



YOUR MUSIC. **YOUR POWER.**

**OWNER'S MANUAL**  
**400.2** **EVOX**

**EVOX**

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**DEAR CUSTOMER,****CONGRATULATIONS ON ACQUIRING A PRODUCT WITH THE HIGHEST QUALITY AND TECHNOLOGY!**

You have just purchased a SounDigital product of the highest technology and quality, so we thank you for your confidence.

**Class D Amplifiers:**

Class D amplifiers have as main characteristics the audio quality, efficiency, application versatility and compact design. Following are the advantages of these features:

**Audio Quality** – In the past, Class D products had limited response and for higher frequencies, Class AB products performed better, but their efficiency was very low. The new technologies introduced by SounDigital resulted in a Class D amplifier with high efficiency and superior Class AB performance.

**Efficiency** – SounDigital Class D amplifiers have total efficiency (output + power source) greater than 70%, which guarantees lower battery consumption and less heating.

**Application Versatility** – The flat full-frequency response of SounDigital amplifiers allows them to be used in all car sound systems. Meeting the demands with extreme quality.

**Compact Design** – The high efficiency and high technology applied, allows SounDigital amplifiers to be very compact, facilitating installation in vehicles where space is limited.

**IMPORTANT INFORMATIONS**


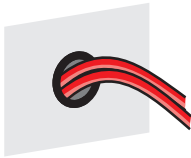
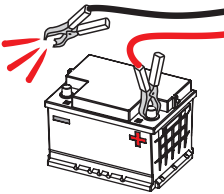
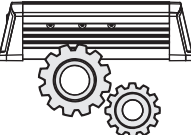


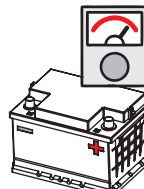
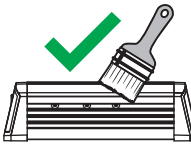


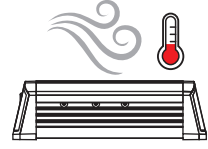
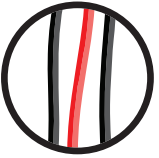
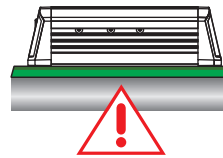

On this manual you will learn about the product, its features and characteristics, in order to obtain the best result and to be able to enjoy your music with SounDigital quality and power.

To better understand and take advantage of all the functions of the product and use it safely, read this manual carefully and if you have any questions, consult our support by email **[info@soundigitalusa.com](mailto:info@soundigitalusa.com)**.

**PACKAGE CONTENTS**

- 01 **400.2 EVOX** Amplifier
- 01 Quick installation guide with warranty certificate
- 01 Allen wrench 2.0mm
- 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.

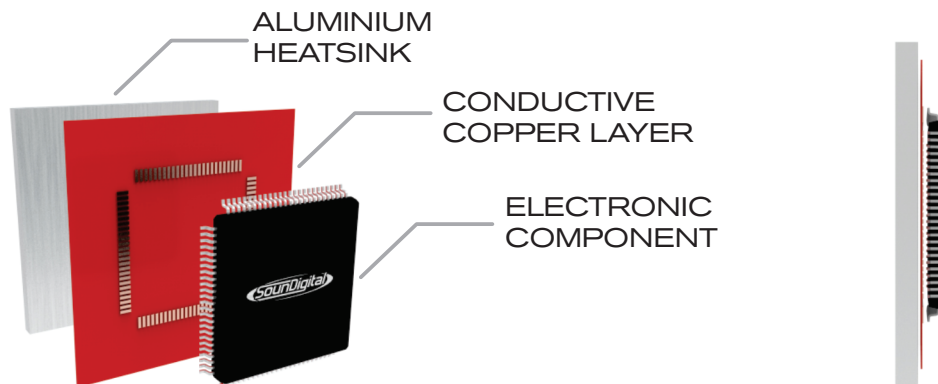
<p>The installation of this product must be done by a qualified professional. In case of any doubt, please contact our technical support;</p>	 <p>When passing cables through metallic walls, use rubber O-rings to avoid cable cutting and short-circuits;</p> 
<p>Before proceeding with the installation of any electric equipment on your vehicle, unplug the negative (-) terminal of the battery to avoid fires, injuries or damages;</p>	 <p>Make sure that the chosen location for the amplifier installation does not affect the operation of the vehicle;</p> 
<p>Use your sound system safely. The continuous exposure to sound pressures over 85dB may cause irreversible hearing damage;</p>	 <p>This product may reach temperatures over 60°C (140°F). Make sure it is cold before touching it;</p> 
<p>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;</p>	 <p>Clean the amplifier periodically with brush or dry cloth to assure the thermal efficiency of the heatsink;</p> 
<p>Do not install the amplifier in places exposed to water, dirt or humidity;</p>	 <p>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;</p> 
<p>Choose a ventilated place to install the amplifier and avoid blocking the side ventilation windows;</p>	 <p>Make sure the cables are properly secured throughout the installation;</p> 
<p>Fix the amplifier properly and firmly. Avoid fixing to metallic parts of the vehicle, as this procedure may cause ground looping (noise);</p>	 <p>Wear gloves, safety glasses and all necessary PPE during the installation of Soundigital amplifiers.</p> 



