



YOUR MUSIC. **YOUR POWER.**

EVO^{4.0}

OWNER'S MANUAL

1 2000.1 EVO^{4.0}

Introduction.....	3
Package contents	3
Safety instructions.....	4
Assembling and disassembling the plastic cover	5
Panels description	
Audio inputs and controls.....	5
Power inputs and audio outputs	7
Installation sequence.....	8
Electrical dimensioning.....	9
Audio inputs	
RCA inputs.....	9
High Level inputs	9
SD RLC and Gain Setting	10
Bass Boost set up	11
Crossovers set up.....	11
Wiring diagram	12
Battery connection diagram.....	13
Technical specifications	
Parameters	14
Dimensional data.....	14
Additional Information	14

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.

PACKAGE CONTENTS

- 01 **12000.1 EVO4.0** Amplifier
- 01 Installation quick guide with warranty card
- 01 Promotional sticker

To prevent injuries to the user or damage to the amplifier, read all safety instructions written on this manual;

If you are insecure about the installation of this equipment, get in touch with our tech support or with a professional specialized in car audio installation;

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;

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

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;

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

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

Mount the amplifier in a secure way. Avoid mounting it on metallic parts of the vehicle, because it may cause ground looping (noise);

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

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

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

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

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;

Make sure the cables are properly secured throughout the installation;

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

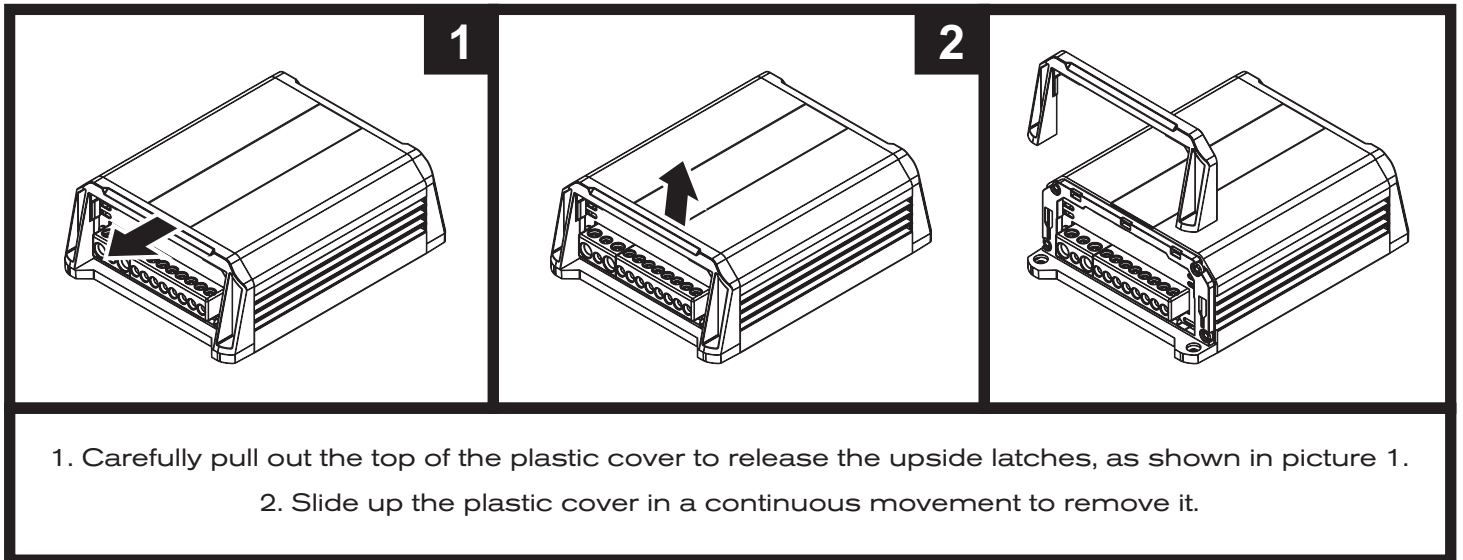


Warning!

