

Technical features

FIREBALL-496	Class AB Amplifier
Output power RMS 4Ω (B _T):	100 W x 4 CH
Output power RMS 2Ω (B _T):	125 W x 4 CH
Output power (bridge) RMS 4Ω (B _T):	250 W x 2 CH
Harmonic distortion factor (THD):	<0.15%
Frequency range(±2dB):	10Hz - 50KHz
Signal to noise ratio:	>95dB
Input sensitivity:	200mV - 6V
Fuse rating:	35A x 2
Size:	353.5 x 179 x 59.1 mm

AURA[®]

OWNER'S

MANUAL



FIREBALL-496

CAR POWER AMPLIFIER

WARNING!

PLEASE READ CAREFULLY BEFORE USING



Due to continuous product development and improvement, all specifications are subject to change without notice.

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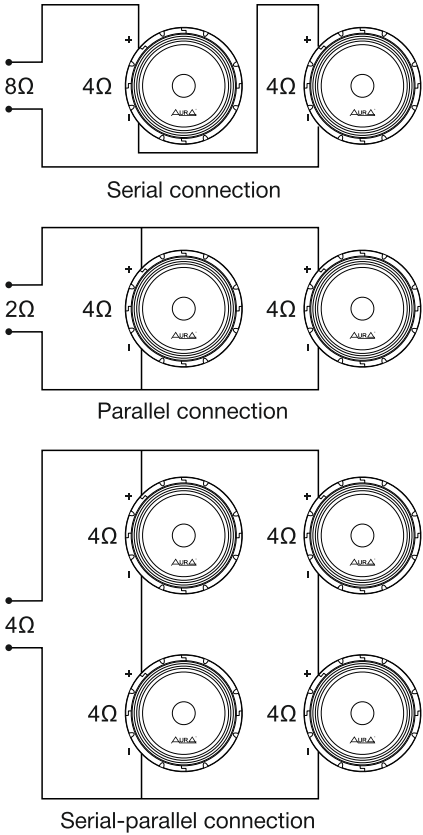


Thank you for purchasing an AURA amplifier.
We strongly recommend using the services of a professional installation studio to install the amplifier. The correct configuration of the system and the qualifications of specialists will allow you to maximize the potential of your amplifier, avoid unpleasant situations, as well as eliminate connection errors and possible malfunctions.

Connection Recommendations

Each channel of your amplifier is rated to load from 2Ω to 4Ω when connected in stereo.
When using bridged mode, the minimum load impedance should be 3Ω for subwoofer and 4Ω for full range speakers. Operating with a low load impedance will not damage the amplifier, but the device will likely overheat, causing the thermal protection circuit to shut down the amplifier. When the cooling radiator cools down, normal operation will resume. Long-term operation of the amplifier under these conditions is highly discouraged and will shorten its service life.

Most car speakers are manufactured with 4Ω impedance. When two such speakers are connected in parallel, we will get an impedance of 2Ω, which is not recommended for bridging your amplifier.



Symptoms

Possible problem

Recommendations

Distorted signal

Defective speaker system

Check the functionality and connection of the speakers. Repair or replace them.

Insufficient supply voltage of the amplifier.
Should not be less than 11.3V

Check the voltage at the power terminals of the amplifier. Check if the connection is correct and secure.

Incorrect settings and settings of the amplifier filters

Change the crossover settings until you achieve the sound you want.

Not enough bass / treble

The polarity is reversed when the speakers are connected.

Check polarity and reconnect if necessary.

Incorrect settings and settings of the amplifier filters

Change the crossover settings until you achieve the sound you want.

Battery fuse blows

Short circuit in the power wire or incorrect connection

Check the power cable connections and correct if necessary.

Fuse less than necessary.

Replace with the correct fuse.

The speaker impedance is too low.

Check the impedance of the speakers. It should not be less than 2Ω in stereo or 4Ω in bridged mode.

Amplifier fuse blows

Too much current

Check the impedance of the speakers. It should not be less than 2Ω in stereo or 4Ω in bridged mode. Install the correct fuse.

