Winn Scandinavia AB
Idrottsvägen 37, 702 32 Örebro
Sweden
www.winnscandinavia.com

BASS HABIT

REBEL

RA500W: Rebel Class AB 2-Channel Amplifier
2 X 125W RMS / 2 X 250W MAX

RA800W: Rebel Class AB 4-Channel Amplifier
4 X 100W RMS / 4 X 200W MAX

RA1200W: Rebel Class D Mono Amplifier
1 X 600W RMS / 1 X 1200W MAX

RA2000W: Rebel Class D Mono Amplifier
1 X 1000W RMS / 1 X 2000W MAX

RA3600W: Rebel Class D Mono Amplifier
1 X 1800W RMS / 1 X 3600W MAX

REBEL RA AMPLIFIER USER MANUAL

TABLE OF CONTENT

INTRODUCTION

CONGRATULATIONS! Thanks for buying BASS HABIT.

Please read this manual in order to fully understand how to get the best result from this amplifier and ensure that the advices on how to look after it and the safety precautions are followed. We hope you enjoy using the amplifier 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.

INCLUDED IN THE PACKAGING

- **Amplifier**
- **Fuses (Not included in RA3600W)**
- **Screws 4pcs**
- **User manual**
- **Bass Remote control** **(Included in RA1200W/RA2000W/RA3600W)**
- **Bass Remote control cable** **(Included in RA1200W/RA2000W/RA3600W)**

SAFETY & WARRANTY

CAUTION & WARNING

Before wiring, disconnect the cable from the negative battery terminal.
Ensure good and correct connections.
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.
Do not expose this product to excessive damp or moisture

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

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.

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, misuse, 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.

INSTALLATION INSTRUCTIONS

INSTALLATION EXPERIENCE
Installation of Bass Habit amplifiers may require experience with a variety of mechanical procedures including cable wiring, drilling, etc.. 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.

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.
- 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.

POWER CONNECTIONS

Bass Habit amplifiers are capable of delivering extremely high power levels and require a heavy duty and reliable connection to the vehicle's electrical system to work properly, carefully follow the instructions below:

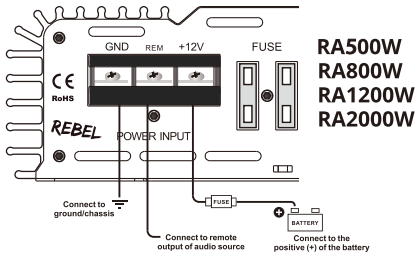
POWER CONNECTION (+12V):
Connect a wire directly to the vehicles positive battery terminal, and install an appropriate fuse and holder within 30cm/12" from the battery terminal. Keep the fuse uninstalled at the time for routing and connecting the power wire. Be sure to use grommets whenever routing wires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

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.

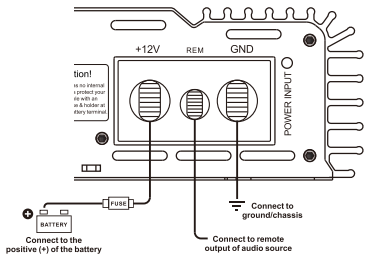
Minimal 12V+ Power / Ground wires recommended sizes:
• RA500W/RA800W: 8AWG /10mm² • RA1200W: 4AWG /20mm² • RA2000W/RA3600W: 2AWG /33mm²

REMOTE CONNECTION (REM):
Connect the amplifiers Remote (REM) terminal to the source unit remote turn on lead using a minimum of 0.75mm²/18 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.

POWER CONNECTIONS



RA500W
RA800W
RA1200W
RA2000W



RA3600W

SPEAKER CONNECTIONS

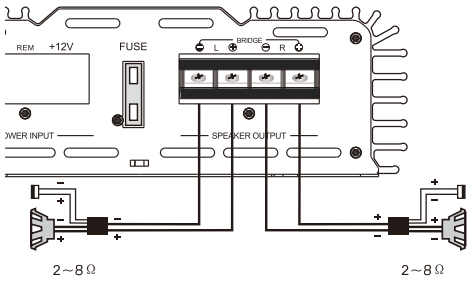
Speaker output connections should be made using a minimum of 16 AWG / 1.25mm² wires. The terminal accepts up to 8 AWG/10mm².

