Designed by:

BerryBak™

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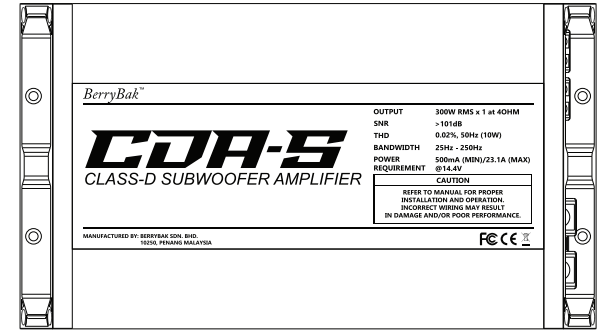
BerryBak company reserves the right to make changes to the specifications and material contained therein without notice.

BerryBak™

USER MANUAL



CDA-S

MONO CHANNEL AMPLIFIER

⚠ WARNING

PLEASE READ CAREFULLY BEFORE INSTALLING OR OPERATING THIS UNIT!

Introduction

Thank you for purchasing a BerryBak product, designed according to the highest quality standards.

Your CDA audio amplifier is an exquisite product of compact size, providing high power and quality of sound. It will ensure maximum satisfaction by occupying a very small space in your vehicle.

To achieve the best possible performance from your new components, we recommend you follow the instructions in this manual carefully. In order to design and create top-level car HI-FI systems, you need to understand automobile mechanical and electrical issues very well; if you think you lack the required knowledge or the proper tools, please consult with a specialized installer.

A professional installation will ensure your system delivers all the performance you have paid for, without affecting the safety and reliability of your vehicle.

This manual has been designed to provide you with the basic instructions required to install and use this product. For further information, please contact your authorized BerryBak dealer or after-sales service.

Precautions

- Before making holes, check the mounting space.
- To prevent noise, keep the wiring away from motors, high-voltage leads and other potential noise sources.
- To prevent a short-circuit, keep all wiring away from moving parts and sharp edges.
- Make sure you carefully read and understand the installation instructions before installing the system in vehicle.

⚠ WARNING ⚠

BerryBak amplifiers can be part of a high power audio system that can generate very high undistorted sound pressure levels. **Please remember that long exposure to an excessively high sound pressure level may damage your hearing.**

Safety must be at the forefront while driving. The listening volume should never obscure the noise coming from the outside of your vehicle; you should be able to hear the sounds generated by your vehicle in order to promtptly face any emergency situation.

Packing List

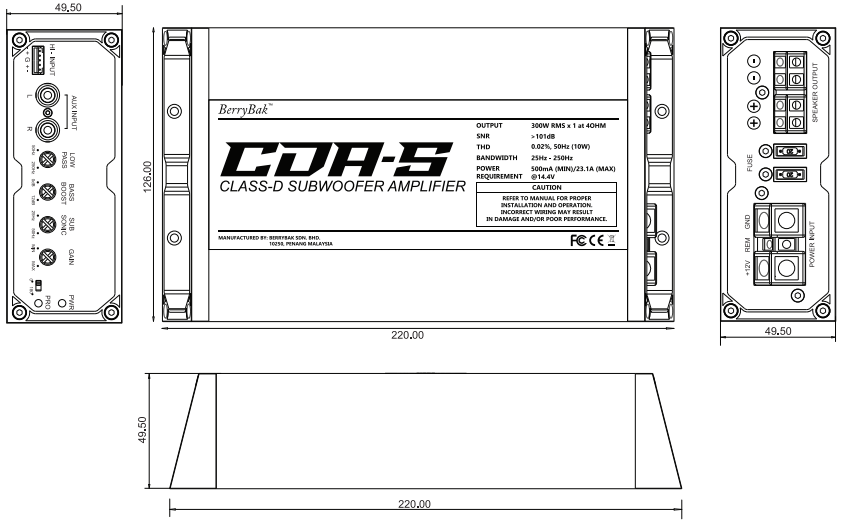
The following items should be placed in the box according to the model you purchased. If there is any missing, please inform the seller or manufacturer as soon as possible.

