

# FOR-X

XC-5000.1  
XC-1500.2  
XC-1000.4  
XC-2500.5

## COMPETITION AMPLIFIERS XC SERIES

installation and operation

## Before You begin installation

Your new FOR-X is one of the most rugged, reliable, powerful and best performing amplifier in the world and exemplifies our commitment to excellence in car audio musical reproduction.

Before you begin , you will need tools, supplies and adapters. It is best to make sure you have everything you need before you start.

## Amplifier Location

Allow air circulation around the amplifier and never install amplifiers in the engine compartment or on the firewall.

When selecting a location, remember that amplifiers generate heat.

Select a location where air can circulate around the amplifier.

Do not cover the amplifier with carpets or enclose it behind interior trim panels.

Every installation will be a bit different based upon vehicle design, check all locations and placements carefully before making any cuts or connections.

## Disconnect Battery

Before you begin, always disconnect the battery negative terminal.

### Important:

If wiring connections are made incorrectly the unit will not operate properly and could be damaged. Follow the installation instructions carefully or have the amplifier installed by an authorized dealer.

## Things to remember when installing FOR-X amplifiers.

The design philosophy of **FOR-X** car amplifiers and mode of regulation requires that proper installation and load impedance instructions be adhered to at all times.

Minimum impedance recommended for XC-5000.1 is 1ohm or 2ohm strapable, for XC-1500.2 and XC-1000.4 is 1ohm stereo or 2ohm bridged, for XC-2500.5 is CH1-4 ( 2ohm srereo or 4ohm bridged ) and CH5 is 1ohm stable.

FOR-X amplifiers are not equipped with fuses so that proper value of external fuses should be used.

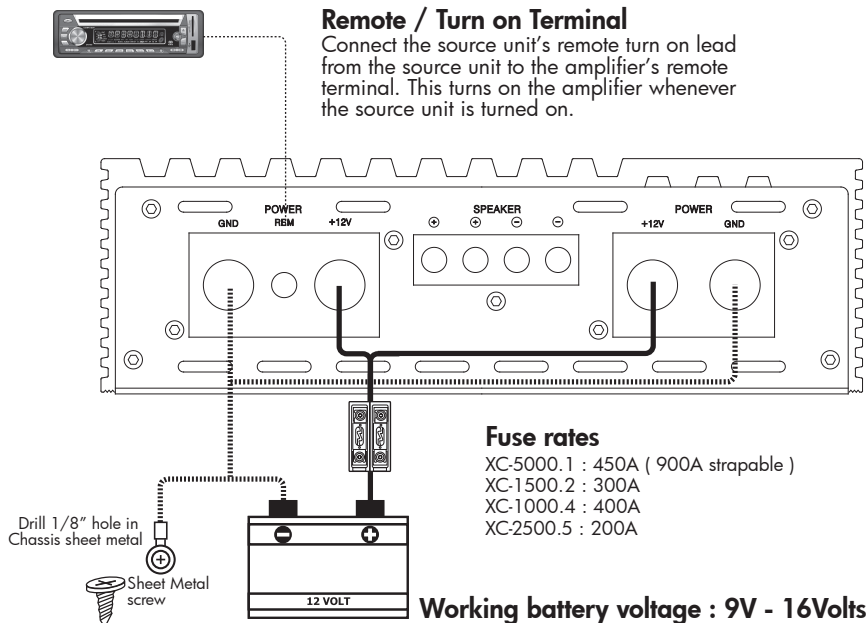
The fuse ratings should be sufficient under normal working conditions. However, if the amplifiers are overloaded fuses may blow.

Therefore, please try to avoid operating the amplifiers under these conditions.

1. Mount the amplifiers where air flow is the best.
2. Mount the amplifiers to a solid surface away from vibration, as these amplifiers are heavy and the vibration can damage the amplifiers.
3. Take extreme caution when mounting the amplifiers, so as not to damage the chassis with a drill or screwdriver.
4. Run 0AWG wire from the battery, using fuses with 12" of the positive battery terminal. The fuses are to protect the car and your car audio system from the fire that could be caused by a short circuit.
5. Run 0AWG ground wire as short as possible, to the closest chassis ground point. Be sure to remove the paint around the chassis ground point to provide a more solid electrical connection.
6. Run a 16AWG ( or larger ) wire to the remote turn-on lead of the headunit.
7. Connect the speakers as per wiring diagrams in the manual.  
12AWG or larger speaker wire is recommended.

