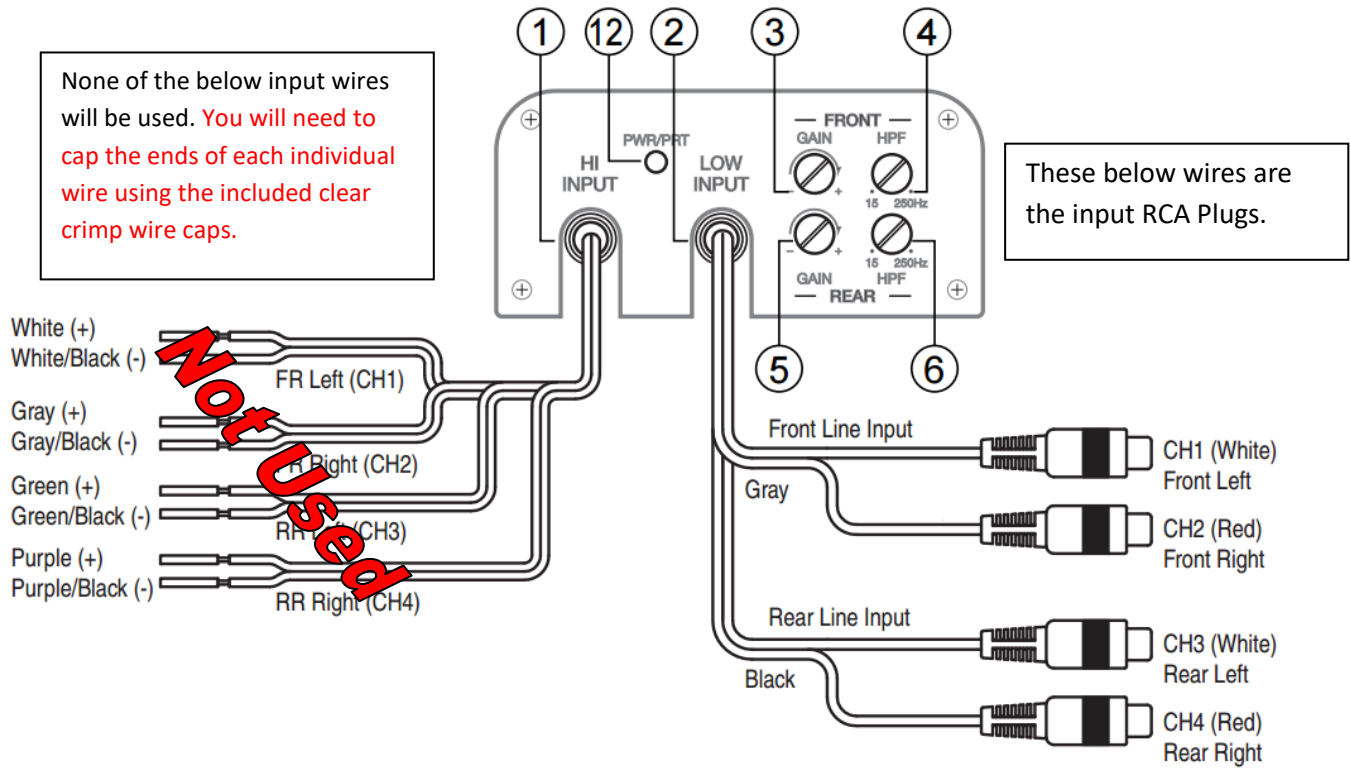


IMPORTANT: The information contained within this document is intended to offer some basic guidelines for the most common installations. More complex audio systems should be installed by a competent professional. Motorcycle Tunes is NOT responsible for any damage to your bike or equipment caused by improper installation or faulty equipment.



1. HI Input connection cables for CH1 (Front LT), CH2 (Front RT), CH3 (Rear LT), CH4 (Rear RT)
2. LOW Input RCA jacks for CH1 (Front LT), CH2 (Front RT), CH3 (Rear LT), CH4 (Rear RT), Subwoofer
3. Front gain control
4. Front Hi-Pass X-Over control
5. Rear gain control

6. Rear Hi-Pass X-Over control
7. Subwoofer gain control
8. Subwoofer Low-Pass X-Over control
9. Bass Boost control
10. Gain control
11. Low-Pass X-Over control
12. Status indicator light

IMPORTANT: The information contained within this document is intended to offer some basic guidelines for the most common installations. More complex audio systems should be installed by a competent professional. Motorcycle Tunes is NOT responsible for any damage to your bike or equipment caused by improper installation or faulty equipment.