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

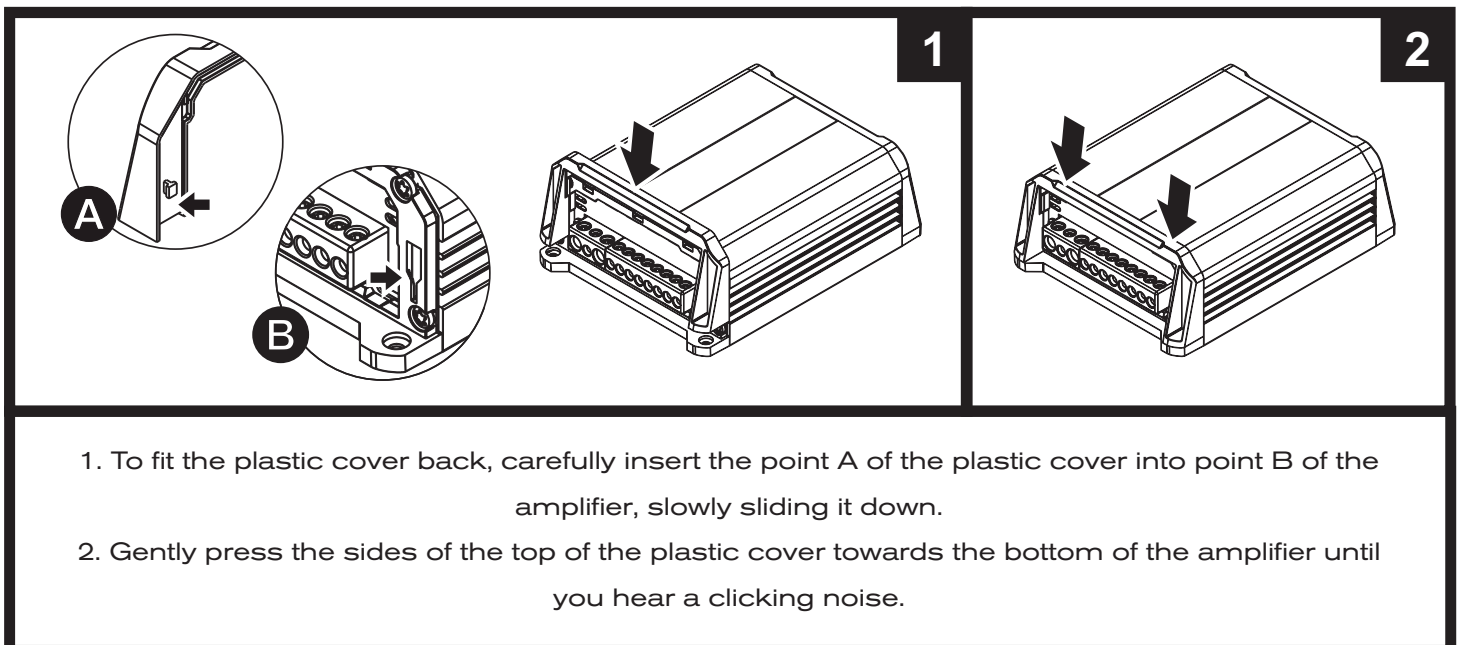
The plastic covers have the function of finishing and hiding the amplifier fixing screws. To disassembling and assembling them, follow the instructions below.

