

C4A300

CLASS D FOUR CHANNEL
POWER AMPLIFIER

USER'S MANUAL

Congratulations on your purchase of the Ciare C4A300 amplifier.

It has been designed, engineered and manufactured to bring you the highest level of performance and quality, for years of listening pleasure.

What's in the box?

When first unpacking your new amplifier, please check first that the package contains all of the items below. If something is missing, contact us at www.ciareusa.com.

- **Amplifier**
- **Instruction manual**
- **Fan power cable with connector**
- **Four (4) mounting screws**
- **Two (2) wrenches**

Features

Your new amplifier features the following:

- Class D Topology
- MOSFET Pulse Width Modulated Power Supply
- 2-Ohm stereo/4-Ohm bridged stability
- Thermal and speaker shorting protection
- Soft turn-on circuit
- Remote Turn-On/Turn-Off circuit
- 4 AWG power and ground inputs
- 12 AWG speaker outputs
- Variable input gain control
- Variable low pass filter
- Variable high pass filter
- RCA low-level inputs
- LED power and protection indicators
- Black anodized heatsink

About 2-Ohm operation

Your amplifier has been designed to operate efficiently at loads down to 2 Ohms. This means that you can install four 8 Ohm speakers , when using parallel wiring.

Doubling the number of woofers produces an acoustic coupling effect. This acoustic coupling effect increases the output by about 3 dB for each doubling of the number of woofers.

When operating at 2-Ohms, the amplifier will increase output power by approximately double. The current draw will also increase by about the same amount, so be sure you have enough current to run the amplifiers into a 2-Ohm load.

General precautions

Before installing and using your new amplifier, please become familiar with all the information contained in this manual. Please keep this manual in a safe place for future reference.

- Do not open or attempt to repair this unit yourself. Dangerous high voltage is present which may result in electric shock. Refer any repairs to a qualified service technician.
- To avoid risk of electronic shock or damage to the amplifier, do not permit any of this equipment to become damp or wet. If this does occur, immediately disconnect the power wires and remove the amplifier from its installed location. Only reconnect and reinstall the amplifier when it is completely dry.
- If smoke or an unpleasant smell exits the amplifier, please disconnect and uninstall the amplifier. Contact www.ciareusa.com for next steps.

Installation precautions

Before you drill or cut any holes, investigate your car's layout very carefully. Take special care when you work near the gas tank, fuel lines, hydraulic lines and electrical wiring.

Never operate the amplifier when it is unmounted. Attach all audio system components securely to prevent damage, especially in an accident.

Before making or breaking power connections in your system, disconnect the vehicle battery.

Confirm that your head unit or other equipment is turned off while connecting the input jacks and speaker terminals.

If you need to replace the power fuse, replace it only with a fuse identical to that supplied with the amplifier. Using a fuse of a different type or rating may result in damage to your audio system or your amplifier which is not covered by the warranty.

Installation precautions

1. Find a suitable location in the vehicle in which to mount the amplifier.

2. Make sure there is sufficient air circulation around the intended mounting location.

3 Mark the location for the mounting hole screws by positioning the amplifier where you wish to install it. Use a scribe or mounting screw, inserted through each of the amp's mounting holes, to mark the mounting surface. If the mounting surface is carpeted, measure the hole centers and mark with a felt tip pen.

4. Drill pilot holes in the mounting surface for the mounting screws. Place the amplifier in position, and attach the amplifier to the mounting surface securely using screws.

SHOCK HAZARD! Do not open the case of this product. There are dangerous voltages present within the unit. There are no user-serviceable parts within the unit.

Do not misuse the gain control!
Do not mistake the gain level control for a volume control! It is designed ONLY to match the output level of your audio source to the input level of your amplifier.

Do not adjust this input level to maximum unless your input level requires it.

Ignoring these instructions will result in an input overload to the amplifier, and excessive audio distortion. It can also cause the protection circuit to engage.

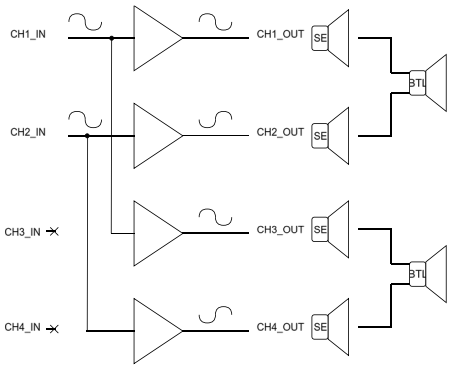
Low level Input Wiring

Low-level (RCA) input wiring is preferred for best audio performance. Always use a high quality RCA cable for best audio performance.