CAUTION: Amplifier is NOT waterproof. Install it under the seat, saddlebag, travel trunk, fork bag, or in our amplifier bag.

CAUTION: DO NOT INSTALL THE FUSE FOR THE AMPLIFIER, UNTIL INSTRUCTED TO DO SO.

CAUTION: The Clarion amplifier has a built in heavy duty heat sink, designed to keep the amplifier cool and prevent heat robbing distortions from running the music. This allows the amplifier to be installed in tight locations without heat issues.

Begin by planning on where you are going to mount the speakers and amplifier. Keep in mind the amp needs a minimum of 1" around it for proper cooling Plan the wire routing; you don't want it around the exhaust or for it to rub. You also don't want to route the power cable next to the audio input cable, because this can add noise to the system.

Amplifier Power

There are 3 Power Wires (1 Power Red Wire, 1 Remote Turn On Blue Wire, and 1 Ground Black Wire)

Step 1: Red Wire (B+) - This is the Red wire with the Fuse box and ring terminal. Hook bare end to the +12V hookup on the amplifier and the terminal ring to the positive battery post.

Step 2: Black Wire (Ground) – This is the Black wire with the ring terminal on the end. Hook the bare end to the GROUND terminal on the amplifier, and hook the terminal end to the negative battery terminal of the motorcycle or to the frame of the motorcycle. GETTING A GOOD GROUND IS VERY IMPORTANT, BECAUSE 99% OF NOISE ENTERS THROUGH THE GROUND OF A SYSTEM.

Trim the length of the ground wire, keep it short as possible,

Step 3: Blue Wire (Remote Turn On Wire) – This is the wire that turns the power to the amplifier on and off.

This wire is located on the Speaker Output plug of the amplifier.

If you ordered the Bluetooth edition,

The Bluetooth Blue wire will hook Remote Turn on wire on the amplifier (see attached Bluetooth instructions for Pairing)

The Bluetooth Red wire will hook to a switched and fused power supply, so that it turns on/off with the key

The Bluetooth Black wire will hook to the negative battery terminal, or to the frame of the bike.

If you did not get the Bluetooth edition, this blue wire can be used with the included t-tap, or the plug can be cut off and the now bare end should be wired to a switched and fused 12v power source on your bike so that it turns on/off with the key. You can use a test light to find a wire that turns on/off with your key, such as a headlight wire, or you can add a mechanical switch inline with a 12 volt source to activate the amplifier. Run the bare end up to where you are going to mount the amplifier.

Speaker Mounting

Step 4: Mounting the Speaker Clamps: Get an idea where you want to mount the speakers. Mount the clamps to your bars. There will be a gap on the clamps that will tighten up when the speakers are installed..

Important: Make sure the speakers will not interfere with your steering, or gauges.

Step 5: Mounting the Speakers: Mount each speaker to the clamp and make sure they are secured, but do not apply too much torque to the nut. The bottom mounting bolt is chromed stainless steel.

Use a pair of vice grips on the end of the clamps to slightly pull them together, that way when you put the speaker mounting bolt through the clamps, you will have more room to tighten the nut a few turns by hand. This will ensure the nut has good thread before you tighten it by wrench, and will prevent the nut from cross threading and seizing up.

The 3-Piece clamps will NOT close all the way, just tighten them snugly.

IMPORTANT The speaker mounting bolt is chromed stainless steel, and the treads on this bolt can be stripped easily if the nut tightened too much, or if the nut is not perfectly aligned before tightening. When you mount the speakers to the clamps use care, or you can damage the thread. Run the speaker wires down to where you are going to mount the amplifier. You may want to run the Audio Adapter Cable at this time as well.

Amplifier Speaker Output Plug – This is a small 4 prong plug, with 4 short speaker wires on it.

Step 6: Hooking up the speaker wires to the Amplifier Speaker Output Plug.

2 Speaker Setup

Left Chrome Speaker **Red** to the Solid White
Left Chrome Speaker **Black** to Gray/Black

Right Chrome Speaker **Red** to Solid Green
Right Chrome Speaker **Black** to Purple/Black

You will need to cap the ends of the remaining individual wire using the included clear crimp wire caps.