DISASSEMBLING OF THE PLASTIC COVER

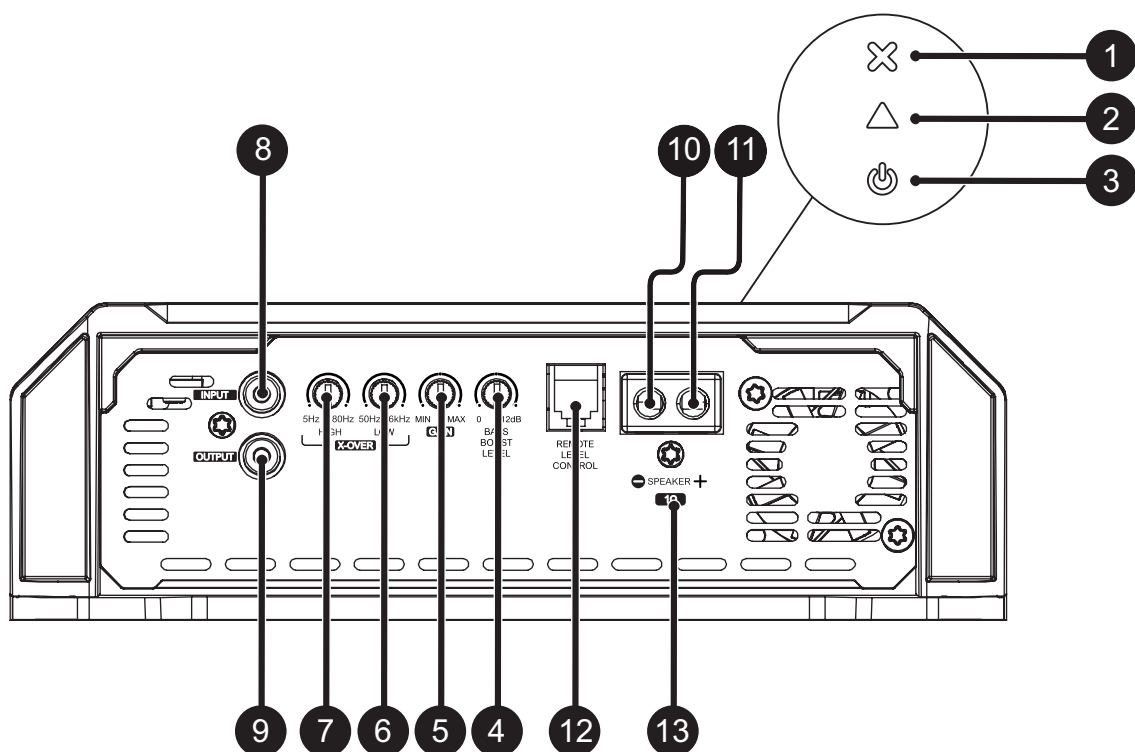


*Merely illustrative images.

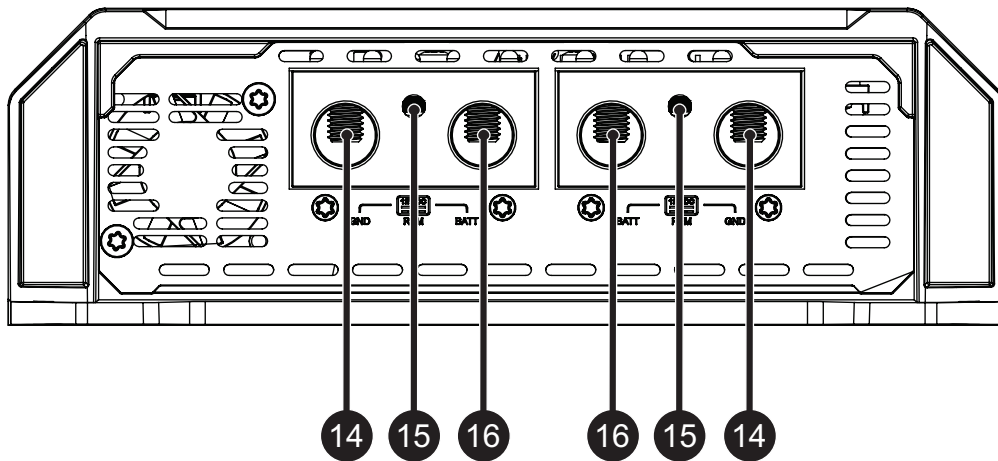
ASSEMBLING THE PLASTIC COVER



*Merely illustrative images.



1	Blue	"POWER ON" LED indicator
2	Yellow	"CLIP" LED indicator
3	Red	"PROTECTION" LED indicator
4	-	Variable Bass Boost Control 50Hz (0dB ~ +12dB)
5	-	Variable Gain control
6	-	Variable Low Pass filter control (50Hz ~ 6kHz)
7	-	Variable High Pass filter control (5Hz ~ 80Hz)
8	Audio input	RCA connectors
9	Audio output	
10	Negative	Speaker output connector
11	Positive	
12	-	Remote level control connector
13	-	Minimum speaker load allowed (impedance)



14	-	Negative power supply connector (GND)
15	-	Remote power supply connector (REM)
16	-	Positive power supply connector (+12VDC)

**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.

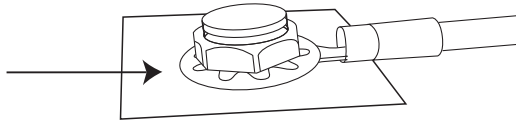
- Mount the amplifier in such a way you have access to the connectors;
- Install the power cables in the vehicle properly, starting from the battery to the fuse holder or circuit breaker, use the cable with the appropriate size. Make all connections, install fuse holders or circuit breakers, but without 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 conector 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;

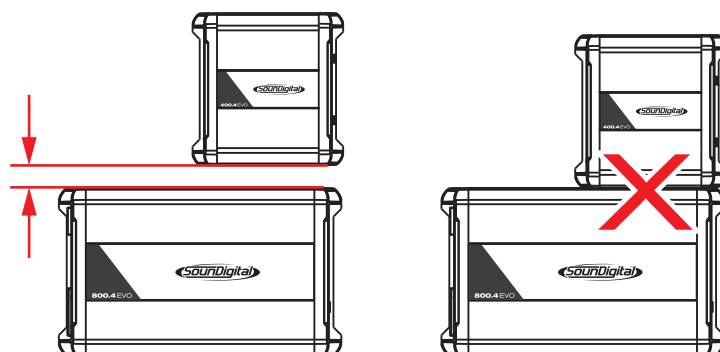
Remove the paint
between the terminal
and chassis



- 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 1.5mm² (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 SoundDigital 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.

