SounDigital®

YOUR MUSIC. **YOUR POWER.**

EVO4.0

OWNERS MANUAL

1200.1 EVO4.0

Dear Customer,
Congratulations on acquiring your Soundigital! You've just purchased a product of high quality and technology. The Soundigital products are developed to assure maximum efficiency and reliability to your sound system.

Class D amplifiers:
The main characteristics of Class D amplifiers are audio quality, efficiency, versatility and compact design. Here are the advantages of these characteristics:

Audio Quality – Class D amplifiers used to have a limited response in the past and they used to have a worse performance regarding higher frequencies thanClass AB amps, despite being more efficient. Introducing new technologies, Soundigital developed a Class D amplifier superior to the Class AB ones in efficiency and performance.

Efficiency - The Soundigital Class D amplifiers have a total efficiency (power source + output) higher than 70%, assuring a battery consumption and a heating lower than the expected.

Versatility of uses –The flat response of all the frequencies of Soundigital amplifiers allows them to be used in all the kinds of systems: SPL, Sound Quality, Trio Eletrico and Pancadao, meeting the needs with extreme quality.

Compact design – The high efficiency and technology allow our amplifiers to be really compact, making it easy to install them in vehicles where you have limited space.

IMPORTANT INFO
Read this manual and follow its instructions and information carefully. It contains extremely important information to have your amplifier working properly. If you feel the need to contact our Tech Support, you can reach our technician sthrough the e-mail info@soundigitalusa.com.

PACKAGE CONTENTS

- 1 **EVO4.0** Amplifier

- 1 Installation quick guide with warranty card

- 1 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);

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

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

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

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

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;

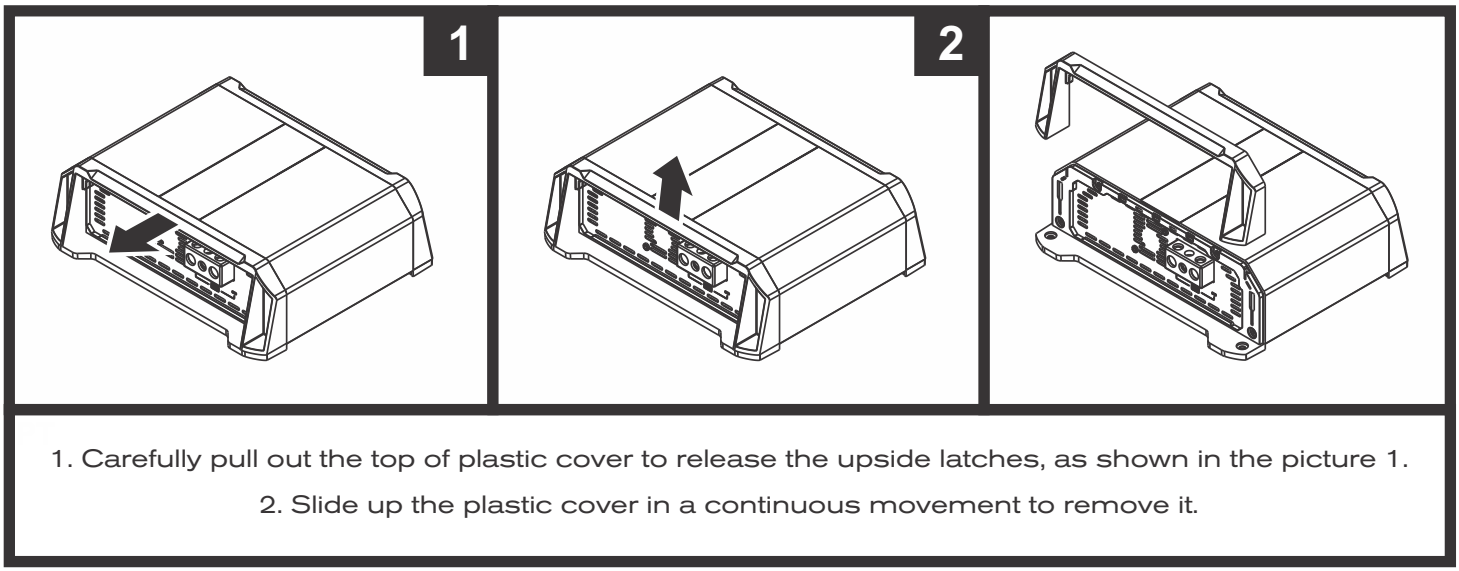
Wear gloves, safety glasses and and all necessary PPE during the installation of SounDigital amplifiers.