▪ CDA-S Amplifier	· 1 pc
▪ User Manual	· 1 pc
▪ 20A Fuse	· 2 pcs
▪ PH 5pin Cable	· 1 pc
▪ Self Tapping Cross Screws	· 4pcs

Product Specifications

· Model:	· Class D Mono Channel Amplifer
· Rms Power @ 4Ω	· 300W
· Max Power @ 4Ω	· 600W
· Supply Voltage:	· 11 - 15VDC
· Frequency Response:	· 25Hz - 250Hz
· Signal Noise Ratio:	· 101dB (A weighted @ 0.8V @ 16Ω)
· Input Sensitivity:	· 0.6V - 2V RMS
· Input Impedance:	· 10kΩ
· T.H.D.:	· ≤0.02% @50Hz, 10W
· REM Operating Voltage:	· 6-16 VDC - 1mA
· REM Latency Time:	· 3s
· Fuse:	· 20A
· Weight:	· 1.25kg
· Dimensions(LxWxH; mm):	· 220 x 126 x 49.5 mm

Product Dimensions



General Precautions

î Before installing the amplifier, make sure you carefully read and understand all instructions

· Disregarding them might cause accidental harm or damage to your amplifier. The amplifier detachment while driving could lead to severe consequences.

· Ensure your vehicle's electric system has a 12V DC voltage with negative to ground to avoid any potential damage to your amplifier and the vehicle itself.

· Pre-plan the configuration of your new amplifier and determine the best wiring routes to facilitate the installation process.

· Always wear protective eyewear when using tools that may generate splinters.

· During installation, keep the amplifier in its packaging for as long as possible to protect it from damages.

· Secure all auxiliary devices you built for installing the components to the vehicle structure using brackets, screws, nuts, and bolts; this ensures stability and safety while driving.

· Detachment of the amplifier while driving can cause harm to the people in the vehicle and other cars. Ensure the amplifier is securely installed, paying utmost attention if the installation is inside the passenger's compartment.

· Avoid carrying out any installation inside the engine compartment.

· Before installing the amplifier, turn off all sources and electronic devices in the audio system to prevent any damages.

· Make sure the chosen location for the components does not interfere with the correct functioning of the vehicle's mechanical and electric devices.

· Avoid running cables or installing the amplifier next to electronic gear cases.

· Exercise extreme caution when cutting or drilling the car plate, ensuring there are no electrical wiring or structural elements underneath.

· Verify that the power cable is not short-circuited during installation and connection.

· Avoid running it over or close to sharp edges or moving mechanical devices. Ensure it is well fixed along its length. Block positive and negative cables close to the amplifier's respective power supply terminal blocks through screws.

· Use rubber grommets to protect the wire if it runs in a hole of the plate or appropriate material if it is close to heat-generating parts.

· For proper grounding of the devices (-), use a screw in the vehicle chassis; scrape off any paint or grease from the metal if necessary and check with a tester for continuity between the battery negative terminal (-) and the fixing point. Whenever possible, connect all components to the same ground point to minimize noise.

· Route all signal cables away from power cables to avoid interference.

· Never run cables outside the vehicle as they won't be protected against wear and might cause issues in case of accidents.

· When installing speakers and the cables that connect them, ensure that non-insulated parts never touch, even occasionally, the vehicle's cutting parts, as it could trigger the amplifier protection.

· To prevent potential problems, use good quality cables, connectors, and accessories.