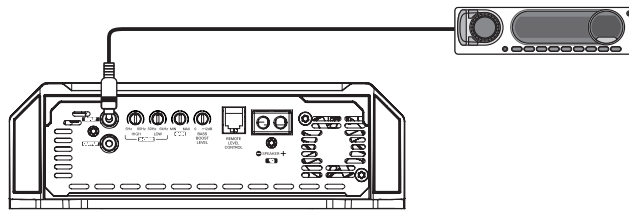
12000 WRMS	POWER CABLE		95mm ² - 0000 AWG
	GROUND CABLE		
	SPEAKER CABLE	12000.1 EVO_{4.0} 1Ω	2 x 16mm ² (5 AWG)
		12000.1 EVO_{4.0} 2Ω	2 x 10mm ² (7 AWG)

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

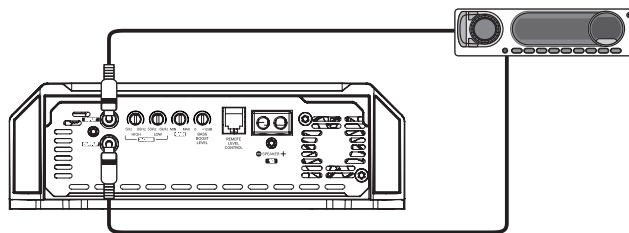
Copper-clad aluminum wire (CCAW) must not be used.

AUDIO INPUTS

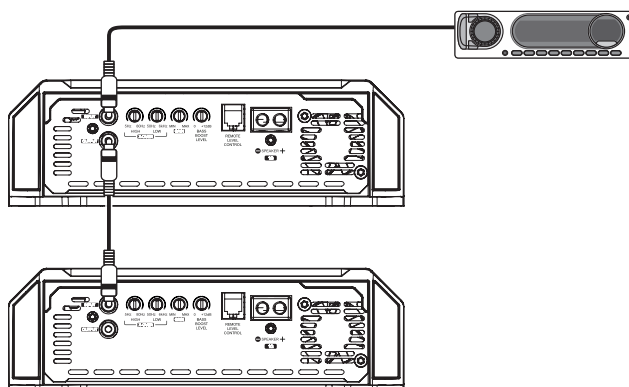
Example of one RCA cable connection only



Example of two RCA cables connection (mono input).



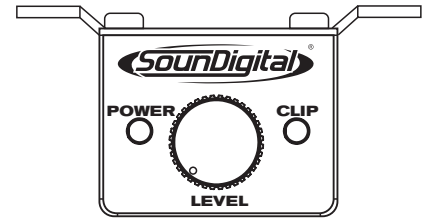
Example of one RCA cable connection only and using the RCA output to connect another amplifier.



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

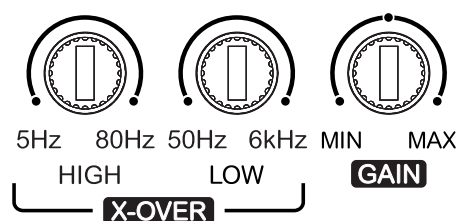
GAIN SETTING

Necessary equipment:

- Digital AC voltmeter;
- Media with sine wave test tone 60Hz recorded at 0db;
- Screwdriver 1/8" (for gain setting).
- Set the audio player fader control to center position (left and right fader controls);
- Set the variable "LOW" crossover in 6kHz and the "HIGH" in 5Hz;

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;
- Use a 60 Hz 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).

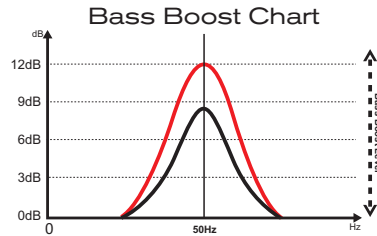


Download the tracks for set up in <https://soundigitalusa.com/tracks-for-set-up/>

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

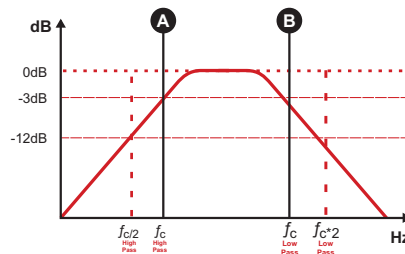
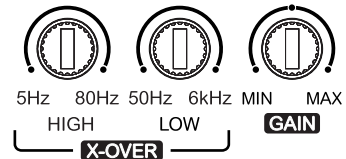
Reproduce your favorite song and set the boost intensity between 0dB and +12dB at the variable control level according your preference.