**Warning!**

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

## DYNAMIC THERMAL MANAGEMENT - DTM®

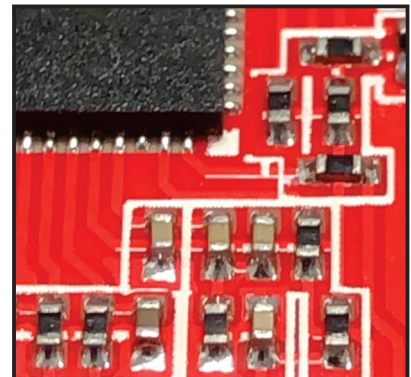


The **DTM**\* is a dynamic thermal recovery system which always maintains a high efficiency of the amplifier by accelerating the thermal exchange of electronic components with the heatsink.

*\*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.

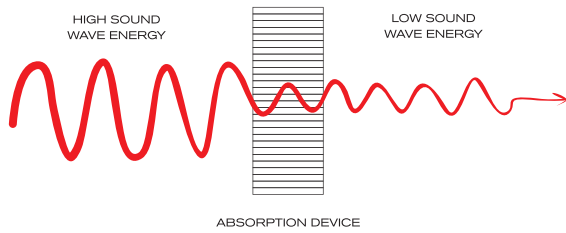


## I-POWER SUPPLY

SounDigital amplifiers are known for their low consumption of battery, and this feature was improved on the **EVOX 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.*



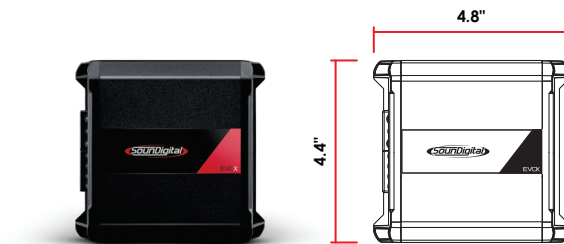


## VIBRATION ABSORPTION SYSTEM - VAS®

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.



## LOW BASS CORRECTION

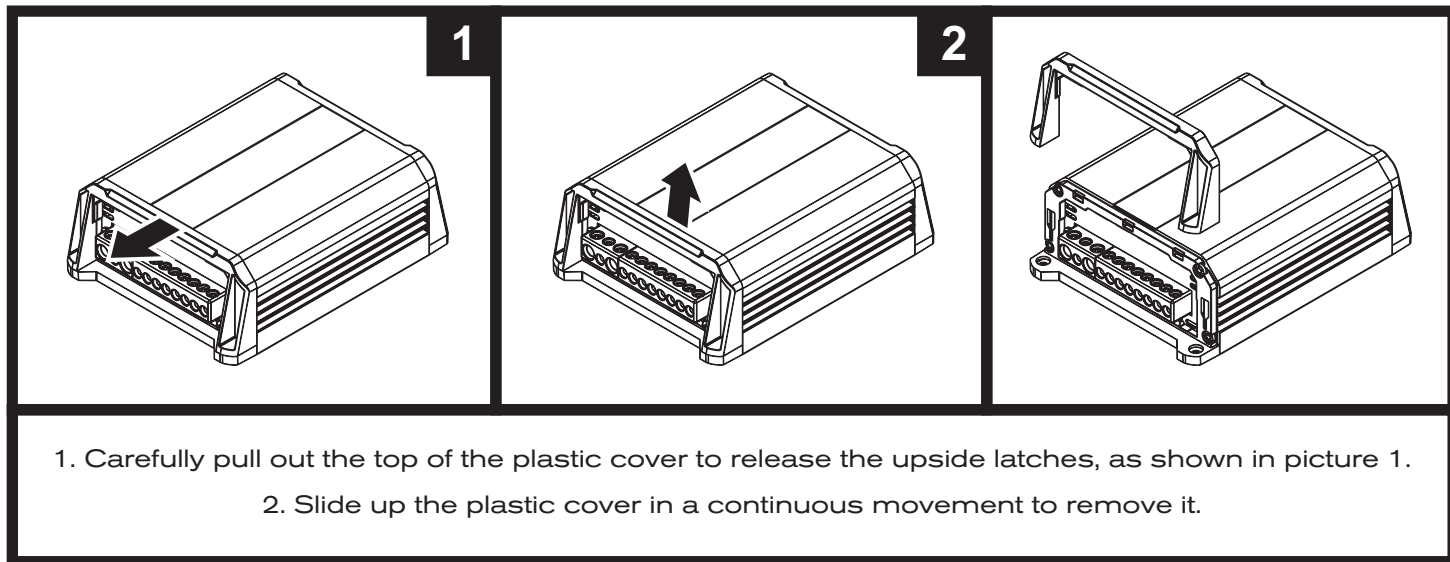
The design of the EVOX line of amplifiers aims to give users the feeling of the smooth and deep bass, without compromise! Our Low Bass Correction technology compares the input signals to the amplifier against the output after the amplification stage, making real time correction of the signal, delivering a deeper bass with less distortion.



\*Merely illustrative image.