Warning!

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

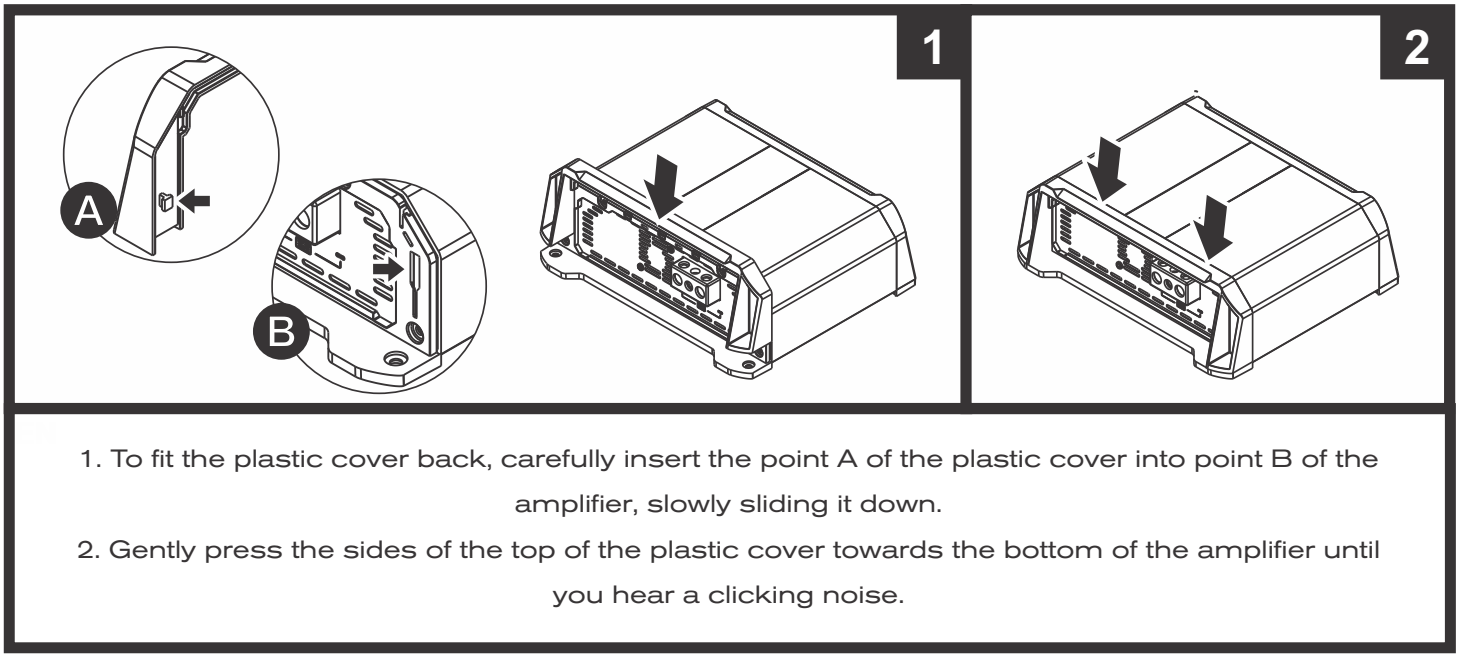
The plastic covers have the function of finishing and hiding the amplifier fixing screws. To disassembling and assembling them, follow the instructions below.