Check the power cable connections and correct if necessary.

The fuse on the amplifier is smaller than required.

Install the correct fuse.



Symptoms

Possible problem

Recommendations

**Does not turn on
no sound**

Too weak or no signal
from the control wire

Check the voltage at
the output of the control wire

Fuse blown

Check the connection of
the power cables, polarity,
replace the fuse

Power cables are not connected.

Check the power cable connections
and correct if necessary.

Audio input is not connected, there
is no signal from the head unit.

Check signal cables and
connections, replace if necessary.

Speaker cables not connected

Check speaker cable connections
and correct if necessary.

Sound on and off

Defective speaker system

Check your speakers
and repair or replace them.

Thermal protection turns on
when the radiator heats
up over 90 °C

Make sure there is sufficient
ventilation to cool the amplifier.

Loose or poor connections
at the amplifier/source input/
output connectors.

Check signal cables and connections,
replace if necessary.

Output distortion

High sensitivity of the input level.
Exceeding the maximum
output power of the amplifier

Adjust the input level
so that there is no distortion.

The speaker impedance
is too low.

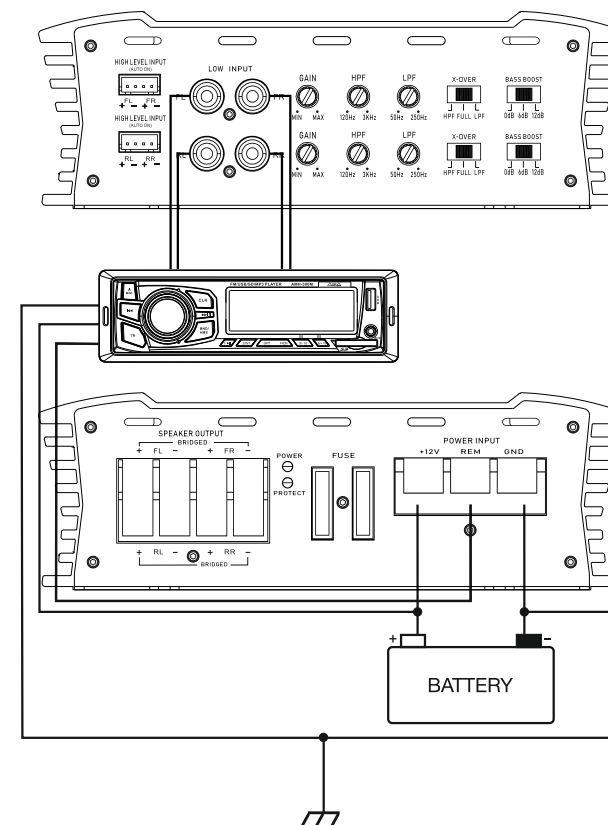
Check the impedance of the speakers.
It should not be less than 2Ω
in stereo mode and not less
than 4Ω in bridged mode.

The speaker terminals or
cables are shorted
to vehicle ground.

Check the integrity and
connection of the loudspeaker
connections if necessary.

Speaker cables are not
properly connected to
the amplifier

Check if the speaker cables
are connected properly
and correct if necessary.



