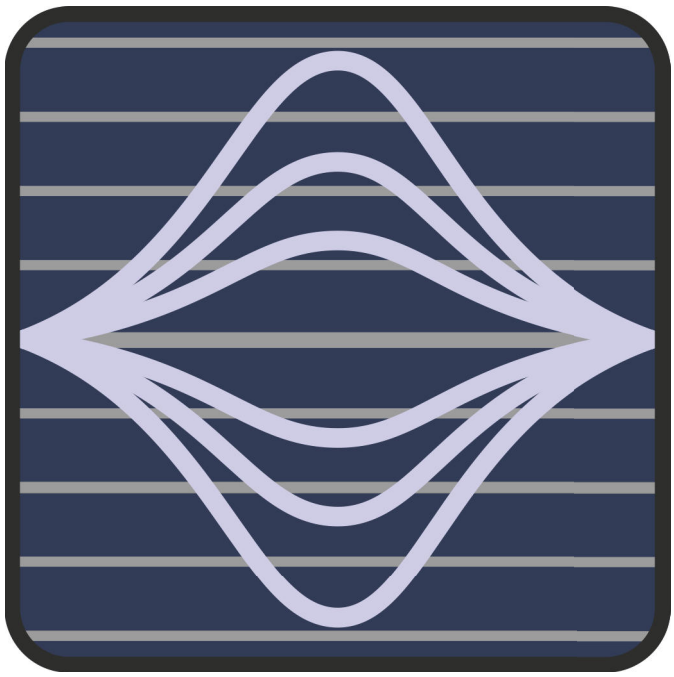
SoundWare

DSP Software



User's Manual

Version 1.0.0

NEXT proaudio

September 2014

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Brief

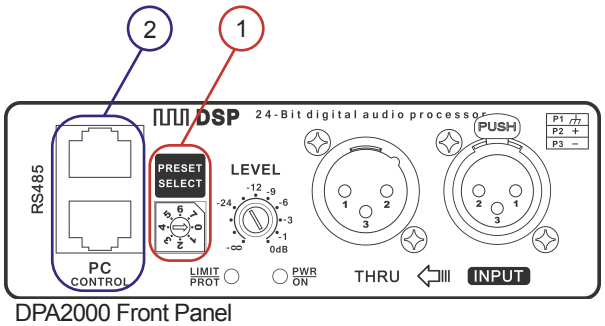
NEXT-proaudio's Amplifiers, **DPA500** and **DPA2000**, includes a networkable DSP that provides 8 selectable Presets (6 Factory Defined and 2 User Defined) that can be accessed by an easy selector **(1)**, located in the front module panel, or real time edited using a computer. With SoundWare software, the DSP, can be controlled via USB/RS-485 allowing you the easily customization of the sound program, for various applications or different venues. This software permits to edit each one of the 6 (pre-loaded) Factory Presets and store it in one of the 2 free User Preset memories.

A maximum of 255 DSP's can be connected together through the RS-485 port **(2)** creating a control network. In order to control each Device individually a unique "Device ID" number must be assigned. By introducing the same "Device ID" number on several units a control group is created allowing a simultaneous control of all devices belonging to the same group.

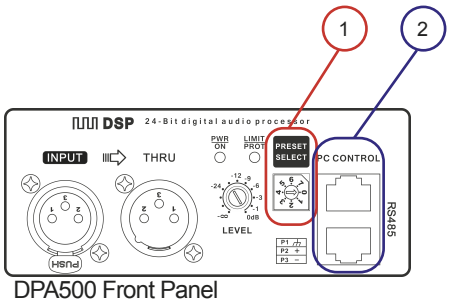
Instead of using computer control, both the Factory and User-generated Presets can be recalled by means of an easy and quick "Preset Selector" **(1)** on the rear panel. A clear and helpfull information of stored Presets is printed on speaker's rear panel **(3)**.

NEXT-proaudio's DSPs are factory programmed so that speakers are "Plug-and-Play".

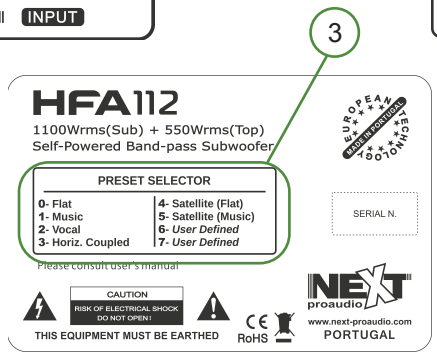
For updates and for different speaker Presets please consult www.next-proaudio.com or send us an e-mail to info@next-proaudio.com.



DPA2000 Front Panel



DPA500 Front Panel

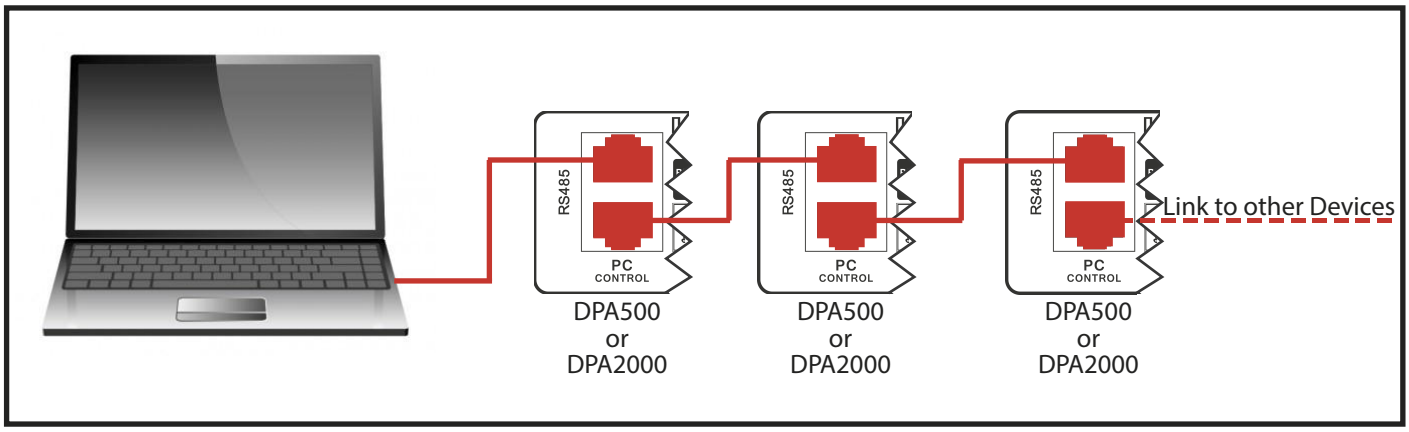


Speaker Sticker Illustration

Getting Started (Hardware)