Minimum total allowed impedance load is:

RA500W :	**2 Ohm stereo / 4 Ohm Bridge/ mono mode.**
RA800W :	**2 Ohm stereo / 4 Ohm Bridge/ mono mode.**
RA1200W / RA2000W / RA3600W:	**1 Ohm mono mode**

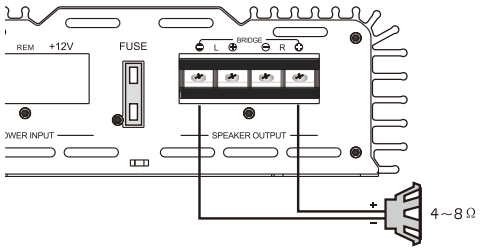
2-CHANNEL STEREO SPEAKER SYSTEM

RA500W

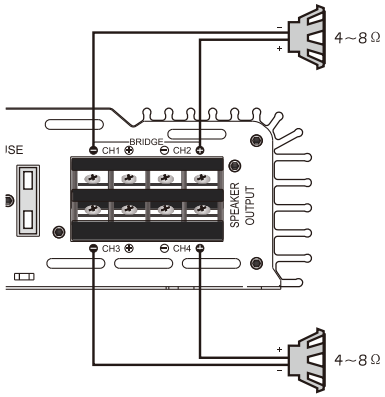


2-CHANNEL MONO BRIDGE MODE

RA500W

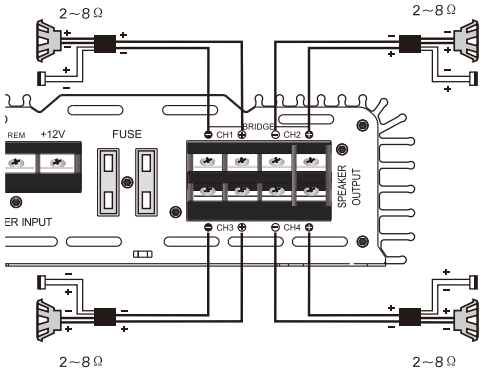


2-CHANNEL MONO BRIDGE MODE



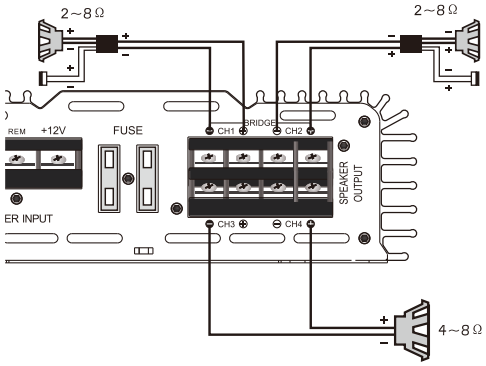
RA800W

4-CHANNEL STEREO SPEAKER SYSTEM



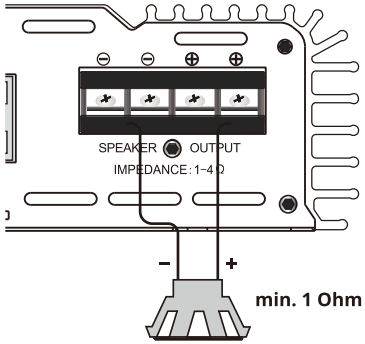
RA800W

3-CHANNEL STEREO+BRIDGE MODE

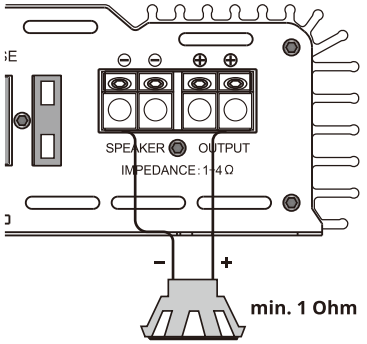


RA800W

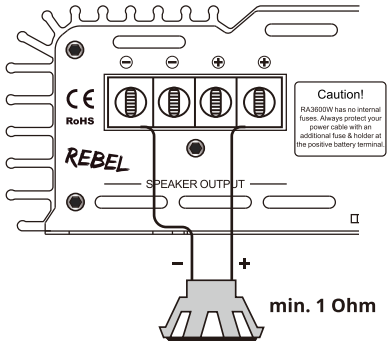
MONO CHANNEL SUBWOOFER SYSTEM (1 SUBWOOFER)