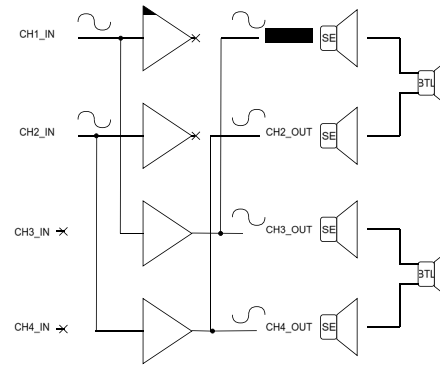
About Sync Mode

Sync Mode allows a user to drive all four amplifier channels 1/2/3/4 with only two inputs, using the Channel 3/4 gain and crossover settings. In 4-Channel Mode, with the Sync switch pressed in, the Channel 3/4 outputs are applied to the Channel 1/2 outputs. Gain and crossover settings for Channel 3/4 are applied to Channels 1/2, as below.

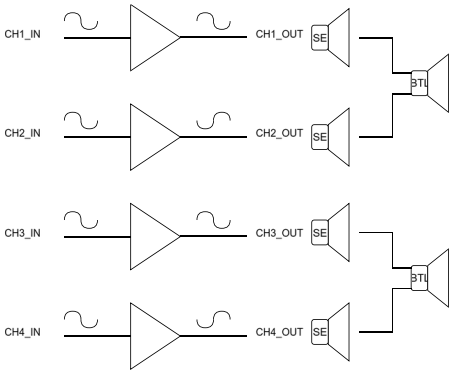
When MODE is set to 2-Channel Mode, and Sync is enabled, the Channel 1 input is applied to Channels 1 and 3, with the signal routed through the Channel 3/4 gain and crossover settings, and then to the Channel 1 and 3 outputs. The Channel 2 input is applied to Channels 2 and 4, with the signal routed through the Channel 3/4 gain and crossover settings, and then to the Channel 2 and 4 outputs.