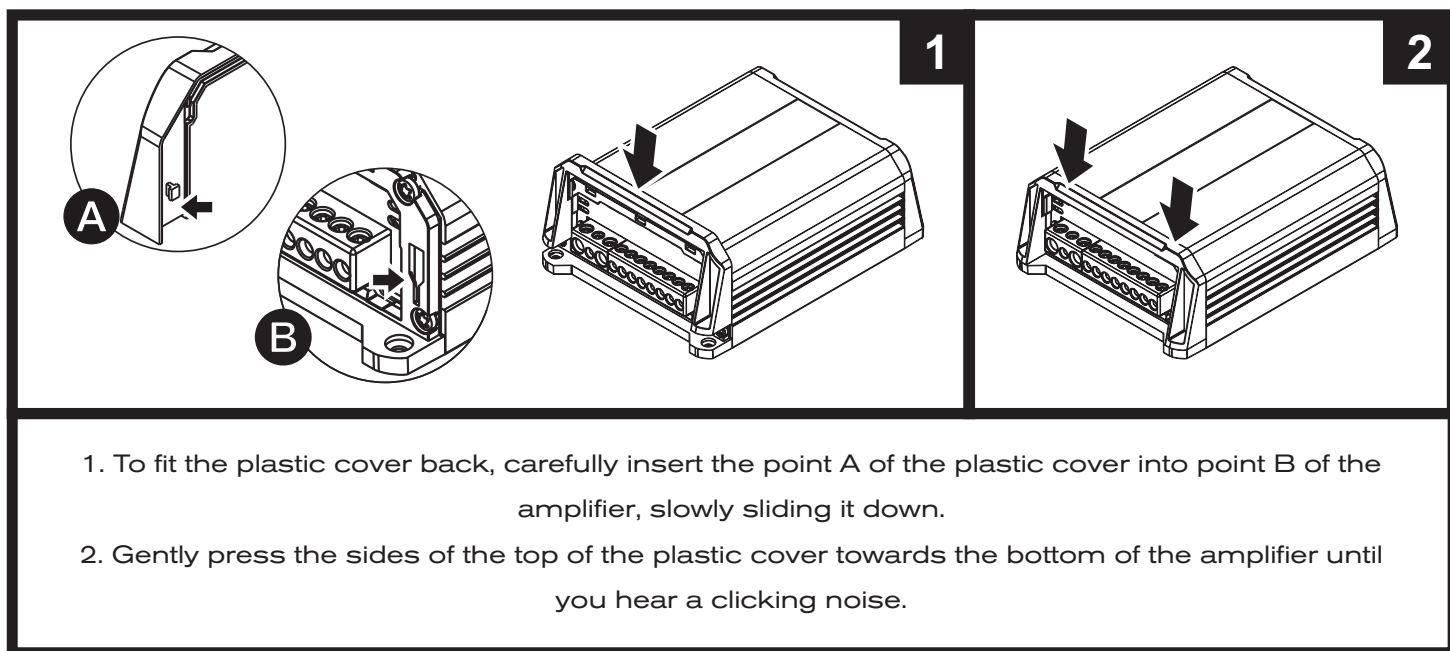
The plastic covers are used to finish off and hide the amplifier's fixing screws. To disassemble and assemble them, follow the instructions below.

## DISASSEMBLING OF THE PLASTIC COVER

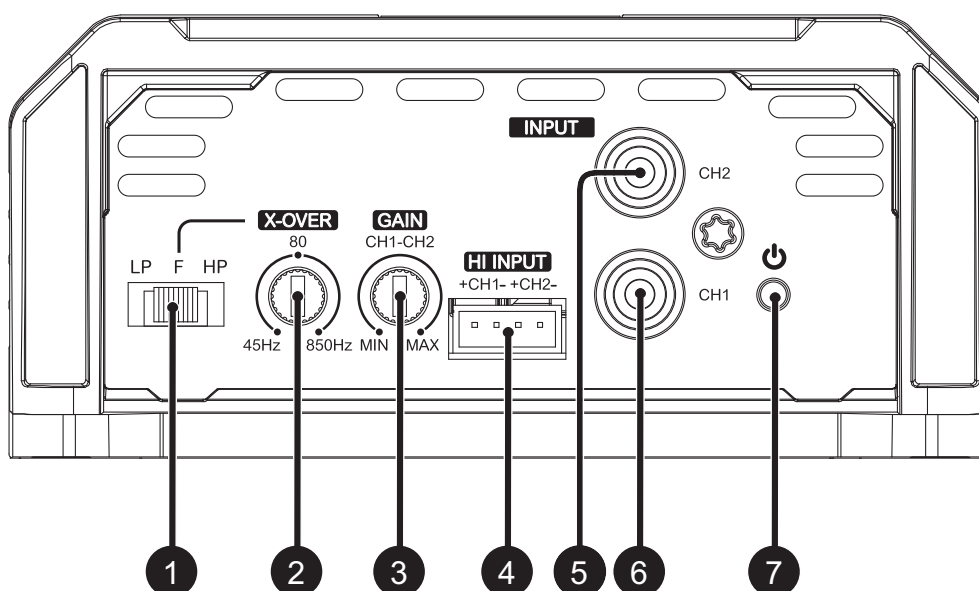


\*Merely illustrative images.