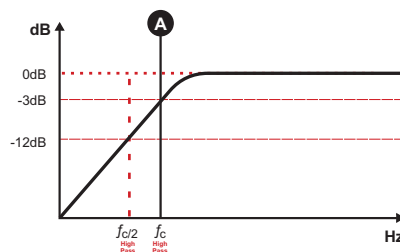
0 +12dB
BASS
BOOST
LEVEL

How to adjust the Crossovers

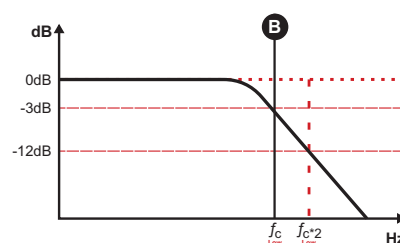
The use of the two associated filters can form a bandpass filter, as in the figure below, where the point "A" is defined in the "HIGH" crossover and the point "B" is defined in the "LOW" crossover.



To set the "HIGH" variable control between 5Hz and 80Hz ("A") where you want to perform the high pass cut filter;



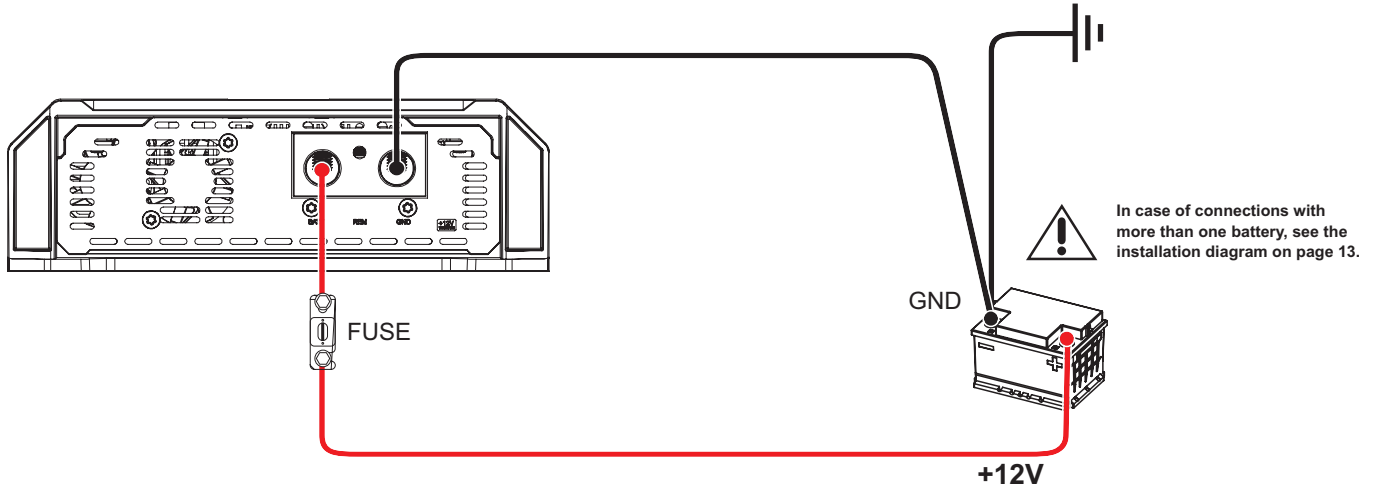
Set in the "LOW" variable control between 50Hz and 6kHz ("B") where you want to perform the low pass cut filter.