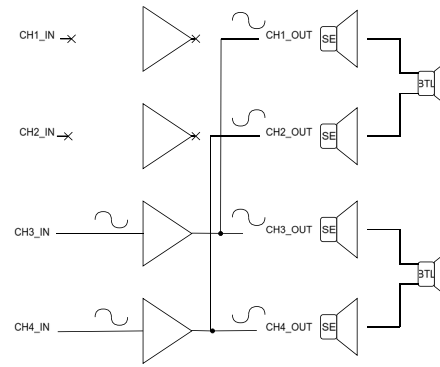
2-Channel Mode Sync Off



2-Channel Mode Sync On

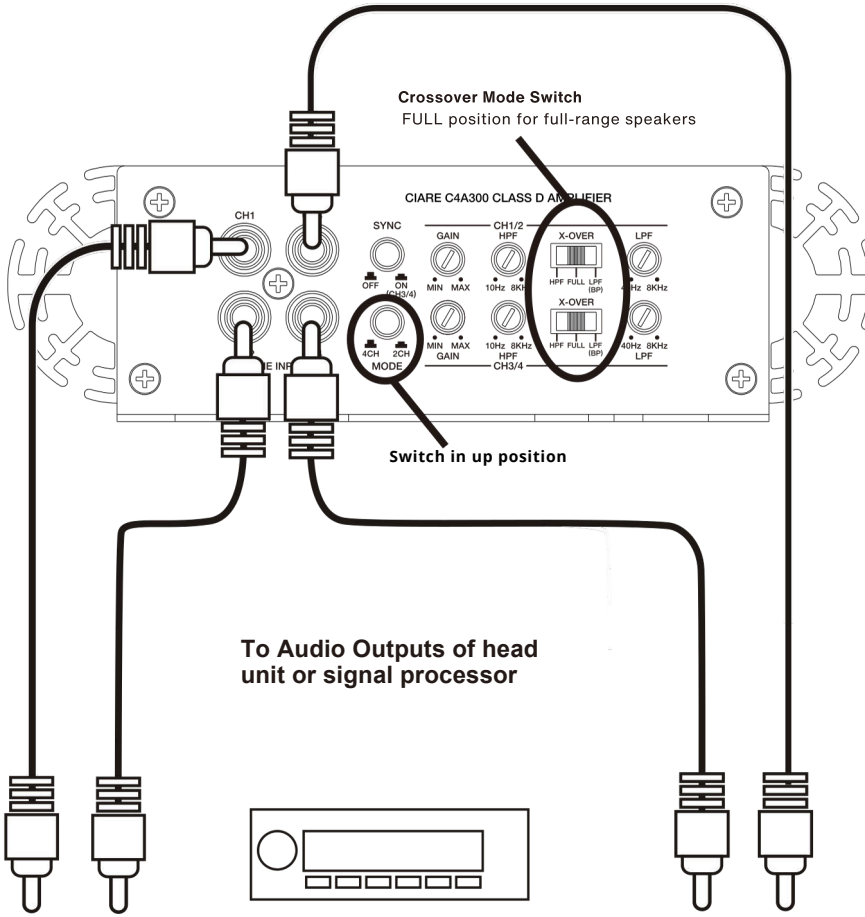


4-Channel Mode Sync Off

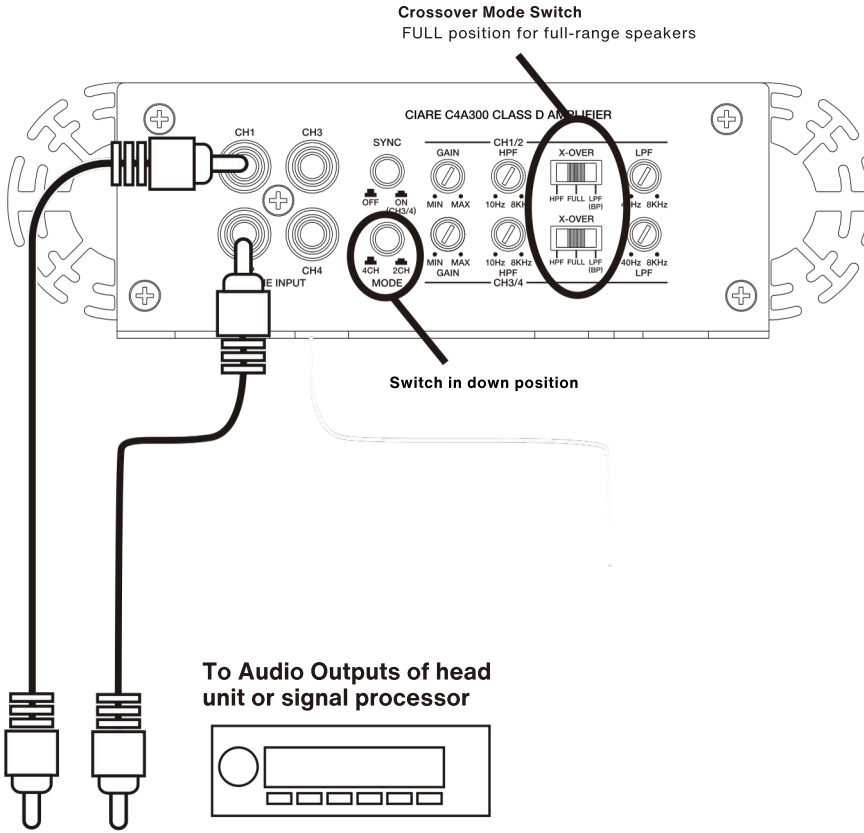


4-Channel Mode Sync On

4-Channel Mode



2-Channel Mode



Power connections

+12V Battery Input (4 AWG Max)