RA1200W

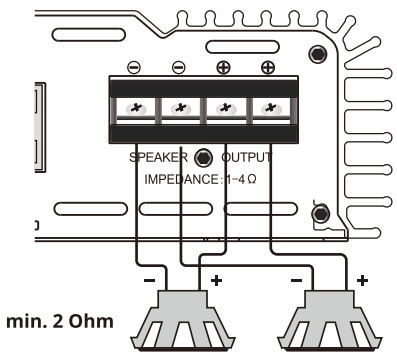


RA2000W



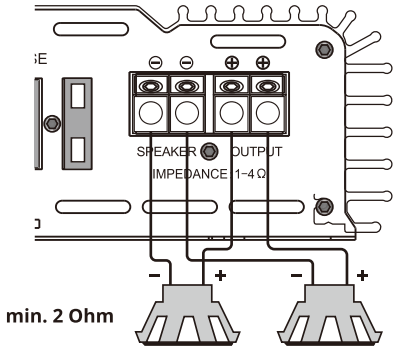
RA3600W

MONO CHANNEL SUBWOOFER SYSTEM (2 SUBWOOFER)



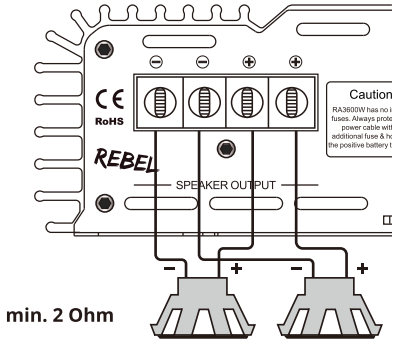
RA1200W

min. 2 Ohm **min. 2 Ohn**



RA2000W

min. 2 Ohm **min. 2 Ohm**



RA3600W

min. 2 Ohm **min. 2 Ohm**

SIGNAL CONNECTIONS

Use high quality RCA jacks cable to make sure that you get the full audio experience.

CONTROL PANEL

Bass Habit 2 & 4 channel amplifiers can be used for speakers and subwoofers.
Bass Habit 1 channel amplifier can normally be used for subwoofers.

Input level control (GAIN):

GAIN control is a seamless adjustable between 0.2V - 6V.
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.
- Then reduce the GAIN slightly until distortion is no longer heard.

Bass Boost control (BASS BOOST):
RA500W/RA800W: Bass Boost is adjustable between 0, 6, 12 db (@ 45Hz)
RA1200W/RA2000W/RA3600W: Bass Boost is variable adjustable between 0-12 dB(@ 45Hz)
Please use the BASS BOOST function with care, excessive use can damage your system!

Treble Boost control (Treble Boost):
RA500W: Treble boost is adjustable between 0, 6, 12dB @ 10KHz
Please use the TREBLE BOOST function with care, excessive use can damage your system!

LPF Crossover (LPF):
RA500W/RA800W: The low pass filter is seamless a djustable between 50Hz - 250Hz
RA1200W/RA2000W: The low pass filter is seamless adjustable between 32Hz - 250Hz
RA3600W: The low pass filter is seamless adjustable between 50Hz - 200Hz
Tip! When using a subwoofer, set the frequency cut point at 80Hz and adjust to your own preferences.

HPF Crossover (HPF & Subsonic):
RA500W/RA800W: The high pass filter is seamless adjustable between 32Hz – 2KHz, an can normally be used to remove and protect the subwoofer notes from midrange/coaxial and similar speakers. 80Hz is a good starting point.

RA1200W/RA2000W: The subsonic filter can be adjusted variable between 15Hz-50Hz and are intended for removing the deepest bass notes from the system. With the subsonic filter in use, it's possible to protect and get a tighter and more rhythmical sound from the subwoofer. 20Hz is a good starting point.

RA3600W: The subsonic filter can be adjusted variable between OFF-50Hz and are intended for removing the deepest bass notes from the system. With the subsonic filter in use, it's possible to protect and get a tighter and more rhythmical sound from the subwoofer. 20Hz is a good starting point.

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

Power status & Protection LED:
• POW = Power LED lights up when the amplifier is turned on.
• PRO = 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.