## ASSEMBLING THE PLASTIC COVER

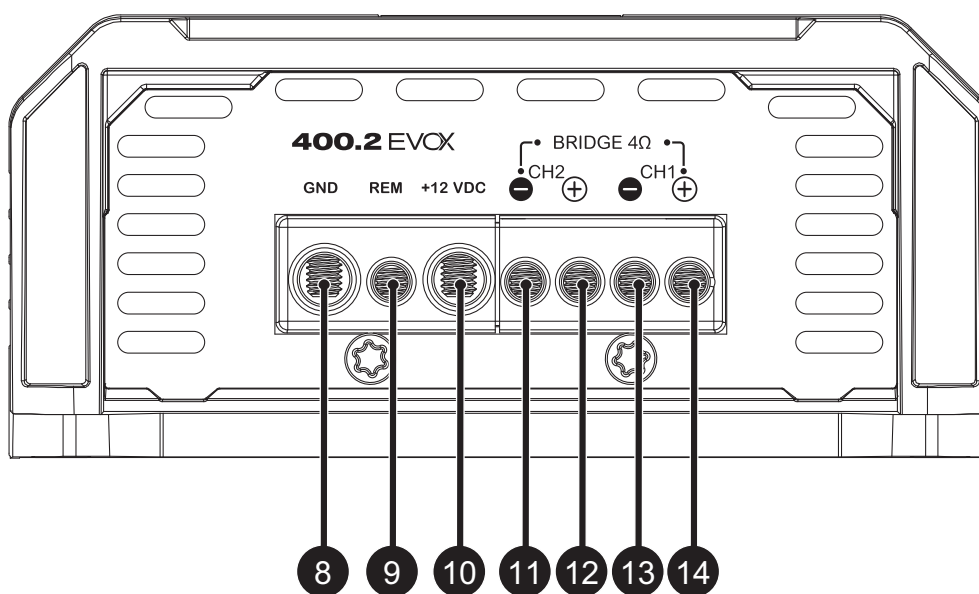


\*Merely illustrative images.



1	CH1/CH2	Crossover switch key Low Pass – Full – High Pass
2	CH1/CH2	Variable Crossover Control (45Hz ~ 850Hz)
3	CH1/CH2	Variable Gain Control
4	CH1/CH2	Audio input – High Level (To connect to the speaker output of the head unit)
5	CH2	Audio inputs – RCA connectors
6	CH1	
7	Blue	"POWER ON" LED indicator





8	-	Negative power supply connector (GND)
9	-	Remote power supply connector (REM)
10	-	Positive power supply connector (+12VDC)
11	CH2	Negative speaker connector (-)
12		Positive speaker connector (+)
13	CH1	Negative speaker connector (-)
14		Positive speaker connector (+)

**Warning!**

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.

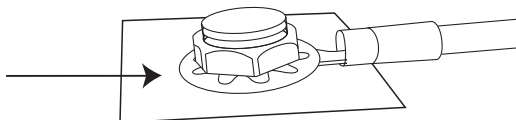
- Fix the amplifier so that the connectors can be easily accessed;
- Install the power cables in the vehicle properly, starting from the battery to the fuse holder or circuit breaker, use the cable with the appropriate size. Make all connections, install fuse holders or circuit breakers, but without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

**Warning!**

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

- 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;

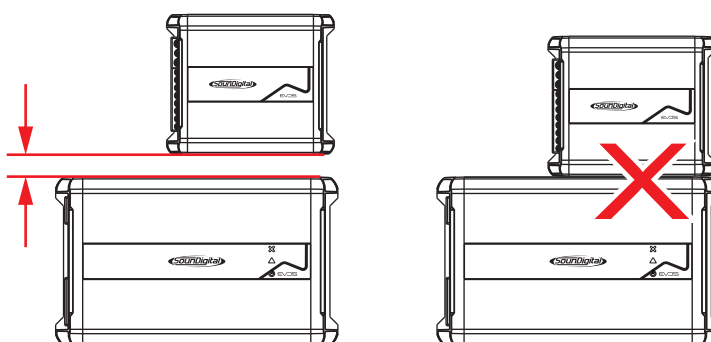
Remove the paint  
between the terminal  
and chassis



- 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.

**Warning!**

Minimum recommended  
installation distance  
between amplifiers\*.  
1.18in. (30mm)



\*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.

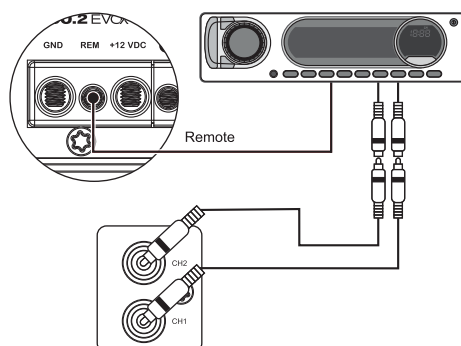
400 WRMS	POWER CABLE (+12VDC)	4mm <sup>2</sup> (11 AWG)
	GROUND CABLE (GND)	
	SPEAKER CABLE	1.5mm <sup>2</sup> (15 AWG)

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.

