



YOUR MUSIC. **YOUR POWER.**

**OWNER'S MANUAL**  
**1600.1 EVOX<sub>2</sub>**

**EVOX<sub>2</sub>**

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**Dear Consumer,**

Congratulations, you have just acquired a SounDigital product of the highest technology and quality, so we thank you for your trust.

SounDigital products are made with raw materials of the highest quality standards, and the most modern processes, equipment and technology are used in their production.

**IMPORTANT INFORMATION**

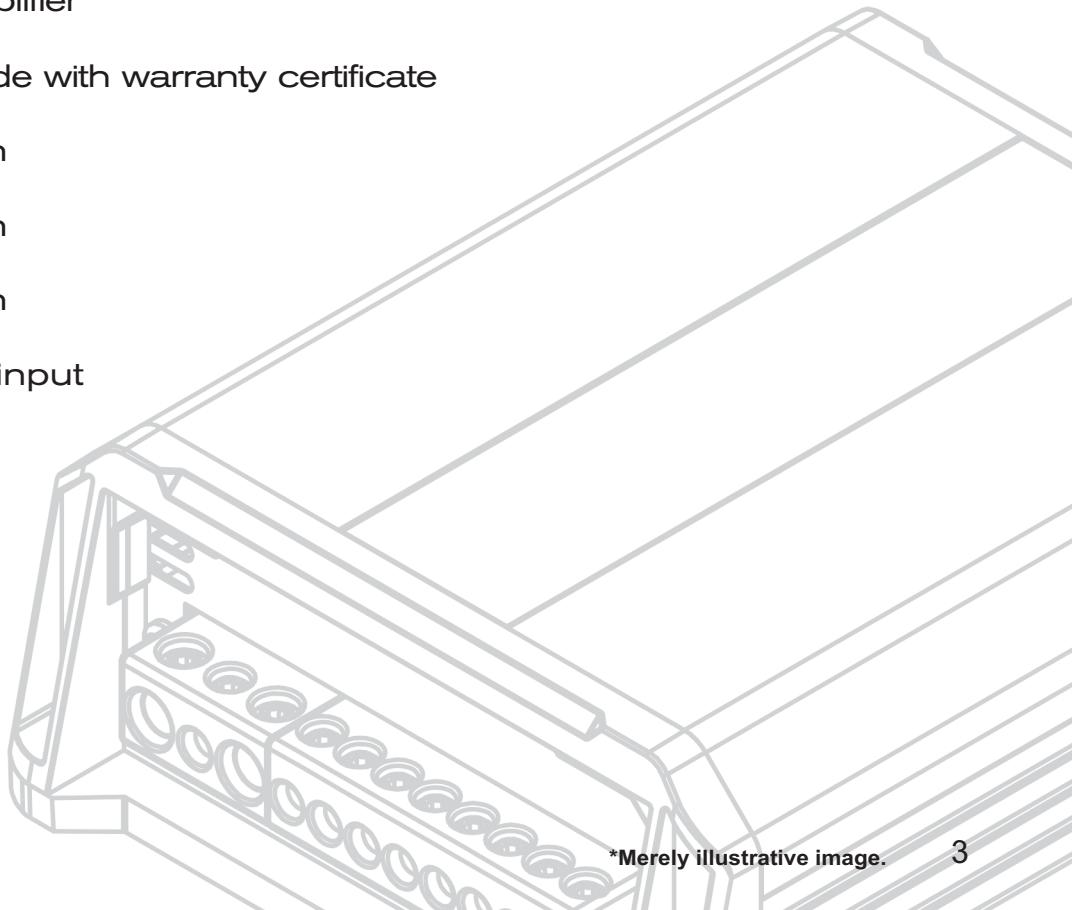
On this manual you will learn about the product, its features and characteristics, in order to obtain the best result and to be able to enjoy your music with SounDigital quality and power.

Read this manual carefully and follow precisely all the information contained therein, these are very important and allow your amplifier to work optimally. If you think it is necessary, please do not hesitate to contact our technical support at the following contact:

 **info@soudigitalusa.com**

**PACKAGE CONTENTS**

- 01 **1600.1 EVOX2** amplifier
- 01 Quick installation guide with warranty certificate
- 01 Allen wrench 2.0mm
- 01 Allen wrench 2.5mm
- 01 Allen wrench 3.0mm
- 01 Cable for High level input
- 01 Promotional sticker



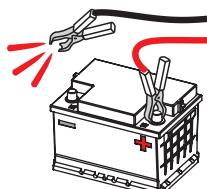
To avoid injury to the user or damage to the amplifier, read all safety instructions written on this manual.

The installation of this product must be done by a qualified professional. In case of any doubt, please contact our technical support;



When passing cables through metallic walls, use rubber O-rings to avoid cable cutting and short-circuits;

Before proceeding with the installation of any electric equipment on your vehicle, unplug the negative (-) terminal of the battery to avoid fires, injuries or damages;



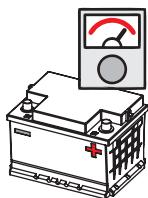
Make sure that the chosen location for the amplifier installation does not affect the operation of the vehicle;

Use your sound system safely. The continuous exposure to sound pressures over 85dB may cause irreversible hearing damage;



This product may reach temperatures over 60°C (140°F). Make sure it is cold before touching it;

This equipment is for use in automotive DC voltage batteries between 12.6 and 14.4 volts. Before installing the equipment, check voltage of the batteries;



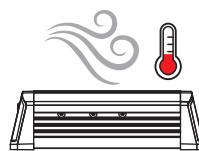
Clean the amplifier periodically with brush or dry cloth to assure the thermal efficiency of the heatsink;