Connection Recommendations

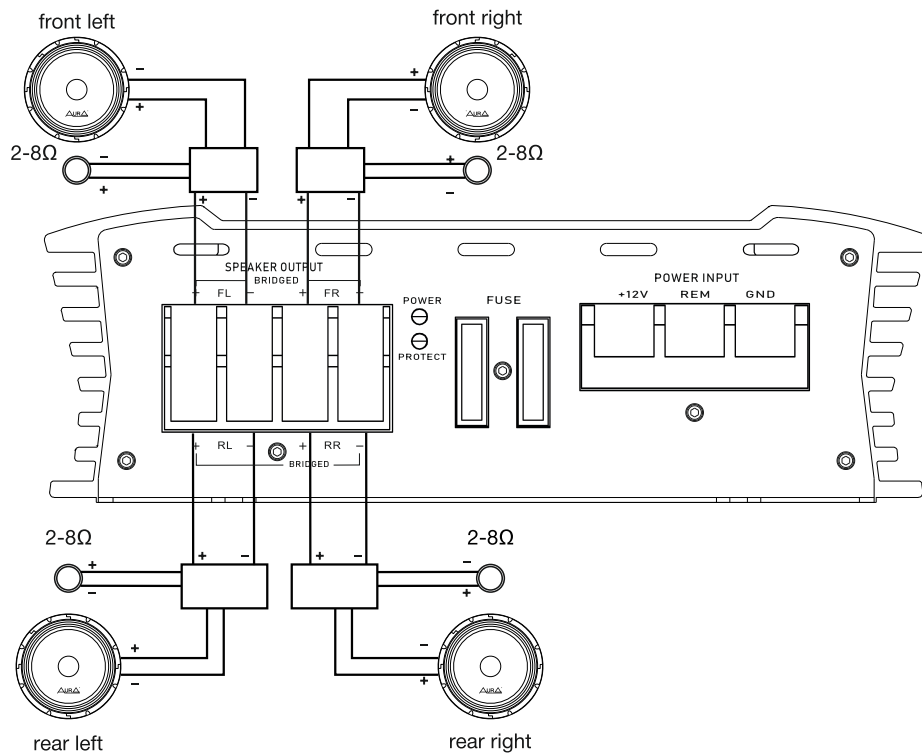
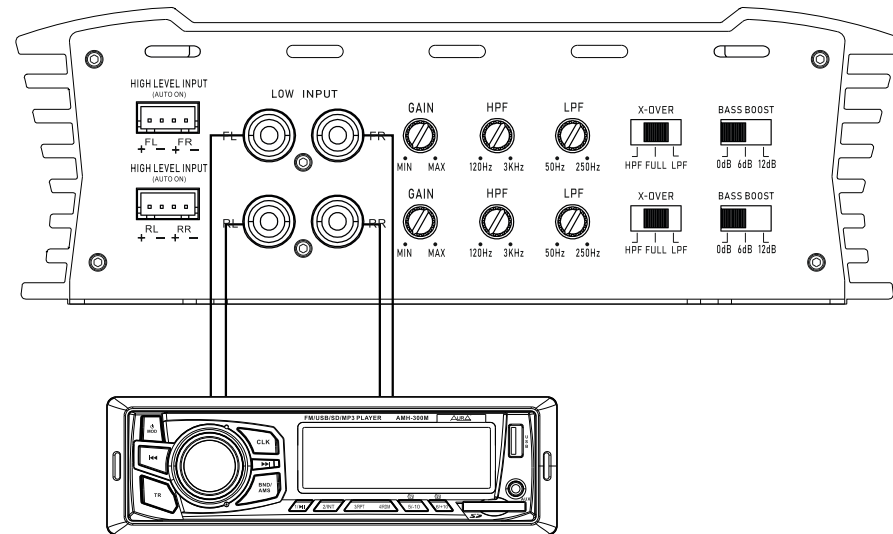
Connect the positive (+ 12V) cable only after all other cables have been connected. The negative cable must be connected to the vehicle body exclusively by bolting. The connection point must be free of paint and reliably protected from corrosion. Loose power connections can cause unstable operation and damage to the amplifier.

The device turns on when + 12V is applied to the "REM" terminal. This terminal is low-current and does not require connection with a cable of the same cross-section as positive or negative. An acceptable wire is 18-16AWG (0.75-1.5mm²). The standard color of the control cable is blue.