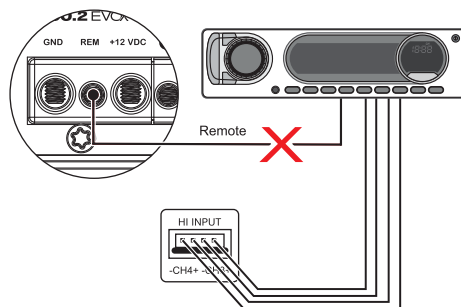
## AUDIO INPUTS

### RCA inputs



All RCA inputs must be connected for the amplifier to work properly. If the signal source is mono type, use "Y" cable at the input.

### High level signal input



All High level signal inputs must be connected for the amplifier to work properly.

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.



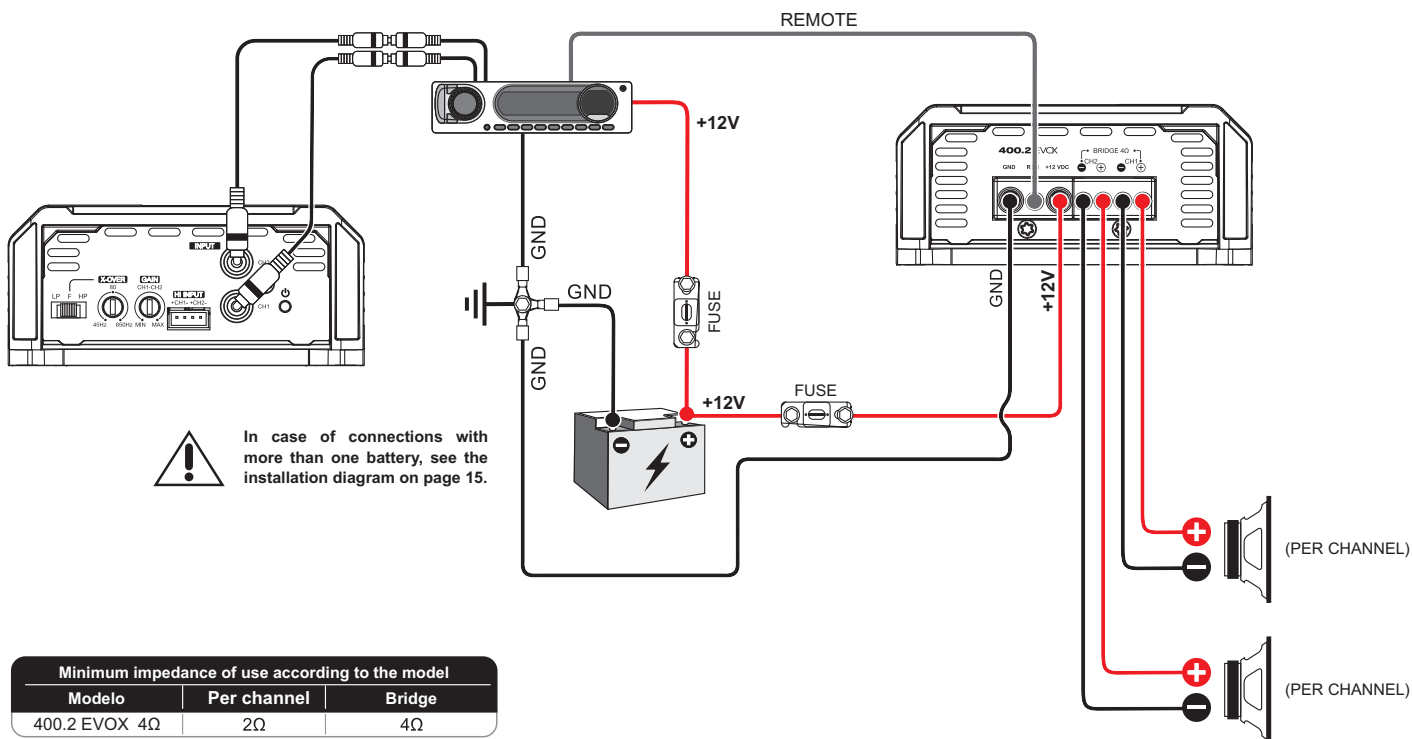
**Warning!**

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

## 2 CHANNELS WIRING DIAGRAM (PER CHANNEL)



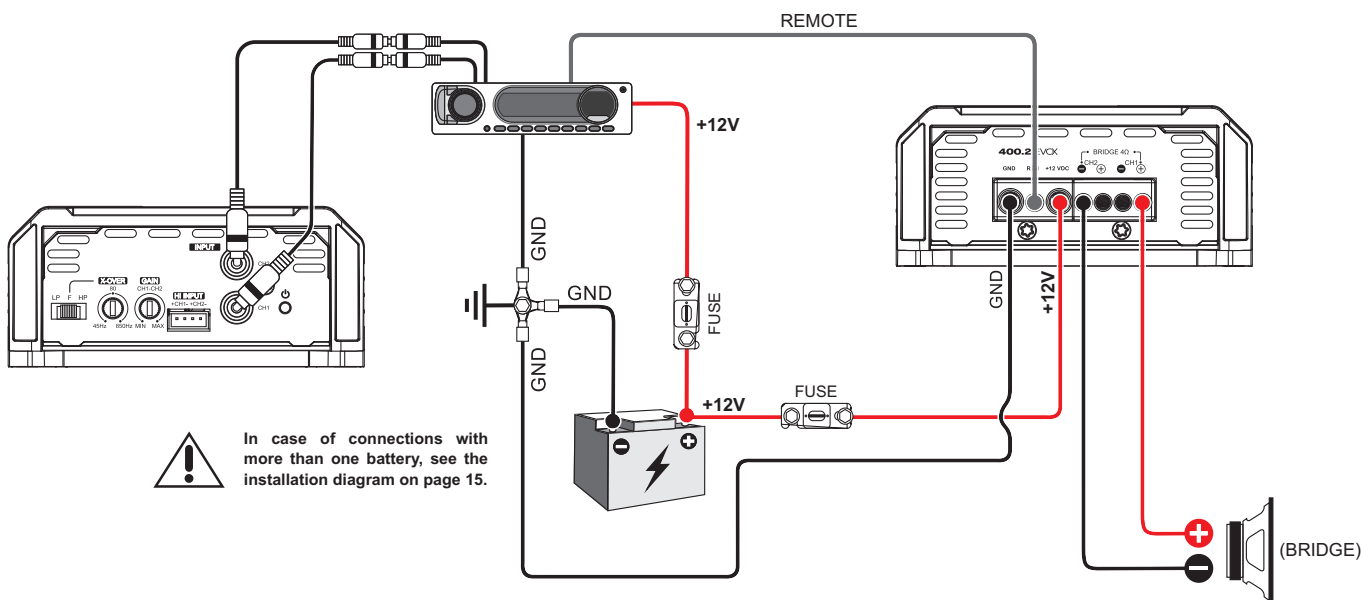
All RCA inputs must be connected for the amplifier to work properly. If the signal source is a mono type, use a "Y" cable at the input.



## 1 CHANNEL WIRING DIAGRAM (BRIDGE)



All RCA inputs must be connected for the amplifier to work properly. If the signal source is a mono type, use a "Y" cable at the input.



## GAIN SETTING

### Necessary equipment:

- Digital AC voltmeter;
- Media with sine wave test tone 60Hz recorded at 0db.

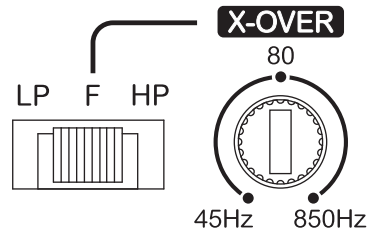