DISASSEMBLING OF THE PLASTIC COVER

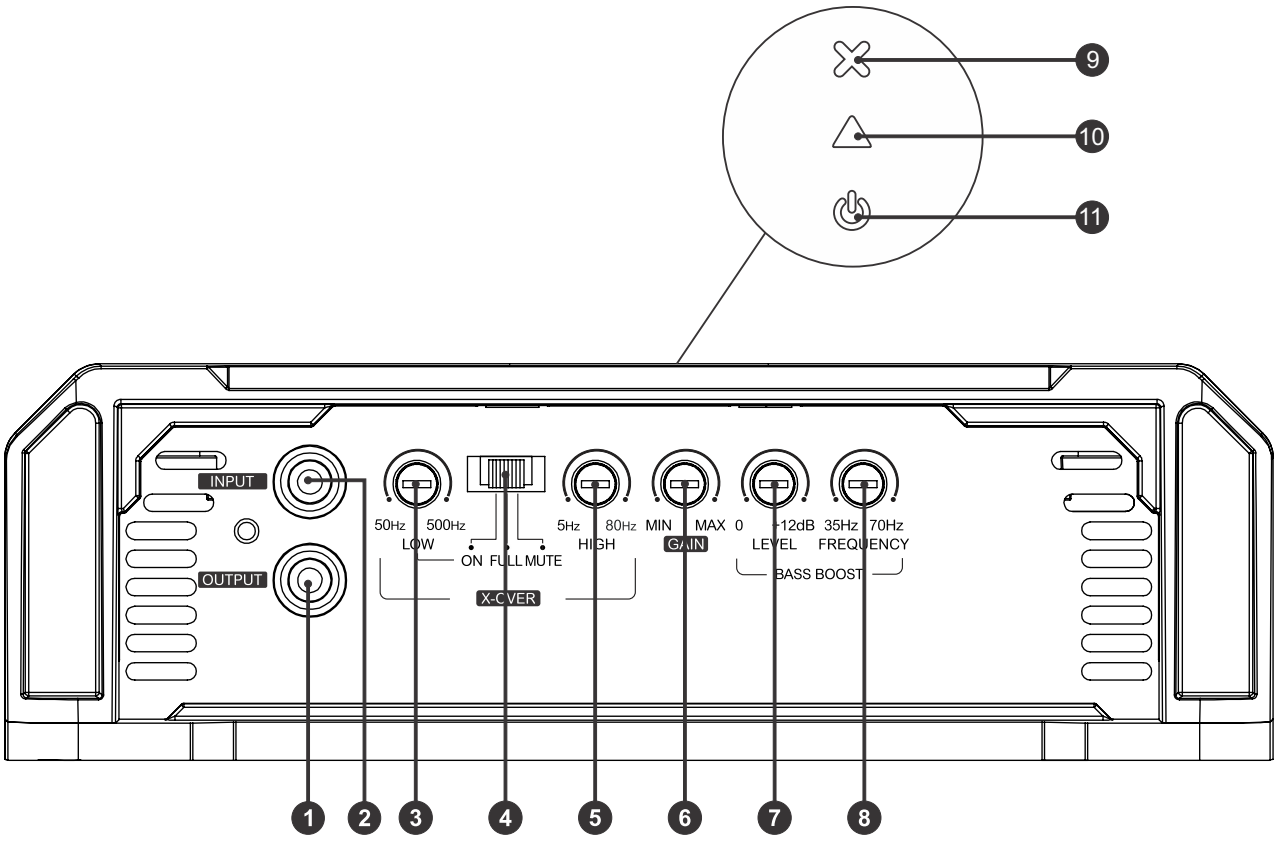


1. Carefully pull out the top of plastic cover to release the upside latches, as shown in the picture 1.
2. Slide up the plastic cover in a continuous movement to remove it.