8. Mount remote level control in the car where it can be easily reached from the driver's seat, if desired.
9. Using RCA interconnect cables, connect all line inputs per the wiring diagrams which follow. If possible, keep rca cables away from the 12V power and ground wire.
10. Set the controls as described on following pages.

## Power, Remote, Ground Connection.



## Power Terminal ( +12V )

Before mounting amplifiers, disconnect the negative ( - ) cable from the battery to protect any accidental damage to your awesome amplifiers and audio system.

Amplifiers are designed to use 0 gauge power and ground connection.

Connect the power cables to power terminal + 12V.

All XC series amplifiers do not have built-in fuses so they need external fuse connection.

Connect one end of fuse holder to the power cable going into the amplifiers and the other end of fuse holder to positive battery.

This fuse location will protect the system and the vehicle against the possibility of a short circuit in the power cable.

Be sure to use fuses and fuse holder adequate for the application.

## Ground Terminal ( GND )

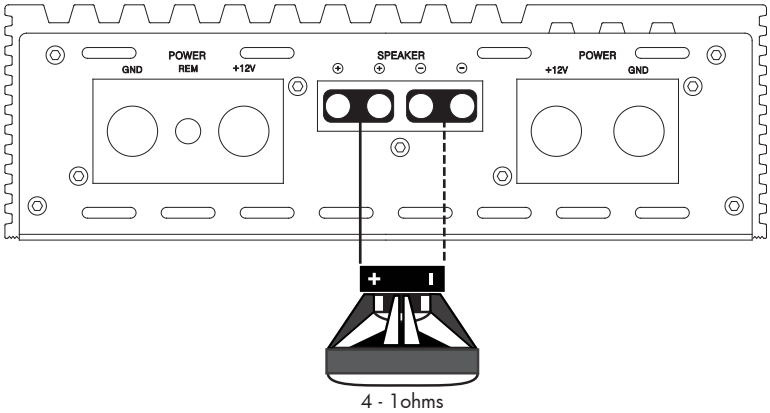
Locate a secure grounding connection as close to amplifier as possible.

Make sure the location is clean and provides a direct electrical connection to the frame of the vehicle. The ground needs to have as low of a resistance as possible.

Connect one end of a short piece of the same size cable as the power cable to the grounding point or to one of your batteries or battery bank.

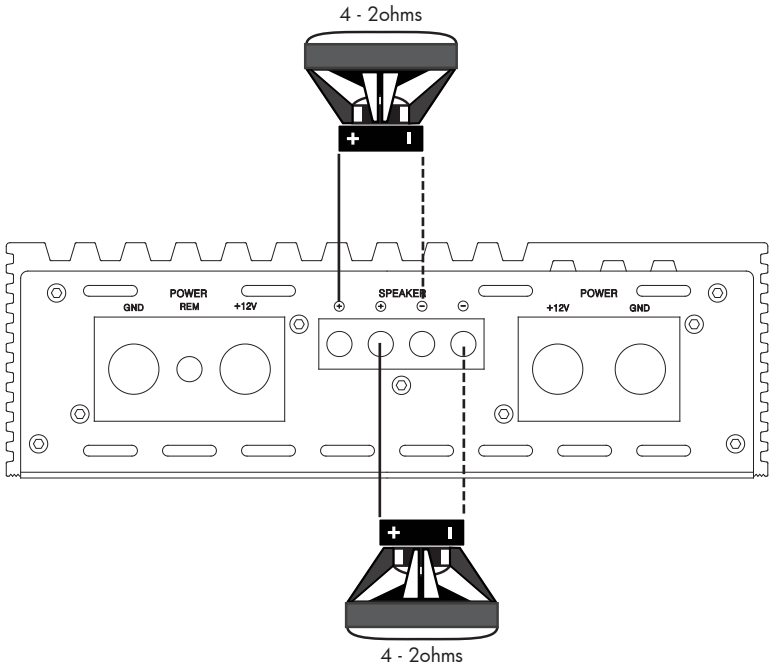
Run the other end of 0 gauge cable to the mounting location of the amplifiers for connection to the amplifiers ground terminals and connect the ground cable to the GND ( ground terminal ).

