



# ELITE

**SE1200.1DF**

**SE2100.1DF**

**SE3100.1DF**

**SE5100.1DF**

**3 BASSHABIT**

# THANK YOU!

Thank you for purchasing this SPL Elite Class D full bridge amplifier from Bass Habit. Please read this manual in order to fully understand how to get the best result from this product and ensure that the advices on how to look after the product and the safety precautions are followed. We hope you enjoy using the product as much as we enjoyed creating it.

Before mounting and installing your new amplifier, please read through the whole user manual. If you have any questions concerning your amplifier or any other Bass Habit products, contact your nearest Bass Habit dealer/distributor.

## UNPACKING

### INCLUDED IN THE PACKAGING

- Mono amplifier
- Bass level remote
- Bass level remote cable 5M
- Screws 6pcs
- Allen keys 2pcs
- User manual
- Bass Habit sticker

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# SAFETY & WARRANTY

## **DO NOT EXPOSE THIS PRODUCT TO EXCESSIVE DAMP OR MOISTURE**

- Doing so may result in shock or damage to the product.

## **BEFORE WIRING, DISCONNECT THE CABLE FROM THE NEGATIVE BATTERY TERMINAL**

- Failure to do so may result in electric shock or injury.

## **ENSURE GOOD AND CORRECT CONNECTIONS**

- Failure to make the correct connections may result in permanent damage to the product.

## **DO NOT USE ANY FUNCTIONS THAT MAY TAKE YOUR CONCENTRATION AWAY FROM DRIVING YOUR VEHICLE**

- Do not setup your amplifier whilst driving. Doing so may result in an accident. For prolonged interaction with the product, make sure that your vehicle is stationary and parked in a safe location.

## **CAUTION**

Never connect any speaker lead to the car chassis. This can cause severe damage to your car audio setup. Before drilling or cutting any holes, investigate the layout of your vehicle thoroughly. Use caution when working near the fuel/hydraulic lines and electrical wiring. Observe the correct polarity when wiring. Improper phasing may cause a loss of bass response. Ensure that no moving parts get caught on the subwoofer or grill.

## **WARRANTY**

All Bass Habit products carry a full warranty depending on the conditions in the country where it is sold. The warranty is valid from the date of the original receipt as proof of purchase (warranty period differs depending on local warranty laws and policies). Contact your international Bass Habit dealer or distributor concerning specific procedure for your country's warranty policies.

## **WHAT IS NOT COVERED**

- Damage to product due to improper installation.
- Subsequent damage to other components.
- Damage caused by exposure to moisture, excessive heat, chemical cleaners and/or UV radiation.
- Damage through negligence, missuse, accident or abuse. Repeated returns for the same fault may be considered as abuse.
- Any cost or expense related to the removal and/or abuse. Repeated returns for the same fault may be considered as abuse.
- Damage caused by amplifier clipping or distortion.
- Items repaired or modified by any unauthorised repair facility.
- Return shipping on non-defective items.
- Products returned without a return authorisation number.
- Damage to product due to use of sealant.

## **WARNING**

Bass Habit equipment is capable of sound pressure levels that can cause permanent damage to your hearing and those around you. Please use common sense when listening to your audio system and practice safe sound. Keep the volume at a level so you can still hear outside noise. Failure to do this may result in an accident. Bass Habit recommends caution when listening at a high volume. For safety and enjoyable listening, the sound should be clear without distortion.

## **INTERNATIONAL TECHNICAL ENQUIRIES**

For international technical support please contact the dealer/distribution agent for your country.

# INSTRUCTIONS

## INSTALLATION EXPERIENCE

Installation of Bass Habit amplifiers may require experience with a variety of mechanical procedures including cable wiring, drilling, etc. This manual only provides general installation and operation instructions. If you have any reservations about your installation skills, please contact your local authorized Bass Habit dealer for help.

## CHOOSING AMPLIFIER MOUNTING LOCATIONS

Choose a mounting location in an area where the amplifier will not be damaged, and where the amplifier is not covered up. Mount the amplifier so that it remains dry - never mount an amplifier outside the vehicle or in the engine compartment. Amplifier cooling is essential for proper amplifier operation. If the amplifier is to be installed in an enclosed space, make sure there is sufficient air circulation for the amplifier to cool itself. When mounting the amplifier under a seat, ensure that it is clear of all moving parts and does not affect the seat functionality. Make sure that the amplifier is mounted securely using nuts and bolts or the supplied mounting screws.