Do not install the amplifier in places exposed to water, dirt or humidity;



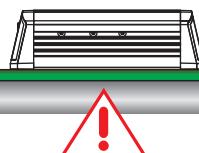
Be careful when making holes in the vehicle. Make sure you are not making holes in the fuel tank, brake lines or electrical cables of the vehicle;

Choose a ventilated place to install the amplifier and avoid blocking the side ventilation windows;



Make sure the cables are properly secured throughout the installation;

Fix the amplifier properly and firmly. Avoid fixing to metallic parts of the vehicle, as this procedure may cause ground looping (noise);



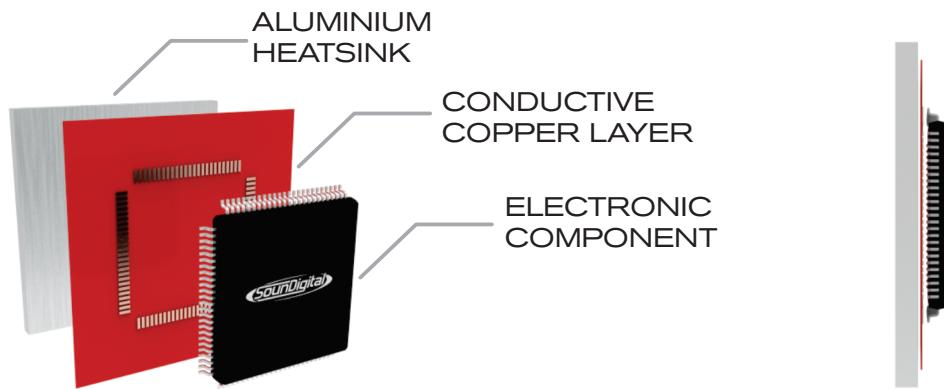
Wear gloves, safety glasses and all necessary PPE during the installation of SounDigital amplifiers.



THIS "WARNING" SIGN ALERTS THE USER OF IMPORTANT INFO. NOT FOLLOWING THESE INSTRUCTIONS MAY CAUSE INJURIES TO THE USER OR DAMAGE TO THE EQUIPMENT.

**Warning!**

## DYNAMIC THERMAL MANAGEMENT - DTM®

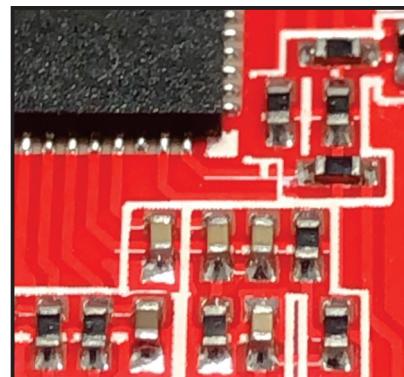


The **DTM\*** is a dynamic thermal recovery system which always maintains a high efficiency of the amplifier by accelerating the thermal exchange of electronic components with the heatsink.

\*Patent required.

## ULTRA COMPACT PCB

An intelligent layout, with great use of the PCB area and the use of modern components with reduced structure guarantee **SounDigital** products a compact design, at the same time robust and with excellent thermal efficiency.

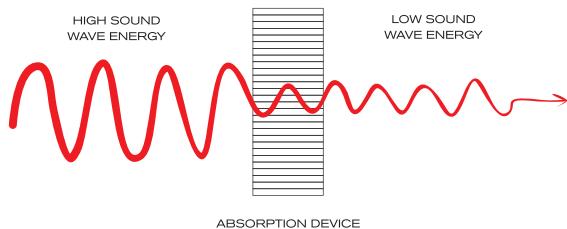


## I-POWER SUPPLY

SounDigital amplifiers are known for their low consumption of battery, and this feature was improved on the **EVOX2 Line**. The new **I-POWER SUPPLY** is even more modern, which replaces the old toroidal transformers by a new generation of "E-E" core transformers delivers efficiency above 90%\*, ensuring more hours of sound without battery recharge.

\*Efficiency measured at power supply only.





## VIBRATION ABSORPTION SYSTEM - VAS®

Our VAS® Technology reduces all impact caused by vibration on the electronic circuit board. This can include road vibration and even vibration caused by sound waves, increasing the reliability of our amplifiers.

## REDUCED SIZE

The technology used in our amplifiers bring both high performance and power into a compact chassis, providing flexible installation solutions for vehicles with limited space.



