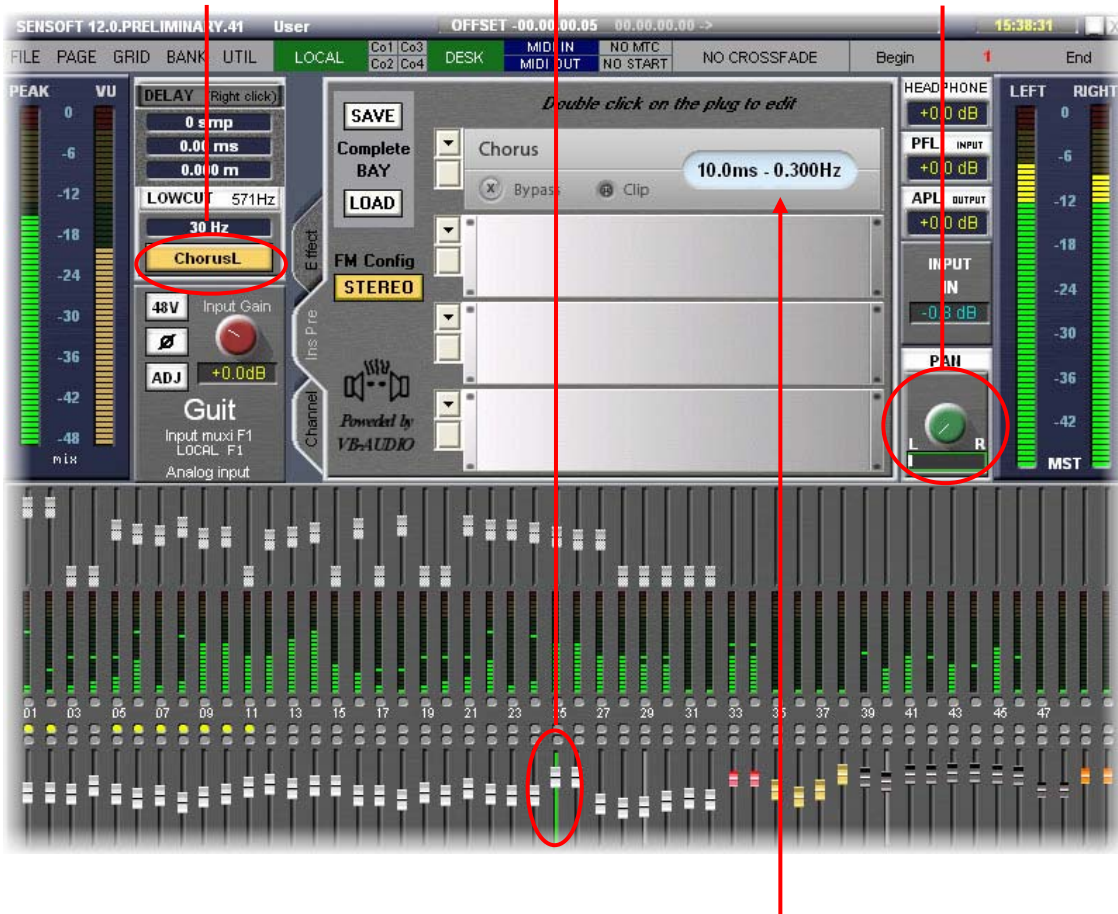


## Using an FX Bay as an inserted processing

Goto the Patch IN grid and patch the Guitar Microphone on 2 Input faders (Split).



Return to the Main Mix window and Select the first Guitar input fader. Adjust the panoramic of this input full Left and insert and activate the “Chorus L” insert point from the list.



Select, in one of the 4 rack, a Chorus FX.



Select the other Guitar Input fader, adjust its panoramic to full right and insert and activate the “Chorus R” insert point from the list.



Our Stereo Chorus receive a Mono signal (2 times the same signal applied on its Left and Right inputs) and generate a Stereo result feeding 2 full panned faders.