Creating a Network

It is possible to connect up to 255 Devices in a single network. The Devices must be connected in a daisy chained connection by RS-485 cables with a maximum distance of 100m.



Daisy Chained Network Illustration

Usage Tips

- Before “Loading All Presets From PC” do not forget to save the Presets stored in the Device (Save All Presets to PC) in order not to loose any data.
- Whenever you select a Preset on PC, do not forget to switch the Preset Selector to the corresponding Preset number after disconnecting from the speaker, otherwise the speaker will assume the Preset selected in the Preset Selector and not the one you choosed on PC.
- Everytime you want to Update your Device with new Presets provided by **NEXT-proaudio** you must use “Load All Presets From PC” function.
- “Bass Enhancer” function should be used when playing signals at low SPL to intensify the bass volume for a better sound experience. Once reproducing high levels of SPL, “Bass Enhancer” should be turned off in order to increase the speaker lifetime and maximum SPL before clipping.

Getting Started (Software)

Taking the First Steps on SoundWare Software.

1) Turn on the Speaker/DSP

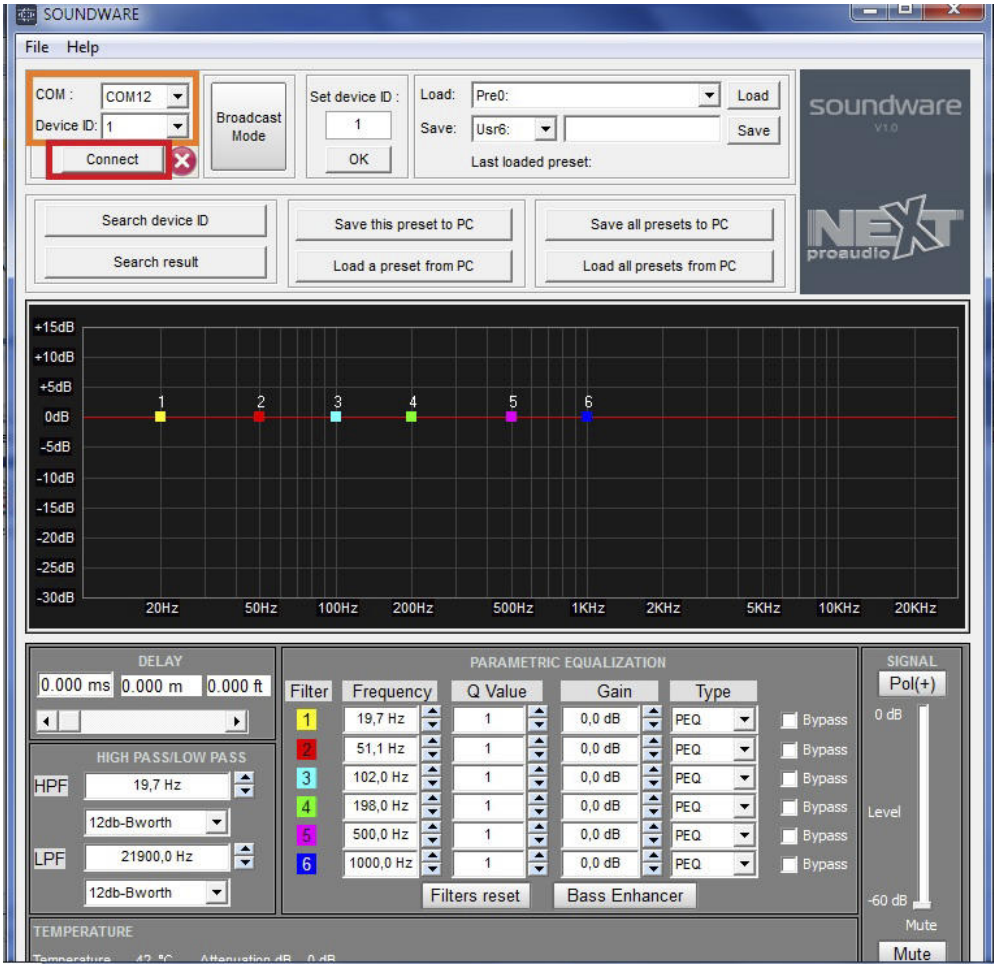
2) Connect the supplied USB/RS-485 cable from the PC to the Speaker/DSP

3) Open SoundWare software

4) Select "COM" port and "Device ID" number (default ID=1) (Orange Box)

5) Click on "Connect" button (Red Box) *

*If you are having trouble in this step, please consult “Search Device ID” section