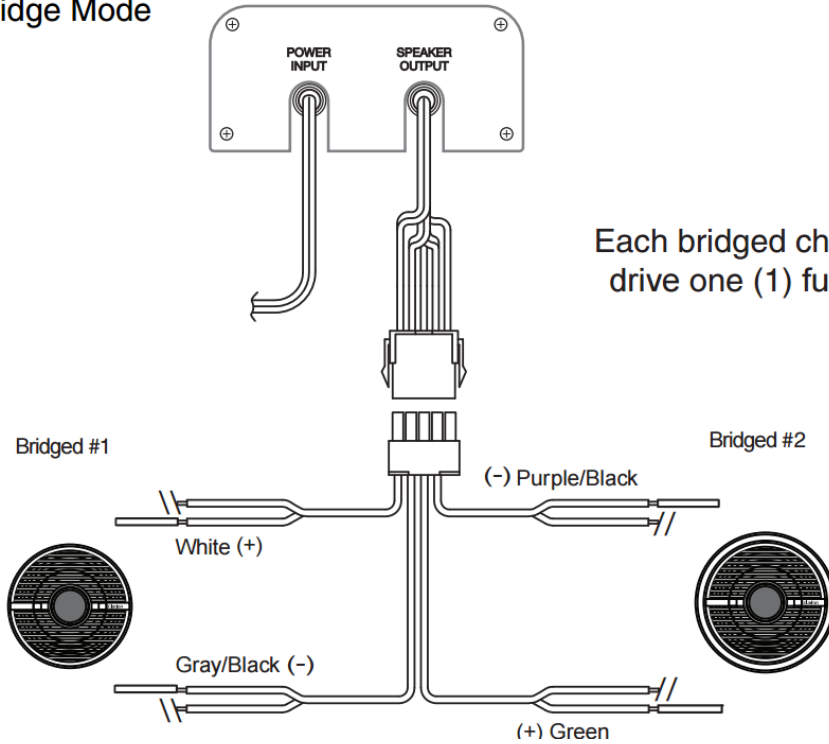
Important

Use the included crimp caps to cap and seal the Unused Speaker output wires

The following wires should be capped and sealed.
White/Black, Solid Gray, Green Black, Solid Purple

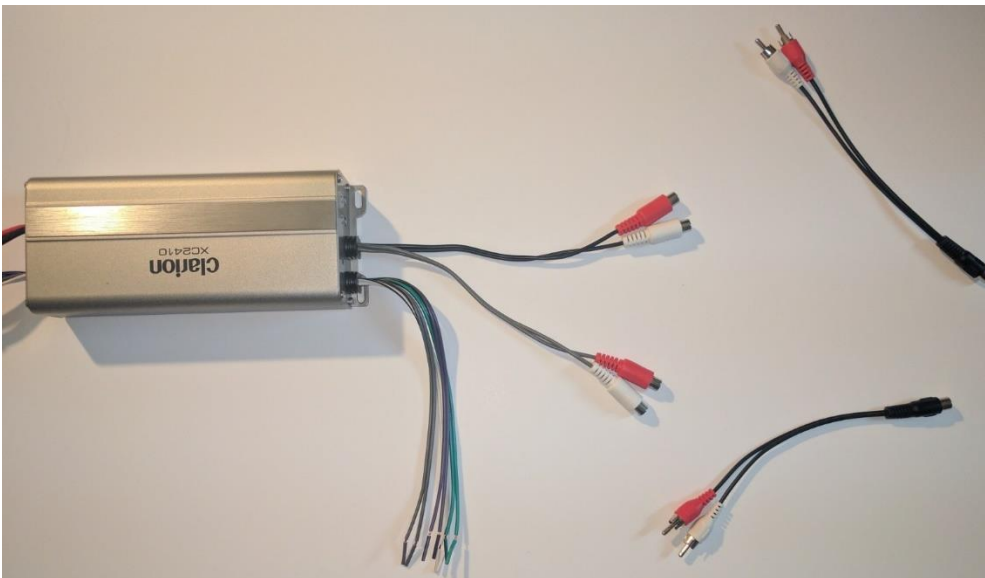
Bridged Mode

In this application, the XC2410 can be wired for Bridge Mode



Step 7. Amplifier Audio Input.

The Amplifier has 4 RCA input Plugs, you will need to locate the two 6 inch long RCA Y Adapters show in the right of the picture.