# XC-5000.1 Speaker connection



## Caution !!

XC-5000.1 minimum working impedance is 1ohm or 2ohm strapable.  
Impedance lower than 1 ohm can damage the amplifier

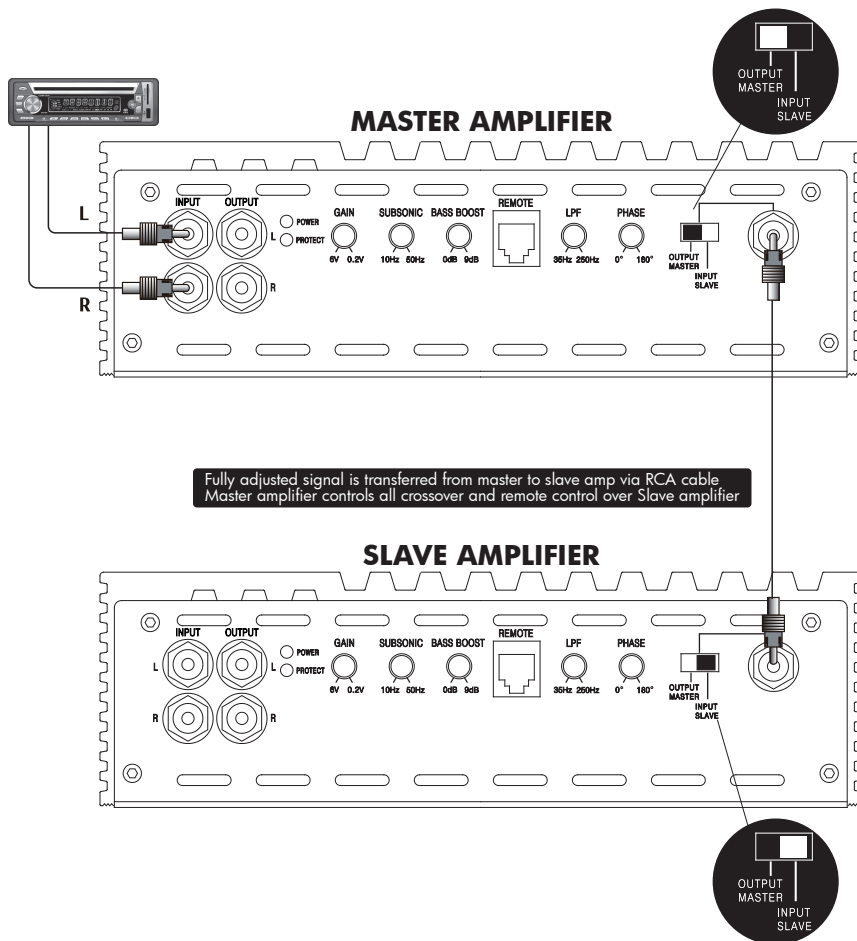


# XC-5000.1 Strapable connection

Strapable connection makes two of same amplifiers linked to 2ohm.  
Strapable connection makes the power double than their each 1ohm power.  
Please read the following connection and diagram carefully to make correct connection.

## Strapable input connection

- Step 1. Connect the Master amplifier to the head-unit and set its output master / input slave switch to output master.
- Step 2. Set Slave amplifier output master / input slave switch to input slave.
- Step 3. Connect RCA cable from the master to the slave amplifier as shown in the diagram.