Load a Preset From Device

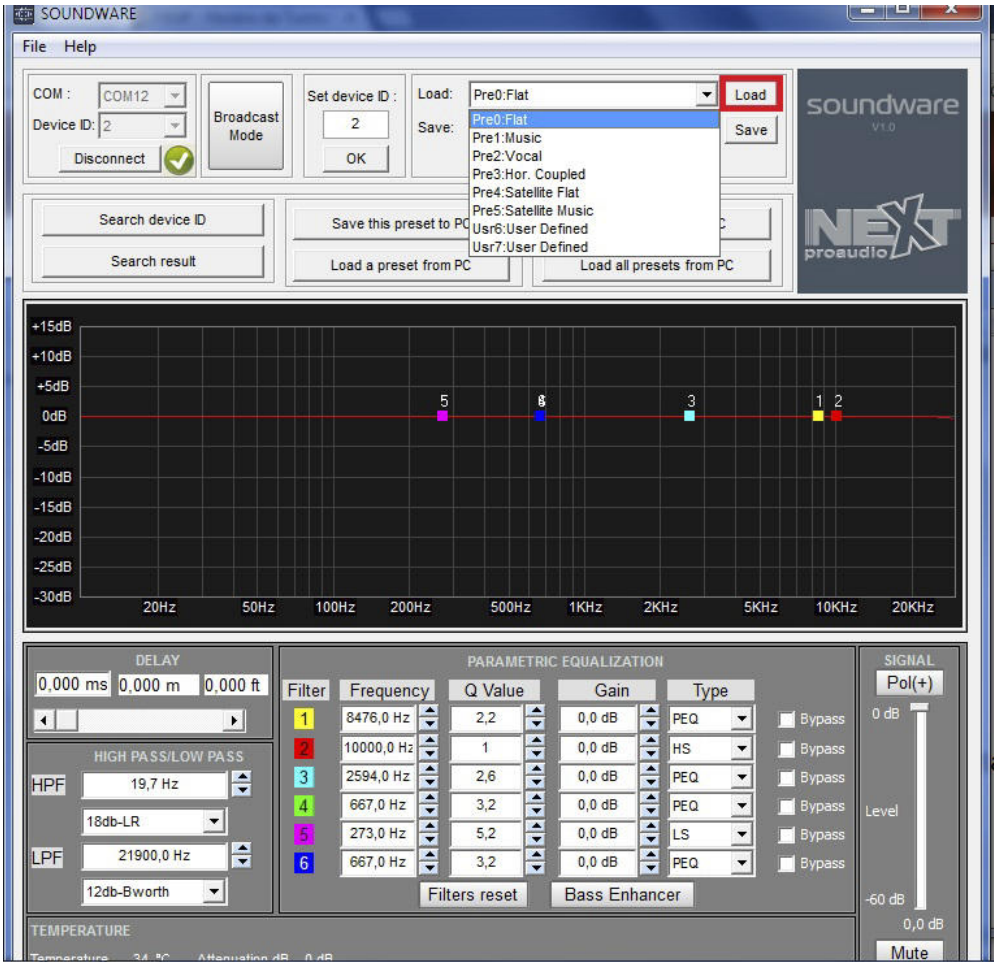
Loading a Preset from Device, allows you to change the active Preset in the speaker to the loaded one.

1) Select a Factory Preset from the “Load” drop-down list

2) Click on “Load” button

WARNING!!!

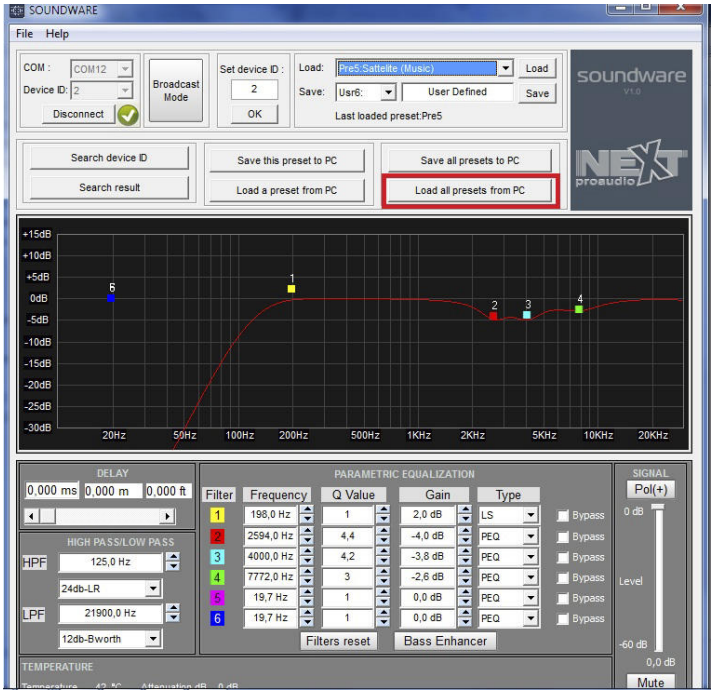
Be aware that once disconnected from PC, the active Preset in the speaker DSP returns to the Preset selected on the “Preset Selector” located on the amplifier panel.



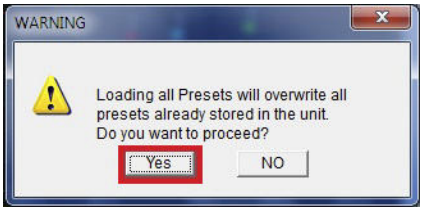
Load All Presets From PC

All Presets can be loaded simultaneously using a single file (.fps file extension) containing complete data.
Loading all presets from PC, will replace all Presets in the Device (6+2) by the loaded presets. **Note: You must use this function when updating Factory Presets**

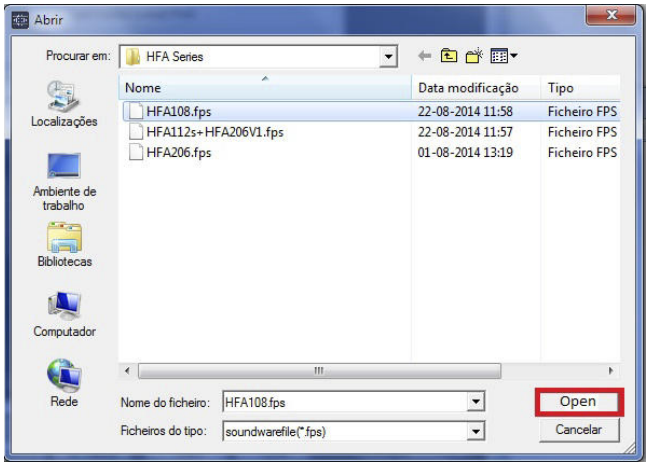
1) Click on "Load all presets from PC" button