### Set up procedure:

- 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;

- On the audio player, set the fader control to center position;
- Set the crossover selector switch in "F";
- Use a 60Hz sine wave;
- Connect the AC voltmeter to the speaker output connectors of the amplifier. Make sure you test the voltage at the correct connectors (+ and -);
- Increase the gain control until the target voltage is observed with the voltmeter (see the chart below);
- Once you have adjusted the amplifier to the correct voltage output, turn off the source unit and reconnect the speaker(s).

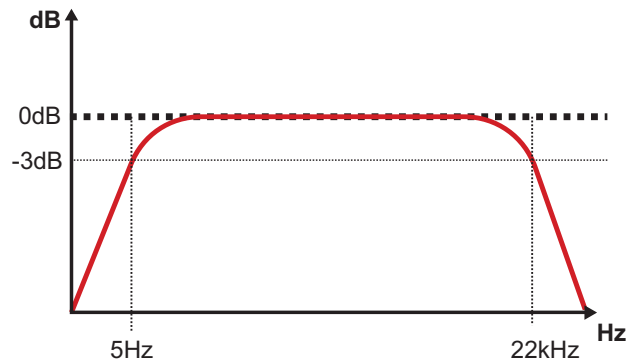
MODEL	STEREO / POWER	BRIDGE / POWER	STEREO OUTPUT VOLTAGE	BRIDGE OUTPUT VOLTAGE
<b>400.2</b> EVQX 4Ω	2Ω / 2 x 200W	4Ω / 1 x 400W	20V	40V

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

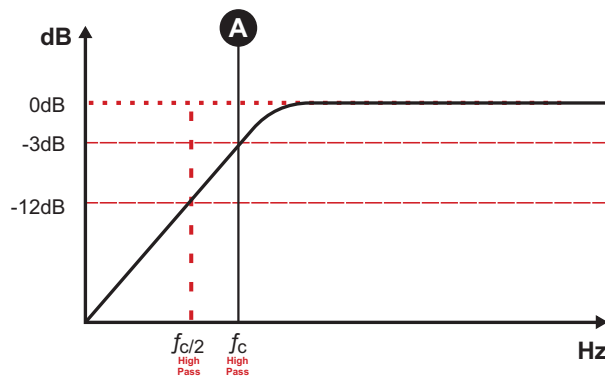


"F" Set variable control in Full Range function;  
 "LP" Set variable control in Low Pass function;  
 "HP" Set variable control in High Pass function.

