EUPHORIA™

EDSP31-68

31 BAND DIGITAL SOUND PROCESSOR

Installation Instructions | Owner's Manual

Due to continuous improvement of the product, specifications are subject to change without notice.

INTRODUCTION

Congratulations on your purchase of a **EUPHORIA EDSP31-68**. Your selection of a EUPHORIA car audio product indicates a true appreciation of fine musical reproduction. Whether adding to an existing system or including your EUPHORIA DSP in a new system, you are certain to notice immediate performance benefits.

Keep Your Sales Receipt

Take this time to attach your sales receipt to the manual and put in a safe place. In case of any unforeseen reason this product may need warranty service, your receipt will be necessary to establish purchase date.

Recommendation

A DSP's performance is only as good as its installation. Proper installation will maximize the system's overall performance. It is recommended that you have our product installed by an authorized **EUPHORIA** retailer. However, if you decide to install it yourself, please carefully read through this manual and take your time to do a quality installation. Due to continuing product improvements and possible manual revisions, we recommend checking our website for latest product information at www.euphoriacaraudio.com

IMPORTANT!

Before making any connections, disconnect the car's battery until the installation is completed to avoid possible damage to the electrical system.

WARNING!

Exposure to high power sound system can cause hearling loss or damange. Listenin to your system at loud levels while driving will impair your ability to hear traffic sounds and emergency vehicles. Use common sense when listening to your system.

Serial #_____ Model #_____

PRECAUTIONS

Warning:

To prevent unit be short circuit, please do not put it in the wet or damping places.

Exposure to high power sound system can cause hearling loss or damange. Listening to your system at loud levels while driving will impair your ability to hear traffic sounds and emergency vehicles. Use common sense when listening to your system.

Packing List

For every package including below items, please check with your retailer and Factory if shortage:

1. EDSP31-68 Unit.....1PC
2. User Manual.....1PC
3. Warranty Card.....1PC
4. USB Cable.....1PC

1.1 EDSP31-68

The Euphoria **EDSP31-68** features a sampling rate of ***48KHz***. The Digital signal processor is a high resolution ***170MHZ***, 64-bit dual floating point (DSP).
It features 8 channel digital audio processing, separate gain controls, signal phasing, 31 parametric equalization, input, delays, and fully customizable frequency filters with selectable filter slopes.

1.2 Software Computer Screen

PC software control: (please check 3. Software Operation detail)

1) Automatically detect whatever the hardware is connecting with USB cable, if ready and will connect with head unit automatically.
2) Display resolution over than ***1280*760***, or else will not show fully.
3) Compatible with windows system's computers.

1.3 Specifications

Active	≥110dB
S/N Ratio	≥100dB
T.H.D.	≤0.05%
Freq.	10Hz ~ 20KHz
Input Impedance	Low level input: 20KΩ, High level input: 180Ω
Low level output impadance	100 Ω
Signal input/output range	RCA Input : 4.0 VAC High level : 18.5 VAC Output : 4.2 VAC
Temperature	-40 ~ 70℃
Supply Voltage	DC 8.5V ~ 16.5 V
Turn-on REM input	
Turn-on REM output	+12 V starting voltage output
Power consumption	≤0.1W

FUNCTION

Input signal type	6 Ch high level, 6 Ch low level, Wireless Stream
RCA output location	8 Ch low level output
Output signal gain	Gain range: Mute, -59.9dB to 0.0dB
Output signal equalizer	Independent 31-band equalizer per channel 1. Frequency range: 20Hz ~ 20KHz 2. Q (Range): 0.404 ~ 28.85 3. Gain: -12.0dB ~ +12.0dB, resolution 0.1 dB
Output signal crossover	1. Ftilter type: Butterworth, Linkwitz-Riley, or Bessel 2. Filter crossover range: 20Hz - 20KHz 3. Filter slope setting: 6/12/18/24/30/36/42/48dB per Octave
Output phase and time delay	Independent adjustments per Channel Phase: 0° /180° Time delay: 0.000-7.354ms, 0.00-254cm, 0.00-100inch
Memory Preset	6 User programable presets