RA3600W Bridge In/Output (BRIDGE IN/OUT)

Two separate Bass Habit RA3600W (same model) can be linked to power a minimum 2 ohm subwoofer setup for increased power output. Follow these instructions carefully, if not carried out correctly you may permanently damage your products.

The power cables on both amplifiers need to be of the same size and quality. Consult your local Bass Habit dealer to make sure that you have the right size cables and fuses.

The settings on the main amplifier (AMP1 in the illustration) will be operational, the settings (gain, crossover etc.) on the linked amplifier (AMP2 in the illustration) will not.

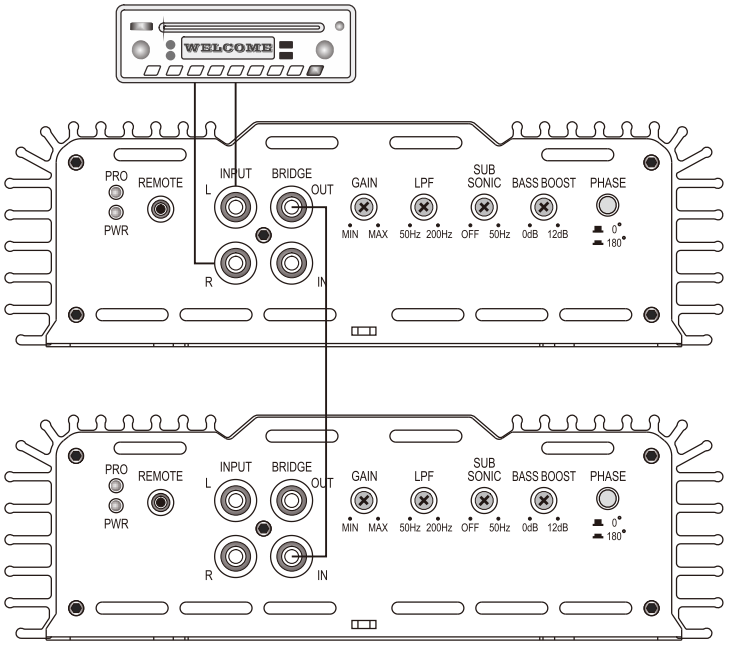
Use a high-quality RCA cable to connect the two amplifiers, the link connects from the BRIDGE OUT On AMP1 to BRIDGE IN on AMP2. Connect as the illustration.

Connect the negative (-) speaker terminals on each amplifier, AMP1 negative (-) speaker terminal output to AMP2 negative (-) speaker terminal output.

Connect the AMP1 positive (+) speaker terminal to the positive (+) subwoofer input terminal
Connect the AMP2 positive (+) speaker terminal to the negative (-) subwoofer input terminal.

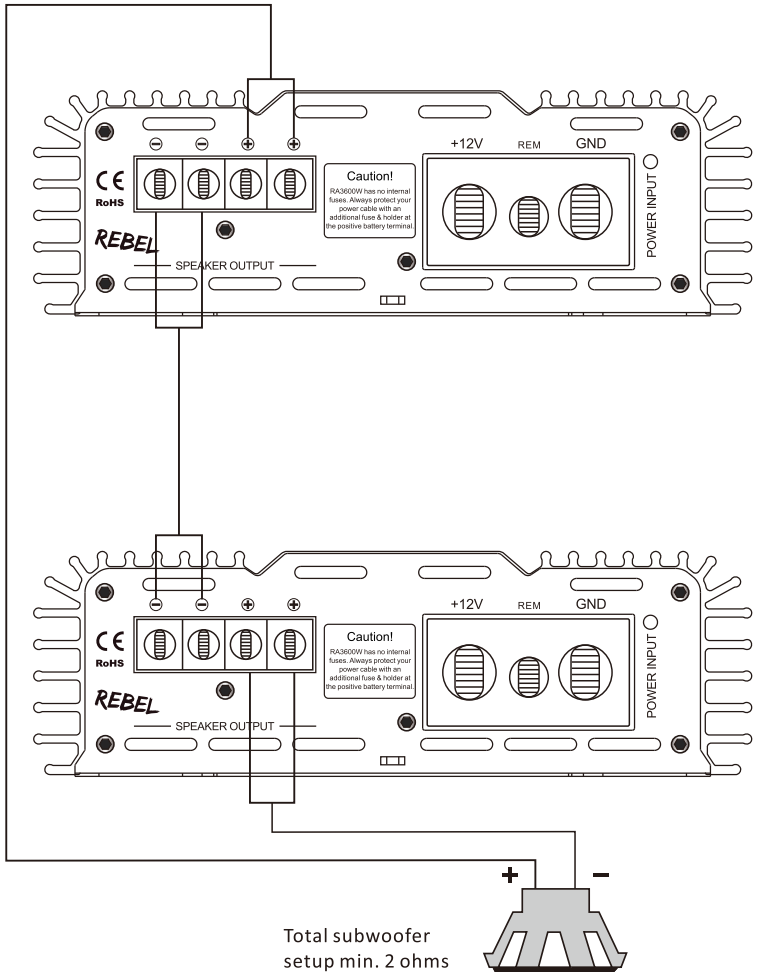
NOTE! The minimum impedance load is 2 Ohm.