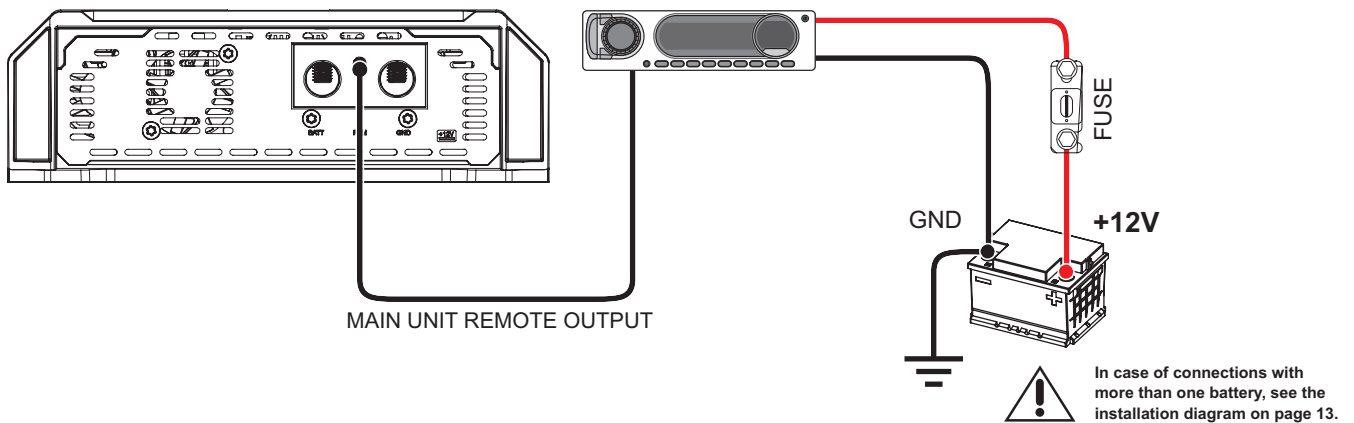


Unplug the negative (-) terminal of the battery before proceeding with any electrical installation in the vehicle to avoid fire starts, wounds or damage to the amplifier.