2. Software Settings

2.1 Software Installation

Plug and play PC tuning software.
Operating system compatibility: *Suitable for Windows 8-10.*
The installation procedure describes:
Simply download the **EDSP31-68** software from the website and, double-click the installation file, and follow the on-screen guide. One installed follow through with steps 3.2

2.2 PC to EDSP31-68 First Time Connection

The PC to **EDSP31-68** connection must be made through a USB cable between the PC and the **EDSP31-68.**
Ensure that the **EDSP31-68** is powered on and connected with the supplied USB cable to the computer through the USB interface, the computer will find the new device and automatically install the update equipment, after a few seconds the installation is complete Double-click the EDSP31-68 icon on your PC to open the software, and the main interface before online is shown in figure 3.2.1 (refer to the status Icon on the top right corner) Blue for connected to PC, Red for unconnected.

2.3 Software

Figure 3.2.2

Software interface units divided into the following sections:
1. as shown in figure 3.2.2, "1", (input signal selection)
2. as shown in figure 3.2.2 in the "2" (connection status)
3. as shown in figure 3.2.2 "3", (crossover settings)
4. as shown in figure 3.2.2, "4" (time delay)
5. as shown in figure 3.2.2, "5" output channel EQ selection
6. as shown in figure 3.2.2, the "6" Equalization selection

2.4 Input Source Settings

While on PC, in Figure 3.2.2 "1", click the appropriate input source, you can switch the audio input source.

Optional: High level, ***RCA, wireless streaming***. The default audio source can be selected in the option of "1" zone. The default signal source is high level. Users can choose RCA default signal source will setting up with PC.

2.5 Output channel switch and operations

"6", click on the corresponding channel number in Figure 3.2.2 (CH1, CH2 ..... CH4), you can switch to the corresponding channel to adjust relevant parameters when changing the channel editing, where there are only 3.2. 2 "5" *(crossover and equalization parameters)* will vary depending on the channel and change the parameter values.

2.6 Output gain, delay, mute and phase setting

In Figure 3.3.1, there are 8 output channels commonly used when parameters are displayed, the user can quickly adjust the parameters directly here. Of course, users can also customize the driver type of each output channel.
Specifically adjusted as follows:

Figure 3.3.1

1. The output gain control, Gain control for each channel can be set independently as well as the master gain.
2. Each channel can be muted, and phase aligned independently, this can be done by selecting the buttons under each channel section.

Figure 3.3.2

3. Delay selection units, which are in milliseconds, centimeters, or inches. The range of milliseconds are from ***0.000~7.354;*** Range of mm are from: ***0~254***; Range of inches are from ***0 to 100***.

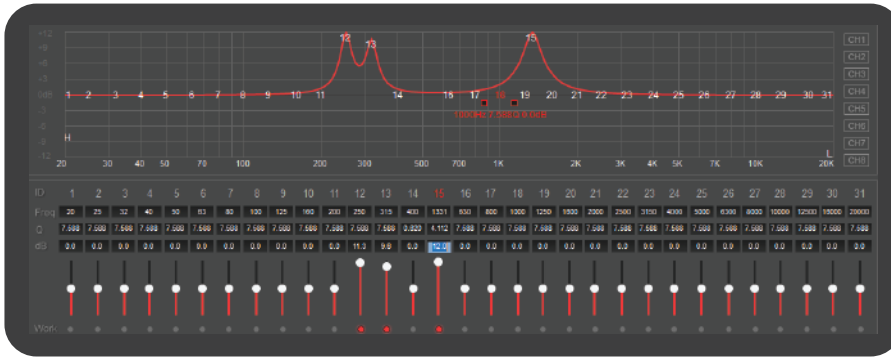


Figure 3.3.7

2.7 Output signal equalizer and crossover operation.

To adjust simply drag the slide to adjust the equalizer frequency points; when the mouse is moved to the left and right of the small red box, press and drag left and right to adjust the equalizer Q. All parameters are displayed simultaneously adjust the current real-time equalizer is also updated value **EQ** parameters editing area.

