DSP MANAGER
LOUDSPEAKER MANAGEMENT SYSTEM

USER GUIDE
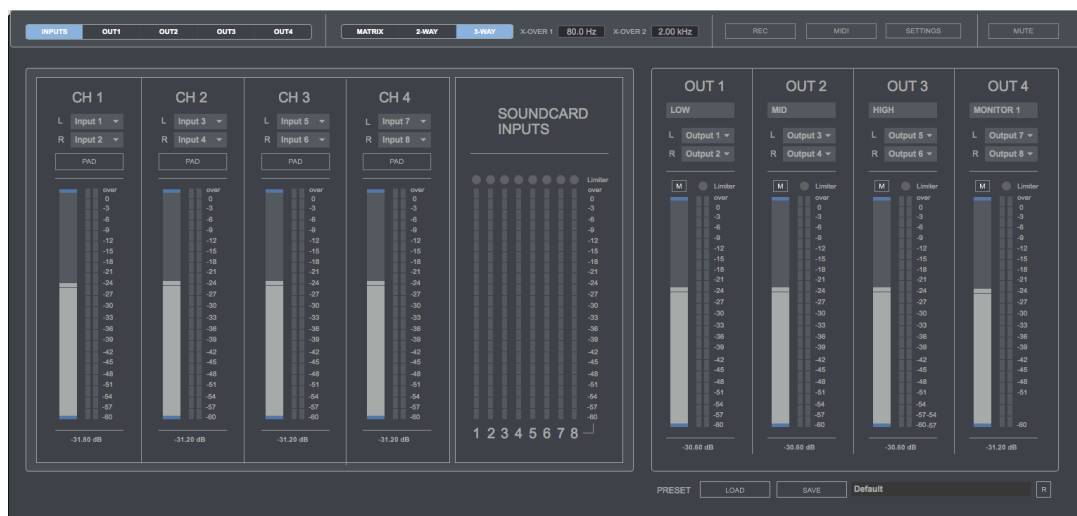
CONTENTS

1 | INTRODUCTION

DSP Manager is a 64Bit standalone software developed to manage loudspeaker systems for events such concerts, venues, conferences or any other kind of event that requires loudspeaker management or that requires routing different audio sources to different listening spaces.

It allows managing complex loudspeakers systems (2-way & 3-way) using a computer, soundcard, midi controller and vst/au plugins instead of a DSP hardware unit featuring crossover filters.

2 | SETUP INSTRUCTIONS

MAC:
Open DSP Manager.dmg. Drag & drop DSP Manager to your applications folder. Double-click DSP Manager.app

WINDOWS:
Drag & drop DSP Manager to your programs folder. Double-click DSP Manager.exe

3 | INPUTS

DSP Manager features 4 stereo input channels. Includes a -20dB Pad to decrease channel input levels if the level received from the soundcard inputs is too high.

Each soundcard input features a brickwall limiter to avoid clipping and distortion coming from soundcard inputs. Soundcard inputs metering info available on these section.

You can set soundcard inputs (L/R) for each DSP Manager input channel.

If you need to use a microphone just set the same soundcard input on both L/R on a DSP Manager channel, in this case the soundcard input channel used to plug in the microphone.

4 | PROCESSING MODES

DSP Manager can work on 3 different processing modes:

- **Matrix** – Routing mixer 4 stereo inputs/4 stereo outputs. In this mode you can assign different output channel for each input channel. This mode is useful for sending different audio sources to different listening spaces or loudspeakers systems.
- **2 Way X-Over** – 2 Way Loudspeaker System
- **3 Way X-Over** - 3 Way Loudspeaker System

When X-Over modes are selected crossover frequencies will be shown so you can set any crossover frequency for your loudspeaker system. Crossover filters features a Butterworth 3rd order filter.

When selecting Matrix mode a pop up window will be shown to configure your matrix settings. This window can be opened at any time using the shortcut "x".

5 | OUTPUTS

DSP Manager features 4 stereo output channels. Each output channel includes a brickwall limiter to avoid clipping and distortion.

You can set soundcard output (L/R) for each DSP Manager output channel.

Mute is available for each DSP Manager output channel, so you can check what`s coming out from each channel separately if needed. Also a general Mute is available to mute the overall sound coming out from DSP Manager (top right).

Depending which processing mode is used (Matrix/2 way/3 way) a label on the top of each channel will show sound processed by them, low freq, mid freq, high freq, monitor 1 and 2.

Monitor output can be used for external recording and monitoring. When working on 2 Way mode 2 monitor outputs are available (CH3 & CH4), when working on 3 way mode only 1 monitor output is available (CH 4).

Monitor audio signals are taken before the crossover stage, after the input channels sum.

Each output channel features a 5-Band Parametric Equalizer, HPF, LPF, independent delay compensation for L/R signals, 4 vst/au plugin sections, channel input/output meters and output routing information.