Using the same way you can imagine how it is easy to insert a stereo Bay on a stereo Mix Bus or on a Stereo Input.

## XI. Locking a Rack

In order to simulate the behaviour of an external device, a Rack can be set in a mode where all of its parameter are relaxed from the memory (pages) of the console. So, when you modify a parameter on a certain page, this modification will stay active even if you change of page. Nothing, on the locked rack, is updated by the snap shot memories.

## Editing the Effects



Click on this little button to lock the rack of your choice. A little padlock indicates this status.

## XII. Editing the Effects

When a plug-in is selected in a Bay, just double click on it to open its editor in a floating window. Several editors can be opened at the same time, it is up to you to keep your screen tidy.

### XII. 1 View of the plugins' editors

#### The Chorus

*This plug-in allow different variations of Chorus, Flanger and Modulation*



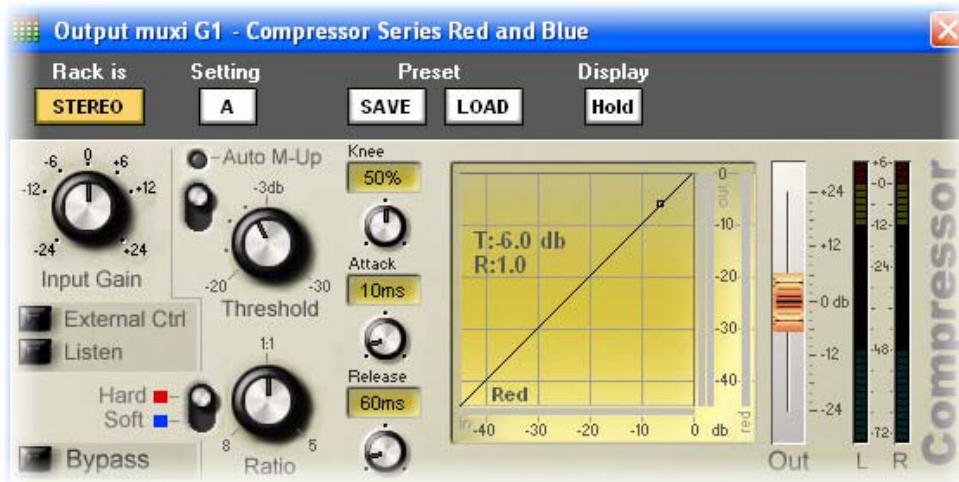
### The C-Limiter

*A Brick Wall Limiter, generating a nice distortion for the high levels*



### The Compressor

*A very efficient Compressor, with a Hard or Soft behaviour*



### The DeEsser / Ducker

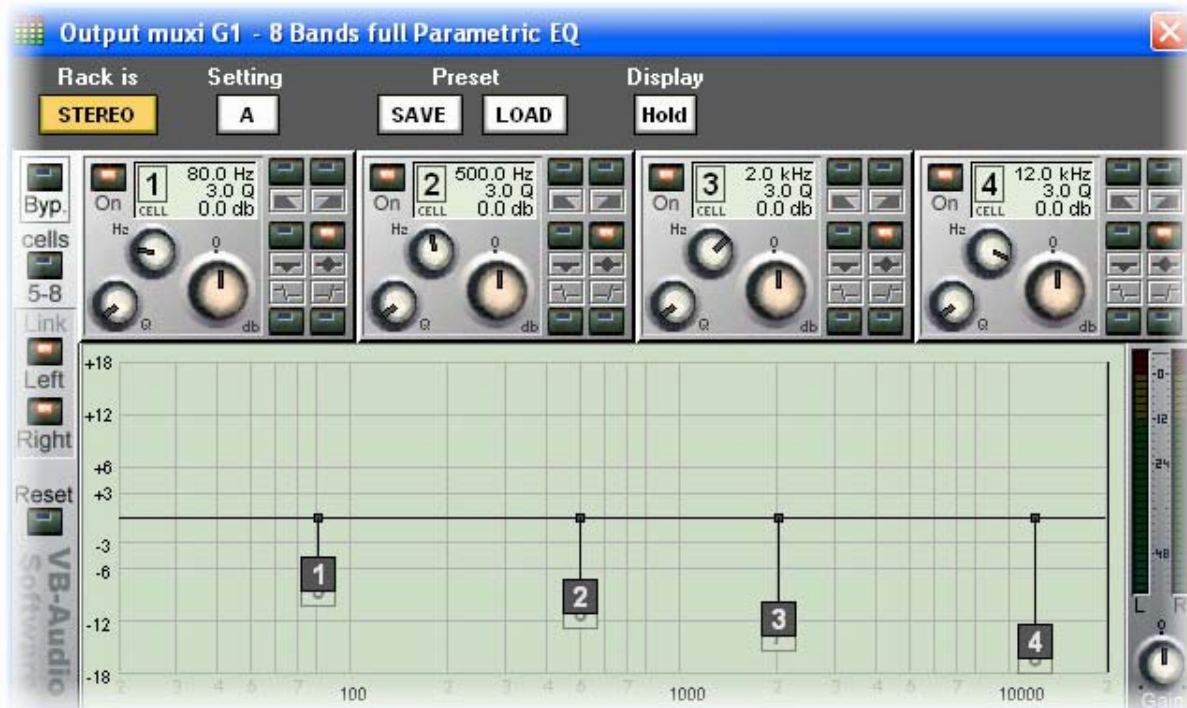
*A De-esser with a BP and HPF filter, will be switchable to a Ducker on a next release*





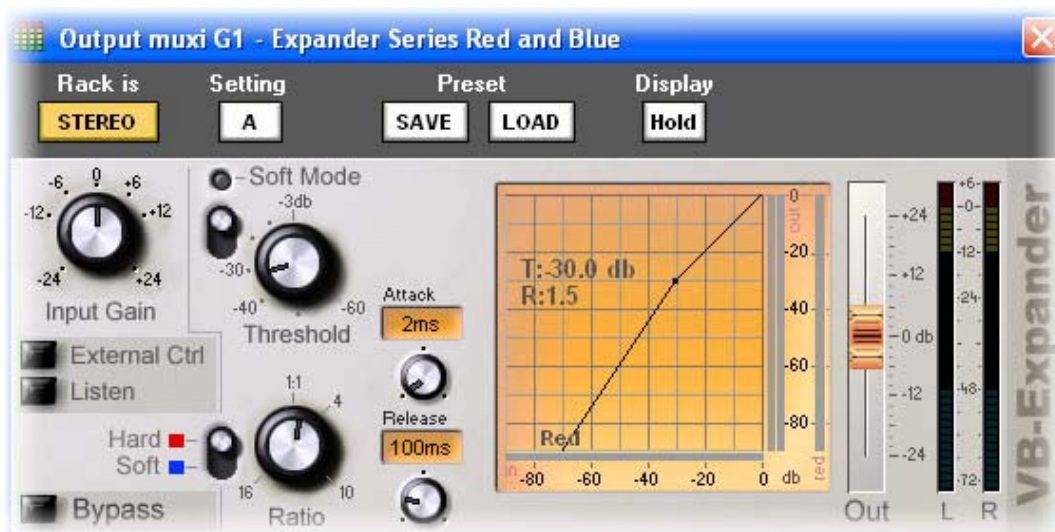
### The EQ-Pro-G8

*A 8 band full parametric EQ – Each band can be a parametric, a shelf, a Notch, a HPF or LPF filter*