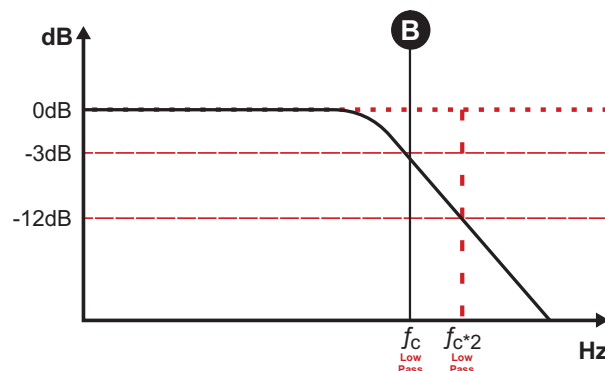
➤ Change the switch to "F" position (Full Range) - All the frequencies will be reproduced.



➤ Change the switch to "HP" position - Set in the variable control between 45Hz and 850Hz ("A") where you want to perform the high pass cut filter;

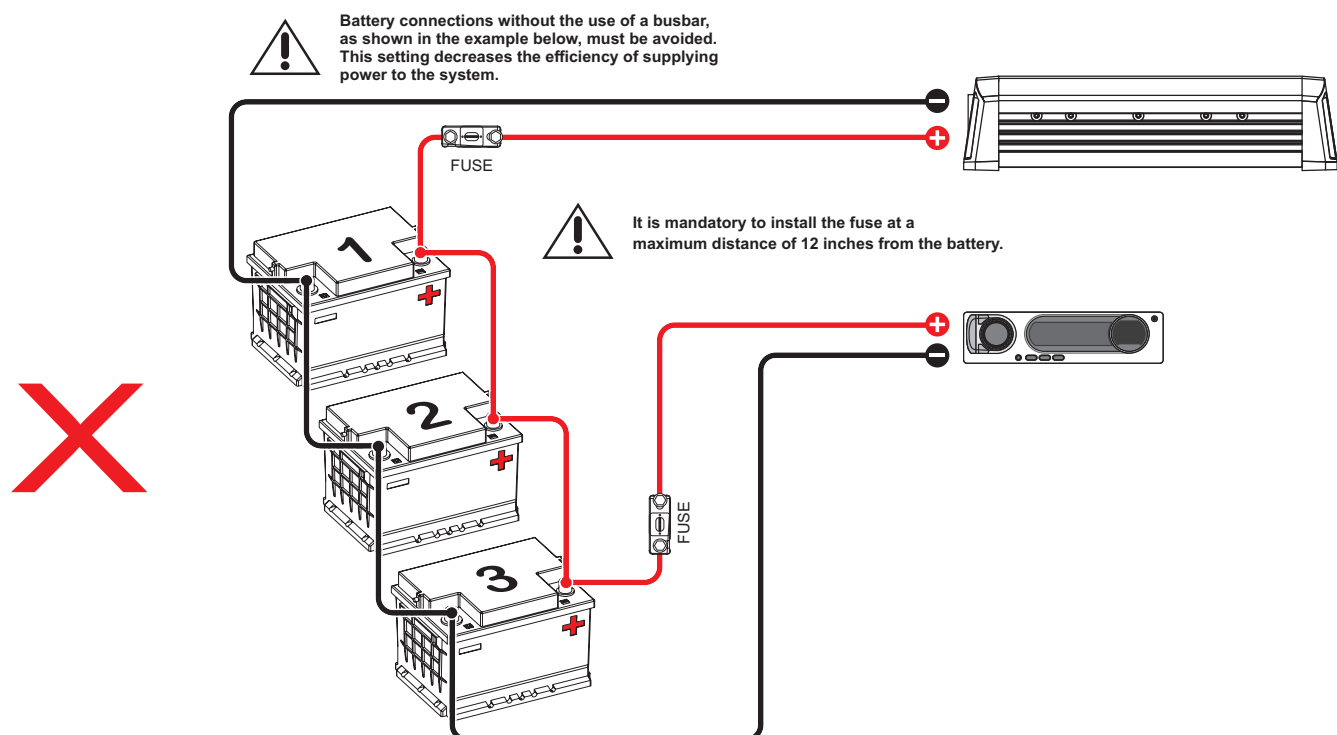
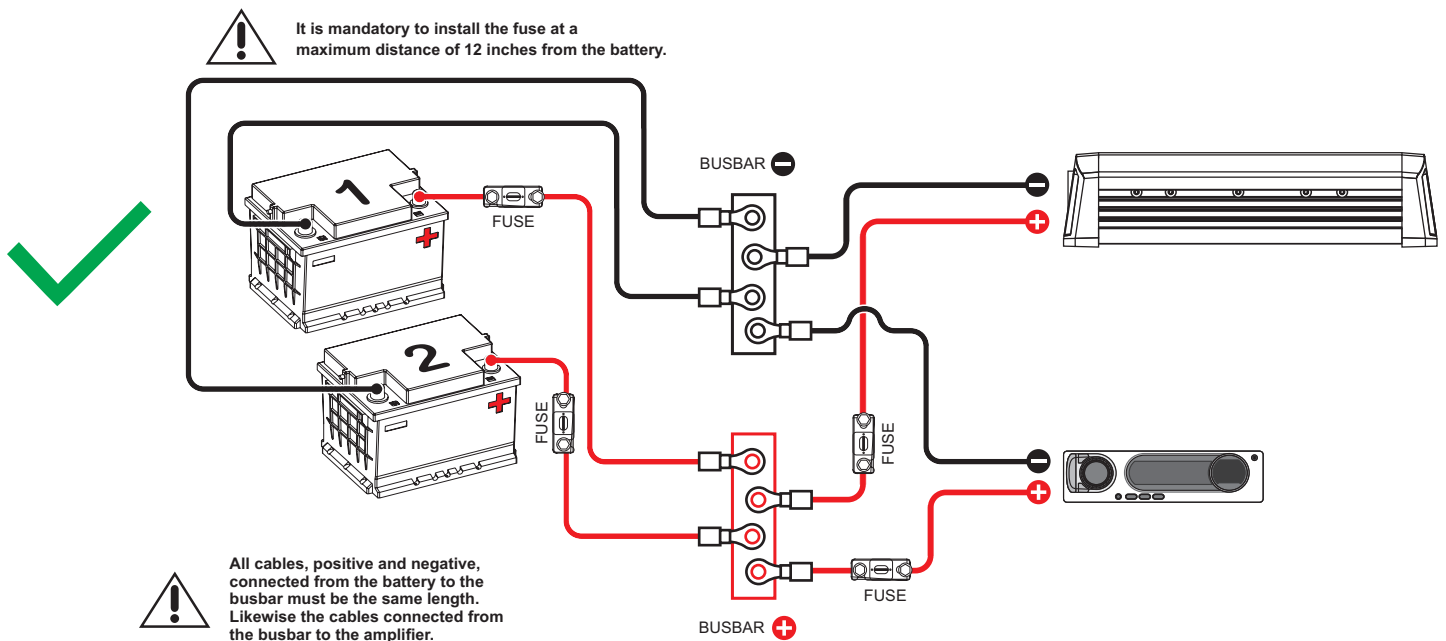