The Bridge connection is only possible with two (2) Bass Habit RA3600W amplifiers.



RA3600W AMP1

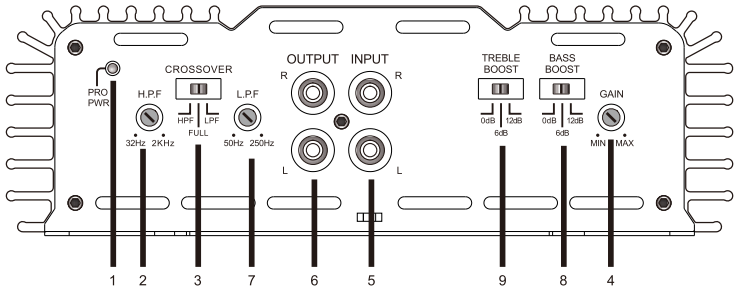
RA3600W AMP2



RA3600W AMP1

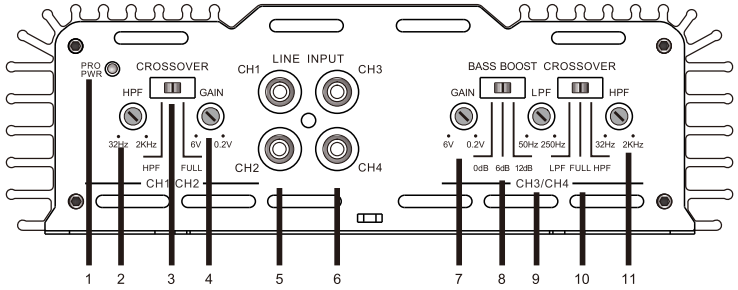
RA3600W AMP2

RA500W



1) POW Power indicator (Green) / PRT Protect indicator (Red)
2) HPF High Pass Filter 32-2000Hz (12dB/Oct)
3) HPF/FULL/LPF : Filter mode settings
4) GAIN: Gain control input signal adjustment 6V-0.2V
5) INPUT RCA
6) OUTPUT RCA (Daisy chaining the RCA's signal into another amplifier)
7) LPF Low Pass Filter 50-250Hz (12db/Oct)
8) BASS BOOST 0dB/6dB/12dB (45Hz)
9) TREBLE BOOST 0dB/6dB/12dB (10KHz)

RA800W

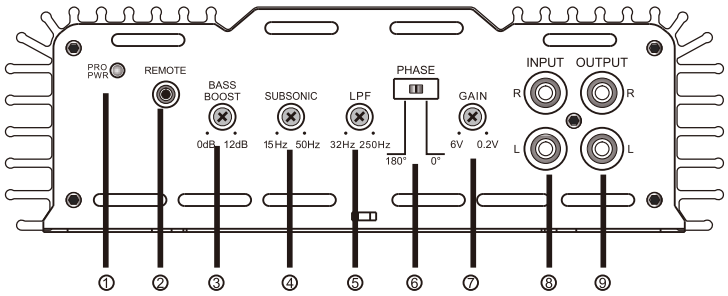


1) POW Power indicator (Green) / PRT Protect indicator (Red)
2) HPF High Pass Filter 32-2000Hz (12dB/Oct)
3) HPF/FULL: Filter mode settings
4) GAIN: Gain control CH 1/2 input signal adjustment 6V-0.2V
5) INPUT RCA CH 1/2
6) INPUT RCA CH3/4
7) GAIN: Gain control CH 3/4 input signal adjustment 6V-0.2V
8) BASS BOOST 0dB/6dB/12dB (45Hz)
9) LPF Low Pass Filter 50-250Hz (12db/Oct)
10) LPF/FULL/HPF Filter mode settings
11) HPF High Pass Filter 32-2000Hz (12dB/Oct)