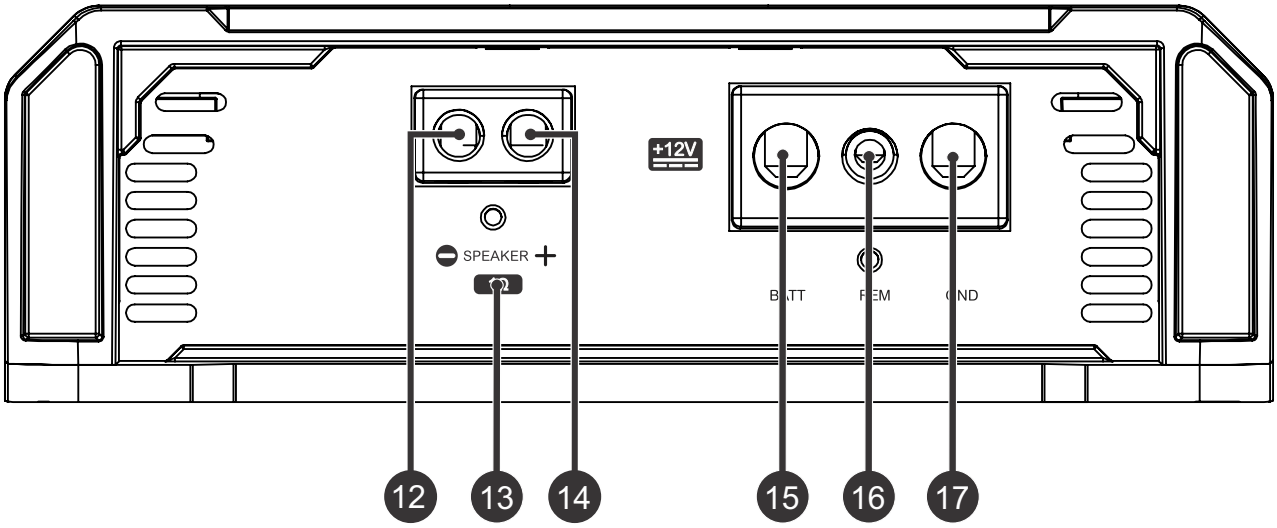
ASSEMBLING THE PLASTIC COVER



1. To fit the plastic cover back, carefully insert the point A of the plastic cover into point B of the amplifier, slowly sliding it down.
2. Gently press the sides of the top of the plastic cover towards the bottom of the amplifier until you hear a clicking noise.



1	INPUT	Audio input - RCA connector
2	OUTPUT	
3	CROSSOVER LOW PASS	Variable Low Pass filter control (50Hz ~ 500Hz)
4		Crossover switch - ON - FULL - MUTE
5	CROSSOVER HIGH PASS	Variable High Pass filter control (5Hz ~ 80Hz)
6	-	Variable Gain Control
7	BASS BOOST	Variable bass boost control (0dB - +12dB)
8		Variable bass reinforcement frequency control (35Hz ~ 70Hz)
9	-	“Protection” LED indicator (Red)
10	-	“Clip” LED indicator (Yellow)
11	-	“Power On” LED indicator (Blue)



12	OUTPUT	Negative speaker connector
13		Minimun speaker load allowed (impedance)
14		Positive audio output connector
15	POWER	Positive power supply connector (+12v)
16		Remote power supply connector (REM)
17		Negative power supply connector (GND)

ELECTRICAL DIMENSIONING

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

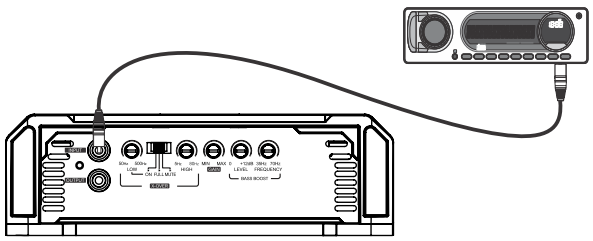
The table below shows the minimum section of GND cables, +12VDC cables and speaker output cables according to the power generated by the amplifier.