Each of the 5 EQ filters can be bypassed to check between processed and non-processed eq filter. Same for HPF and LPF.

Delay section also offers a link option to set both delays L/R to the same amount.

You can switch from inputs section to each of the 4 output sections using the top left selector and using shortcuts:

- i – Inputs Section
- 1 – Output Channel 1
- 2 – Output Channel 2
- 3 – Output Channel 3
- 4 – Output Channel 4

5.1 | PLUGINS SECTION

We strongly recommend using only zero-latency plugins (64Bits)

- **Browse.** Select your vst/au plugin.
- **View Plugin.** Click over the plugin name to show it on screen.
- **S**. Save the plug-in internal preset. (.fxp file)
- **L.** Load a plug-in internal preset (.fxp file)
- **X.** Remove plugin.

6 | RECORDING (Shortcut "r")

Stereo output recording in WAV or AIFF (16/24/32Bits).
Up to 192kHz (depending your soundcard).

>**Destination.** Select the destination folder and file name.
>**Rec.** Press to start recording.
>**Stop.** Press to stop recording.
>**Volume.** Set the recording volume
>**Rec Source.** Select recording source.
>- **XOver:** This mode will record the main output before the crossover stage when using XOver processing modes (2 way & 3 way)
>- **Out 1/2/3/4:** Recording the selected output on Matrix mode.
>
>**IMPORTANT:** You`ll need to set recording destination folder and file name for each recording take.

7 | MIDI (Shortcut "x")

Control level faders via your midi device.

>**Scan.** Scan midi controllers in your computer. Click on the selected midi device.
>**Play/Learn modes.** Click on the selected parameter to activate midi learn mode (red), touch the controller in your midi device that you want to associate to the selected Voxpat parameter. You can also manually select the midi channel assigned to each parameter control. Click again to change to Play mode (white).

8 | PRESET MANAGER

Save and load your own presets. Including midi configuration.

To save your own presets, we strongly recommend creating a new folder in your computer with the same name of the preset and save it inside this folder. Preset saving process automatically create a **.json** (DSP Manager preset) file and some **.fxp** (plug-in preset) files associated to the plug-ins used. To restore any session you just need to open the **.json** file associated to this session and the whole session data will be restored. **Do not separate these files**.

>**Load.** Load a preset from your computer.
>**Save.** Save a preset on your computer
>**R.** Reset to default setup.

9 | KEYBOARD SHORTCUTS

For better and faster user experience.

x – Matrix configuration
m – Midi
s – Settings
r – Recording
CMD (mac)/CRTL (windows) – Holding this key allows changing values more accurately when tweaking any numerical display or controller.
CTRL + Q (windows) / **CMD + Q** (Mac) - Close app.
i – Inputs section
1 – Output channel 1
2 – Output Channel 2
**3** – Output Channel 3
4 – Output Channel 4

10 | SETTINGS (keyboard shortcut "S")

In this section you can select your audio settings. Set up your own input/output configuration depending your soundcard and needs at anytime..

We strongly recommend using the lower values for IO Vector Size and Signal Vector Size to avoid any latency when processing the incoming audio.

Click on **IO MAPPINGS** (bottom right) to edit the input/output configuration associated to your soundcard inputs/outputs.
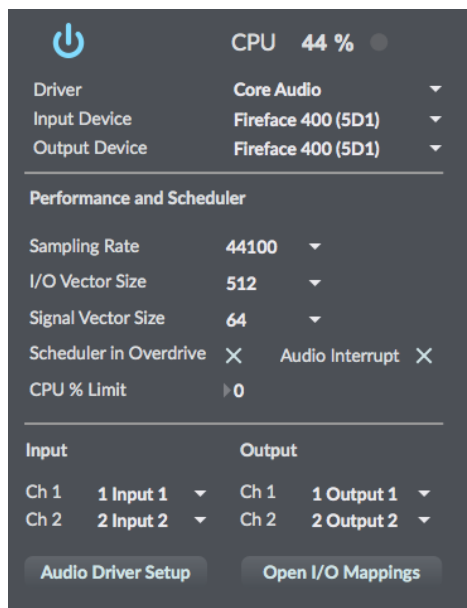
11 | SYSTEM REQUIREMENTS

Mac System Requirements

Mac Intel machine running OS X 10.11.6 or later. 64 Bits. Minimum RAM 4GB.

Apple M1 processors must use Rosetta 2 (installed by default in your OSX) to run this app.

Windows System Requirements

Windows 7 or later, multicore processor. 64 Bits. Minimum RAM 4GB.

Required screen resolution 1920x1080.

12 | TROUBLESHOOTING

If you have problems with the sound (clicks/distortion/latency) try changing IO Vector Size and Signal Vector Size to lower values.

THANKS FOR YOUR SUPPORT!

Technical support at
support@digitalbrain-instruments.com

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