SPECIFICATIONS

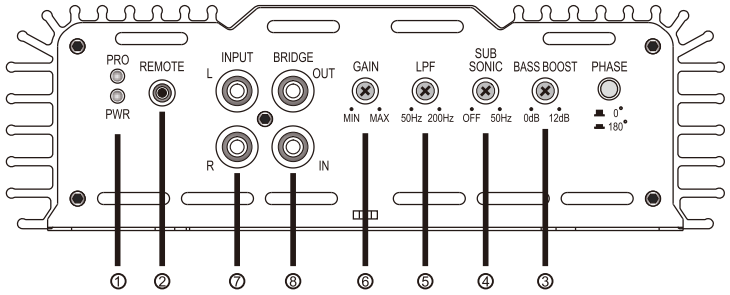
	RA500W	RA800W	
Component	CLASS AB amplifier	CLASS AB amplifier	
Number of channels	2 channels	4 channels	
Power output MAX	500W MAX	800W MAX	
Power output @1 ohm	N/A	N/A	
Power output @2 ohm	2x125W RMS*	4x100W RMS*	
Power output @4 ohm	2x75W RMS*	4x60W RMS*	
Bridged power @4 ohm	1x250W RMS*	2x200W RMS*	
RCA Output	Yes	N/A	
S/N	>90dB	>90dB	
Frequency response	15Hz-20Khz	15Hz-20Khz	
High Pass Filter	32Hz-2Khz	32Hz-2Khz	
Low Pass Filter	50Hz-250Hz	50Hz-250Hz	
Treble Boost	0/6/12 dB @ 10KHz	N/A	
Treble Boost frequency	10KHz	N/A	
Bass Boost	0dB/6dB/12dB	0dB/6dB/12dB	
Bass Boost frequency	45Hz	45Hz	
Input adjustment	0.2V-6V	0.2V-6V	
Operation voltage	10V-16V	10V-16V	
Fuse rating	1x30A	2x25A	
Protect	Short circuit protection		
	Overload protection		
	DC protection		
	Thermal protection		

* RMS Power @ 14.4 V, THD 1%



RA1200W
RA2000W

1) POW Power indicator (Green) / PRT Protect indicator (Red)
2) REMOTE: Bass Remote control input
3) BASS BOOST: 0-12dB (45Hz)
4) SUBSONIC: 15-50Hz (12 dB/Oct)
5)) LPF Low Pass Filter 32-250Hz (12db/Oct)
6) PHASE: 0 / 180 deg
7) GAIN: Gain control input signal adjustment 0.2V-6V
8) INPUT RCA R/L
9) OUTPUT RCA R/L (Daisy chaining the RCA's signal into another amplifier)



RA3600W

1) POW Power indicator (Green) / PRT Protect indicator (Red)
2) REMOTE: Bass Remote control input
3) BASS BOOST: 0-12dB (45Hz)
4) SUBSONIC: OFF-50Hz (12 dB/Oct)
5)) LPF Low Pass Filter 50-200Hz (12db/Oct)
6) GAIN: Gain control input signal adjustment 0.2V-8V
7) INPUT RCA R/L
8) BRIDGE IN/OUT