1200 WRMS	POWER CABLE	16mm² - 5 AWG
	GROUND CABLE	
	SPEAKER CABLE	2 x 1.5mm² - 15 AWG

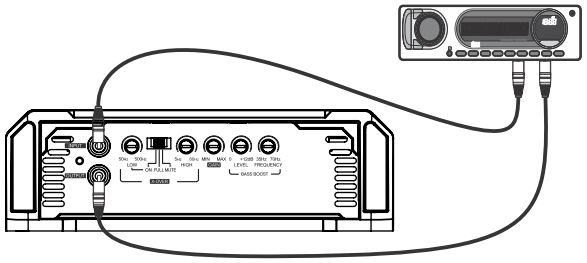
We recommend the use of ONLY OFC (Oxygen Free Copper) Cables on the installation of our products.

RCA INPUTS

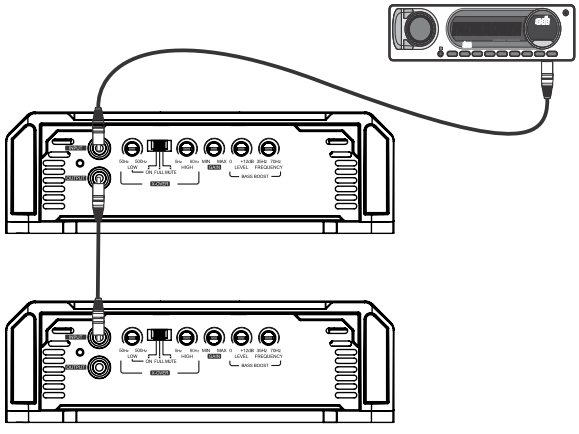
Exemple of one RCA cable connection only



Example of two RCA cables connection (mono input).



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



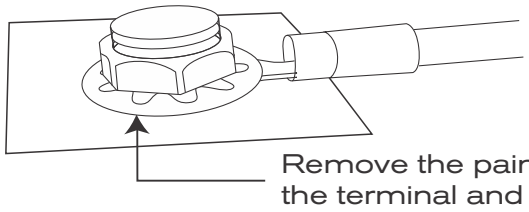
INSTALLATION SEQUENCE

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.

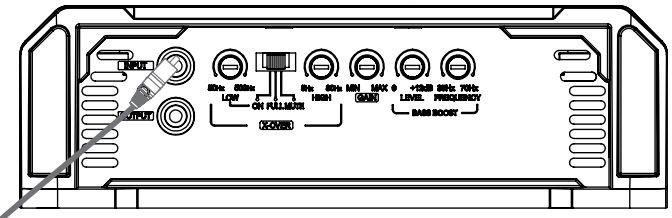
Warning! THE MAX. DISTANCE FOR THE INSTALLATION OF THE FUSE/CIRCUIT BREAKER IS ONE FOOT (30 CM) AWAY FROM THE BATTERY.

- 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;