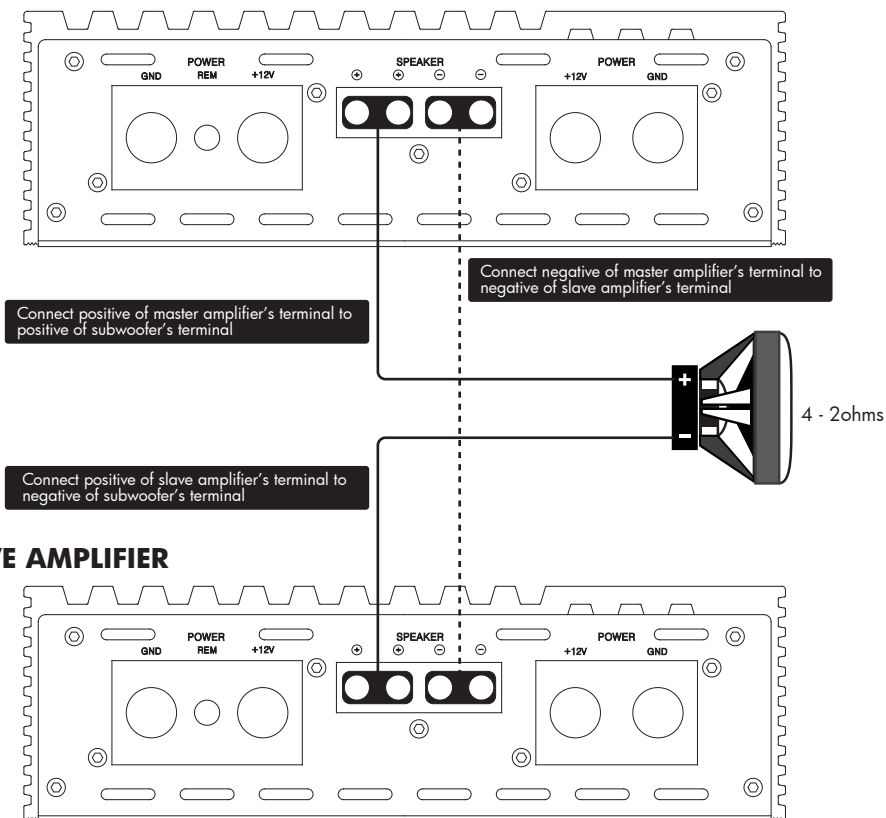
## Strapable speaker connection

Step 1. Connect speaker cable (+) on master amplifier to subwoofer (+)

Step 2. Connect speaker cable (+) on slave amplifier to subwoofer (-)

Step 3. Connect speaker cable (-) on master amplifier to speaker cable (-) on slave amplifier

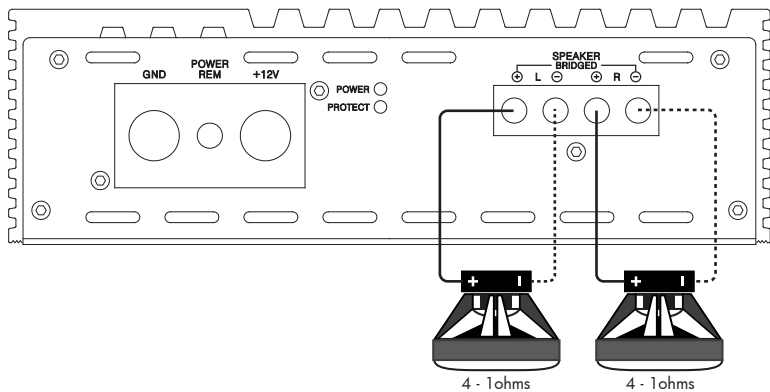
### MASTER AMPLIFIER



### SLAVE AMPLIFIER

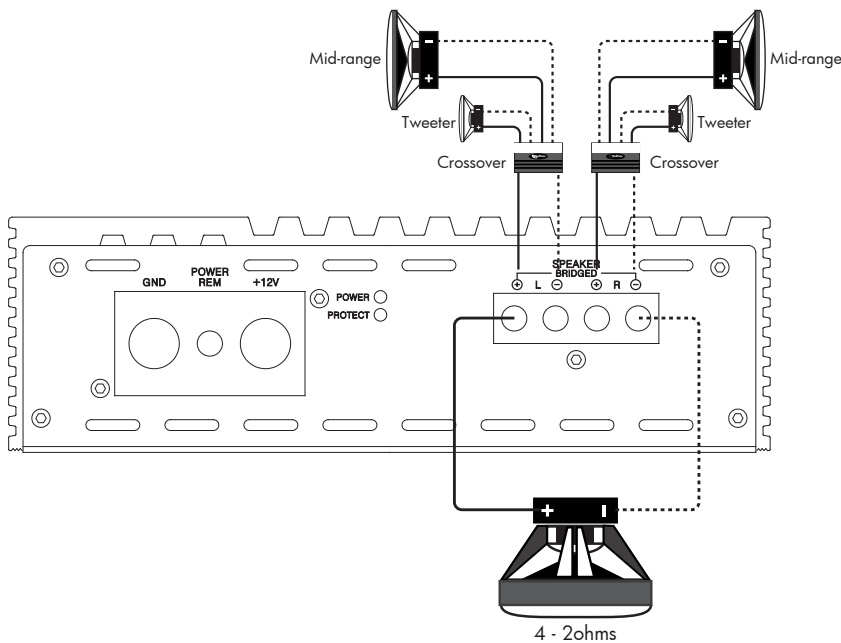
In strapable connection,  
Minimum working impedance is 2ohm.  
Impedance lower than 2ohm strappable connection can damage the amplifiers