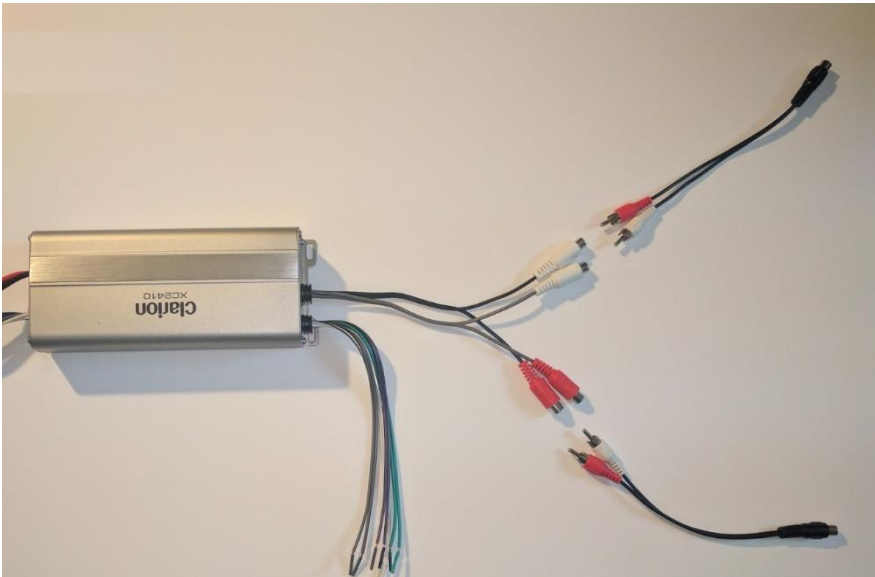
On the amplifier RCA Input Plugs, you will need to separate the RED and the WHITE plugs like in the picture below.

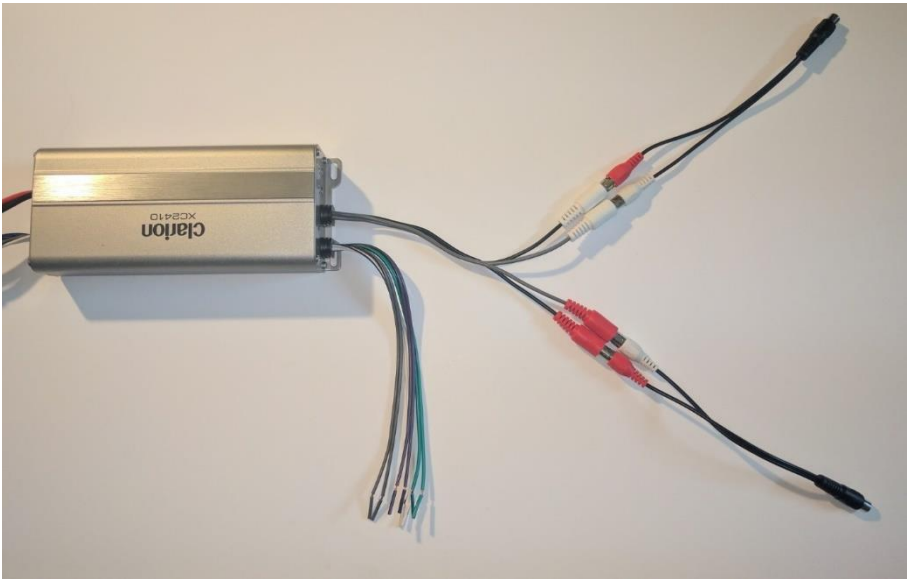


The following two pictures show how the cables should now be connected.

The WHITE RCA Inputs on the amplifier, will plug into one of the RCA Y Adapters

The RED RCA Inputs on the amplifier, will plug into one of the RCA Y Adapters





Now you will need to locate the Audio Adapter Cable



Amplifier Audio Input Cable –

If you ordered the Bluetooth edition, (see attached Bluetooth instruction)