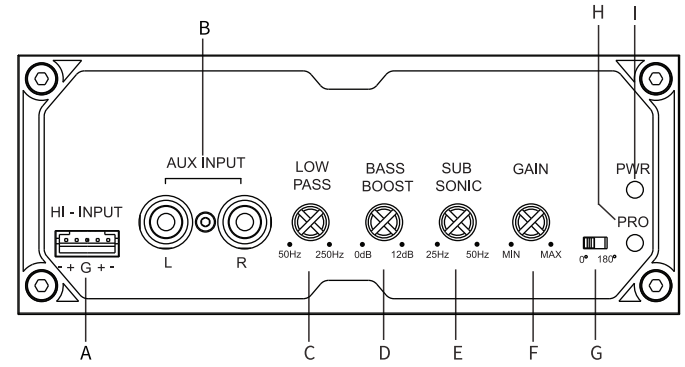
· After installation and before plugging the main power supply fuse, check the system wiring and ensure all connections were done correctly.

- Power amplifiers put an increased load on the battery and its charging system. We recommend checking your alternator and battery condition to ensure they can handle the increased consumption. Although standard electrical systems in good condition should handle this extra load without problems, we recommend using an energy storage capacitor and/or a battery for a high-level audio system.
- Be sure to place a fuse and its insulated fuse holder no more than 40 cm away from the battery's positive terminal. Connect one end of the power cable to the fuse holder after connecting the other end to the amplifier. The fuse value should be 50% higher than the amplifier's built-in fuse. In case the cable supplies power to several amplifiers, the fuse value must be 50% higher than the sum of the values of all other fuses in the amplifiers.
- Ensure there is good air circulation in the area where the amplifier is installed. This location should not be affected by humidity, rain, external deposits, or parts coming from the vehicle's mechanical devices. Avoid obstructing the cooling of the amplifier side fins in any way.
- Install the amplifier in vehicle parts where the temperature ranges from 0°C (32°F) to 55°C (131°F).

WARNING: In demanding conditions, the amplifier can reach temperatures of around 80 - 90°C (176-194°F). Before touching the amplifier, make sure it is not dangerously hot. Exercise caution while handling it to avoid burns or injuries.

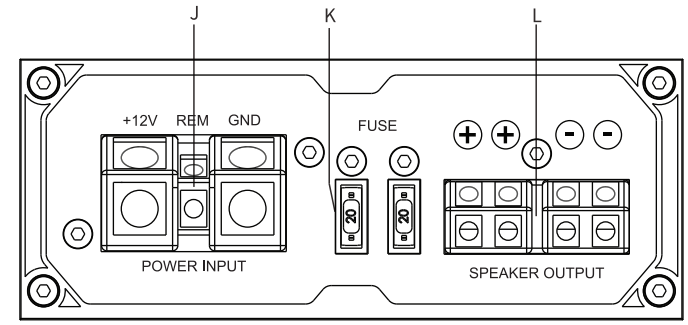
Functions

Front Panel



A. High Level PH Input Terminal
B. Low Level RCA Input Terminal
C. Low Pass Filter
D. Bass Boost
E. Subwoofer SNOIC
F. Gain
G. Phase Selector Switch
H. Protection Light
I . Power Light

Rear Panel



J . Power Input Terminal
K. Fuse
L . Speaker Outout Terminal

Precautions

- This unit is designed for negative ground 12V DC operation only.
- Use a subwoofer speakers system with an impedance of 2 or 8 Ohms.
- Avoid installing the unit in locations where:
  - It would be subject to high temperatures, such as direct sunlight or hot air from the heater.
  - It would be exposed to rain or moisture.
  - It would be subject to duct or dirt.
- If your car is parked in direct sunlight and experiences a considerable rise in temperature inside, allow the unit to cool off before operation.
- When installing the unit horizontally, ensure that the heatsink fins are not covered with floor carpet, as this may cause overheating.
- If this unit is placed too close to the car radio, interference may occur. To avoid this, separate the amplifier from the car audio.
- This power amplifier employs a protection circuit to safeguard the amplifier and speakers in case malfunctions. Do not attempt to test the protection circuits by covering the heatsink or connecting improper loads.
- Ensure the auto battery is in good condition as the amplifie's optimum performance depends on a normal battery supply voltage.
- For safety reasons, keep the volume of your car audio system as the moderate level, allowing you to hear normal traffic sounds outside your car.
- If the product contains desiccant, do no eat, avoid touching the liquid, and keep away from children.