## FULL RANGE

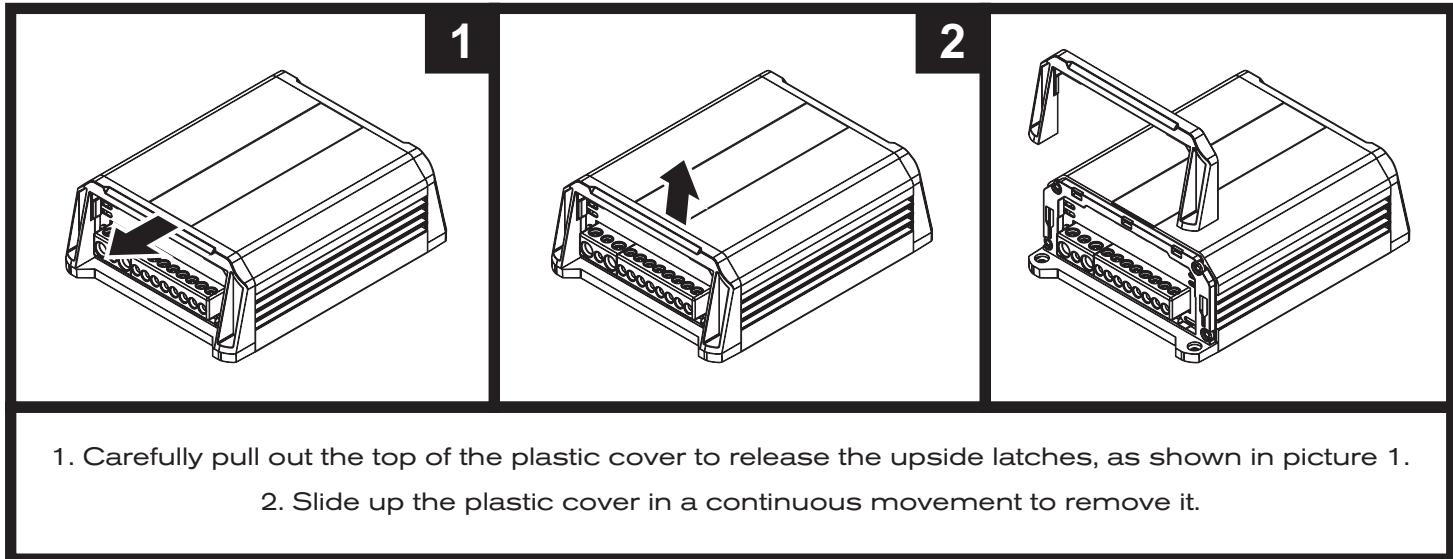
AMPLIFIER

## FULL RANGE

The **1600.1 EVOX2** amplifier is a versatile product that cover the entire audible frequency range, any type of loudspeaker or music program.

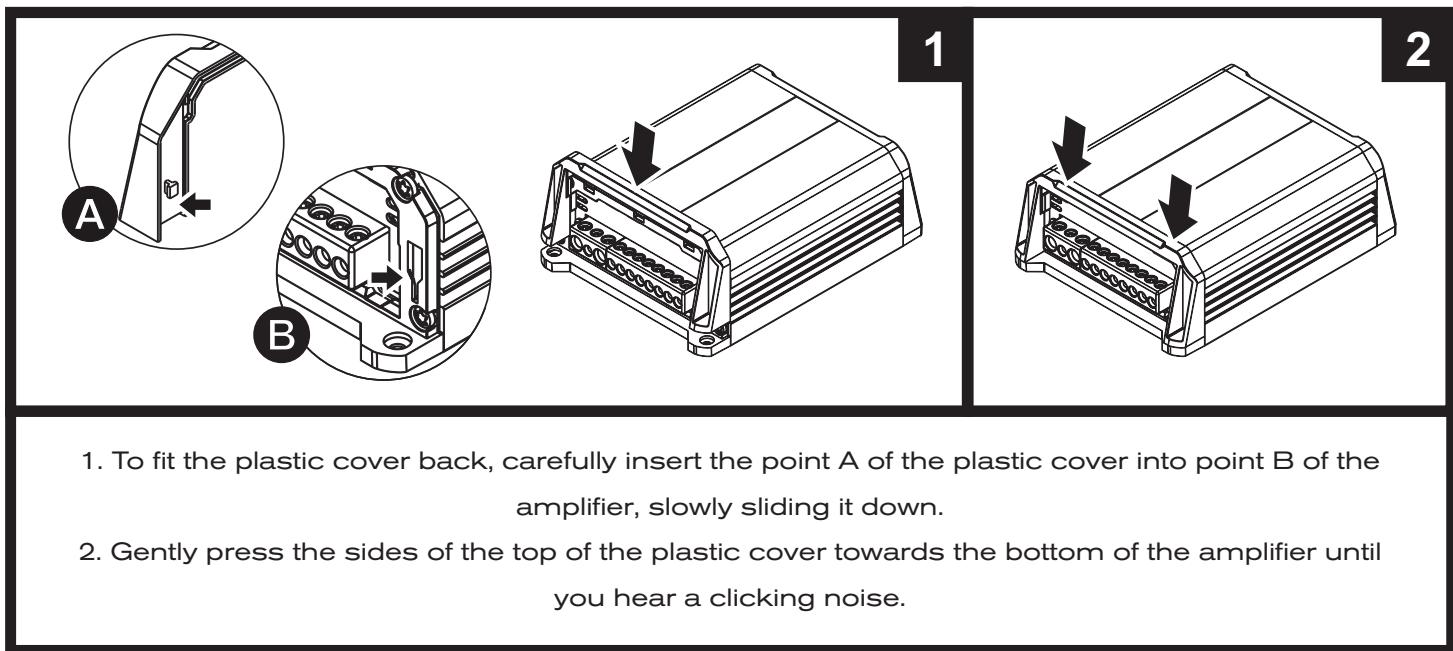
The plastic covers are used to finish off and hide the amplifier's fixing screws. To disassemble and assemble them, follow the instructions below.

## DISASSEMBLING OF THE PLASTIC COVER

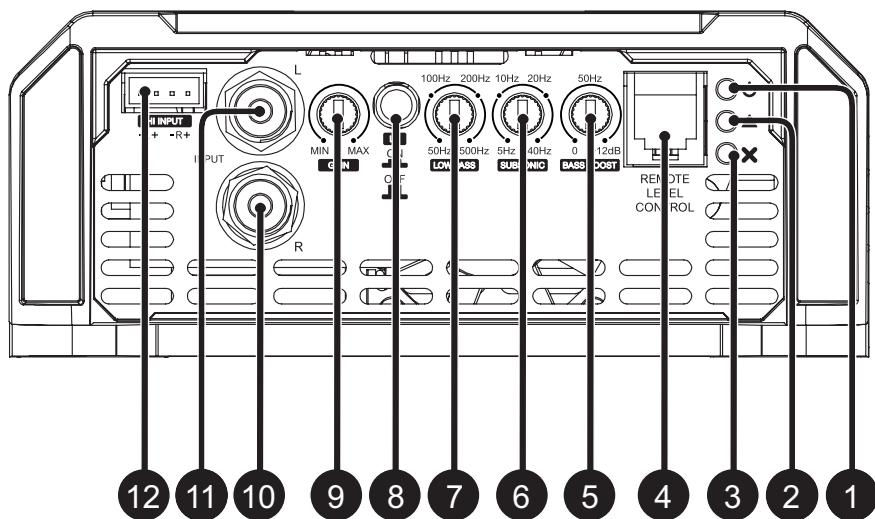


\*Merely illustrative images.