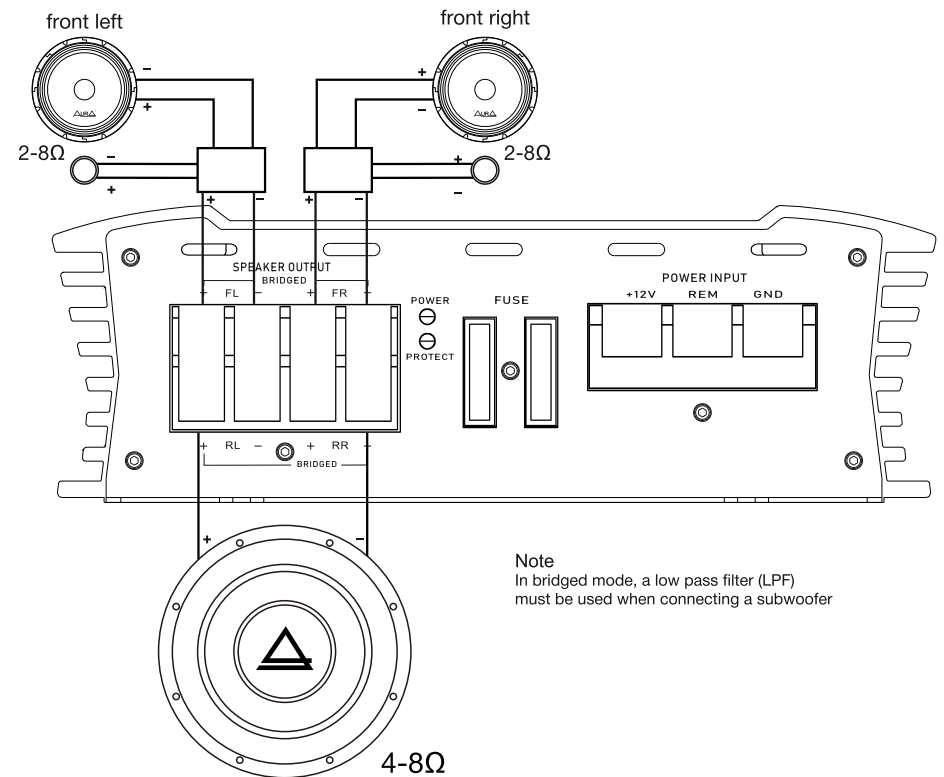
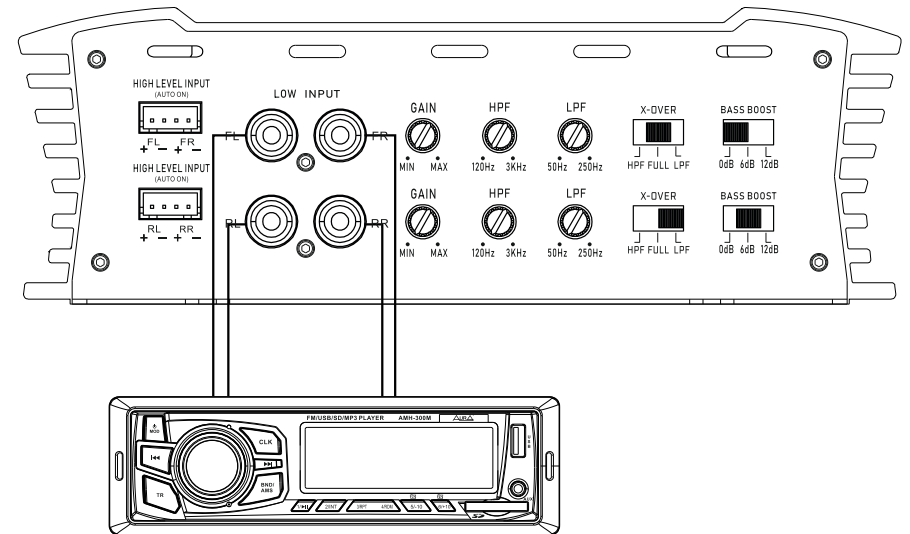
Be sure to use a fuse on the positive power cable that is at least the same as the fuse on the amplifier. Install the fuse as close to the car battery as possible, but no further than 40cm from the positive terminal.

When operating the amplifier at maximum output power, it is recommended to use at least 8AWG (8mm²) cables. The cross section of the positive and negative cables must be the same. For this, the models of power cables **AURA** PCC-508R / B, PCS-308R / B are suitable.

System 1 4 channel stereo mode



System 2 3 channel stereo/mono mode



Note
In bridged mode, a low pass filter (LPF)
must be used when connecting a subwoofer