**WARNING! DO NOT START the amplifier WITHOUT a load on the speaker output terminals.**

Ignoring to do so can potentially result in a circuit failure in the start up mode sequence and leave the amplifier stuck in protect mode (see specifications for correct impedance).

## INSTALLATION PRECAUTIONS

NOTE! Proceed only if you are a qualified installer, otherwise let your dealer do it.

- Always wear protective eyewear when using tools.
- Turn off all stereo and other electrical devices before you begin.
- Disconnect the (-) negative lead from your vehicle's battery.
- Keep the amplifier in the package until final installation, and always rest it upwards.
- Never use force when installing a amplifier.
- Locate all fuel lines, brake lines, oil lines and electrical cables when planning your installation.
- Check clearances on both sides of a planned mounting surface before drilling any holes or fixing screws.
- When routing cables, keep input-signal cables away from power cables and speaker wires.
- When making connections, make certain all cables are secure and properly insulated.

## STEP 1) POWER CONNECTIONS

The Bass Habit SPL Elite amplifiers are capable of delivering extremely high power levels and require a heavy-duty and reliable connection to the vehicle's electrical system. To get the very best performance out of your Bass Habit SPL Elite amplifier, carefully follow the instructions below:

### GROUND CONNECTION (GND):

Connect the amplifiers Ground (GND) terminal to a solid point on the vehicles metal chassis, as close to the amplifiers as possible. Scrape away any paint from this location; use a star-type lock washer to secure the connection.

Ground wire recommended size:

SE1200.1DF: 4 awg/ 20mm<sup>2</sup>

SE3100.1DF: 0 awg/ 50mm<sup>2</sup>

SE2100.1DF: 2 awg/ 35mm<sup>2</sup>

SE5100.1DF: 2 x 0 awg/ 2 x 50mm<sup>2</sup>

### POWER CONNECTION (+12V):

Connect a wire directly to the vehicles positive battery terminal, and install an appropriate fuse and holder within 30cm/12" from the battery terminal. Keep the fuse uninstalled at the time for routing and connecting the power wire. Be sure to use grommets whenever routing wires through the firewall or other metal parts. When routing/connecting is done, installation of the fuse into fuse holder can be finalised.

+12V wire recommended size:

SE1200.1DF: 4 awg/ 20mm<sup>2</sup>

SE3100.1DF: 0 awg/ 50mm<sup>2</sup>

SE2100.1DF: 2 awg/ 35mm<sup>2</sup>

SE5100.1DF: 2 x 0 awg/ 2 x 50mm<sup>2</sup>

### REMOTE CONNECTION (REM):

Connect the amplifiers Remote (REM) terminal to the source unit Remote turn on lead using a minimum of 0.75mm<sup>2</sup>/18 gauge wire. If your source unit does not have a turn on connection, connect the amplifier (REM) terminal through a power switch button which can provide a +12V signal.

Remote wire maximum accepted size for terminal:

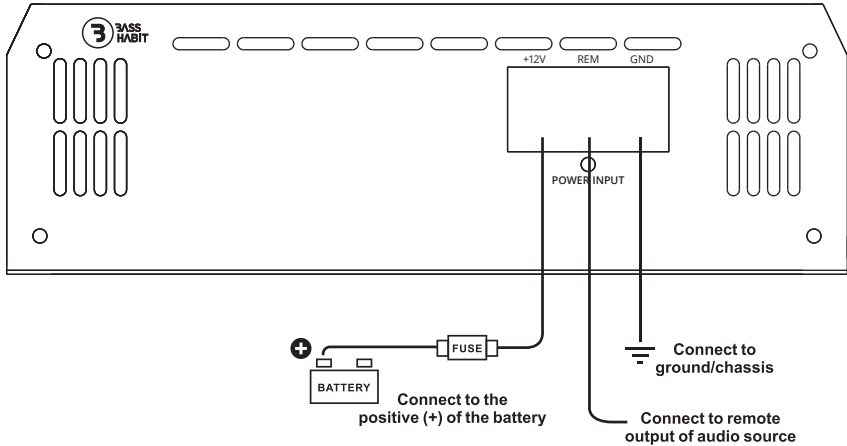
SE1200.1DF: MAX 10 awg/ 6mm<sup>2</sup>

SE3100.1DF: MAX 10 awg/ 6mm<sup>2</sup>

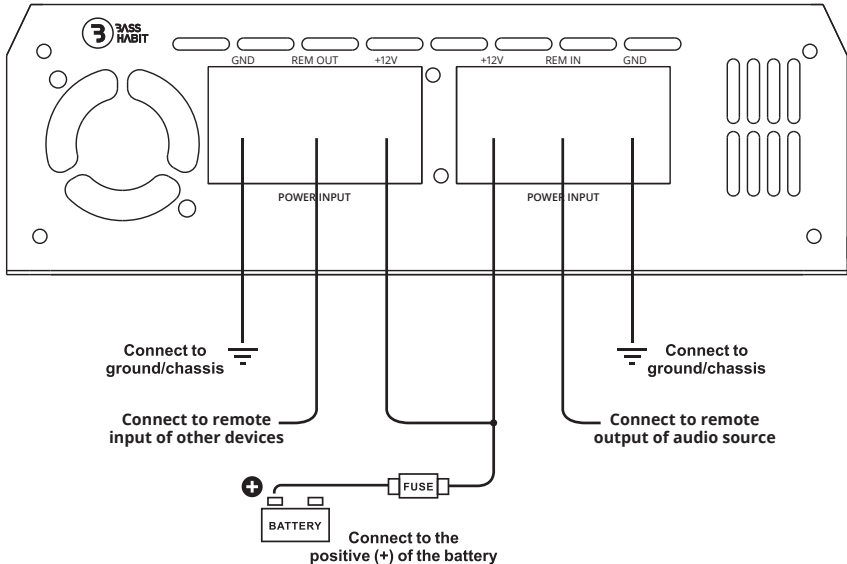
SE2100.1DF: MAX 10 awg/ 6mm<sup>2</sup>

SE5100.1DF: MAX 10 awg/ 6mm<sup>2</sup> (IN) / 10 awg/ 6mm<sup>2</sup> (OUT)

### FIG 1: POWER CONNECTIONS



### FIG 1.5: POWER CONNECTIONS FOR SE5100.1DF



**NOTE! SE series amplifiers do not come with internal or external fusing.**

Always make sure you install appropriate inline fusing on the positive power source side.

Recommended external fuse size:

SE1200.1DF: 80A-100A

SE3100.1DF: 250A

SE2100.1DF: 150A

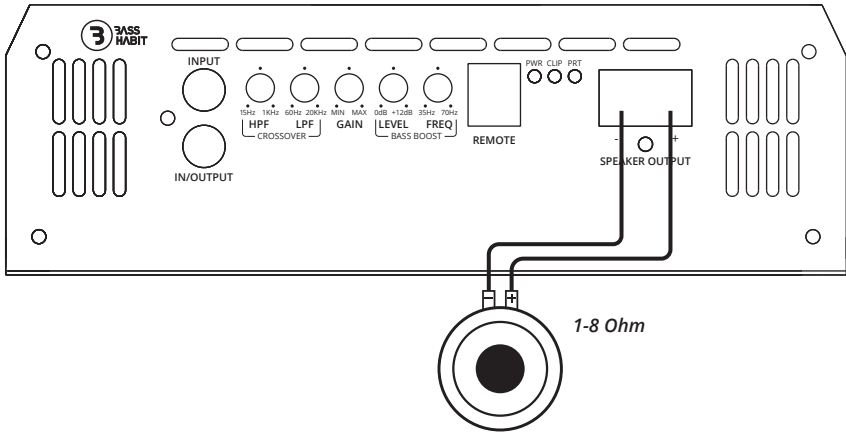
SE5100.1DF: 2x250A

## STEP 2) SPEAKER CONNECTIONS

### SPEAKER CONNECTIONS (SPEAKER OUTPUT):

Speaker connections should be made using a minimum of 16 awg/1,25mm<sup>2</sup> wire. The terminal accepts up to 8 awg/10mm<sup>2</sup>. Minimum total allowed impedance load is 1 ohm depending on model.