2) Press "Yes" (If you really want to replace all Presets stored in the Device)



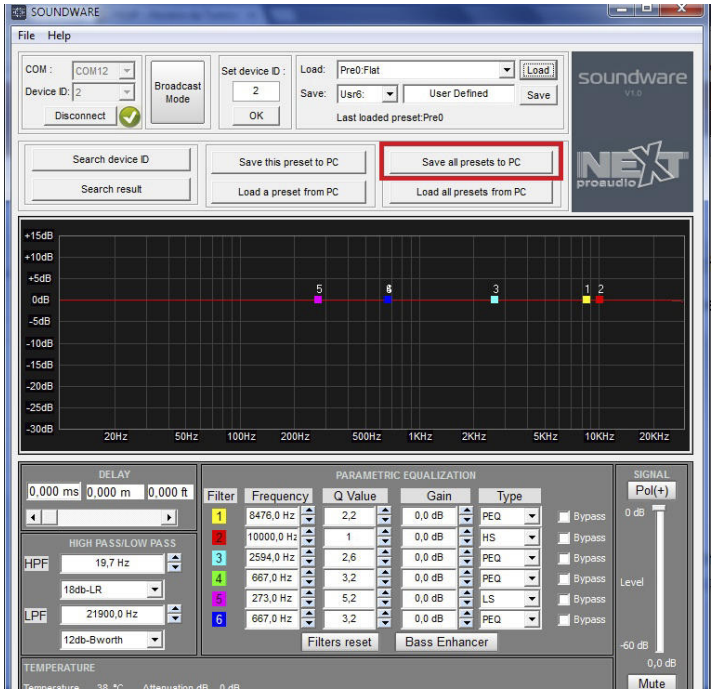
3) Select the desired/appropriated Presets and click on “Open” button



Save All Presets to PC

By saving all Presets to PC, you will create a file in your PC (.fps file extension) containing all Presets stored in the device (6+2).

1) Click on "Save all presets to PC" button

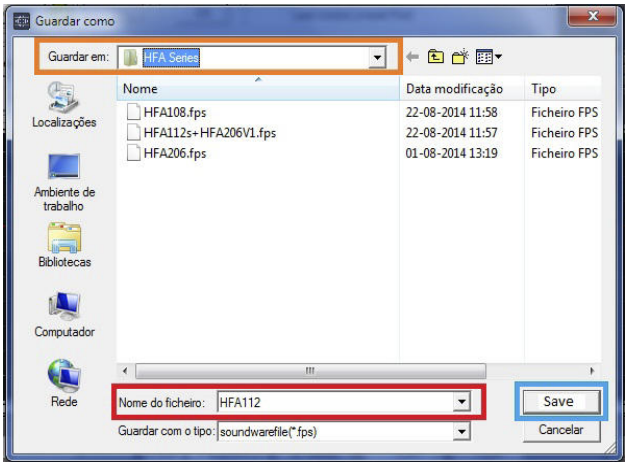


2) Select the directory where you want to save the file (Orange Box)

3) Choose a file name (Red Box)

4) Click on "Save" button (Blue Box)

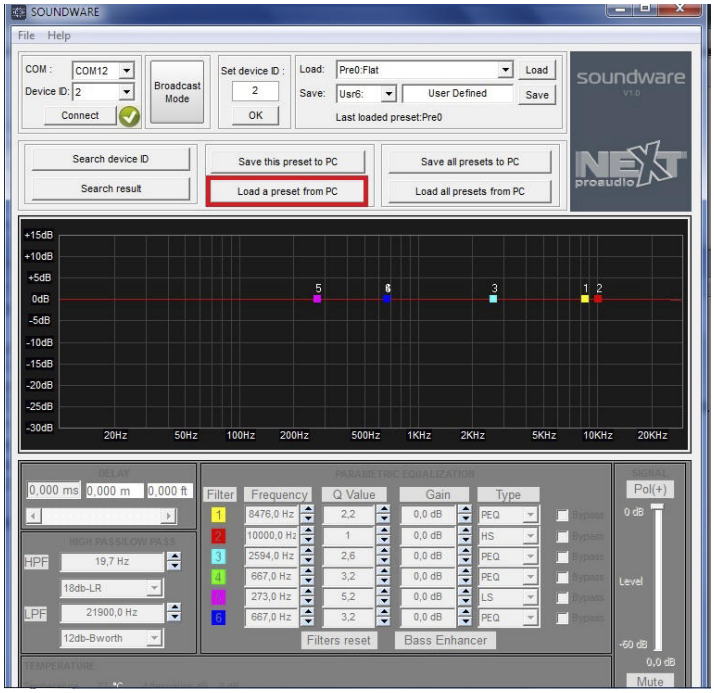
Note: a file “name”.fps will be created in the selected directory



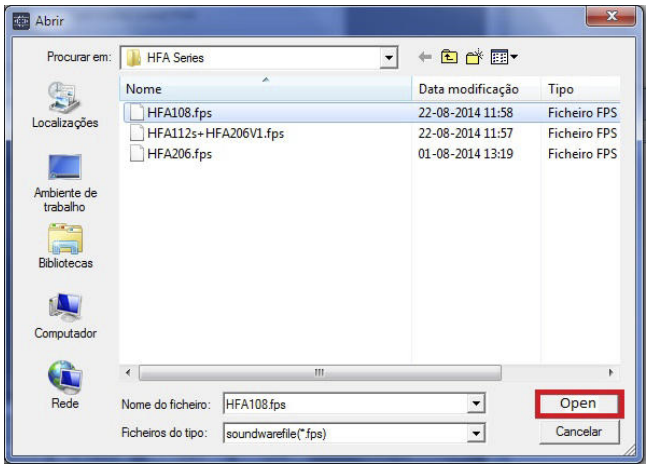
Load a Preset From PC

One individual Preset, previously saved, can be loaded using a single file (.sps file extension).
Loading a Preset from PC, will replace the active preset by the loaded one. The Preset can be saved later in one of the two User Presets memories.