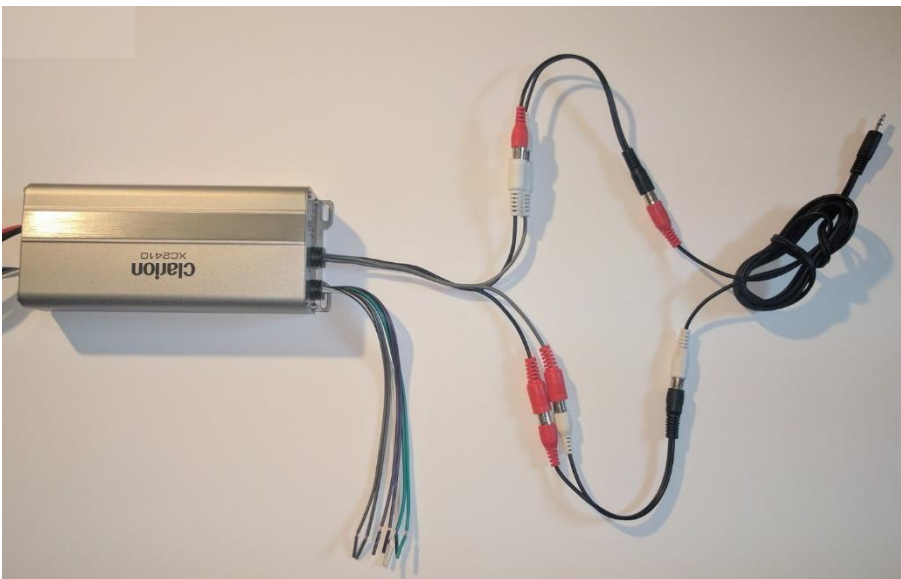
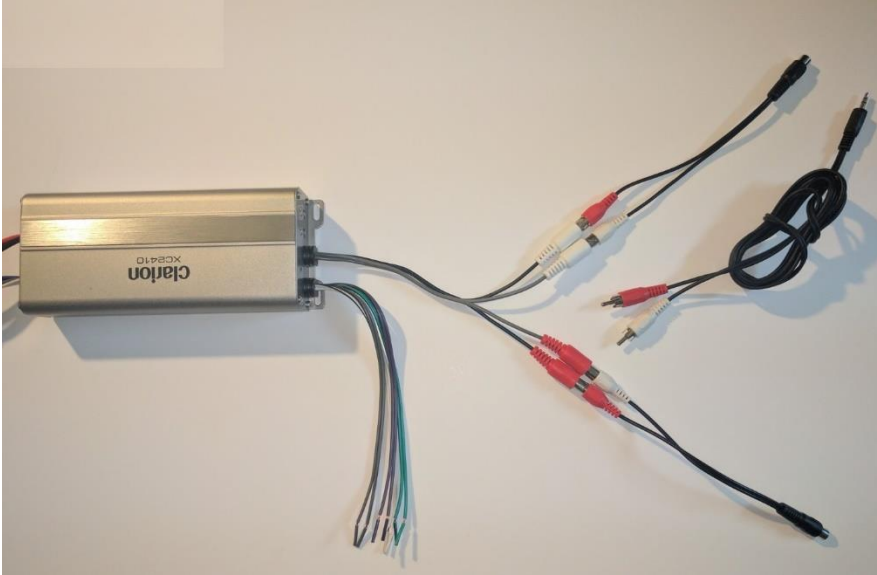
If you did NOT order the Bluetooth edition,

The RCA ends of this audio plug adapter will plug into the Y RCA Adapters that lead to the amplifier.

The 3.5mm Jack end, will go up towards where you want to mount your audio device/Volume Control/Bluetooth Adapter

When routing RCA cables, keep the cables away from the power cables and output speaker wires.

See below pictures





Step 8: Volume Control –

If you ordered the Bluetooth edition (see attached Bluetooth instructions)

If you did NOT order the Bluetooth edition, The volume control is used to make adjustments to the volume while you ride. The male end of the In-Line Volume Control will plug into the headphone jack or audio output jack of your audio device. You can use the included cable ties to secure the volume control to your handlebars so that it can be safely adjusted while your ride.

If you have an iPhone or Android Phone, you can go to the app store and download a third party speed based volume control, some are free, some cost.

Step 9. Check Wiring. RECHECK YOUR WIRING, AND MAKE SURE EVERYTHING IS HOOKED UP CORRECTLY.

There are two power wires on the Amplifier Power Plug, The red power wire, should have a fuse inline before connecting to the positive battery terminal. The smaller red wire should be hooked to a switched and FUSED 12v power source that turns on/off with the key. The Black wire should be hooked to the negative battery terminal of your bike, and should be short as possible. No longer than 30 inches max.

Make sure that all wires are away from hot areas, and that everything is secured to your bike. Before your turn on the power, make sure that your devices volume is turned down. You can damage your speakers/amplifier if your device is at full or loud volume when the amp is turned on. You will always want to start off with a low volume and build up to a louder volume. This will prolong the life of your speakers/amplifier. Everything should now be hooked up correctly. You can now use the speakers.

When you turn the key on, the amplifier light should also come on, this indicates that it is properly hooked up.

CAUTION: HOOKING THE AMPLIFIER UP INCORRECTLY CAN CAUSE PROPERTY DAMAGE OR PERSONAL INJURY.