**FIG 2: SPEAKER CONNECTIONS**



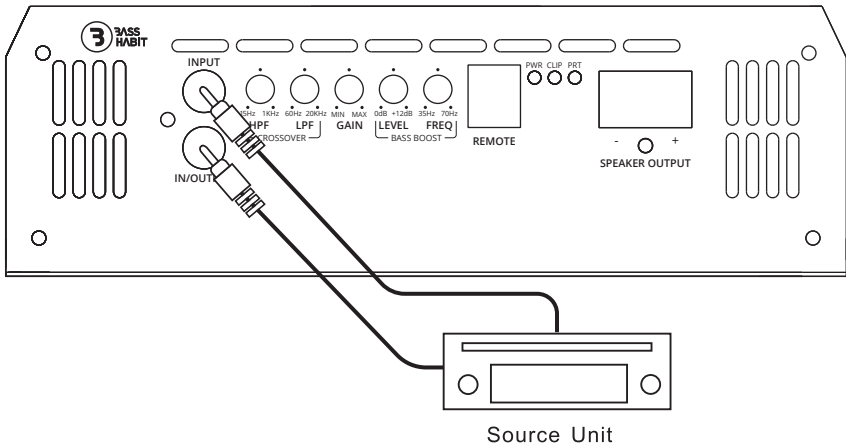
**WARNING! DO NOT START the amplifier WITHOUT a load on the speaker output terminals.** Ignoring to do so can potentially result in a circuit failure in the start up mode sequence and leave the amplifier stuck in protect mode (see specifications for correct impedance).

## STEP 3) SIGNAL CONNECTIONS

### SIGNAL CABLE CONNECTION (SIGNAL INPUT):

Use high quality RCA signal cables to make sure you get the full audio experience.

**FIG 3: SIGNAL CABLE CONNECTIONS**





# CONTROL PANEL

## **FRONT PANEL (SEE FIG 4 ON THE NEXT PAGE)**

Bass Habit SPL Elite amplifiers can be used for speakers and subwoofers in the range between 15Hz - 20KHz.

While listening to music, adjust the gain/crossover/subsonic/bass boost for the least perceived distortion from the speakers, allowing them to reproduce as much bass as possible.

### **Input level control (GAIN):**

GAIN control is a seamless adjustable between 0,2V - 5V.

Tips for adjusting the GAIN control correctly:

- Initially turn the GAIN control to minimum (counter clockwise).
- On the source unit, increase the volume control to the 3/4 of maximum volume.
- Slowly increase the GAIN control until you hear slight distortion in the speaker/speakers and the Clipping LED on the amplifier starts to flash or is lit.
- Then reduce the GAIN slightly until distortion is no longer heard or the Clipping LED no longer flashes or is lit.

### **Bass Boost control (BASS BOOST):**

Bass Boost is seamless adjustable between 0-12 db (35Hz - 70 Hz)

*Please use the BASS BOOST knob with care, excessive use can damage you system!*

### **LPF Crossover (LPF):**

The low pass filter is seamless adjustable between 60Hz - 20KHz. When using a subwoofer, set the frequency cut point at 60Hz and adjust to your own preferences.

### **HPF Crossover (HPF):**

The high pass filter is seamless adjustable between 15Hz-1KHz. The HPF can be used for removing the deepest bass notes from the subwoofer, get a tighter and more rhythmical sound. For a normal setup the HPF should be adjusted to the "15 Hz" setting.

### **Remote Level Control (REMOTE):**

Included with the Bass Habit SPL Elite two channel and five channel amplifier is a wired subwoofer remote volume control with a clipping indicator. This allows you to adjust the level from your listening position. Install the controller at a convenient position close to the driver seat, and connect it to the REMOTE jack on the amplifier. **NOTE!** The level control will attenuate from the lowest gain to the highest previously set on the amplifier.

### **Power status, Clipping & Protection LED:**

- PWR = Power LED lights up when the amplifier is turned on. Normally during the start-up sequence the PWR, CLIP and PRT lights will flash as a self test procedure.
- CLIP = Clipping LED flashing or solid. This light is an indicator of distortion in the gain structure and can possibly damage your speakers. Turn down your remote level controller or gain knob.
- PRT = Protect LED light flashing or solid. This light is an indicator of the protect mode status, see the trouble shooting section of the manual for more information.