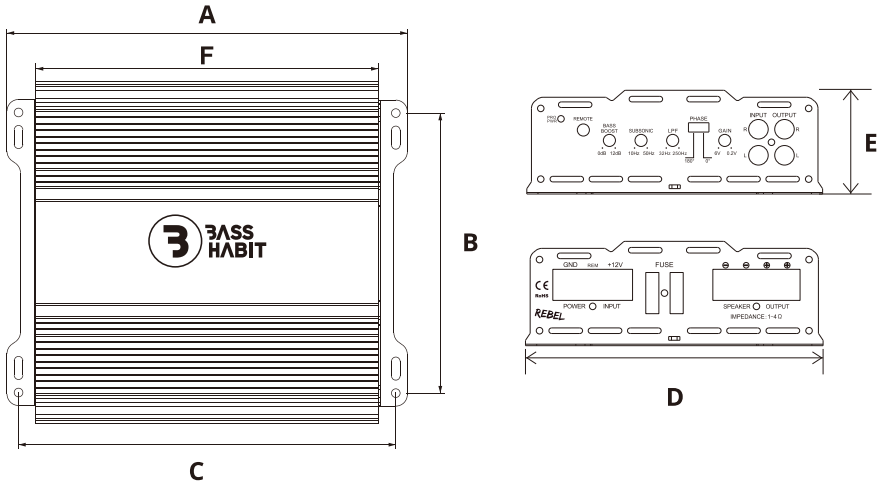
SPECIFICATIONS

	RA1200W	RA2000W	RA3600W
Component	CLASS D amplifier	CLASS D amplifier	CLASS D amplifier
Number of channels	1 channel	1 channel	1 channel
Power output MAX	1200W MAX	2000W MAX	3600W MAX
Power output @1 ohm	1x600W RMS*	1x1000W RMS*	1x1800W RMS*
Power output @2 ohm	1x400W RMS*	1x650W RMS*	1x1200W RMS*
Power output @4 ohm	1x230W RMS*	1x400W RMS*	1x700W RMS*
S/N	>90 dB	>90 dB	>95 dB
Frequency response	15Hz-250Hz	15Hz-250Hz	15Hz-200Hz
Bridge IN/OUT	N/A	N/A	YES
Output RCA	YES	YES	N/A
Low Pass Filter	32Hz-250Hz	32Hz-250Hz	50Hz-200Hz
Subsonic Filter	15Hz-50Hz	15Hz-50Hz	OFF-50Hz
Bass Boost	0dB-12dB	0dB-12dB	0dB-12dB
Bass Boost frequency	45Hz	45Hz	45Hz
Input adjustment	0.2V-6V	0.2V-6V	0.2V-8V
Operation voltage	10V-16V	10V-16V	10V-16V
Fuse rating	2x40A	3x40A	Fuse Recommendation 150A
Protect	Short circuit protection		
	Overload protection		
	DC protection		
	Thermal protection		

* RMS Power @ 14.4 V, THD 1%

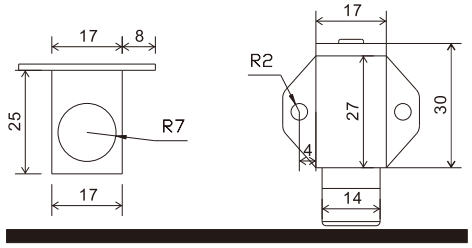
DIMENSIONS

Amplifier



MODEL	A	B	C	D	E	F
RA500W	227	145	215	177	56	198
RA800W	288	145	276	177	56	258
RA1200W	208	145	196	177	56	178
RA2000W	248	145	236	177	56	218
RA3600W	387	145	375	177	56	358

Bass Remote



Included in RA1200W/RA2000W/RA3600W

(mm)

TROUBLESHOOTING

Symptom	Check / Control
No sound / No active POWER LED	• Check and measure voltage at +12V and REM terminals (allowed working range is 10-16V DC). • Check and measure ground connections. • Check external fuse. • Check input signal and cables from source unit. • Check speaker wires and terminals.
Noise or Distorted sound / Low output	• Check crossover/input level/control knobs and switches. • Check ground connections of all installed audio equipment, (source unit, dsp etc.). • Check speaker wires for possible short circuit. • Check impedance load of the speaker/speakers according to the manual. • Check speaker connections for proper polarity.
Amplifier Protection mode (PROTECT)	• Check impedance load of the speaker/speakers according to the manual. • Check chassis ground connections. • Check speaker wires for possible short circuit. • Check power input voltage (allowed working range is 10-16V DC). • Check RCA input voltage (allowed range is 0.2-6V). • Check RCA cable for possible short circuit.

The crossed-out wheelie 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.

Winn Scandinavia reserves for possible typos, factual or numeric errors that may have been printed on any products, package designs, user manuals and/or other included accessories.

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. 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.