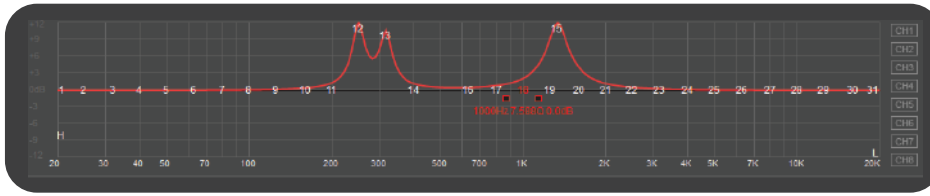


Figure 3.3.8

2.8 Straight balanced:

The button shown in Figure 3.3.4, the current channel as long as there is an equalizer in the open state, this button will appear highlighted in green state, indicating that you can click this button to make all the equalizer.

Current channel change to not start moving (directly). Click the button that will return to *"restore"* Then click on "*restore"* button will allow all current equalizer channel back to the last activated state.

Note: This operation will change the equalizer gain.

3.1 Reset balanced: the button shown in *Figure 3.3.4*, click this button to make all current channel equalizer parameters return to the initial state: uniform distribution of frequency, **Q value is 7.588, a gain of 0.0dB**.

The output channel crossover selection.

Figure 3.3.9

In the column of ***"frequency selection"*** in figure 3.3.9, the parameter value of the crossover for the given driver channel or channels selected.

Filter type setting: drop-down menu to select the type, options are

(Linkwitz- Riley), (Bessel) or (Butterworth)

Frequency setting: you can type via direct input frequency value or select and scroll the mouse wheel up and down keys on the keyboard and other ways to adjust low-cut or high-cut frequency. Adjustment range: ***20Hz ~ 20KHz.***

Slope (slope) settings: ***6dB, 12dB, 18dB, 24dB, 30dB, 36dB 40dB or 46dB per octave.***

3.2 Reset Output Configuration

This button is to re-configure the output signal of the channel type of operation

3.3 Lock output Configure

Click this button to configure the channels ***CH1 to CH8*** to lock or unlock operation, it indicates that the configuration setting are locked.

3.4 Memory

Click this ICON to save all system configurations to the PC hard drive or to load a saved PC customized a labeled setting.

Preset tabs 1-6
Click preset stabs 1-6 to individually save or load 6 fully customizable DSP settings.

1. The computer stored scene data operation: the machine is now running in the scene data is saved as a computer file, or to load a previously saved scene computer files to the machine running.
(Note: the choice of input signal sources, the output signal and the output

Preset 1-6 : Click ***"Save as "*** item will pop up after the Save As dialog window

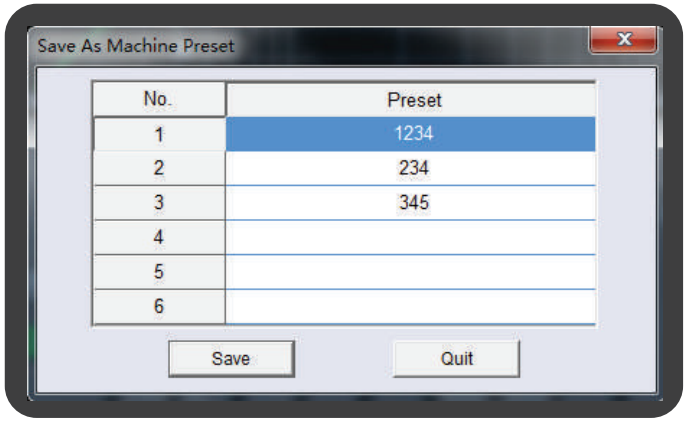


Figure 3.4.2

3.5 Naming Presets: Enter a name (such as 4-abc), named in the preset number you want displayed to save. Figure 3.4.4. click *"Quit"* button to complete the save as preset.

