

Thank you for purchasing the Beat-Sonic Encore Alpha Plug & Play Car Audio Amplifier. Designed and made in Japan, this product represents our commitment to quality and excellence. Please read this manual carefully prior to installing this product to ensure proper operation.

■ Features

- Class AB high efficiency car audio amplifier
- Easy plug & play installation
- Retains factory head unit, speakers and connectors
- Full range RCA pre-outputs
- Manufactured using premium hi-fi audio grade components
- Made in Japan

■ Important

- This product is installed using factory harness connectors, however there are multiple factory harness connectors of the same size and shape. Do not plug into the wrong connector or serious damage may result. Contact Beat-Sonic if unsure.
- Check the Beat-Sonic website for the latest vehicle compatibility information before installing.
- Some vehicles may require extensive disassembly to install this product. Installation should be performed by an experienced motor vehicle technician or auto electrical professional.

■ Precautions

- This amplifier is suitable for negative ground 12V DC operation only.
- Wrap cables in protective electrical tape when routing near metal brackets and sharp edges.
- Do not install main unit or harness near moving mechanisms such as the steering column, seat rails, pedals etc.
- Do not install this product where it may get wet or in areas where it is likely to get dusty or dirty.
- Do not open, disassemble or modify this product.
- Ensure the car battery is in good condition. A weak battery will cause a significant drop in power output and sound quality.

■ Protection Circuit

This amplifier is equipped with a protection circuit that operates in the following conditions:

- When the speaker output terminals are short circuited.
- When the battery is connected in reverse polarity.
- When the amplifier is overheated.

If this occurs, turn off the ignition and determine the cause of the malfunction. In case of overheating, wait until the amplifier has cooled off before using it.

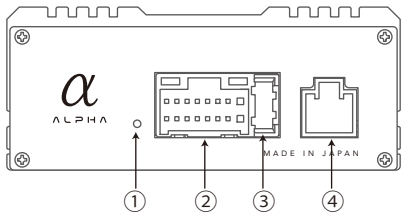
■ Contents

Amplifier x 1	Wiring Harness x 1	Double-Sided Tape x 2
Instruction Manual x 1	Padding Strips x 2	

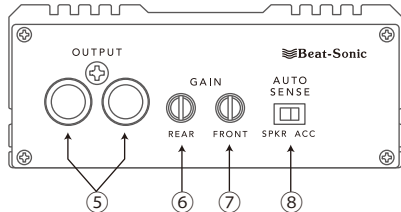
1 Specifications

Class AB amplifier	4 channels
Power output	50W (max) x 4ch (4Ω)
Speaker impedance	4 ~ 8Ω
Input sensitivity	0.5 ~ 5V
Bandwidth	15 ~ 80kHz (+0, -1dB)
Total harmonic distortion	0.01% (1kHz / 4 Ω)
Operating voltage	DC11V ~ 15V
Quiescent current	200mA
Fuse	15A
Audio input	Speaker High Level
Audio output	4 x Speaker Output 2 x RCA Line Level (3V)
Remote output	DC 12V (max. 100mA)
Protection	Short circuit / reverse polarity / heat protection
Dimensions	96mm (W) x 114mm (D) x 40mm (H)
Weight	420g (exc. harness)

2 Parts Location

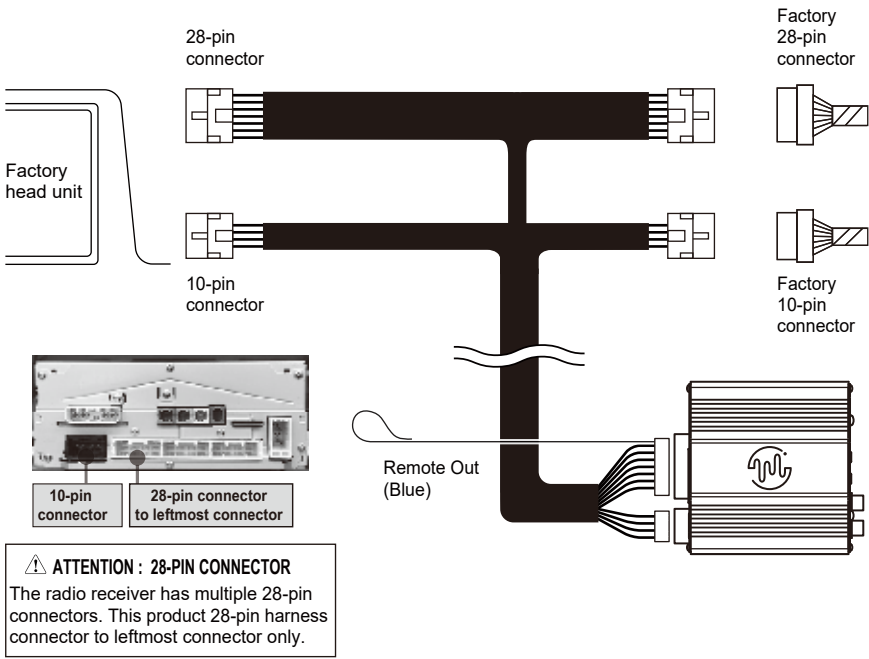


- ① Power Indicator
- ② Power / Speaker Output Connector
- ③ Fuse (15A)
- ④ High Level Input Connector