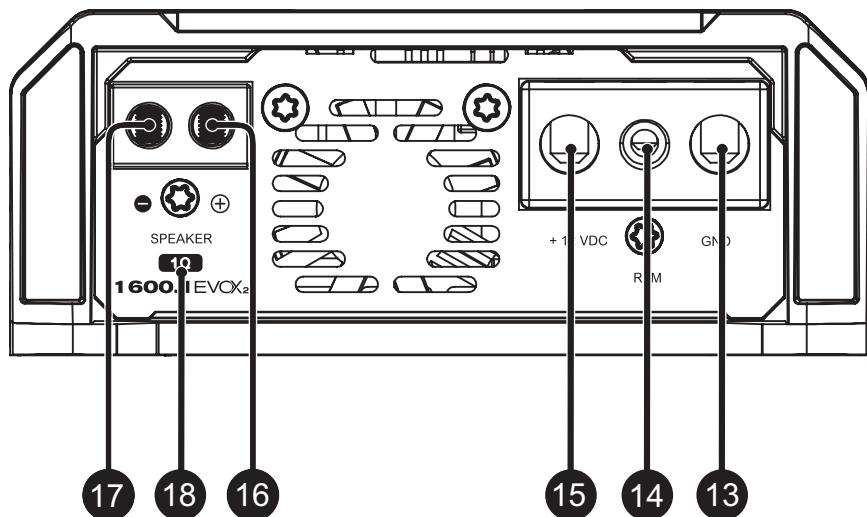
## ASSEMBLING THE PLASTIC COVER



\*Merely illustrative images.



1	Blue	"POWER ON" LED indicator
2	Yellow	"CLIP" LED indicator
3	Red	"PROTECTION" LED indicator
4	-	Remote level control connector
5	-	Variable Bass Boost Control 50Hz (0dB ~ +12dB)
6	-	Variable Subsonic filter control (5Hz ~ 40Hz)
7	-	Variable Low Pass filter control (50Hz ~ 500Hz)
8	-	Low Pass filter ON/OFF switch key
9	-	Variable Gain control
10	Right Channel	Audio inputs – RCA connectors
11	Left Channel	
12	Right Channel Left Channel	Audio input – High Level (To connect to the speaker output of the head unit)



13	-	Negative power supply connector (GND)
14	-	Remote power supply connector (REM)
15	-	Positive power supply connector (+12VDC)
16	Speakers Output Connectors	Positive speaker connector (+)
17		Negative speaker connector (-)
18	-	Minimum speaker load allowed (impedance)



BEFORE PROCEEDING WITH THE INSTALLATION, UNPLUG THE NEGATIVE TERMINAL FROM ALL OF THE BATTERIES, TO AVOID FIRE, DAMAGE TO THE AMPLIFIER AND THE USER HIMSELF.

**Warning!**

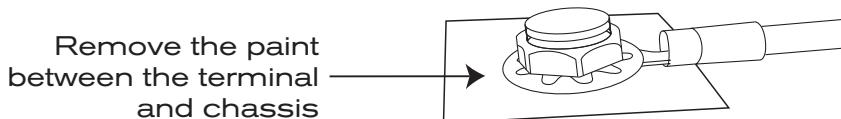
- Fix the amplifier so that the connectors can be easily accessed;
- Install the power cables in the vehicle properly, starting from the battery to the fuse holder or circuit breaker, use the cable with the appropriate size. Make all connections, install fuse holders or circuit breakers, but without placing the fuses or with the circuit breakers in the "OFF" position;



THE MAXIMUM DISTANCE FOR THE INSTALLATION OF THE FUSE/CIRCUIT BREAKER IS 12 INCHES (30cm) AWAY FROM THE BATTERY.

**Warning!**

- Connect the power cables in to the amplifier, observing the polarity. Connect all the positive cables (+) from the fuse holder or circuit breaker to the positive connector of the amplifier and all the negative power cables from the batteries to the negative connector of the amplifier;
- The ground cable must be as short as possible and must be connected to the vehicle chassis and the battery negative;

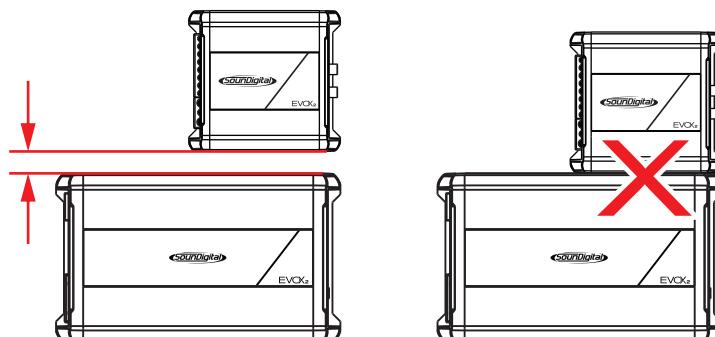


- Install the signal input cables in a proper way, distant from the power cables;
- Connect the RCA or the high level signal input cables to the head unit and amplifiers;
- Install the audio output cables with the appropriate section, distant from the power and audio input cables;
- Connect the audio output cables to the amplifier and speakers respecting the positive (+) and negative (-) polarities;
- Install the remote cable with the power cables, using 1.5mm<sup>2</sup> (15 AWG) cable or thicker;
- Connect the remote power cable to the amplifier's "REM" terminal at the main unit's remote power output (when not using the high level signal inputs);
- Before powering the system, verify all the connections and make sure there are no mistakes or short-circuits on the power and ground cables;
- Reconnect the ground of the batteries;
- Check if the head unit is turned off and then place the fuses in the fuse holders or switch the circuit breakers on;
- Turn on the main unit and the amplifier will turn on the "POWER ON" LED indicating that it is in operation.