➤ Change the switch to "LP" position - Set in the variable control between 45Hz and 850Hz ("B") where you want to perform the low pass cut filter.



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	400.2 EVCX 4Ω
Power RMS @ 4Ω**	2 x 132W
Power RMS @ 2Ω**	2 x 200W
Power RMS (Bridge) @ 8Ω**	1 x 264W
Power RMS (Bridge) @ 4Ω**	1 x 400W
Frequency Response (-3dB)	5Hz ~ 22kHz
Low Pass filter (12dB/octave)	45Hz ~ 850Hz
High Pass filter (12dB/octave)	45Hz ~ 850Hz
Operating Voltage	8V ~ 16V
SNR	88dB
Input Sensitivity (RCA)	0.2 ~ 4V
Input Sensitivity (High Level input)	1 ~ 10V
Current Draw (music)	18A
Current Draw (max.)	36A
Total Efficiency	88%
Damping Factor (@100Hz nominal impedance)	200
Power Cable	4mm <sup>2</sup> (11 AWG)
Speaker Cable	1.5mm <sup>2</sup> (15 AWG)
Recommended Fuse* (music)	20A
Recommended Battery (minimum)	35Ah

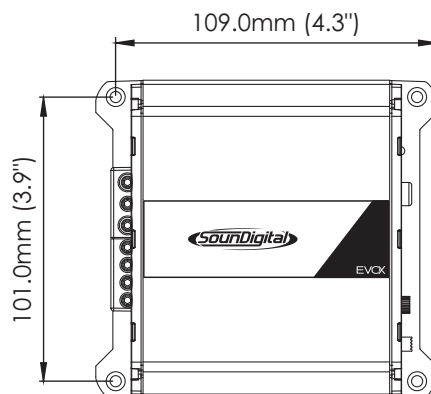
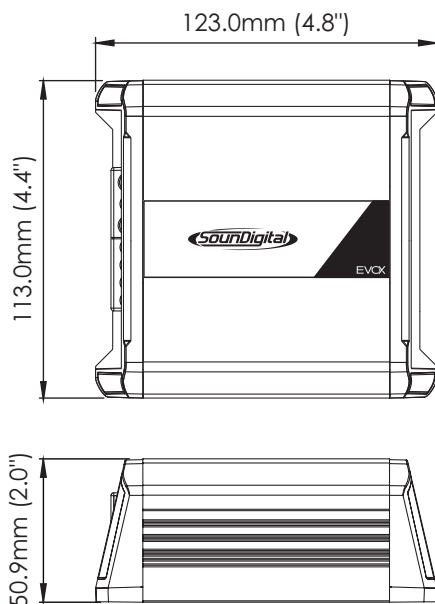
\*It is mandatory to install the fuse at a maximum distance of 12 inches from the battery.

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



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

## DIMENSIONAL DATA



Net Weight	0.53 kg (1.16 lb)
Gross Weight	0.73 kg (1.60 lb)

## ADDITIONAL INFORMATION

The values presented are based on measurements performed in SoundDigital's laboratories. All the equipment used in the assays, tests, measurements and gauging of the technical parameters of SoundDigital 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 SoundDigital 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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