# XC-1500.2 Speaker connections

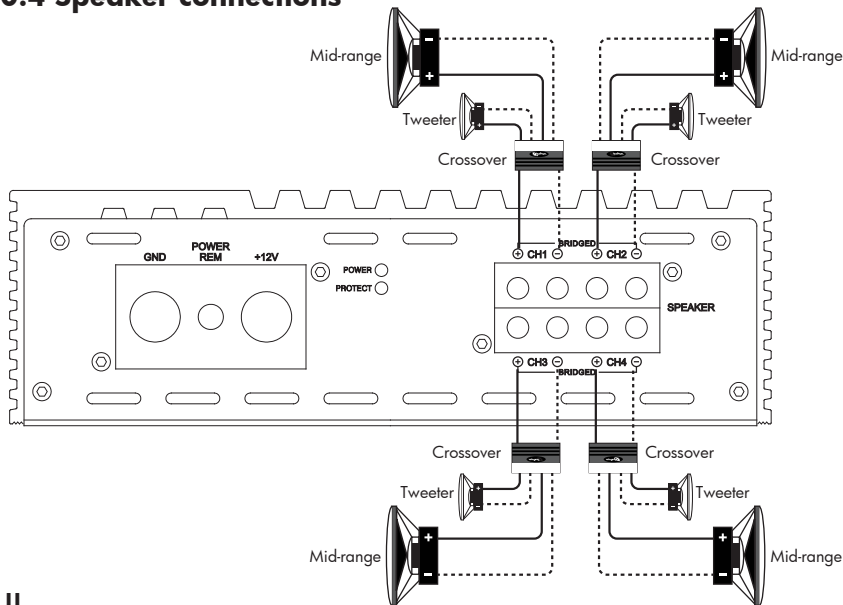


## Caution !!

XC-1500.2 minimum working impedance is 1ohm stereo or 2ohm bridged.  
Impedance lower than 1 ohm stereo can damage the amplifier