- ⑤ Full Range RCA Pre-Output
 - ⑥ Rear Channel Gain
 - ⑦ Front Channel Gain
 - ⑧ Auto Sense Switch
- SPKR** : Amp turns on with audio signal (DC offset)
ACC : Amp turns on with accessories (ACC signal)

3 Connection Diagram



4 Installation

4.1 Remove all necessary parts to gain access to the rear of the factory head unit. The method of disassembly varies for each vehicle. If unsure, please contact Beat-Sonic for advice for vehicle specific instructions.

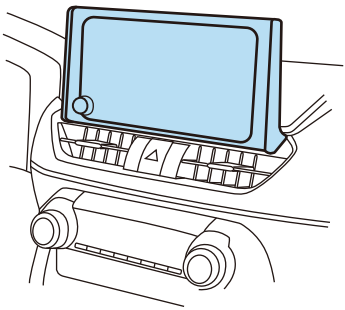
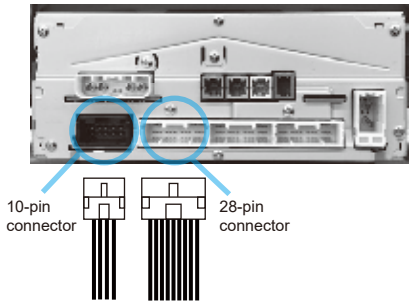


Diagram for illustration purposes. Actual radio and panels will vary according to model and grade.

4.2 Viewing the head unit from the rear, locate the leftmost 28-pin connector and the adjacent 10-pin connector. Disconnect the leftmost 28-pin connector and 10-pin connector from the back of the factory head unit and connect the wire harness connectors inline with the factory connectors in a daisy chain configuration (see section 3).



Photos are for illustration purposes. Actual radio, number of connectors and connector positions will vary according to model and grade.

4 Installation (continued)

4.3 Decide a suitable location to mount the amplifier. The mounting location will vary depending on the vehicle. Suggested mounting locations include behind the factory head unit, inside the glove compartment or behind the glove compartment.

i) **Installing behind the head unit, behind the glove compartment or other location inside the dash:** use the supplied foam padding strips by cutting to size to insulate against possible rattles from metal to metal contact.

ii) **Installing inside the glove compartment:** use the provided double-sided tape strips to secure the amplifier in place. An opening may need to be cut into the top/side of the glove compartment to allow the cables to pass through. Before installing, confirm the glove compartment can be freely opened and closed with the amplifier in place, and the cables do not obstruct moving parts.

4.4 Route the wire harness to the location of the amplifier and connect both the 16-pin grey connector and 8-pin white connector to the amplifier.

4.5 Confirm all connectors are fully inserted before reinstalling the head unit back into its original position. Reconnect all other electrical connectors including AC / heater controls, behind trim panels etc. Test the system by turning on the radio and confirm audio is output from all speakers. Play music through the sound system and adjust the gain if necessary (see section 5 below).

IMPORTANT

Return all electrical connectors behind the radio, AC / heater controls, behind trim panels etc., to their original locations before powering on the vehicle. Failure to do so may result in check engine light or error codes that require a reset procedure.

4.6 Return panels and trim to the original locations taking care to ensure all connectors are reconnected to complete the installation.

5 Gain Adjustment

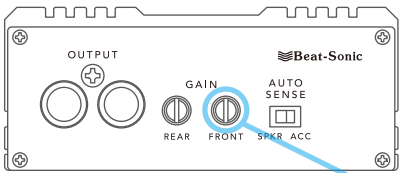
Gain adjustment allows optimization of the factory head unit volume range in relation to the amount of power output by the amplifier. In most installations, the gain on the amplifier can be left at the factory set 50% gain (approx. 12 o'clock) position. In some cases however, adjustment may be necessary to prevent overdriving the speakers at relatively low volumes.

It is important to remember that a lower gain setting does not mean less available power - it just means that the head unit volume needs to be increased to deliver the same output volume.

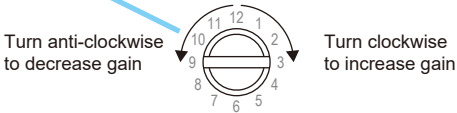
How to Adjust the Gain

5.1 Adjust factory head unit bass, treble, balance and any other equalizer settings to the mid-point positions.

5.2 Play music with impactful bass, treble and vocals. Slowly increase the volume on the factory radio to a medium-high level while carefully listening for any distortion. Use your fingernail or small flat-head screwdriver to adjust the gain on the front and rear channels for maximum volume without distortion or overdriving the speakers.