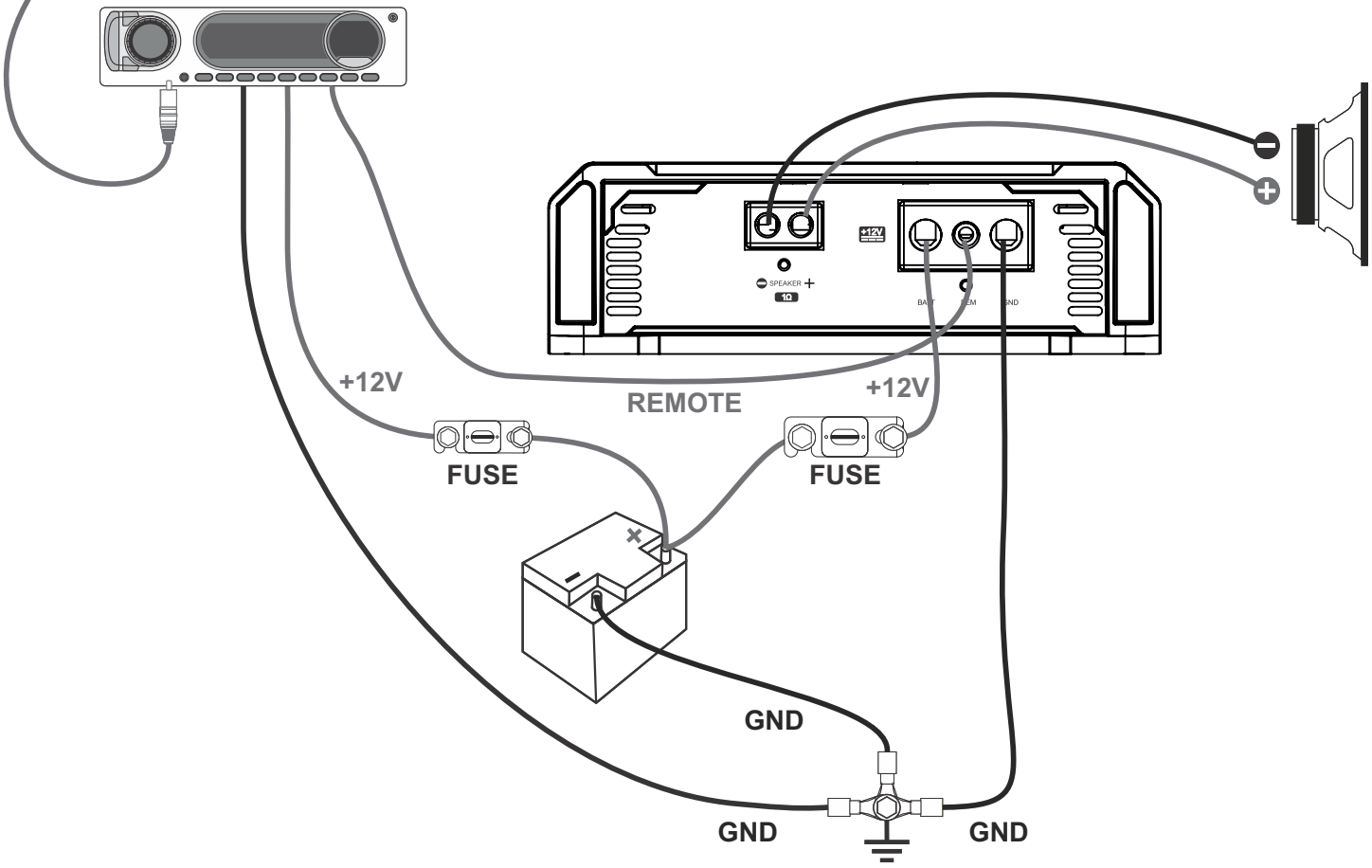


- Install the signal input cables in a proper way, distant from the power cables;
- Connect the RCA or the high signal input cables to the head unit and amplifiers;
- Install the audio output cables with the appropriate section , distant from the power and audio input cables;
- Connect the audio output 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 headunit 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 "On" LED indicating that it is in operation.