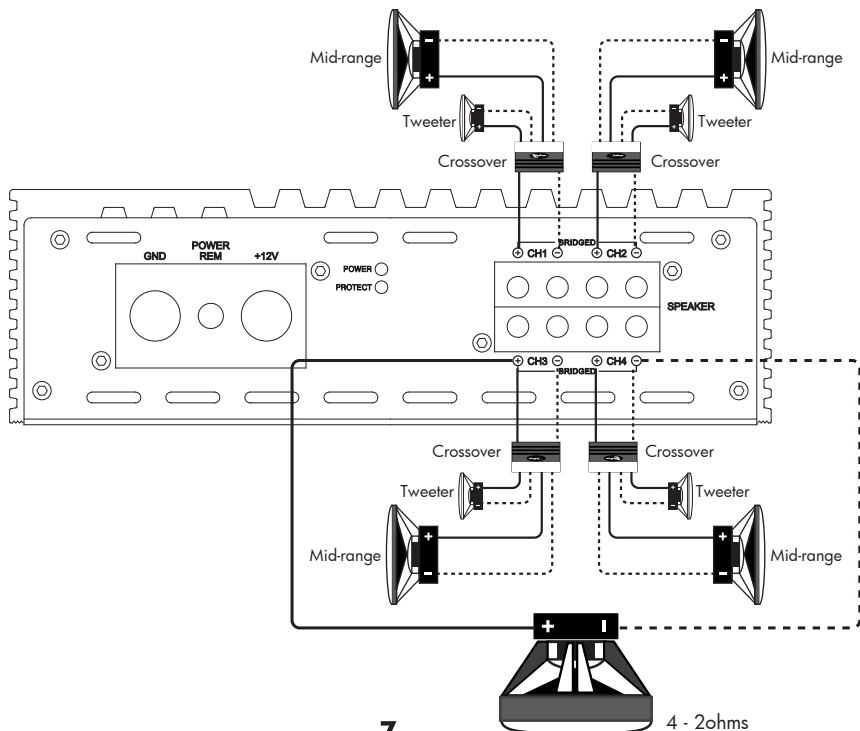


XC-1000.4 Speaker connections



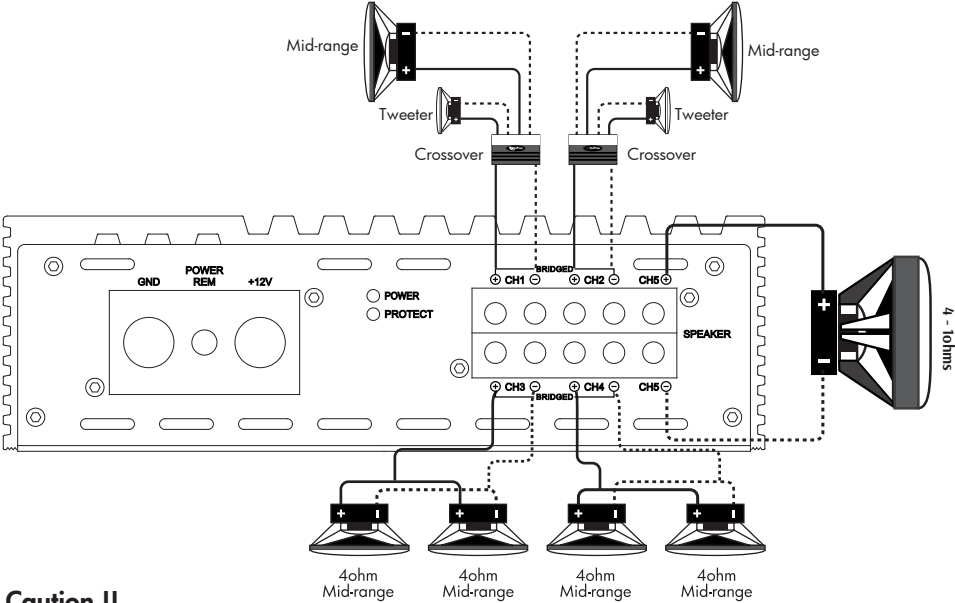
Caution !!

XC-1500.2 minimum working impedance is 1ohm stereo or 2ohm bridged.  
Impedance lower than 1 ohm stereo can damage the amplifier



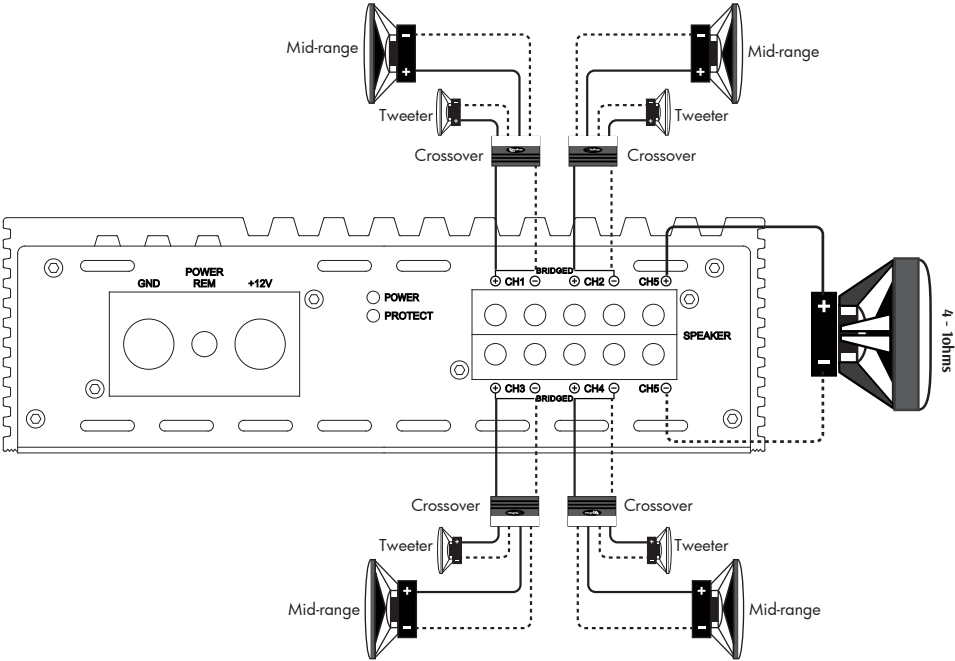


# XC-2500.5 Speaker connections



## Caution !!

XC-2500.2 minimum working impedance is 2ohm stereo or 4ohm bridged for CH1- CH4 and 1ohm for CH5  
Impedance lower than 2ohm stereo for CH1-4 and 1ohm for CH5 can damage the amplifier