1) Click on "Load a preset from PC" button



2) Select the desired/appropriated preset and click on “Open” button



WARNING!!!

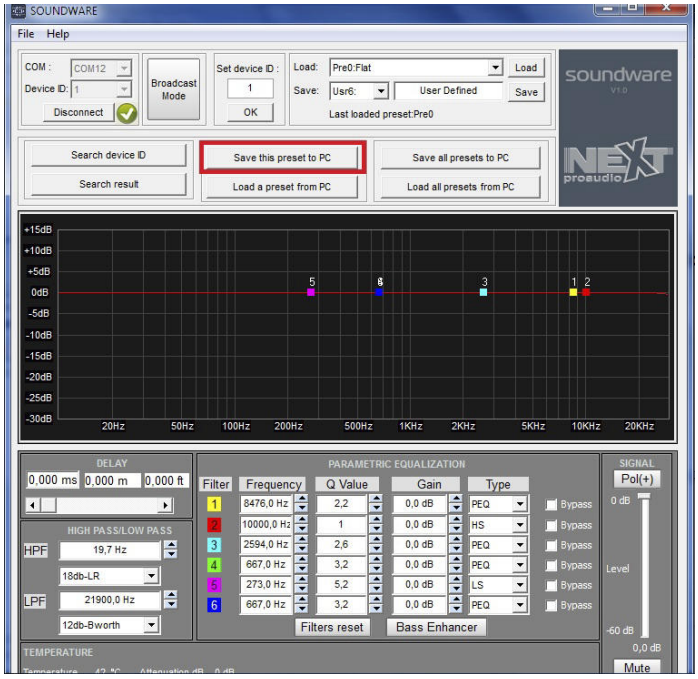
The loaded Preset **is not automatically saved.** You must save it in one of the two User Preset memories before disconnect from PC.

Once disconnected from PC, the active Preset in the speaker DSP returns to the Preset selected on the “Preset Selector” located on the amplifier panel.

Save Active Preset to PC

Saving an Active Preset to PC, you will create a file in your PC (.sps file extension) containing the active preset data.

1) Click on "Save this preset to PC" button

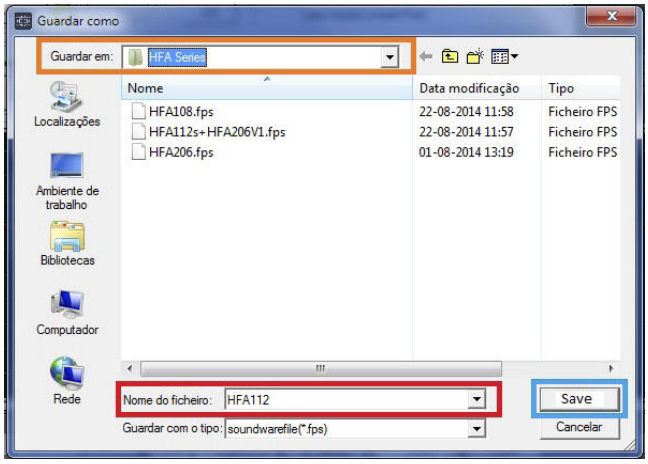


2) Select the directory where you want to save the file (Orange Box)

3) Choose a file name (Red Box)

4) Click on "Save" button (Blue Box)

Note: a file “name”.sps will be created in the selected directory



Make Your Own Preset

You can edit one of the 6 Factory Presets, according to your needs, using the available processing tools. This edited Preset can be saved in one of the two User Preset memories.

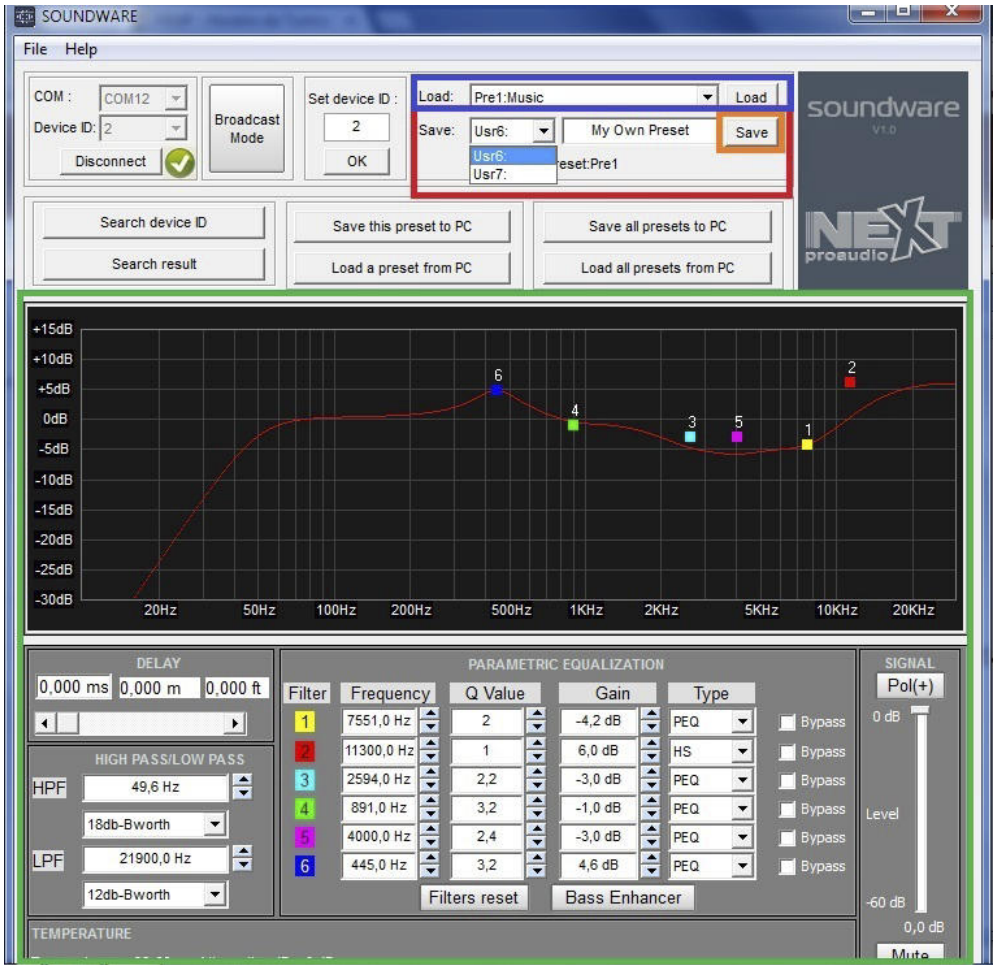
1) Select one of the Factory Presets and load it (Blue Box) *