### The Expander

*An Expander with a Hard and Soft mode behaviour*



### The GEQ-31

*A complete Graphic Eq offering several dB scales*



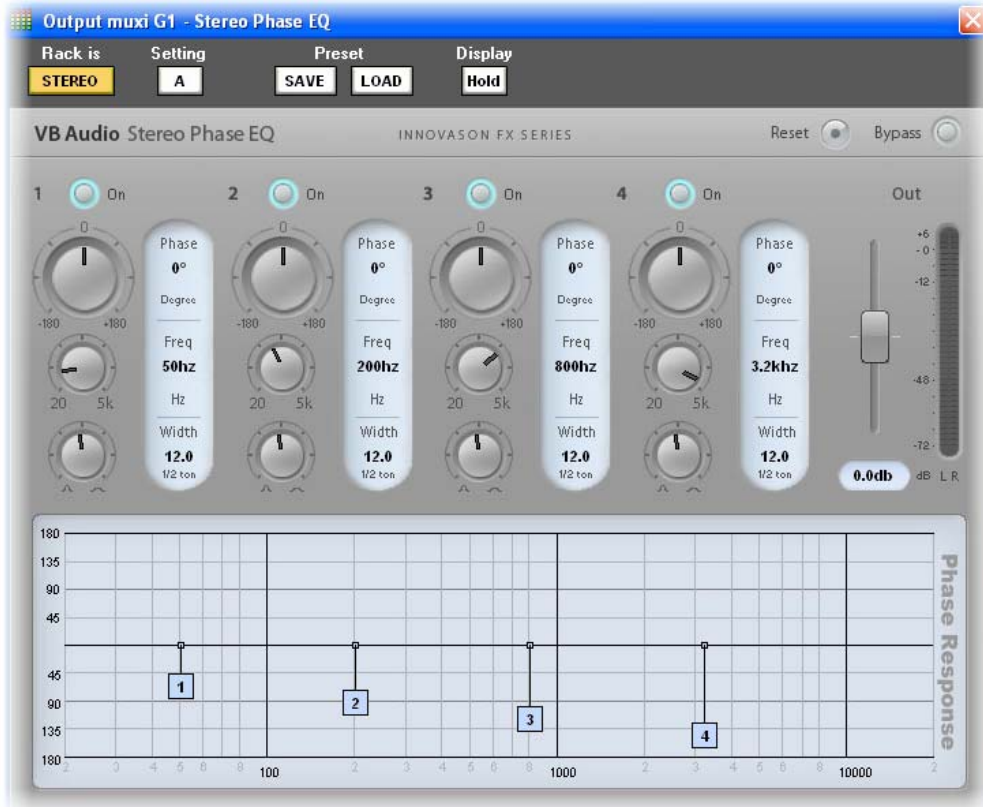
### The Just-Verb<sup>2</sup>

*The Reverb using the famous algorithms of the VB-Audio Aphro reverb*



### The Stereo Phase Eq

***This unique plug in allow to adjust the phase (+/-180°) at 4 different frequencies***



### The MultiTap Delay

***A Multitap Delay allowing all variations of Echoes, Ping-Pong, ...etc***

***A tap Tempo is integrated to the Plugin. Each Tap has its Level and Panoramic adjustable.***





### XIII. Some little words about the 16 floating processing

As you may know, since Sensoft 9, 16 floating processing (each contain a Peq, a Compressor, a Noise Gate Exp and a Low Cut filter) are available for the mix busses. Sensoft 12 has changed a little bit the way to accede to these processing by adding some new Tabs on the main mix windows.

Select a Mix Bus (an Aux in the example below). Then activate the Tab [Ins Pre] to insert a floating processing Pre-Fader.



Make a right click on the [INSERT] button to open the list and select an internal processing.

## Some little words about the 16 floating processing



Then, activate the **[INSERT]** return and you can now operate on the complete process inserted on the Aux buss. By using the same way you can easily insert a floating processing Post Fader... select the **[Ins Post]** Tab and do the same operation that we just did.



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*If you have questions, or technical issues, feel free to contact our customer service:*

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