Minimum recommended installation distance between amplifiers\*.

1.18in (30mm)



**Warning!**

\*For installations with more than one amplifier, second unit not included. Merely illustrative images.

## ELECTRICAL DIMENSIONING

For proper operation of your SounDigital amplifier, you need the proper dimensioning of the electrical system and the cables used.

The table below shows the minimum section of GND cables, +12VDC cables and speaker output cables according to the power generated by the amplifier.

1600 WRMS	POWER CABLE (+12VDC)	16mm <sup>2</sup> (5 AWG)	
	GROUND CABLE (GND)		
	SPEAKER CABLE	@1Ω	2 x 4.0mm <sup>2</sup> (11 AWG)

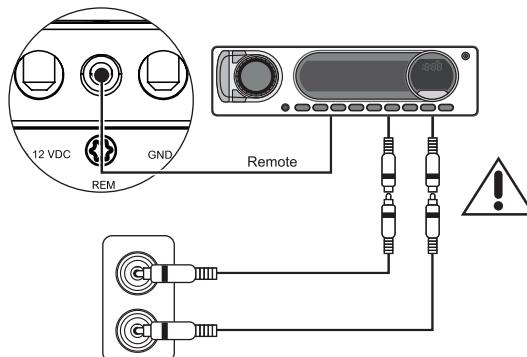
@2Ω	2 x 2.5mm <sup>2</sup> (13 AWG)

We recommend the use of only OFC (Oxygen Free Copper) cables on the installation of our products.

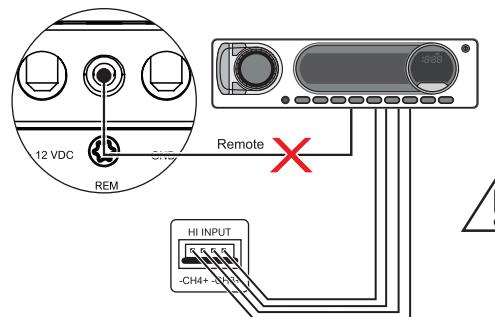
Copper-clad aluminum wire (CCAW) must not be used.

## AUDIO INPUTS

### RCA inputs



### High level signal inputs



High level input must be used when the main unit does not have RCA outputs.

When High level input is used, no remote connection is required, the amplifier recognizes the audio signal and switches on.

If your source unit is not able to turn on the amplifier through the High level input, the remote input should be connected normally.



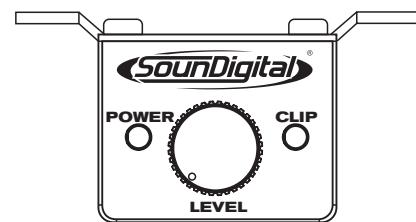
RCA AND HIGH LEVEL INPUTS SHOULD NOT BE USED SIMULTANEOUSLY OR YOU MAY DAMAGE THE AMPLIFIER.

Warning!

## EXTERNAL LEVEL CONTROL - SD RLC (\*Not included)

The SD RLC is an easy-to-install external level control accessory that allows you to tune the level of SOUNDIGITAL amplifiers that have remote level control.

In SD RLC, you can adjust the amplifier level without having to lean over and adjust the gain setting on the amplifier and can monitor the "CLIP" LED which is also available on the accessory.



SD REMOTE  
LEVEL CONTROL\*

\*Sold separately

## GAIN SETTING

### Necessary equipment:

- Digital AC voltmeter;
- Media with sine wave test tone 60Hz recorded at 0db;
- Screwdriver 1/8" (for gain setting).

### Set up procedure:

- Turn the gain control all the way down;
- Disconnect the output cables from the amplifier outputs;
- Turn off all processing (bass, treble, loudness, EQ, etc.);
- Set the audio player volume to 3/4 of full volume;

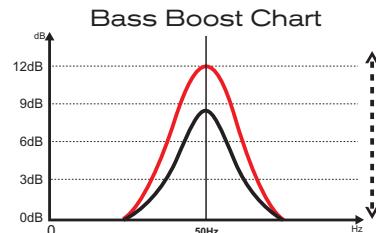
- Set the audio player fader control to center position (left and right fader controls);
- Set the variable "LOW PASS" crossover in 500Hz and the "SUBSONIC" in 5Hz;
- Use a 60Hz sine wave;
- Increase the gain control until the "CLIP" LED starts blinking;
- Return the gain to the limit where the "CLIP" LED stops blinking and remains off;
- Once you have adjusted the amplifier to the correct voltage output, turn off the source unit and reconnect the speaker(s).

Download the tracks for set up in <https://soundigitalusa.com/tracks-for-set-up/>

## Using Bass Boost

The Amplifier Bass Boost setting enables the user to boost the sound intensity at low frequencies of the sound system, where boost intensity can be adjusted.

This is a semi-parametric equalizer type circuit with "Q" value for the fixed filter, with an intensity boost adjustment from 0 to +12dB (16 times), and a central frequency adjustment of the filter in 50Hz, making it versatile for several types of sound systems.