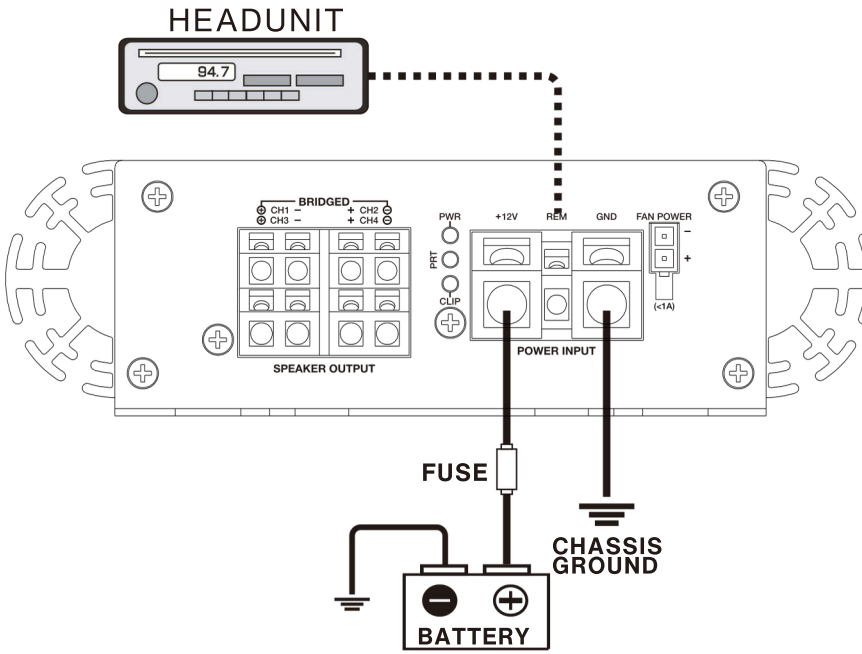
You will need to connect a power wire to the vehicle's positive battery terminal. This connection must be tight and secure to ensure proper connectivity. This wire has to be fused appropriately see each amplifier's fuse rating under specifications) within 12 to 16 inches for safety. You will then need to connect the power wire to the 12+ terminal of the amplifier with an Allen wrench.

Ground Connection (4 AWG Max)

The ground connection must be made to the vehicle's chassis and should be kept as short as possible. The surface should be sanded at the contact point to clean rust, paint or grime so a metal-to-metal connection between the chassis and the termination of the ground wire is effective. You will then need to connect the ground wire to the GND terminal of the amplifier with an Allen wrench.

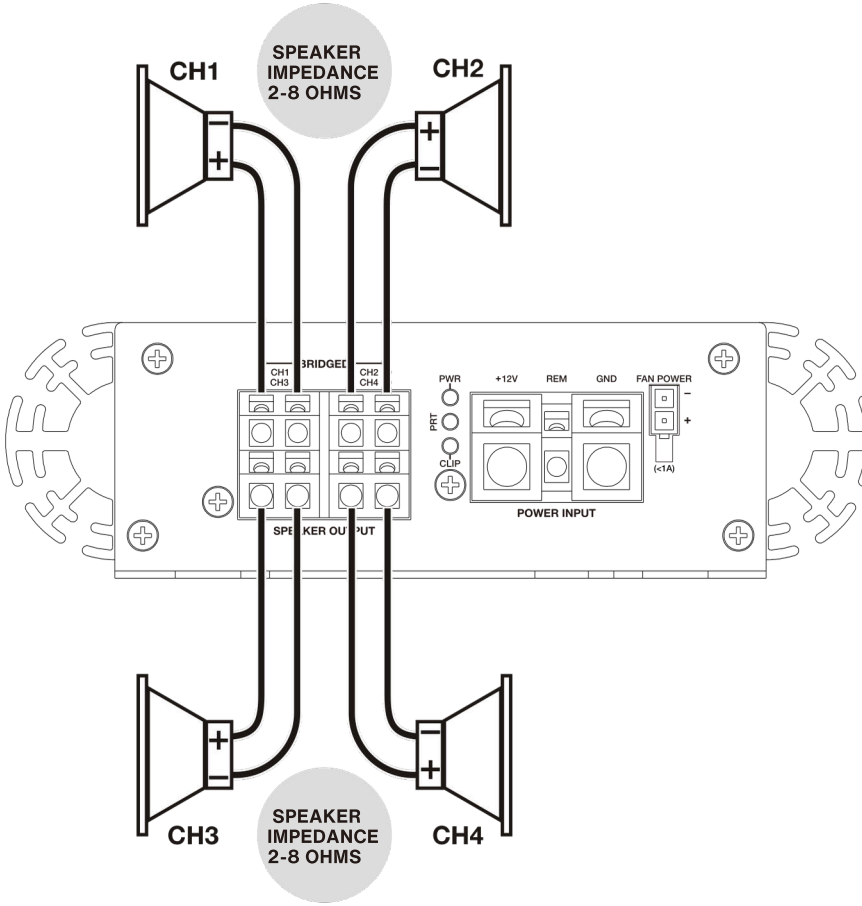
Remote Input (12 AWG Max)

The +12V remote turn-on wire is typically controlled by the source unit's remote turn-on output. The amplifier will turn on when +12V is present at its remote (REM) input and turn off when +12V is switched off. Connect the remote wire using 12 to 16 gauge wire to the REM connection of the amplifier with Allen wrench, then connect the other end of the remote wire to either the source unit's turn on output or ignition switch circuit.