AUDIO INPUT AND OUTPUT CONNECTIONS



POWER SUPPLY AND AUDIO OUTPUT CONNECTIONS



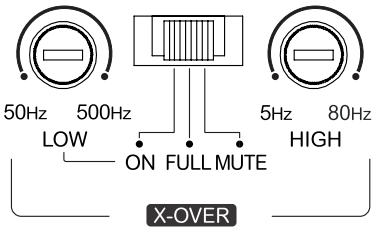
Necessary equipament:

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

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 source unit volume to 3/4 of full volume.
- Set the source unit's fader control to center position;
- Set the variable "LOW" crossover in 500Hz and the "SUBSONIC" in 5Hz;
- 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 its 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/



➢ Select the key in the "FULL" position and the "HIGH" variable control at 5Hz- All frequencies will be reproduced according to "Figure 1";

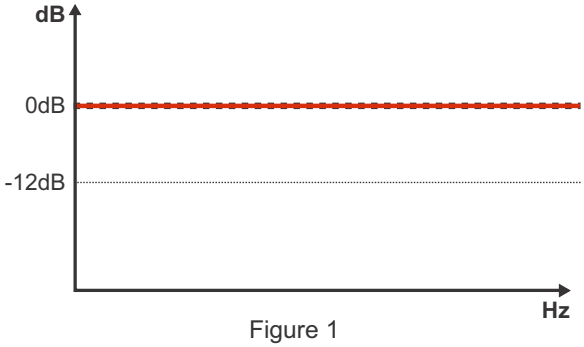


Figure 1

To use the high pass filter as in "Figure 2", select the key in the "FULL" position and the variable control "HIGH" at the frequency where you want to filter between 5Hz and 80Hz (A).

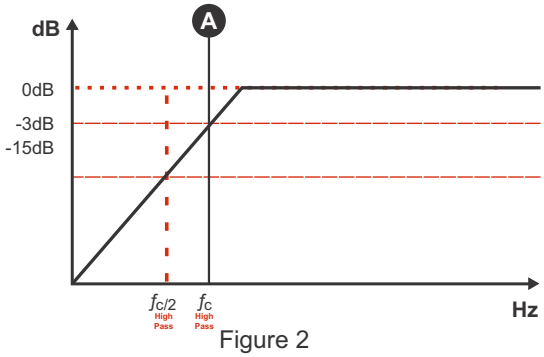


Figure 2

To use the low pass filter as in "Figure 3", select the key in the "ON" position and the variable control "HIGH" at the frequency where you want to filter between 50Hz and 500Hz (B).

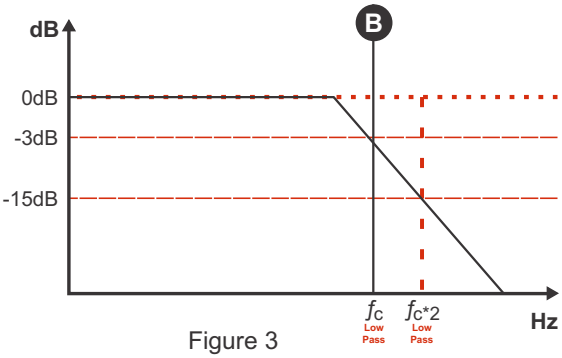


Figure 3

To use the bandpass filter as in "Figure 4", select the key in the "FULL" position and the "HIGH" variable control at the frequency where you want to start the band between 5Hz and 80Hz (A) and the "LOW" variable control in the frequency where you want to end the band between 50Hz and 500Hz (B).

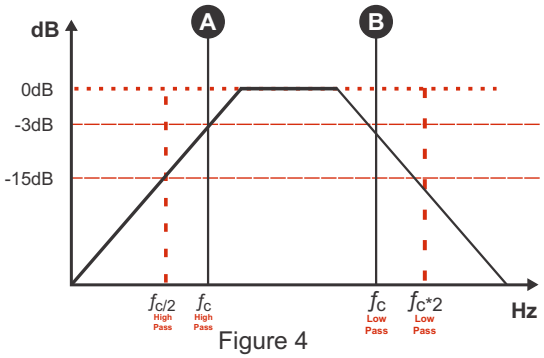
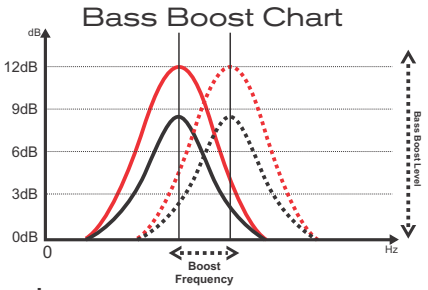