*If you are having trouble in this step, please consult “Loading a Preset From Device” section

3) Make the changes you want (Parametric EQ, LP/HP Filters, Delay, Bass Enhancer, Gain and Polarity)

4) Select one of the 2 available user memories and choose the name you want (Red Box)

6) Click on "Save" button (Orange Box)



Make Your Own Preset

EQing Tips

Because of the way our hearing changes when subjected to very loud sounds, it is necessary to compensate for these changes by using EQ to maintain the correct balance. If the system is used for background music reproduction or will not be reproducing SPL levels over 100dB continually then you will not need to apply SPL dependent midrange attenuation. For levels over 100dB you will need to apply EQ in varying amounts depending on the playback SPL.

Depending on SPL, **NEXT-proaudio** recommends you to equalize **2520Hz** with the settings below:

SPL Range	Level	Bandwidth
100 - 110dB	-4dB	Q= 4.3
110 - 120dB	-5dB	Q= 4.3
120 - 130dB	-6dB	Q= 4
130 - 140dB	-8dB	Q= 4

***NEXT-proaudio**'s Music Preset already has midrange attenuation although you can equalize it by yourself.*

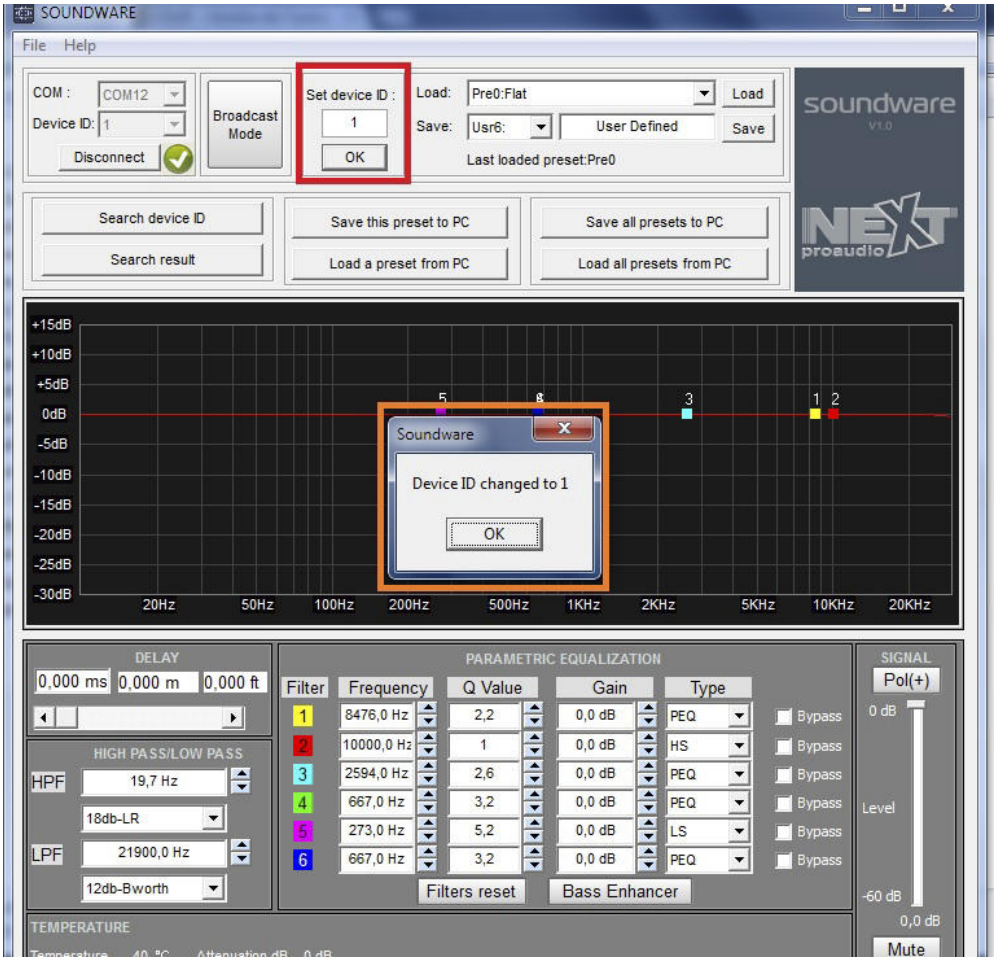
Problem	**Solution** (Parametric Equalization)
The system sounds thin and lacking in weight	**Freq:** 50Hz **| Q:** 3.8 to 4.8 **| Gain:** +4 to +6dB **| Type:** PEQ
No kick	**Freq:** 91Hz **| Q:** 4.8 to 6 **| Gain:** +5 to +8dB **| Type:** PEQ
Double Bass sounds bloated and muddled	**Freq:** 130 to 150Hz **| Q:** 4.8 to 6 **| Gain:** -3 to -4dB **| Type:** PEQ
Female vocal sounds too warm	**Freq:** 200 to 240Hz **| Q:** 3.8 to 4.8 **| Gain:** -3 to -4dB **| Type:** PEQ
Female vocal sounds too thin	**Freq:** 200 to 240Hz **| Q:** 3.8 to 4.8 **| Gain:** +3 to +4dB **| Type:** PEQ
Piano sounds annoying and rings	**Freq:** 700 to 900Hz **| Q:** 3.8 to 4.8 **| Gain:** -2 to -4dB **| Type:** PEQ
Vocals sound abrasive and aggressive	**Freq:** 2kHz **| Q:** 3.8 to 4.8 **| Gain:** -3 to -4dB **| Type:** PEQ
Synth sweeps on dance tracks rips your head off	**Freq:** 3kHz **| Q:** 3.8 to 4.8 **| Gain:** -4 to -6dB **| Type:** PEQ
Vocals sound too sibilant	**Freq:** 4 to 6kHz **| Q:** 6.6 to 8 **| Gain:** -3 to -4dB **| Type:** PEQ
HF sounds brittle. Hi hats sound crunchy	**Freq:** 8.5kHz **| Q:** 6.6 to 8 **| Gain:** -3 to -4dB **| Type:** PEQ
HF lacks sparkle	**Freq:** 10.5kHz **| Q:** 3.8 to 4.8 **| Gain:** +3 to +4dB **| Type:** PEQ
HF sounds flat and lacks air	**Freq:** 12.5kHz **| Q:** ------- **| Gain:** +3 to +5dB **| Type:** HS