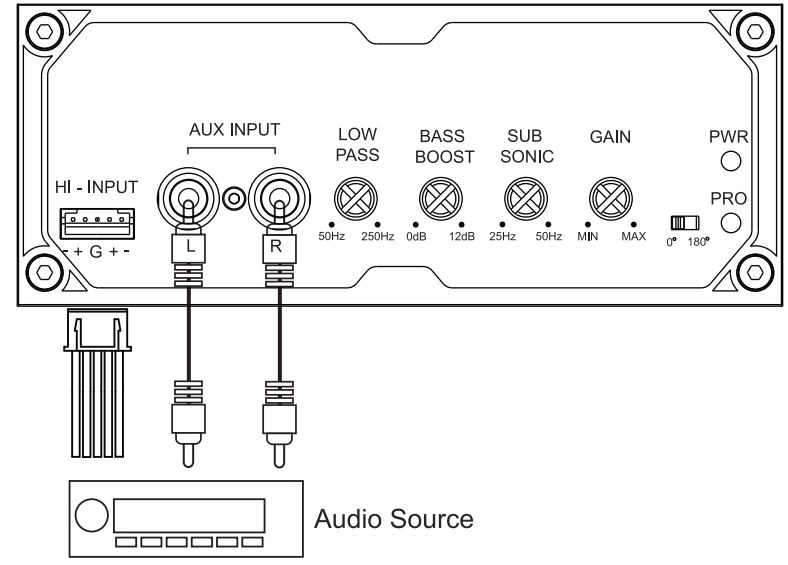
Fuse Replacement

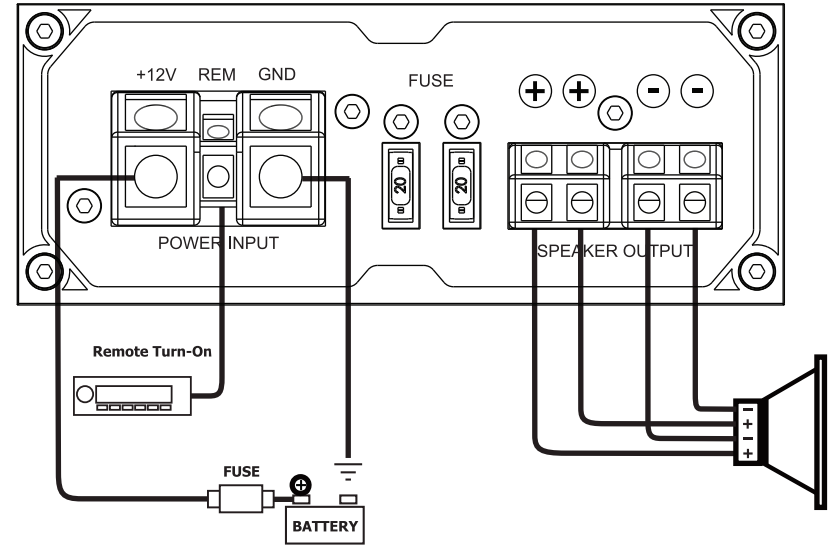
If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In this case, consult your dealer.

WARNING
Use the specified amperage fuse. Use of a higher amperage fuse may cause serious damage.