Figure 4

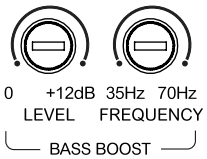
The selection key in the "ON" and "FULL" positions acts only on the "LOW" crossover (low pass), turning it on and off respectively. The "MUTE" position, when activated, cuts the audio from the amplifier.

Using Bass Boost

Bass Boost controls allow the user to increase the intensity of the sound at low frequencies, where the intensity can be adjusted, as well as the frequency of the region to be amplified, as indicated in the graph. This is a semiparametric equalizer circuit with a "Q" value for the fixed filter, with intensity increase adjustment from 0 to + 12dB (16 times), and central filter frequency adjustment between 35 and 70Hz, making it versatile for various types of sound systems.



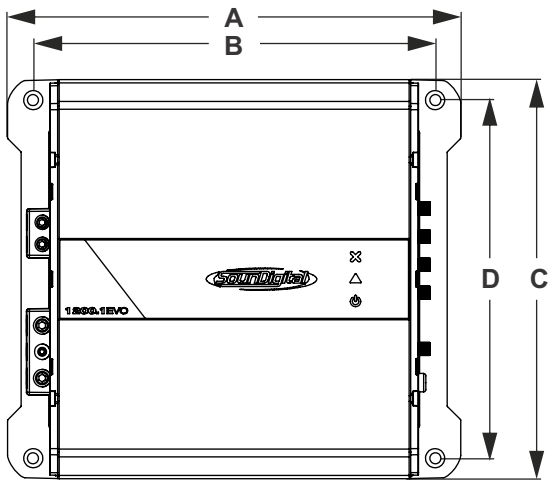
How to adjust the Bass Boost



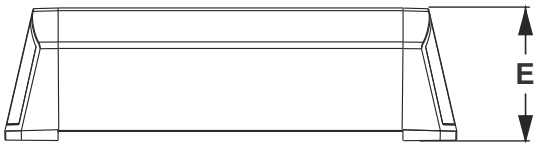
Play your favorite music and set the frequency you want to increase between 35Hz and 70Hz on the "FREQUENCY" variable control. Set the intensity between 0dB and + 12dB on the "LEVEL" variable control according to your personal taste.

PARAMETERS	1200.1 EVO4.0 1Ω	1200.1 EVO4.0 2Ω
Power RMS @ 4Ω*	363W	660W
Power RMS @ 2Ω*	660W	1200W
Power RMS @ 1Ω*	1200W	N/A
Frequency Response (-3dB)	5Hz ~ 20kHz	5Hz ~ 20kHz
Low Pass filter (LP -12dB/8)	50Hz - 500Hz	50Hz ~500Hz
High Pass filter (HP -12dB/8)	5Hz ~80Hz	5Hz ~80Hz
Operating Voltage	8V ~ 16V	8V ~ 16V
SNR	99dB	99dB
Input Sensitivity	0.2 ~ 4V	0.2 ~ 4V
Current Draw (music)	63A	63A
Current Draw (Max @ 1kHz -12,6V)	127A	127A
Total Efficiency	75%	75%
Damping Factor (@100Hz nominal impedance)	>1000	>1000
Minimum Impedance	1Ω	2Ω
Fuse (music)	70A	70A
Recommended Battery (minimum)	70Ah	70Ah

DIMENSIONAL DATA



DIMENSIONS		
A	205mm	8.0"
B	182mm	7.1"
C	181mm	7.1"
D	162mm	6.3"
E	57mm	2.2"
Net Weight	1.3kg	2.8lbs



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