Set Device ID

By setting the “Device ID”, you will change the “Device ID” number, so that you can later access them in groups of Devices or individually.

1) Assign a “Device ID” number and click “OK” (Red Box)

3) A confirmation window will pop-up. Click on “OK” button (Orange Box)



Search Device ID

Searching “Device ID” will identify all Devices that are connected in the network showing their “Device ID” number and “COM” port.

1) Open SoundWare software (**Do not press “Connect” button**) *

*If already connected please disconnect

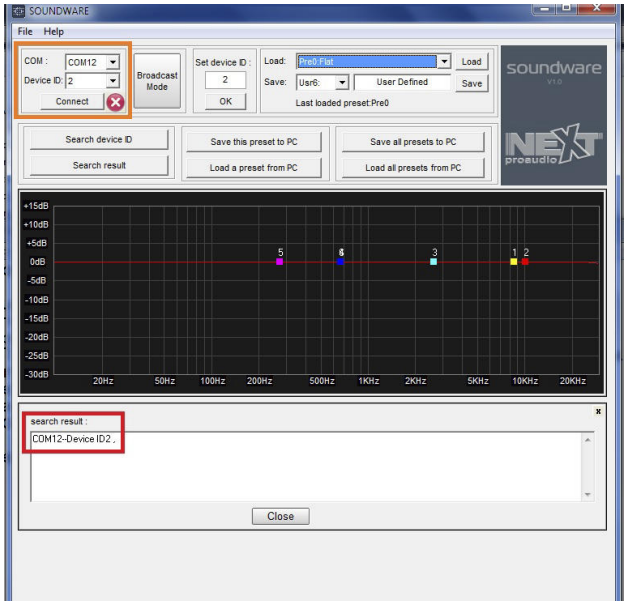
2) Click on "Search Device ID" button (Blue Box) *Wait while it searchs...*

3) See “Search Result” (Red Box) *

*If “Search Result: none” please download the latest Driver version from www.next-proaudio.com

4) Change “COM” port and “Device ID” number to desired ones * (Orange Box)

*If you want to connect with any Device present in the network



Broadcast Mode

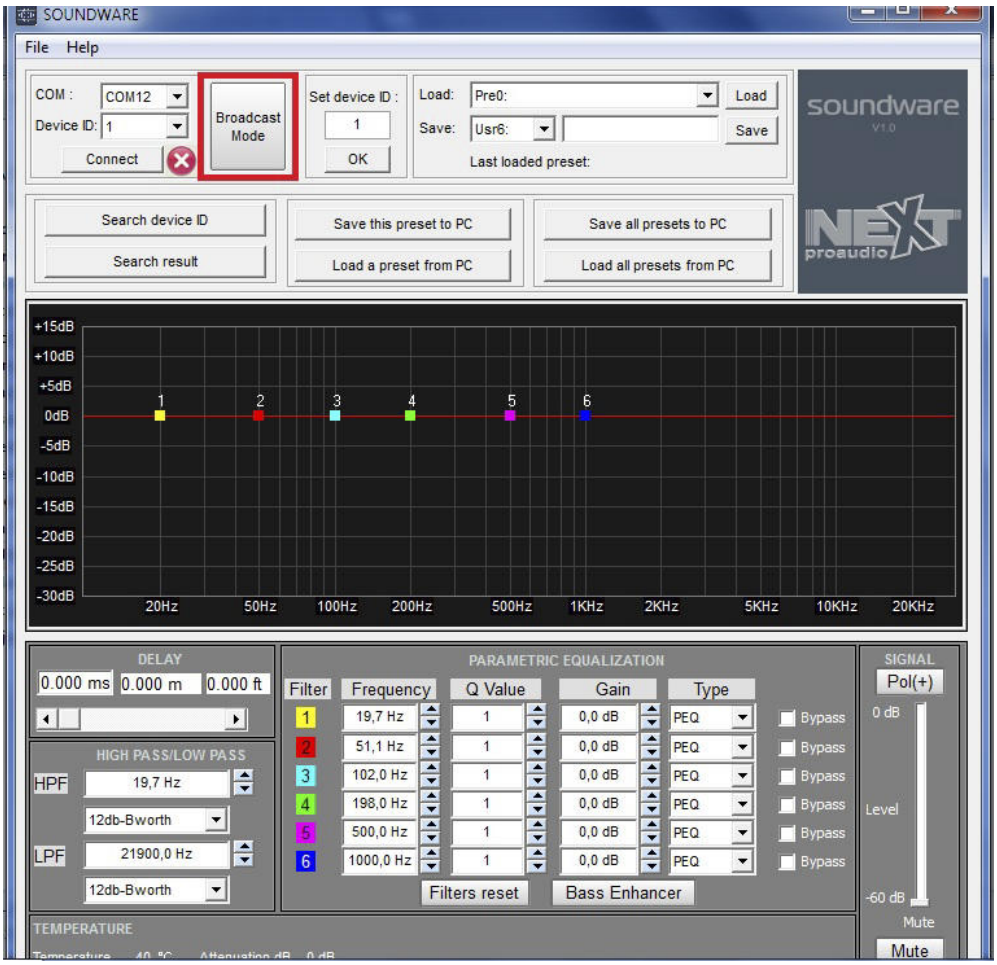
Broadcast Mode, allows you to control up to 255 Devices simultaneously in real-time via USB. The settings made will take effect in each one of the connected devices in the network