STEP 10. Setting up the amplifier. Before you mount the amplifier, you want to get set the settings because it may not be easily assessable once installed. Make sure the volume on your audio device is turned down, then Plug the 3.5mm male end of the Volume Control into the headphone jack or audio output jack of your device. Turn on the Key, this will power up the amplifier Turn on your audio device, and push play, turn you can adjust the volume on your device and use the the in-line volume control.

The only setting on the amplifier you should worry about is the gain dial, for most people turning this up about $\frac{3}{4}$ is the sweet spot, but it is a personal preference. See Amplifier Setting Chart for how to set gain.

Step 11 Mounting the Amplifier Securely mount the amplifier to the motorcycle. Be sure to allow at least 1" around the amplifier for proper cooling.

Step 12: Safety Check *Important:* Make sure that your driving ability is not hindered by the items added to your bike, and that you can safely operate your bike before your road test the equipment. Motorcycle Tunes yields all responsibility of any damage caused by or any damage that may result from the Motorcycle Tunes audio system. When purchasing our item, you are agreeing to release Motorcycle Tunes of all legal liabilities of all products/advice given through website, instructions, email, or phone. As the purchaser, you are agreeing to assume all responsibility of the items once they have been shipped.

Setting the operating level

The gain controls allow you to set the nominal operating level of the amplifier from 200mV to 8V for RCA inputs or 600mV to 20V for speaker level inputs. This wide adjustment range accommodates virtually any source unit brand.

Improving bass sound

The amplifiers feature a narrow-frequency band bass boost circuit (known as “high-Q”). The bass boost control acts much like an equalizer with switchable gain fixed at 50Hz.

Use this control to tune low-frequency audio response to compensate for a less than ideal subwoofer enclosure design. The added boost produces rich, full bass tones that are normally difficult to reproduce in the car audio environment.

Note:

If you don't want to boost the bass frequencies, set this control to minimum.

Designing a more advanced system

Freq (Hz) controls

The high pass crossover frequency is fully adjustable between 35Hz and 250Hz (35Hz-250Hz on the low-pass crossover XC2110). Use the high-pass/low-pass filter controls, along with your speaker manufacturer's recommended crossover frequencies, to quickly design a more advanced system.

X-Over mode switches

These switches are equipped with 12dB per octave electronic filters for precise frequency attenuation with minimal phase distortion.

Final system checks

1. Start the engine and turn on the source unit. (Please make sure vehicle is outdoors or has adequate ventilation for exhaust fumes)
2. After a two-second delay, slowly increase the volume control and listen to the audio.
If you hear any noise, static, distortion or no sound at all, check the connections and refer to Troubleshooting. Depending on your system, the volume may become quite loud even at low level settings. Until you get an “audio feel” for the system's power, use care when adjusting the controls.
3. Turn the balance controls to their extreme positions and listen to the results. Audio output should match control settings (audio from the left speaker when balance is left).
4. Increase the volume and verify that the amplifier reproduces the audio at full frequencies without distortion.
If you hear distortion check the connections and verify that the gain control is set correctly. Another cause of distortion could be underpowered or damaged speakers. Refer to Troubleshooting.

6. TROUBLESHOOTING

No Audio

- Low or no remote turn-on voltage: check remote connections at the amplifier and source unit.
- Blown amplifier fuse: replace with a new fast-blow fuse (same rating).
- Power wires not connected: check battery and ground wiring at the amplifier and check the battery connections.
- Speaker leads shorted: check speaker continuity to ground; it should not show a common ground.
- Speakers not connected or are blown: check speaker connections at the amplifier; measure coil impedance.

Audio cycles on and off

- Thermal protection circuits are shutting the amplifier off.
- Check the location for adequate ventilation. Consult an authorized Clarion audio dealer.

Distorted audio

- Gain is not properly set or the speaker cones are damaged.
- Review the instructions for setting the gain. Inspect each speaker cone for signs of damage, such as a frozen cone, burning smell, etc.

Amplifier fuse keeps blowing

- The wiring is connected incorrectly or there is a short circuit.
- Review the installation precautions and diagram in this manual and check all wiring connections.

Whining or ticking noise when engine on

- The amplifier is picking up alternator or radiated noise.
- Turn down input gain.
- Move the audio cables away from the power wires.
- Check the power and ground connections on the amplifier and install an in-line noise filter on the source unit's power wire.
- Check the alternator and/or voltage regulator. Test for a weak battery or add water to the battery.