## **TROUBLE SHOOTING**

### **NO POWER LED ON, NO OUTPUT**

- Check +12V and GND connection
- Check remote signal +12V
- Check the external fuses or built-in.

### **POWER LED ON, NO OUTPUT**

- Check source unit for output
- Check input gain control
- Check RCA cable
- Check speaker and wiring for shorts
- Check for damaged speakers

### **NO SOUND ON ONE CHANNEL**

- Swap left/right input to check source
  - ... If sound swaps too, source or signal cable is bad
- Swap left/right speaker to check speakers
  - ... If sound does not swap, speaker or speaker wiring is bad
  - ... In any case, consult authorized dealer

### **AMPLIFIER GOES IN PROTECTION MODE AT HIGHER GAIN**

- Check speaker impedance
  - XC-5000.1 is 1ohm or 2ohm strapable.
  - XC-1500.2 and XC-1000.4 are 1ohm stereo or 2ohm bridged.
  - XC-2500.4 is 2ohm stereo or 4ohm bridged for CH1-4 and 1ohm for CH5.
- Check working voltages ( 9V - 16Volts )
- Check speaker wiring for short circuit

### **ENGINE OR ALTERNATOR WHINE NOISE**

- Check wiring. make sure RCA cables are not run parallel on same side of vehicle as power cable.
- Check any preamps or black boxes in the signal path between source unit and amplifier
- Make sure ground pin ( shield or outer barrel of RCA cables ) have not lost connection and that source unit has good reference ground.

## SPECIFICATION

Features	XC-5000.1	XC-1500.2	XC-1000.4	XC-2500.5
4ohm RMS power	1700W x 1	650W x 2	500W x 4	130W x 4 + 680W x 1
2ohm RMS power	2900W x 1	1100W x 2	800W x 4	200W x 4 + 1100W x 1
1ohm RMS power	5000W x 1	1500W x 2	1000W x 4	1700W x 1 for CH5
2ohm RMS strapable power	10000W x 1			
4ohm RMS bridged power		2200W x 1	1600W x 2	400W x 2 + 680W x 1
2ohm RMS bridged power		3000W x 1	2000W x 2	
Frequency Response	10Hz - 260Hz	10Hz - 27KHz	10Hz - 27KHz	10Hz - 33KHz for CH1-4 10Hz - 260Hz for CH5
Signal to Noise Ratio	97dB <	95dB <	95dB <	95dB <
Damping Factor	400dB <	100dB <	100dB <	100dB <
Efficiency ( 4 ohm, 100Hz )	95% <	94% <	95% <	95% <
Input Sensitivity	6V - 0.2V	6V - 0.2V	6V - 0.2V	6V - 0.2V
Subsonic Filter	10Hz - 50Hz			10Hz - 50Hz
Phase	0 - 180			
Strappable connection	yes			
Bass Boost	0 - 9dB	0 - 18dB	0 - 18dB	0 - 9dB
Low Pass Filter	35Hz - 250Hz	50Hz - 800Hz	50Hz - 800Hz	50Hz - 5KHz for CH1-4 35Hz - 250Hz for CH5
x10 LPF multiply		500Hz - 8KHz	500Hz - 8KHz	
High Pass Filter		20Hz - 800Hz	20Hz - 800Hz	20Hz - 5KHz
x10 HPF multiply		200Hz - 8KHz	200Hz - 8KHz	
0 Gauge Power & Ground Input	Yes	Yes	Yes	Yes
Working Voltage	9V- 16V	9V- 16V	9V- 16V	9V- 16V
Remote Gain Control	Included ( Clipping indicator )			
Tested Voltage & THD	14.4V & Less than 1% THD			
Dimensions ( 212x65 mm WxH )	450	450	450	450

**FOR-X**

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**XC SERIES**