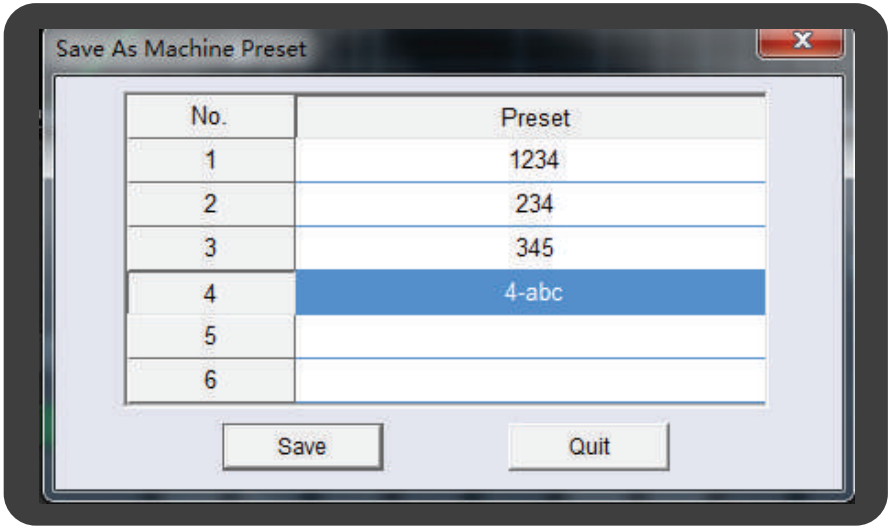


Figure 3.4.4

3.6 Loading presets: (figure 3.4.5) , select the preset you want to load and then click below the ***"Load"*** button a pop-up will appear to indicate the loading 3.4.6 loading data window will show you the progress.

Loading data window will show you the progress.

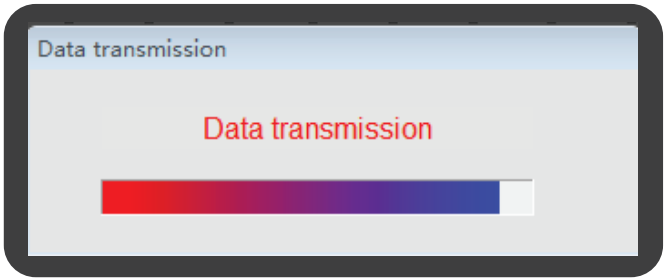


Figure 3.4.6

3.7 Deleting Preset

As shown 3.4.9 Select the preset and click the delete button confirmation dialog window to erase a preset setting you don't need.

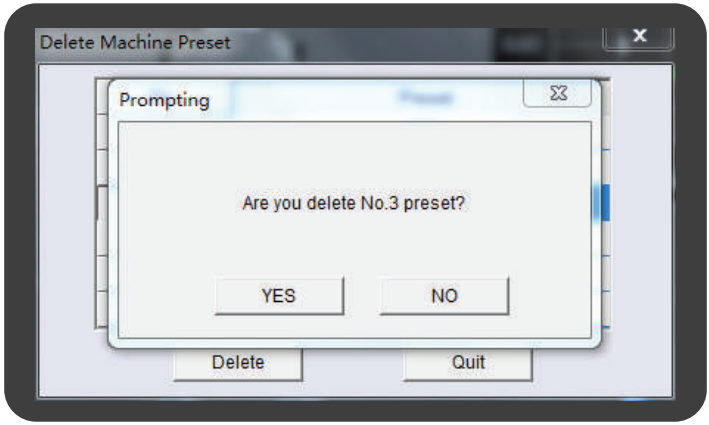


Figure 3.4.9

3.8 Delete confirmation

Confirm ***"Yes"*** on figure 3.4.8 to confirm the delete operation, once deleted the preset setting will be erased. (Figure 3.4.10).