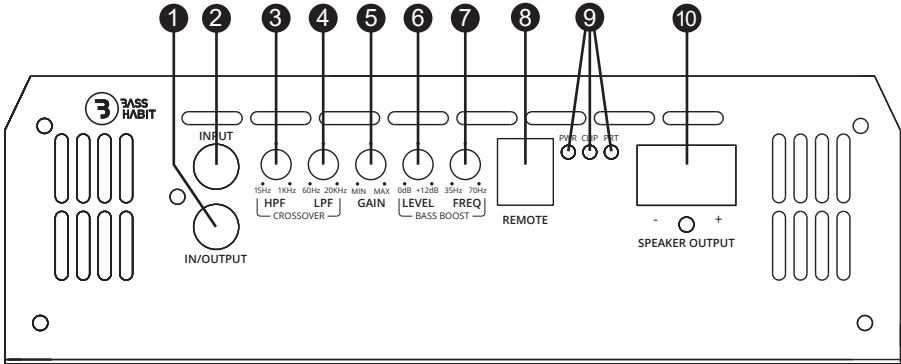
### **Line Input:**

Connect the line outputs from your source unit and connect to the Line L and R inputs.

### **Line Output:**

Bass Habit SPL Elite class D mono amplifiers are equipped with full-range output that can be used to connect additional amplifiers.

**FIG 4: FRONT PANEL**



1	RCA signal input/output	Connect the RCA signal wire from the audio source / head unit (Input) Connect another amplifier (using an RCA cable) (Output)
2	RCA signal input	Connect the RCA signal wire from the audio source / head unit
3	High pass filter (HPF)	Adjust the High pass filter's crossover point (15KHz - 1KHz)
4	Low pass filter (LPF)	Adjust the Low pass filter's crossover point (60Hz - 20KHz)
5	Gain	Adjust the Gain level (0,2-5V)
6	Bass boost level (LEVEL)	Adjust the bass boost level between 0-12 dB
7	Bass boost frequency (FREQ)	Adjust the bass boost's center frequency (35Hz - 70Hz)
8	Subwoofer remote volume control input	Input for connection of the bass remote control
9	Power status, Clipping & Protection LED	Indicating the power & clipping status and activated protection mode
10	Speaker wire terminal	Connect to a speaker/subwoofer

# SPECIFICATIONS

	<b>SE1200.1DF</b>	<b>SE2100.1DF</b>
Component	<b>Class D full bridge amplifier</b>	<b>Class D full bridge amplifier</b>
Number of channels	<b>1 channel (mono)</b>	<b>1 channel (mono)</b>
Power output @ 1 ohm	<b>1200W RMS *</b>	<b>2100W RMS *</b>
Power output @ 2 ohm	<b>800W RMS *</b>	<b>1450W RMS *</b>
Power output @ 4 ohm	<b>500W RMS *</b>	<b>850W RMS *</b>
Power output MAX	<b>2400W MAX</b>	<b>4200W MAX</b>
Input sensitivity	<b>0,2 - 5V</b>	<b>0,2 - 5V</b>
S/N	<b>100dB</b>	<b>100dB</b>
Frequency response	<b>15Hz - 20KHz</b>	<b>15Hz - 20KHz</b>
LPF crossover control	<b>60Hz - 20KHz</b>	<b>60Hz - 20KHz</b>
HPF crossover control	<b>15Hz - 1KHz</b>	<b>15Hz - 1KHz</b>
Operation voltage	<b>10.5V - 15.5V DC</b>	<b>10.5V - 15.5V DC</b>
Fuse	<b>N/A</b>	<b>N/A</b>
Recommended Fuse	<b>80-100A</b>	<b>150A</b>
Bass Level Remote with clipping indicator	<b>Included</b>	<b>Included</b>
Measurements	<b>151x209x67mm</b>	<b>191x209x67mm</b>
Cooling system	<b>Smart thermal management system (STMS)</b>	<b>Smart thermal management system (STMS)</b>
Protection system	<b>4 Way Protection Circuit (Thermal, DC Offset, Voltage &amp; Speaker short)</b>	<b>4 Way Protection Circuit (Thermal, DC Offset, Voltage &amp; Speaker short)</b>