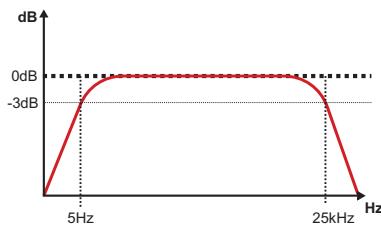
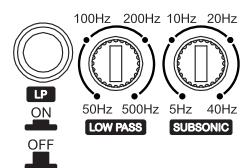
## How to adjust Bass Boost

Reproduce your favorite song and set the boost intensity between 0dB and +12dB at the variable control level according your preference.

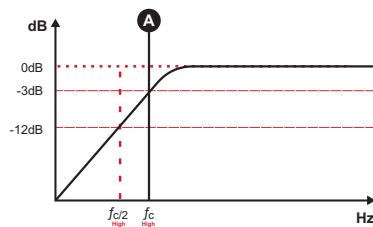


## How to adjust the Crossovers

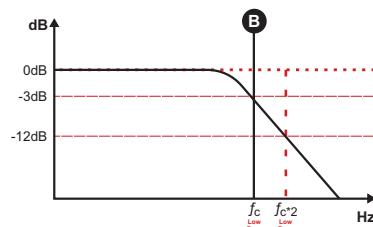
For full range application, select the LP key in the "OFF" position and the "SUBSONIC" variable control at 5Hz. All frequencies will be reproduced according to figure bellow;



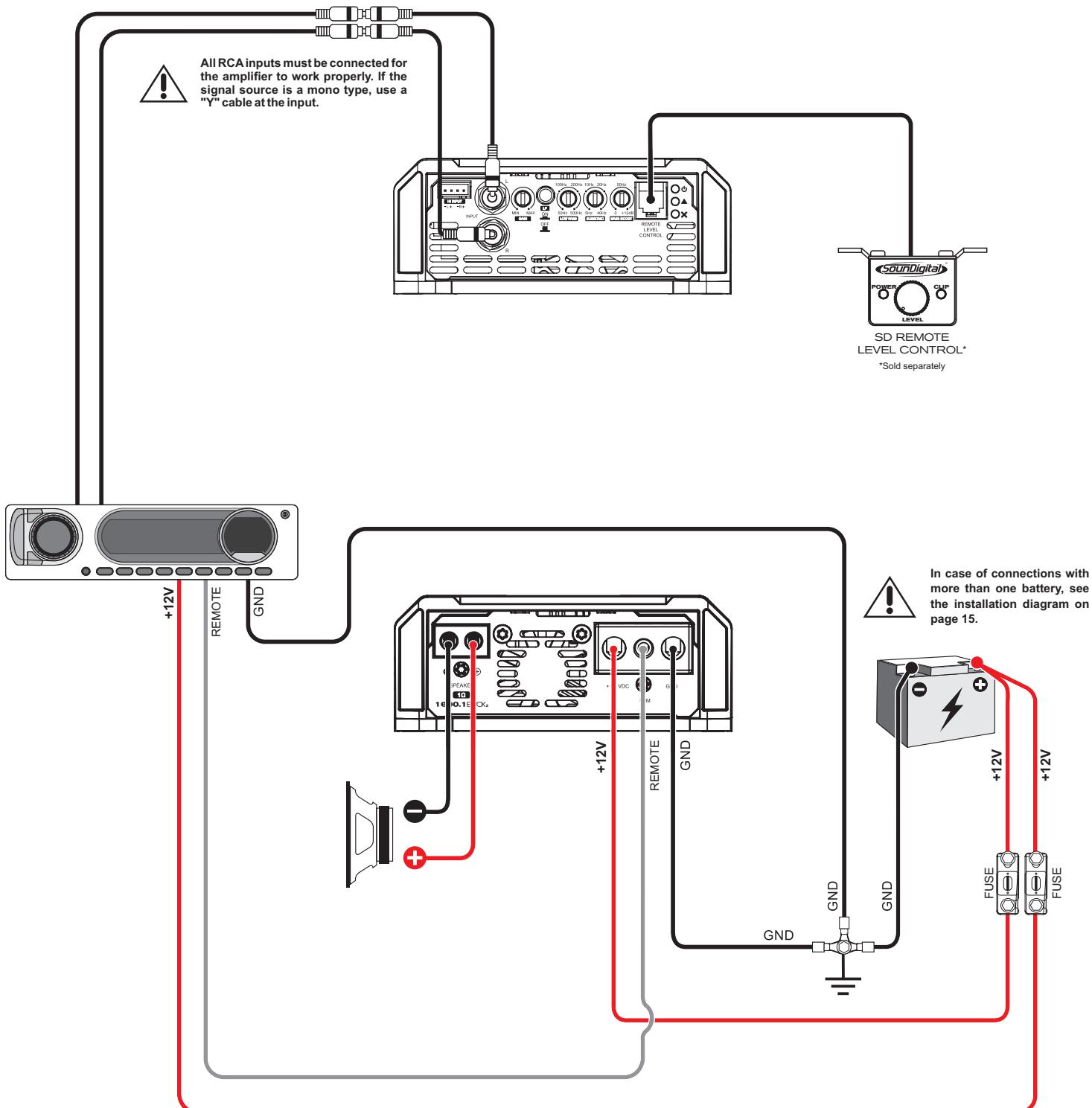
To set the "SUBSONIC" variable control between 5Hz and 40Hz ("A") where you want to perform the subsonic cut filter ;



Set in the "LOW PASS" variable control between 50Hz and 500Hz ("B") where you want to perform the low pass cut filter and select the "LP" key in position "ON".