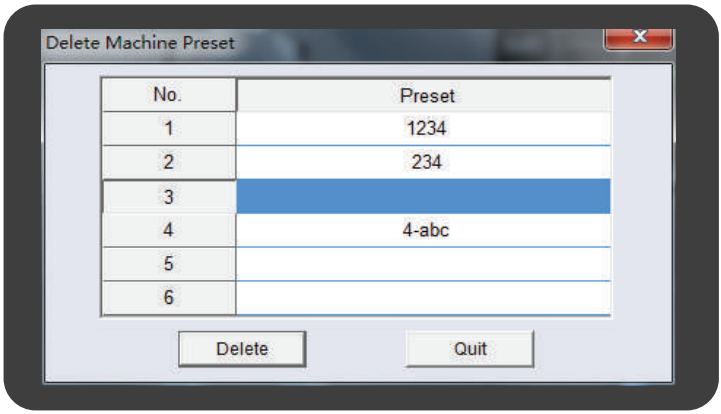


Figure 3.4.10

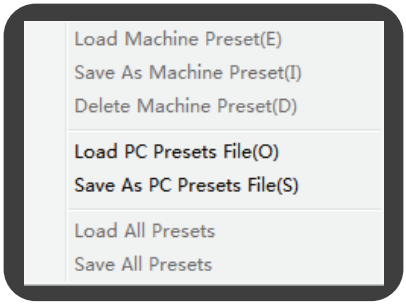


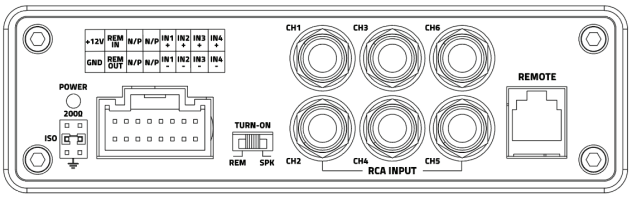
Figure 3.4.12

3.9 Saving DSP setting to PC or device

After the **EDSP31-68** has been fully configured by the user it is recommended that the user saves all the setting to the PC for safe keeping. This can be done by clicking the memory tab on the top left corner of the GUI screen. When the pop-up window appears click the Save all presets tab.

This will save all settings on to your PC. *Your PC will then ask you to name the file.*

*** Speaker | Power | Remote | Dongle come Togheter**



Connection Diagram

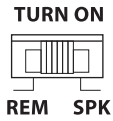
3.9.1 High level inputs and power connections: Use the Molex connector to connect your high-level speaker wires from your factory head-unit. See diagram below for configuration

In 1+ Left front
In 1- Left front
In 2 + Right front
In 2 - Right front
In 3 + Left rear
In 3 - Left rear
In 4 + Right rear
In 4 - Right rear

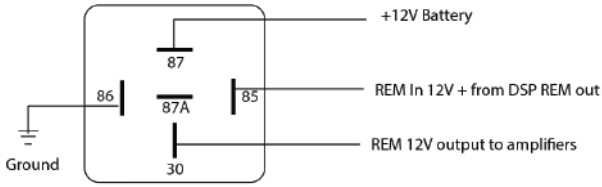
- **+12V** connect to 12v positive battery constant power
- **GND** connect to chassis ground.
- **REM IN** connect to after market head unit REM out wire.
- **REM out** connect to aftermarket amplifier or audio accessory requiring switched turn on.

3.9.2 Software Operation

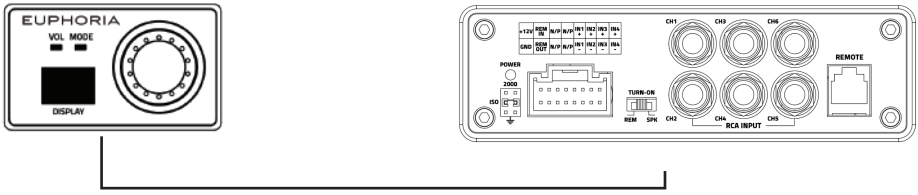
3.9.2 The REM Out, is triggered either by the High-level audio sensing when using factory radio or the **REM** In when using after market radio. Make sure to select the appropriate Turn on mode on the **EDSP31-68** chassis.



NOTE: REM OUT is only 0.2A, if you are connecting multiple amplifiers, you will need to use a relay .. see diagram bellow