\* RMS Power at 14.4 V, THD 1%

# SPECIFICATIONS

	<b>SE3100.1DF</b>	<b>SE5100.1DF</b>
Component	<b>Class D full bridge amplifier</b>	<b>Class D full bridge amplifier</b>
Number of channels	<b>1 channel (mono)</b>	<b>1 channel (mono)</b>
Power output @ 1 ohm	<b>3100W RMS *</b>	<b>5100W RMS *</b>
Power output @ 2 ohm	<b>1900W RMS *</b>	<b>3100W RMS *</b>
Power output @ 4 ohm	<b>1050W RMS *</b>	<b>2100W RMS *</b>
Power output MAX	<b>6200W MAX</b>	<b>10200W MAX</b>
Input sensitivity	<b>0,2 - 5V</b>	<b>0,2 - 5V</b>
S/N	<b>100dB</b>	<b>100dB</b>
Frequency response	<b>15Hz - 20KHz</b>	<b>15Hz - 20KHz</b>
LPF crossover control	<b>60Hz - 20KHz</b>	<b>60Hz - 20KHz</b>
HPF crossover control	<b>15Hz - 1KHz</b>	<b>15Hz - 1KHz</b>
Operation voltage	<b>10.5V - 15.5V DC</b>	<b>10.5V - 15.5V DC</b>
Fuse	<b>N/A</b>	<b>N/A</b>
Recommended Fuse	<b>250A</b>	<b>2x250A</b>
Bass Level Remote with clipping indicator	<b>Included</b>	<b>Included</b>
Measurements	<b>211x209x67mm</b>	<b>291x209x67mm</b>
Cooling system	<b>Smart thermal management system (STMS)</b>	<b>Smart thermal management system (STMS)</b>
Protection system	<b>4 Way Protection Circuit (Thermal, DC Offset, Voltage &amp; Speaker short)</b>	<b>4 Way Protection Circuit (Thermal, DC Offset, Voltage &amp; Speaker short)</b>

\* RMS Power at 14.4 V, THD 1%

# TROUBLESHOOTING

## TROUBLESHOOTING:

Symptom	Check / Control
No sound / No active PWR LED	<ul style="list-style-type: none"><li>• Check and measure voltage at +12V and REM terminals (allowed working range is 10.5-15.5V DC).</li><li>• Check and measure ground connections.</li><li>• Check external fuse.</li><li>• Check input signal and cables from source unit.</li><li>• Check speaker wires and terminals.</li></ul>
Noise or Distorted sound / Low output	<ul style="list-style-type: none"><li>• Check crossover/input level/control knobs and switches.</li><li>• Check ground connections of all installed audio equipment, (source unit, dsp etc.).</li><li>• Check speaker wires for possible short circuit.</li><li>• Check impedance load of the speaker/speakers according to the manual.</li><li>• Check speaker connections for proper polarity.</li></ul>
Amplifier Protection mode (PRT)	<ul style="list-style-type: none"><li>• Check impedance load of the speaker/speakers according to the manual.</li><li>• Check chassis ground connections.</li><li>• Check speaker wires for possible short circuit.</li><li>• Check power input voltage (allowed working range is 10.5-15.5V DC).</li><li>• Check RCA input voltage (allowed range is 0,2-5V).</li><li>• Check RCA cable for possible short circuit.</li></ul>



The crossed-out wheeled bin symbol means that the product, literature and packaging included must be taken to separate collection at the end of their working life. Do not dispose of these products as unsorted municipal waste: dispose of them at a recycling point. For info on your nearest recycling point, check with your local waste authority.

Products marked with the RoHS symbol complies with the relevant provisions of the RoHS Directive for the European Union. In common with all Electrical and Electronic Equipment (EEE) the product should not be disposed of as household waste. Alternative arrangements may apply in other jurisdictions.

The product with the CE mark indicates that it has passed the corresponding conformity assessment procedure and the manufacturer's declaration of conformity, and it complies with the relevant EU directives, and is used as a pass for the product to be allowed to enter the European Community market. Relevant directives require industrial products to be affixed with the CE mark. Those that do not have the CE mark shall not be marketed.

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