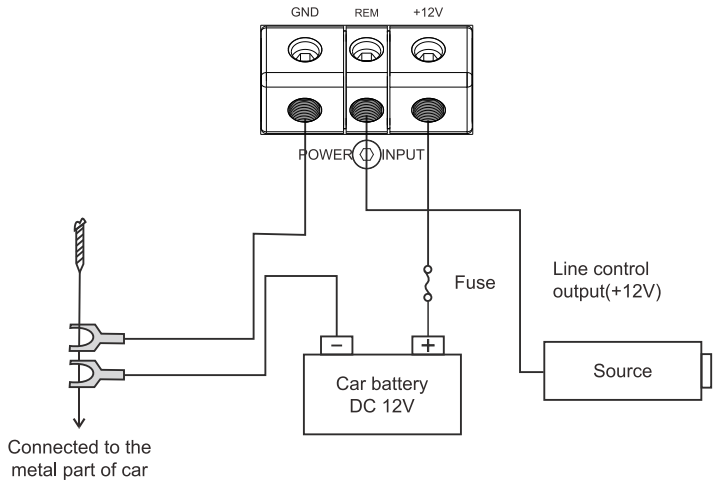
Protection Circuit:
This amplifier is provided with a protection circuit which operates in the following cases when:
-the unit is overheated.
-the speaker terminals are short circuited.
-too low or too high power voltage
-too low load impedance

Speakers Connections





Power Connection Leads



Interference

All cables can act as sources of interference. Among them, the power cable and RCA audio cable are particularly susceptible to interference; the remote cables are less prone. Interference is often caused by the generator(piping), ignition(cracking) or other car electronic parts. However many of these issues can be resolved through correct and careful cabling. Here are some guidelines to follow:

- Use only a signal cable for the wiring between 'low level in' of the amplifier and RCA or DIN output of the radio.
- Lay the signal, speaker and power cables separately with sufficient distance from one another and also from each other car cable. If separation is not feasible, you can bundle the circuit and ground cable together with the serial cables. However, ensure that the audio and speaker cable are kept as far away from these bundles as possible. The REM cable connecting to the automatic antenna output of the radio can be laid together with signal cables.
- If there are noises from the car electronics, consider adding an interference suppression choke to the power wiring to migitate the interference.
- If you encounter huming noises, use thicker ground cables or add more ground cables to the chassis. Proper grounding can help reduce humming or ground loop issues.

Wiring Instructions

POWER CONNECTION

The battery terminal (+12V) must be connected directly to the positive terminal of the vehicle battery to provide an adequate voltage source and minimize noise. Connecting the battery terminal lead to any other point (such as the fuse block) will reduce the power output and may cause noise and distortion. Use only #10 gauge or thicker (smaller gauge #) wire for this lead and connect it to the terminal of the battery after all other wiring is completed.

GROUND CONNECTION

The ground terminal (GND) connection is also critical to the correct operation of the amplifier. Use a wire of the same gauge as the power connection (#10 or thicker) and connect it between the ground terminal(GND) of the amplifier and a metal part of the vehicle close to the mounting location. This wire should be as short as possible and any paint or rust at the grounding point should be scraped away to provide a clean metal surface to which the end of the ground wire can be bolted.

REMOTE TURN-ON CONNECTION

The amplifier is turned on by applying +12V to the remote turn-on terminal (REM). The Wire lead to this terminal should be connected to the "Auto-Antenna" lead from the car stereo which will provide the +12V only when the car stereo is turned on. If the car stereo does not provide an Auto-Antenna lead, the remote turn-on lead may be wired to an "Accessory" or "Radio" terminal in the car's fuse block. This will turn the amplifier on and off with the ignition key, regardless or whether the car stereo is on or off. The remote turn-on lead does not carry large currents. So #20 gauge wire may be used for this application.

SPEAKER CONNECTIONS

Depending on the type and number of speakers used with the amplifier, wire them to the speaker terminals as per the appropriate wiring diagram. For most applications #16 gauge wire should be used for the speaker leads but in no case thinner than #18 gauge. For leads in excess of 3 meters #14 gauge is recommended. When wiring the speakers, pay careful attention to the polarity of the terminals on the speakers and make certain they correspond to the polarity of the corresponding terminals on the amplifier. Do not ground any speaker leads to the corresponding terminals on the amplifier. Do not ground any speaker leads to the chassis of the vehicle.

INPUT CONNECTIONS

This amplifier features low-level input and high-level input capability.

Attention: Dont't connect at the same time by high level input and low level input!