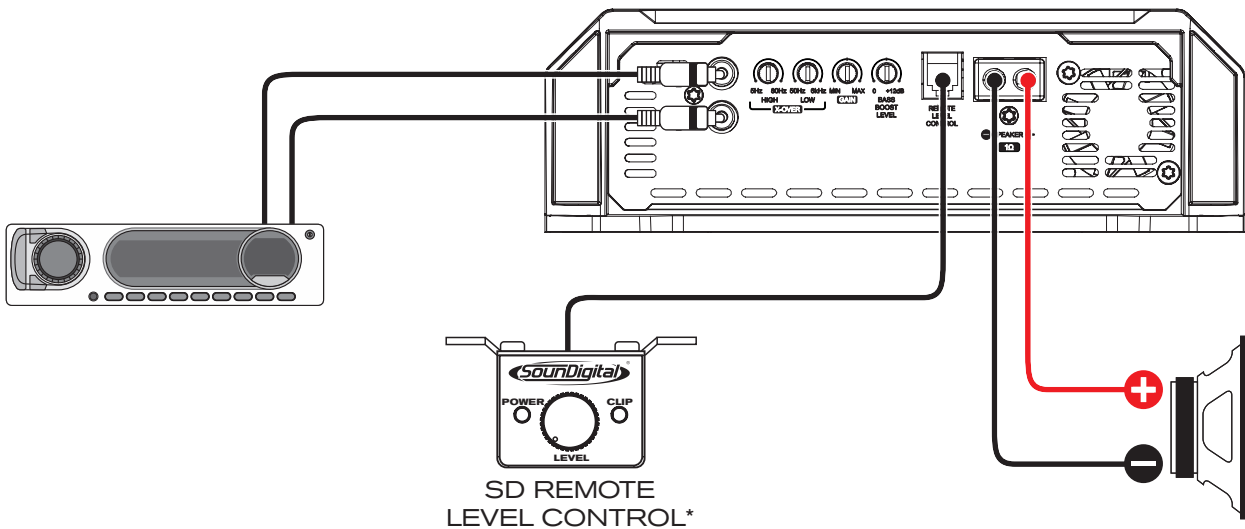
POWER CONNECTIONS



REMOTE INPUT CONNECTIONS



AUDIO INPUT AND OUTPUT CONNECTIONS

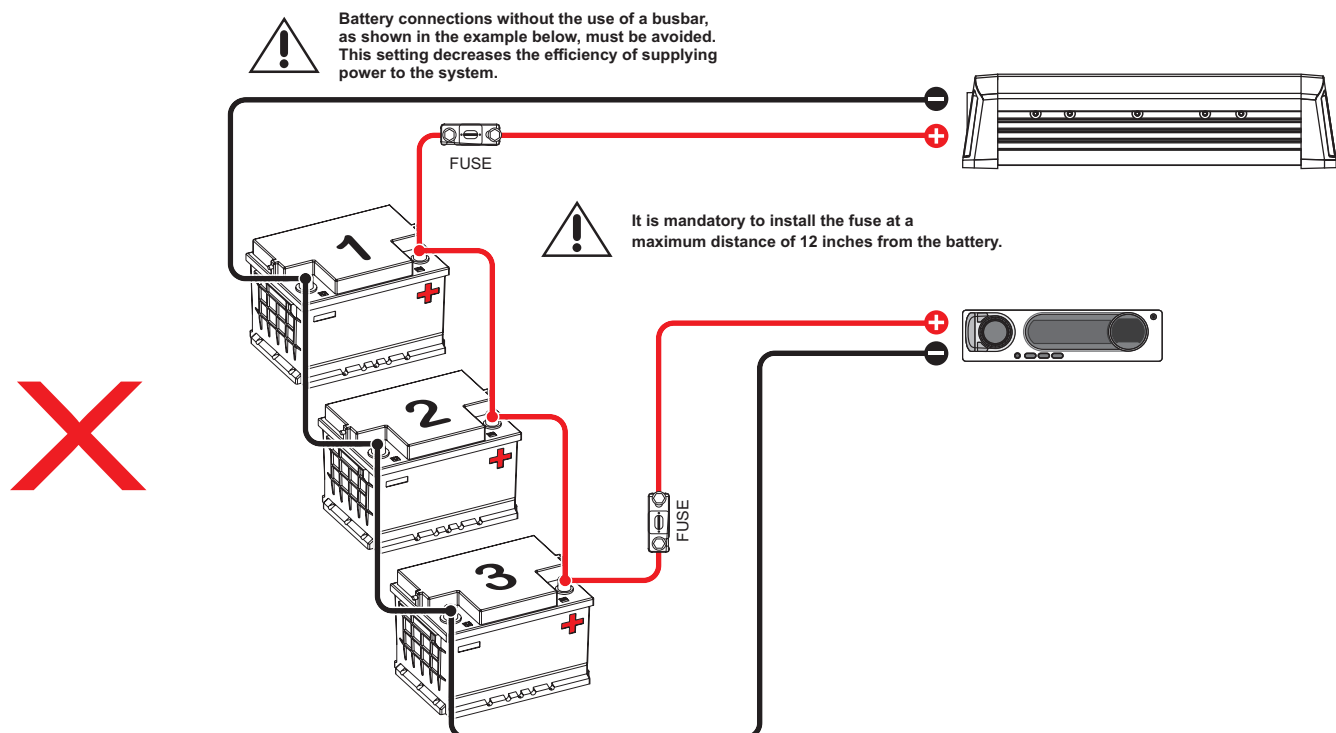
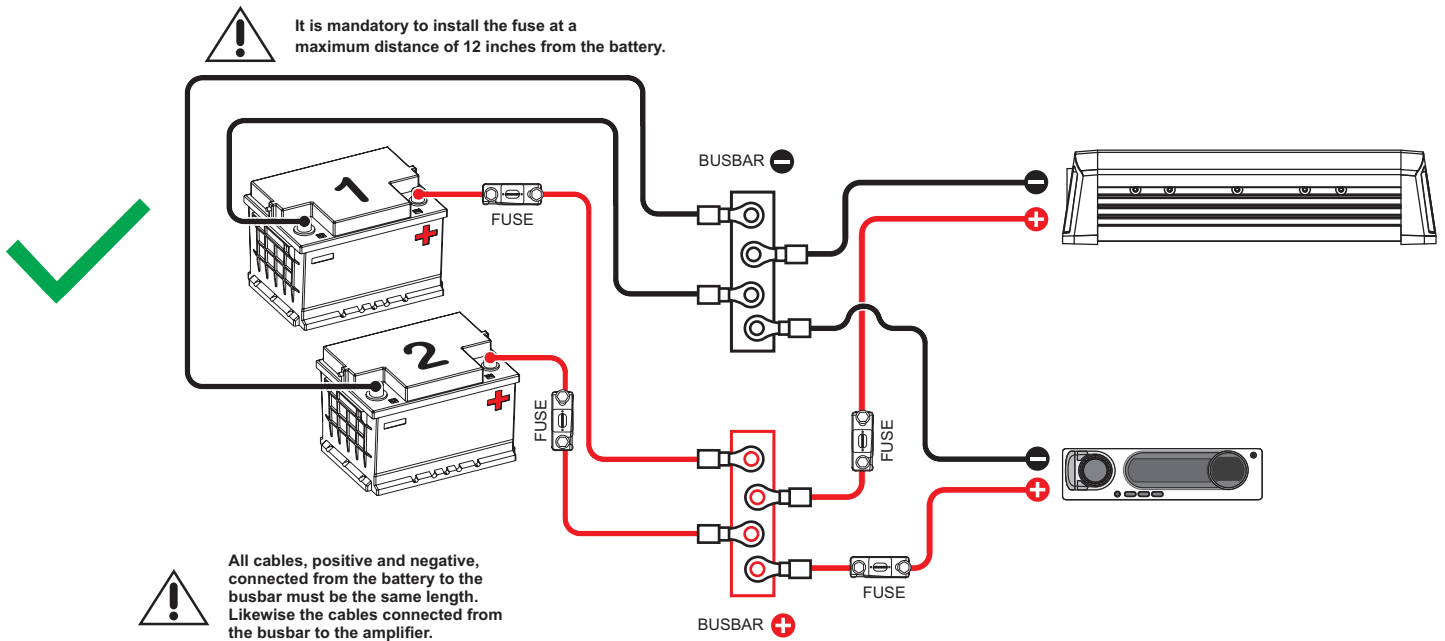