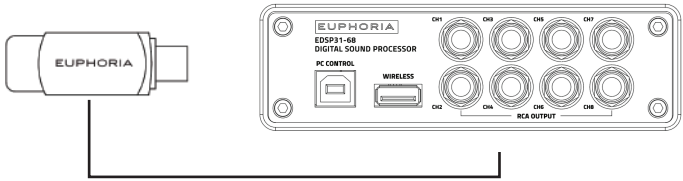


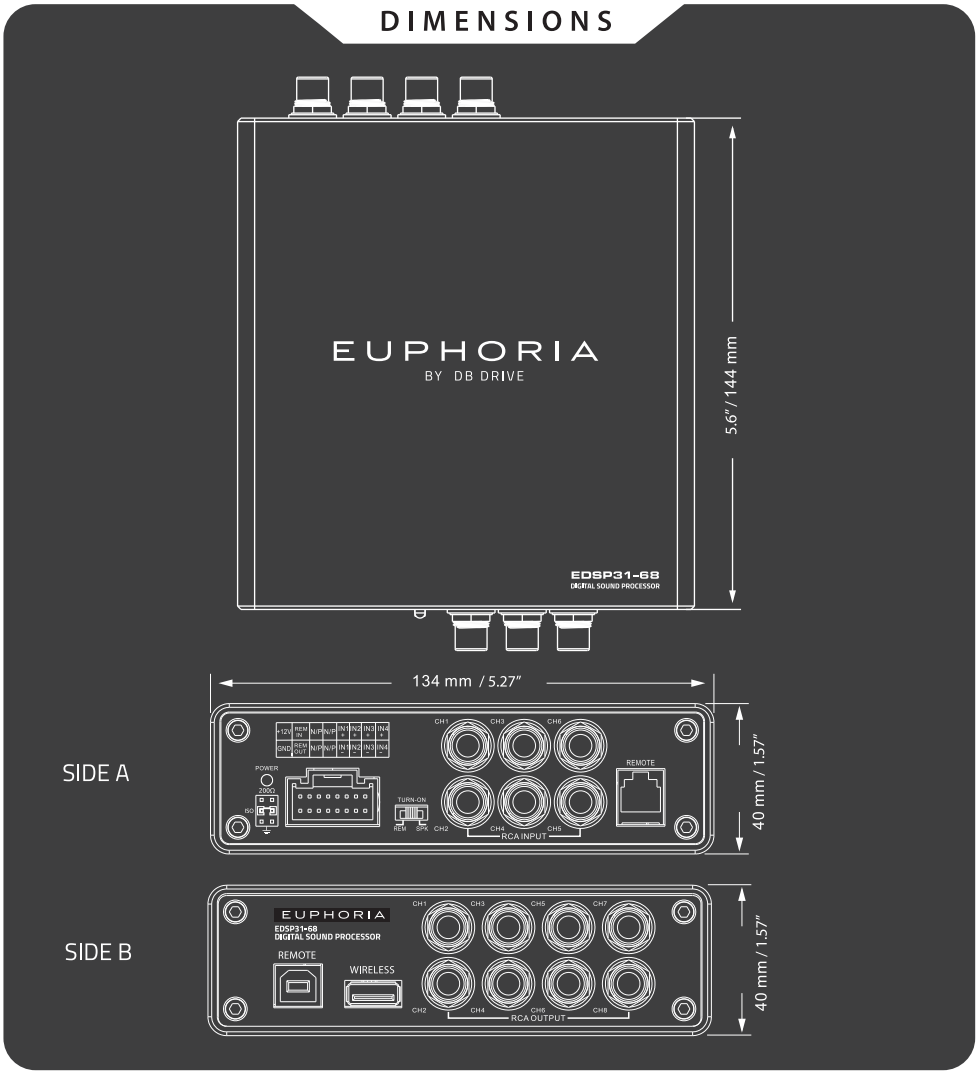
EDSP31-REM Remote dash control: an optional remote dash control is available. *(Sold Separately)* the **ESP31-REM** remote allows you to control the system master gain control, select through the user programed presets and control the subwoofer level output gain.



EDSP31-BTD Dongle: an optional Wireless audio steaming and smart phone control is available. *(Sold Separately)* the dongle will allow you to stream audio from your smart phone as well as allow you to use the downloadable **ESP31-68 DSP** control app. *The free apps are compatible for both iOS and Android devices.*
Please refer to the Euphoria website for the download links.
www.euphoriacaraudio.com

4. Dimensions





EUPHORIA™

LIMITED WARRANTY

Euphoria™ warrants any products purchased in the U.S.A. from an authorized **Euphoria**™ dealer.

All products are warranted to be free from defects in material and workmanship under normal use and service for a period of **two (2) years.**
This warranty applies to the ***original purchase only.***

Euphoria™ will either repair or replace (as its option) any unit that has been found to be defective and under warranty provided the defect occurs within the **two (2) years warranty period**.

This limited warranty does not extend to units have been subjected to misuse, abuse, neglect, or accident. In **Euphoria**™'s judgment, products that show evidence of having been altered, modified, or serviced without **Euphoria**™ authorization, will be ineligible under this warranty.

To obtain warranty service please contact your retailer or visit our website at ***www.euphoriacaraudio.com*** for more details.

EUPHORIA™

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