Speaker Wiring

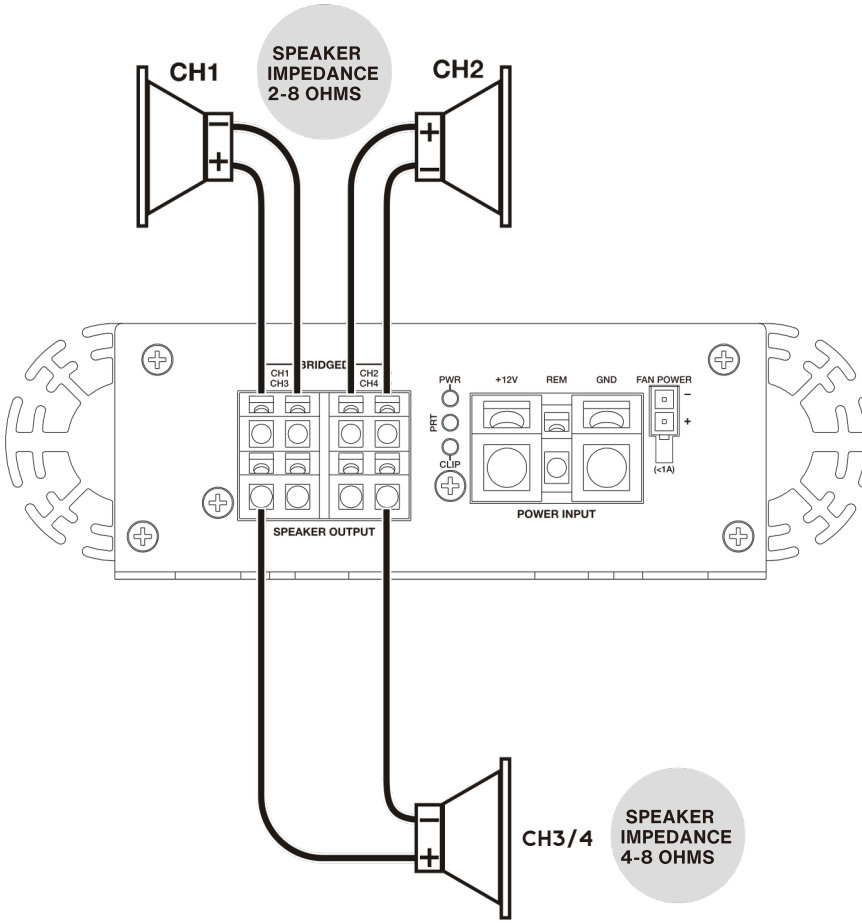
4-Channel Mode



Speaker Wiring

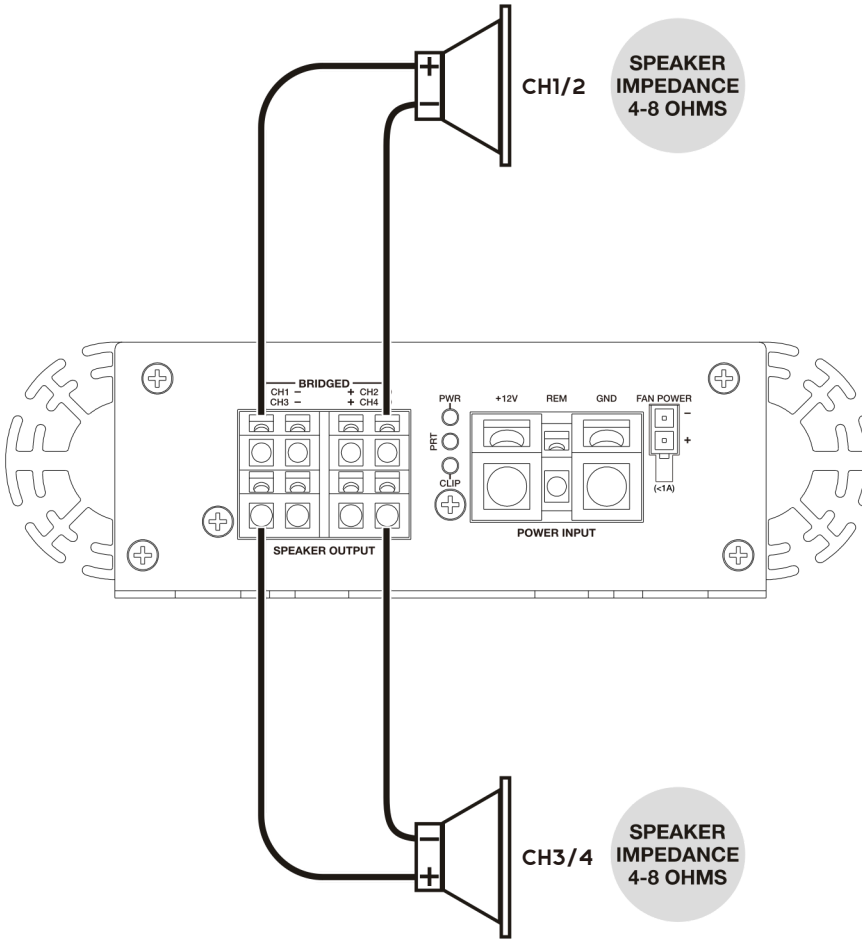
Stereo + Bridged 2.1 Mode

3-Channel Mode



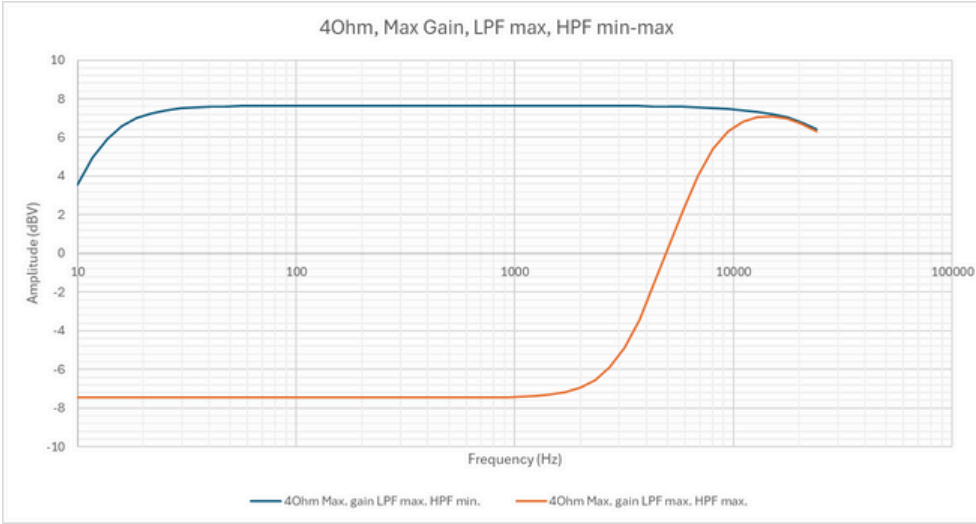
Speaker Wiring

Bridged Mode

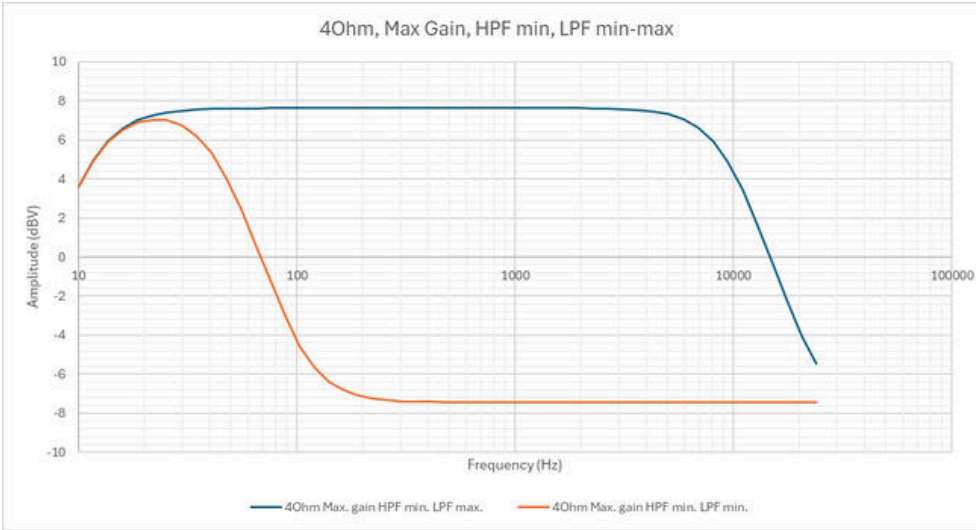


Filter adjustments on C4A300

With gain set to minimum, the input sensitivity is 19 dBV (9 Vrms)
With gain set to maximum, the input sensitivity is -6.5 dBV (470 mVrms)

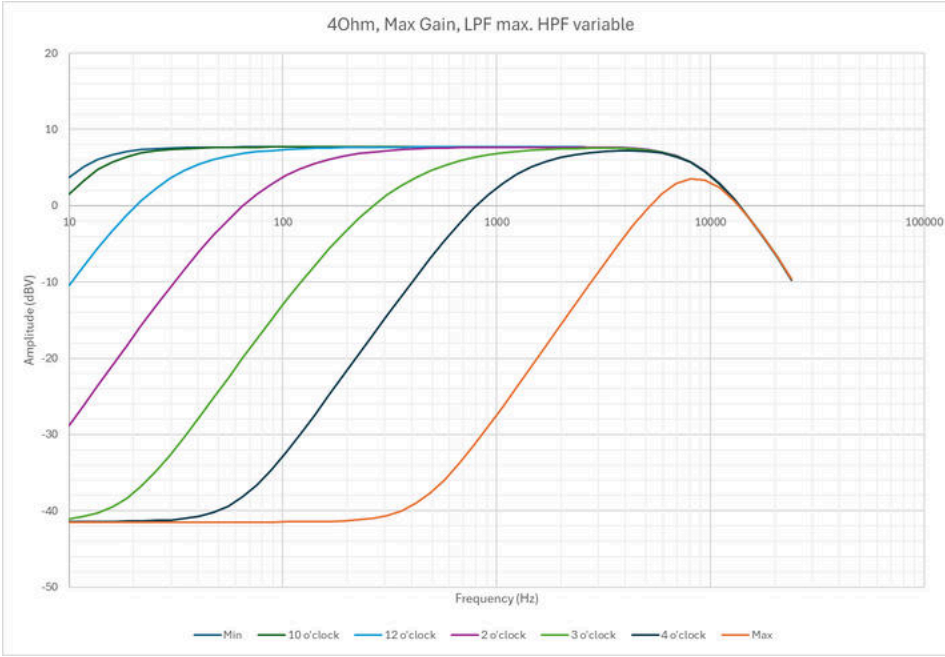