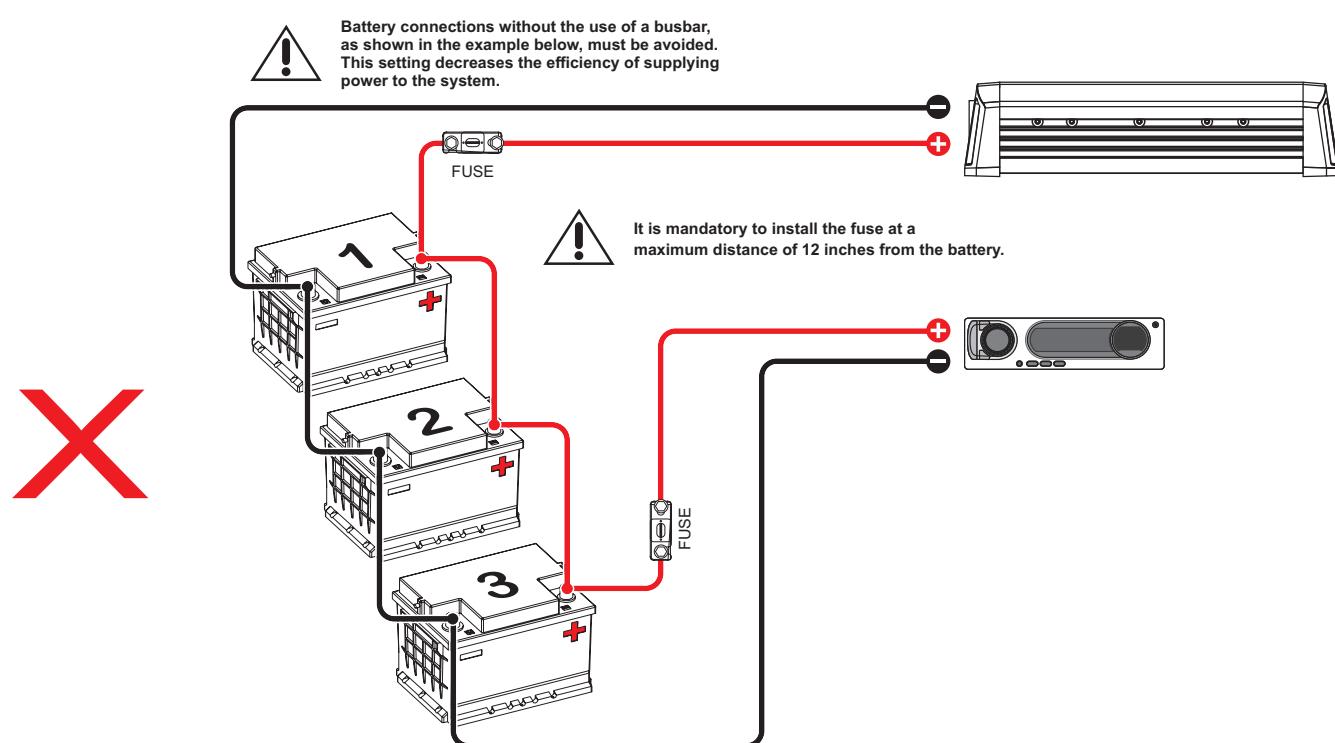
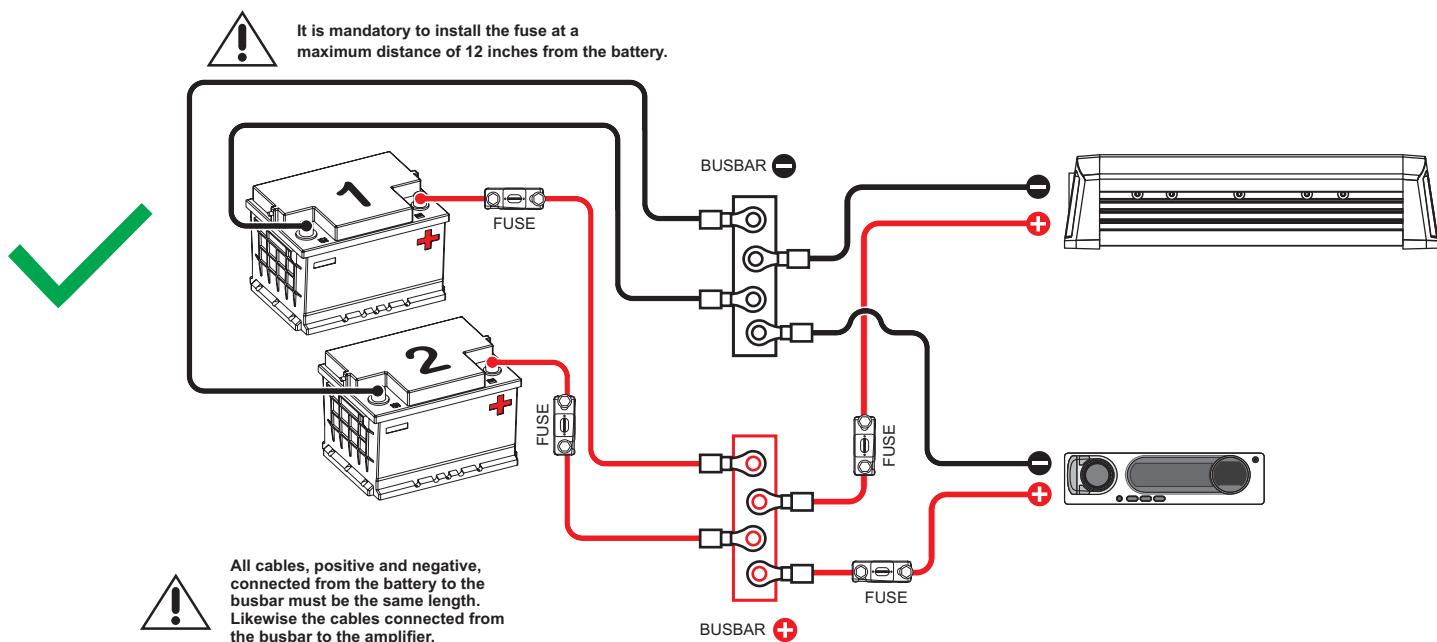
## 1 CHANNEL WIRING DIAGRAM