1) Open SoundWare software (**Do not press “Connect” button**) *

*If already connected please disconnect

2) Click on "Broadcast Mode" button *

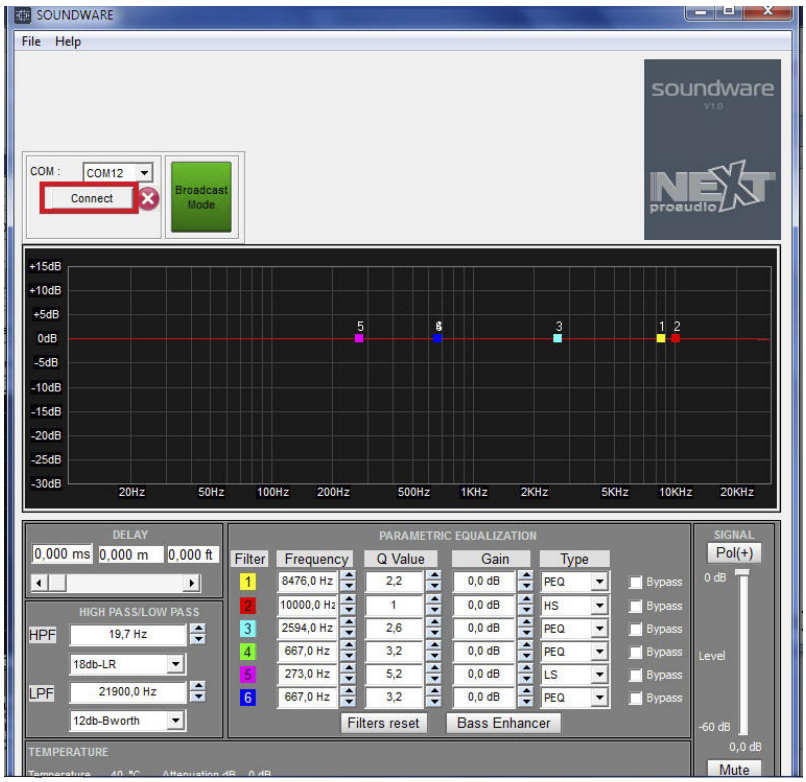
*Please be sure you have selected the same preset on all devices (Module “Preset Selector”)

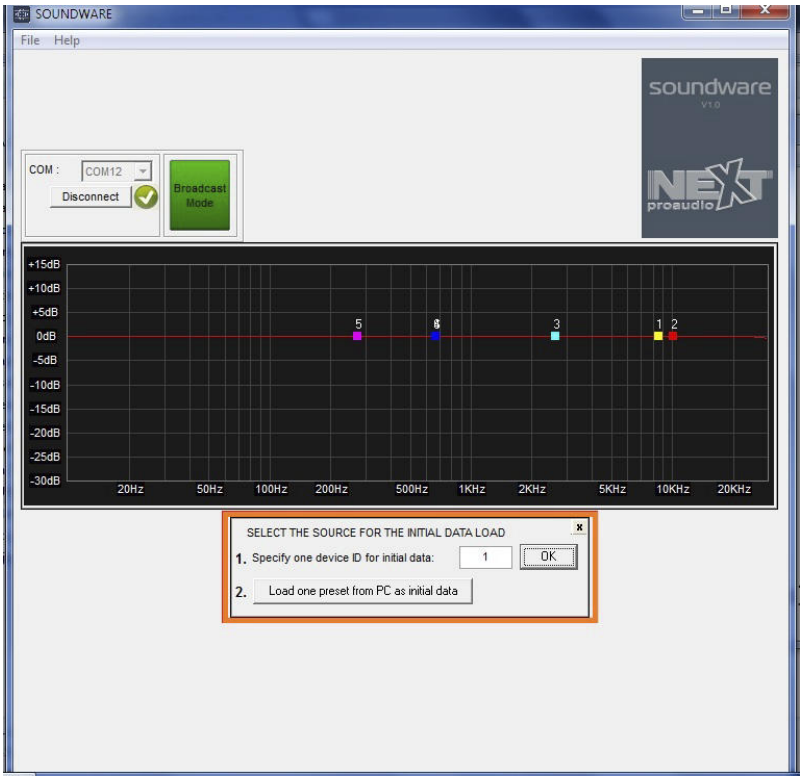


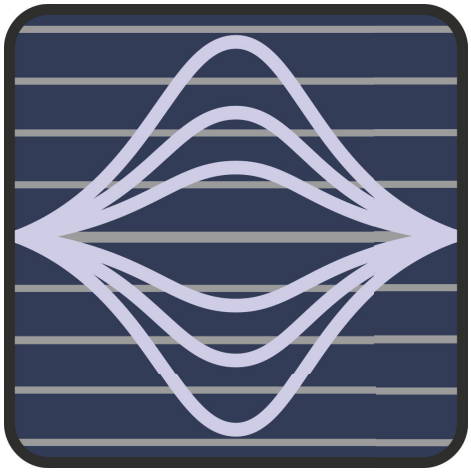
Broadcast Mode

3) Click on "Connect" button (Red Box)

4) Select a “Device ID” number or Load a Preset from PC for initial data, and then click “OK” (Orange Box) **Obs: by clicking OK the program will assume the Preset chosen and will affect all the Devices connected.**







SoundWare

Software designed and developed by:

www.next-proaudio.com

PORTUGAL