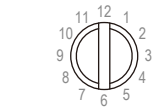


Do not apply excessive force to gain control. Maximum gain is at 5 & minimum gain is at 7.



Caution!

The gain control will turn easily until the maximum or minimum stop position is reached. Do not forcibly turn the gain beyond the max / min stop position, otherwise damage can occur.



Factory set gain position (approx. 12 o'clock)



Minimum gain position (approx. 7 o'clock)

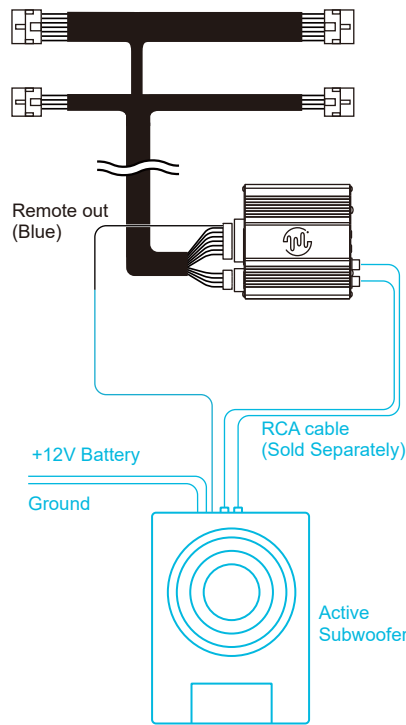


Maximum gain position (approx. 5 o'clock)

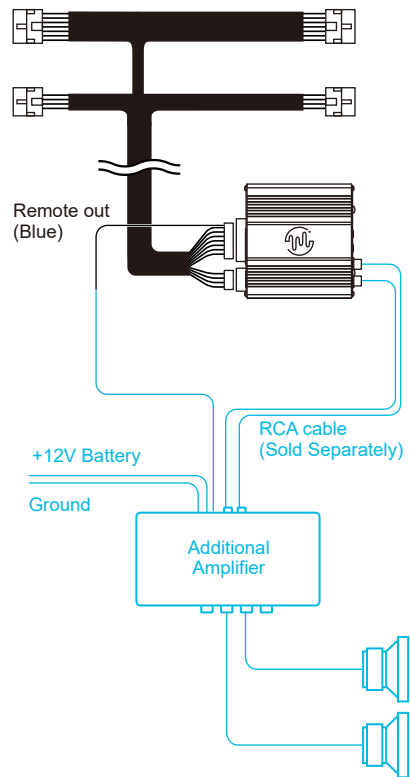
6 RCA Pre-Out Connection (Optional)

This amplifier provides full range RCA pre-outputs for optional system expansion, such as connection to an active/powered subwoofer or additional amplifiers. The RCA pre-out audio signal is acquired from the front channel inputs. A remote turn on signal wire is also provided to turn on/off the additional amplifier or active/powered subwoofer.

E.g.1 : Active Subwoofer Connection



E.g.2 : Additional Amplifier Connection



RCA pre-out audio signal is acquired from the front channel inputs. Adjusting front / rear fader control on the head unit will also adjust pre-out volume.

7 Troubleshooting

Symptom	Possible Cause	Action
No sound	Ensure vehicle is in ACC mode or IGN mode.	Vehicle must be in ACC or IGN mode.
	The fuse is blown.	Replace the fuse with a new one.
	The battery voltage is too low.	Check battery voltage (11V ~ 15V).
No sound in ACC mode	Vehicle uses digital accessories (ACC) mode.	Place vehicle into IGN mode to turn on the amplifier. Check with Beat-Sonic you have the correct product number for your vehicle.
Steering wheel controls don't work. Intermittent errors.	Connector is not fully inserted into the back of the radio.	Check wire harness connectors are fully inserted. Firmly push in the connector until you hear the "click".
The sound is too quiet	Head unit volume is too low or fader is biased to front or rear.	Adjust volume on radio. Check fader settings are set to neutral.
	The gain setting is not adjusted correctly.	Adjust gain settings as explained in section 5 of this manual.
The sound is distorted	Head unit volume is too high or fader is biased to front or rear.	Adjust volume on radio. Check fader settings are set to neutral.
	The gain setting is not adjusted correctly.	Adjust gain settings as explained in section 5 of this manual.
Adjusting rear gain has no effect on music volume	Vehicle uses factory 2ch input amplifier.	Keep rear gain at 12 o'clock (default) position. The amplifier will provide maximum power using the front 2 channels.
The amplifier gets abnormally hot and shuts off	Speaker impedance is too low. Inadequate ventilation.	Use speakers with suitable impedance 4 ~ 8Ω. Make sure amplifier is installed in a well ventilated location.



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