Model	Minimum impedance
1600.1 EVOX2 1Ω	1Ω
1600.1 EVOX2 2Ω	2Ω

When necessary the association of one or more battery banks to supply the necessary current to the amplifier, it is recommended to use batteries of the same brand, model, and if possible the same manufacturing lot so that the system has the maximum performance.

For an ideal energy performance, we recommend that all batteries be connected to positive and negative busbars and the busbars connected to the amplifier, as shown in the diagram below:



PARAMETERS	1600.1 EVOX <sub>2</sub> 1Ω	1600.1 EVOX <sub>2</sub> 2Ω
Power RMS @ 4Ω**	697W	1056W
Power RMS @ 2Ω**	1056W	1600W
Power RMS @ 1Ω**	1600W	N/A
Frequency Response (-3dB)	5Hz ~ 25kHz	5Hz ~ 25kHz
Subsonic Filter (12dB/octave)	5Hz ~ 40Hz	5Hz ~ 40Hz
Low Pass Filter (12dB/octave)	50Hz ~ 500Hz	50Hz ~ 500Hz
Bass Boost	0dB ~ 12dB @ 50Hz	0dB ~ 12dB @ 50Hz
Operating Voltage	8V ~ 16V	8V ~ 16V
SNR	94dB	94dB
Input Sensitivity (RCA)	0.2V ~ 2.5V	0.2V ~ 2.5V
Input Sensitivity (High Level input)	1.4V ~ 14V	1.4V ~ 14V
Current Draw (music)	65A	62A
Current Draw (max.)	125A	115A
Total Efficiency	89%	89%
Damping Factor (@100Hz nominal impedance)	>3000	>3000
Power Cable	16mm <sup>2</sup> (5 AWG)	16mm <sup>2</sup> (5 AWG)
Speaker Cable	2 x 4mm <sup>2</sup> (11 AWG)	2 x 2.5mm <sup>2</sup> (13 AWG)
Recommended Fuse* (music)	80A	80A
Recommended Battery (minimum)	80Ah	80Ah

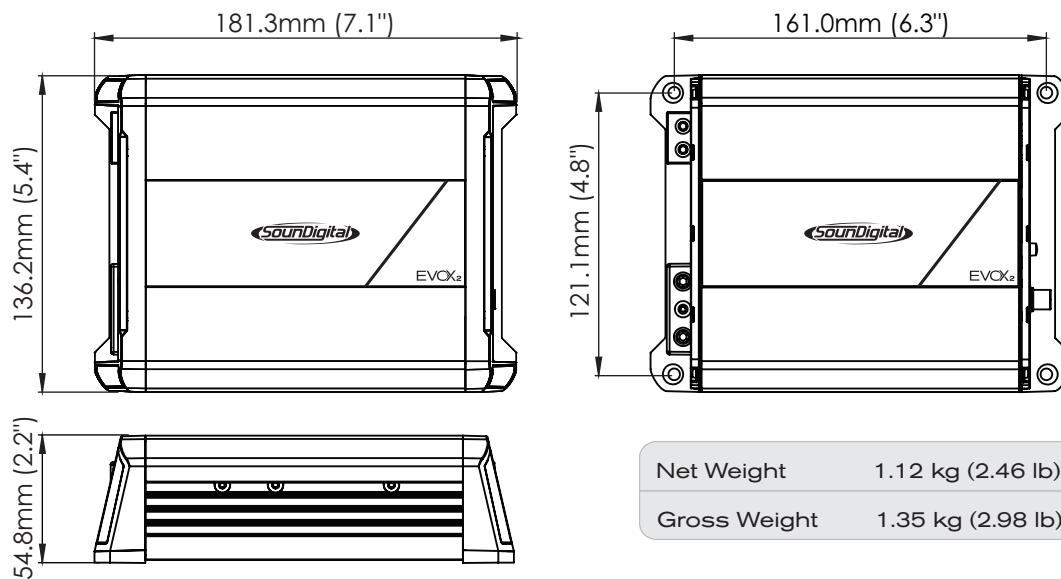
\*It is mandatory to install the fuse at a maximum distance of 12 inches from the battery.

\*\*Power at 14.4V @ 60Hz with a maximum THD of 1%.



\*\*POWER RATING ACCORDING TO  
CTA-2006 INDUSTRY STANDARDS.

## DIMENSIONAL DATA



## ADDITIONAL INFORMATION

The values presented are based on measurements performed in SounDigital's laboratories. All the equipment used in the assays, tests, measurements and gauging of the technical parameters of SounDigital products were calibrated in certified laboratories, thus ensuring the performance and standard of excellence of the developed products.

The Manufacturing Process may present variations, and the electronic components may also present changes in values in relation to their nominal parameters. Thus, causing small differences between measurements taken. Small variations in the values presented and divulged by SounDigital are recognized.



Updates of information made in this document will always be published and made available for consumer consultation, free of charge, on the brand's websites. The user is advised to search for the manual in its latest version when necessary.

The images presented in this document are representative and merely illustrative; therefore, they do not necessarily correspond to the actual product/model.



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Technology  
Association™



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