SD REMOTE LEVEL CONTROL*

*Sold separately

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	12000.1 EVO _{4.0} 1Ω	12000.1 EVO _{4.0} 2Ω
Power RMS @ 4Ω**	1 x 5227W	1 x 7920W
Power RMS @ 2Ω**	1 x 7920W	1 x 12000W
Power RMS @ 1Ω**	1 x 12000W	N/A
Frequency Response (-3dB)	5Hz ~ 6kHz	5Hz ~ 6kHz
High Pass Filter (12dB/octave)	5Hz ~ 80Hz	5Hz ~ 80Hz
Low Pass Filter (12dB/octave)	50Hz ~ 6kHz	50Hz ~ 6kHz
Bass Boost	0dB ~ 12dB @ 50Hz	0dB ~ 12dB @ 50Hz
Operating Voltage	8V ~ 16V	8V ~ 16V
SNR	71dB	71dB
Input Sensitivity (RCA)	0.2V ~ 2V	0.2V ~ 2V
Input Sensitivity (High Level input)	N/A	N/A
Current Draw (music)	643A	643A
Current Draw (max.)	1287A	1287A
Total Efficiency	74%	74%
Damping Factor (@100Hz nominal impedance)	200	200
Power Cable	95mm ² (0000 AWG)	95mm ² (0000 AWG)
Speaker Cable	2 x 16mm ² (5 AWG)	2 x 10mm ² (7 AWG)
Recommended Fuse* (music)	2 x 350A	2 x 350A
Recommended Battery (minimum)	650Ah	650Ah

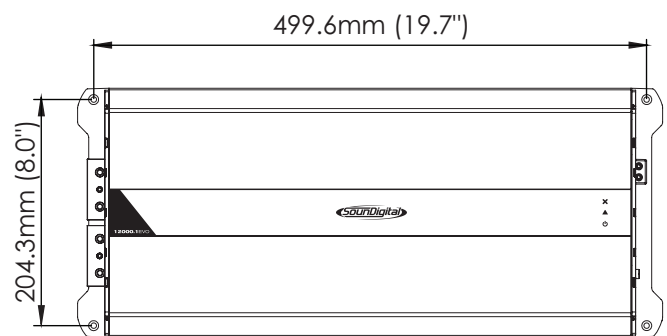
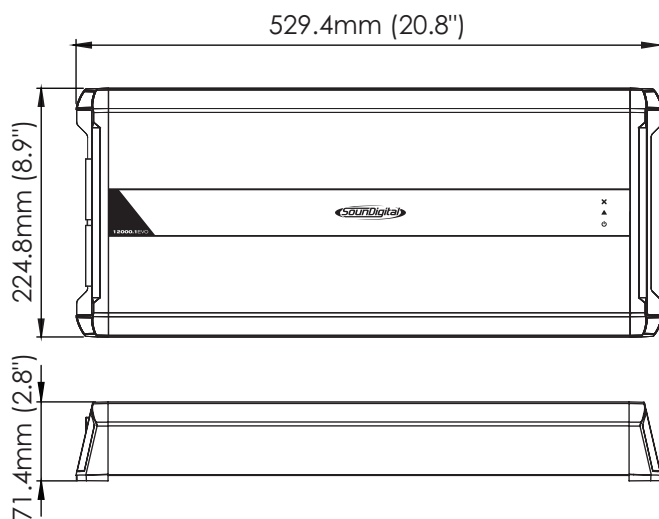
*It is mandatory to install the fuse at a maximum distance of 12 inches from the battery.

**Power at 12.6V @ 60Hz with a maximum THD of 1%.



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

DIMENSIONAL DATA



Net Weight 7.0 kg (15.4 lb)

Gross Weight 7.3 kg (16.2 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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