Max gain, High Pass Filter settings from min to max, -30 dB signal input, 4-Ohm load
(when HPF selected, and LPF disabled)



Max gain, Low Pass Filter settings from min to max, -30 dB input, 4-Ohm load
(when LPF (BP) selected, LPF potentiometer is also enabled)

Bandpass Filter adjustments on C4A300



Max gain, Low Pass Filter settings set to max, adjusting variable HPF setting,
-30 dB input, 4-Ohm load
(with LPF (BP) selected)

Specifications

MODEL	C4A300
Output Power Watts	
Max Power @ 4Ω	• 4 x 600W
Max Power @ 2Ω	• 4 x 960W
RMS Power @ 4Ω	• 4 x 300W
RMS Power @ 2Ω	• 4 x 480W
Bridged Power @ 4Ω	• 2 x 960W
THD @ Rated Power	• 0.01%
Input Sensitivity	• 0.5-8V
S/N Ratio	• ＞90dB
Frequency Response (±3dB)	• 9Hz - 50kHz
Variable Hi-Pass Filter	• 10Hz - 8KHz
Variable Low-Pass Filter	• 40Hz - 8KHz
Dimensions (LxWxH)	• 420x180x53mm (16.5''x7.1''x2.1'')
Weight	• 9.37lbs/4.26kg

Features Subject To Change Without Notice

For more information, please visit www.ciareusa.com.