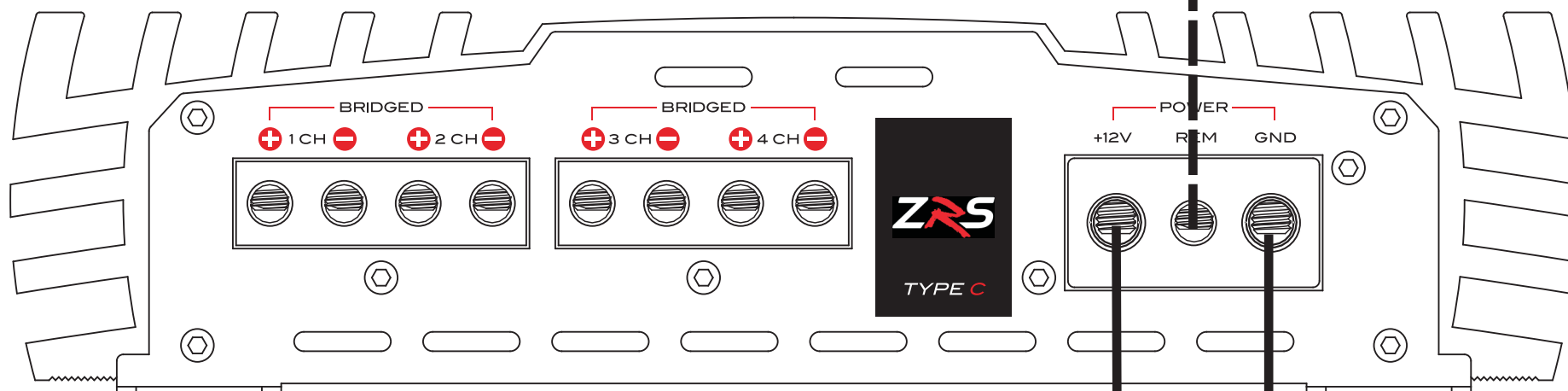


# ZRS C4 QUICK INSTALLATION GUIDE

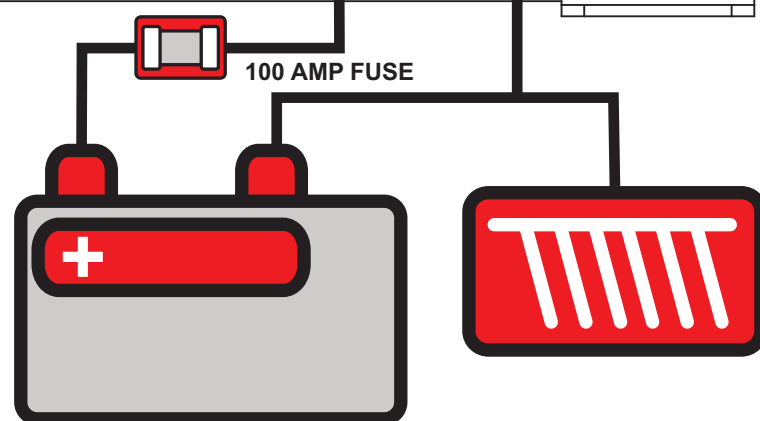


REMOTE TURN-ON  
FROM HEAD UNIT



## POWER CONNECTION REQUIREMENTS: MINIMUM 4 GAUGE CABLES.

GROUND CONNECTION CABLE SHOULD USE SAME GAUGE WIRE AS POWER CABLE. KEEP GROUND CABLE AS SHORT AS POSSIBLE. ALL AMPLIFIERS IN A MULTI-AMP INSTALLATION SHOULD GROUND TO THE SAME LOCATION TO AVOID GROUND LOOPS.



4 GAUGE MINIMUM FOR 4-OHM BRIDGED OR 2-OHM STEREO HIGH POWER INSTALLS. YOU MUST INSTALL AN ADDITIONAL 100 AMP IN-LINE FUSE IN THE MAIN POWER CABLE CONNECTION.



## ZRS Type C4 - 4 Channel High Power Amplifier

|                              |   |
|------------------------------|---|
| <b>4-Ohm Power:</b>          | 4 x 150 Watts RMS                       |
| <b>2-Ohm Power:</b>          | 4 x 225 Watts RMS                       |
| <b>4-Ohm Bridged:</b>        | 2 x 450 Watts RMS                       |
| <b>IHF-2002 Peak Power:</b>  | 2 x 900 Watts = 1800 Watts Max          |
| <b>Damping Factor:</b>       | >500 @ 100Hz                            |
| <b>Preamp Input Voltage:</b> | 300mV to 7Volt                          |
| <b>Low Pass Crossover:</b>   | 30Hz-300Hz                              |
| <b>High Pass Crossover:</b>  | 10Hz-300Hz                              |
| <b>Crossover Slope:</b>      | 12dB + 24dB                             |
| <b>Band Pass Control:</b>    | YES                                     |
| <b>Minimum THD:</b>          | <0.1%                                   |
| <b>Frequency Response:</b>   | 10Hz - 40Khz +/- 3dB                    |
| <b>Dimensions:</b>           | 9.6" x 2.32" x 22" (243x59x554mm) W/H/L |

We have spared no expense in designing these amplifiers, creating the most rugged, reliable, powerful and best performing amplifiers. In fact we are so sure of the quality we backup every ZRS Series amplifier with our exclusive two-year warranty which exemplifies our commitment to excellence in car audio musical reproduction. (See enclosed warranty card for details.)

Please read this installation guide carefully for proper use of your Cadence power amplifier. Should you need technical assistance during or after your installation please call our technical-line between 9:30 am and 5:00 PM EST at 732/370-5400. Read this entire guide fully before attestation.

**WARNING: BE AWARE!** Use of this amplifier at extreme high volumes for extended periods of time may cause hearing loss and or hearing damage. During periods of prolonged high volume levels it is recommended that you use ear safety devices. Playing Cadence amplifiers at high volume levels while driving will impair your ability to hear necessary traffic sounds. While driving always keep your sound volume at reasonable levels. We at Cadence want you listening for many years to come.

When installing the amplifier, secure it tightly. An unmounted amplifier in your car can cause serious injury to passengers and damage to your vehicle if it is set in motion by an abrupt driving maneuver or short stop.

We suggest you construct a Red wiring harness with 2 additional fuse. One fuse should be located near the car battery. This fuse near the battery offers protection against damage from short circuits to the car chassis between the battery and the amplifier. A second fuse closer to the amplifier offers additional safety to the amplifier itself. This fused red power wire should be attached to the amplifier power terminal marked **12V+**.

The wire harness should be made of primary cable of at least **4** gauge. The harness should terminate in a large ring terminal for connection directly to the positive terminal of the car battery. Use a spade plug to attach the wire, which connects to the amplifier location marked **12V+**.

A second black color wire of equal gauge should be used as a ground connection to a welded chassis member. When connecting the ground wire make sure that there is no paint or other insulator blocking a good ground connection. When installing multiple amplifiers, mount them in close proximity so that they can all share the same ground point. Attach the black ground wire to the amplifier screw terminal marked **Ground**.

We recommend that you use the Cadence amplifier installation kits, which contain all the cabling and accessories necessary for a good, reliable installation.

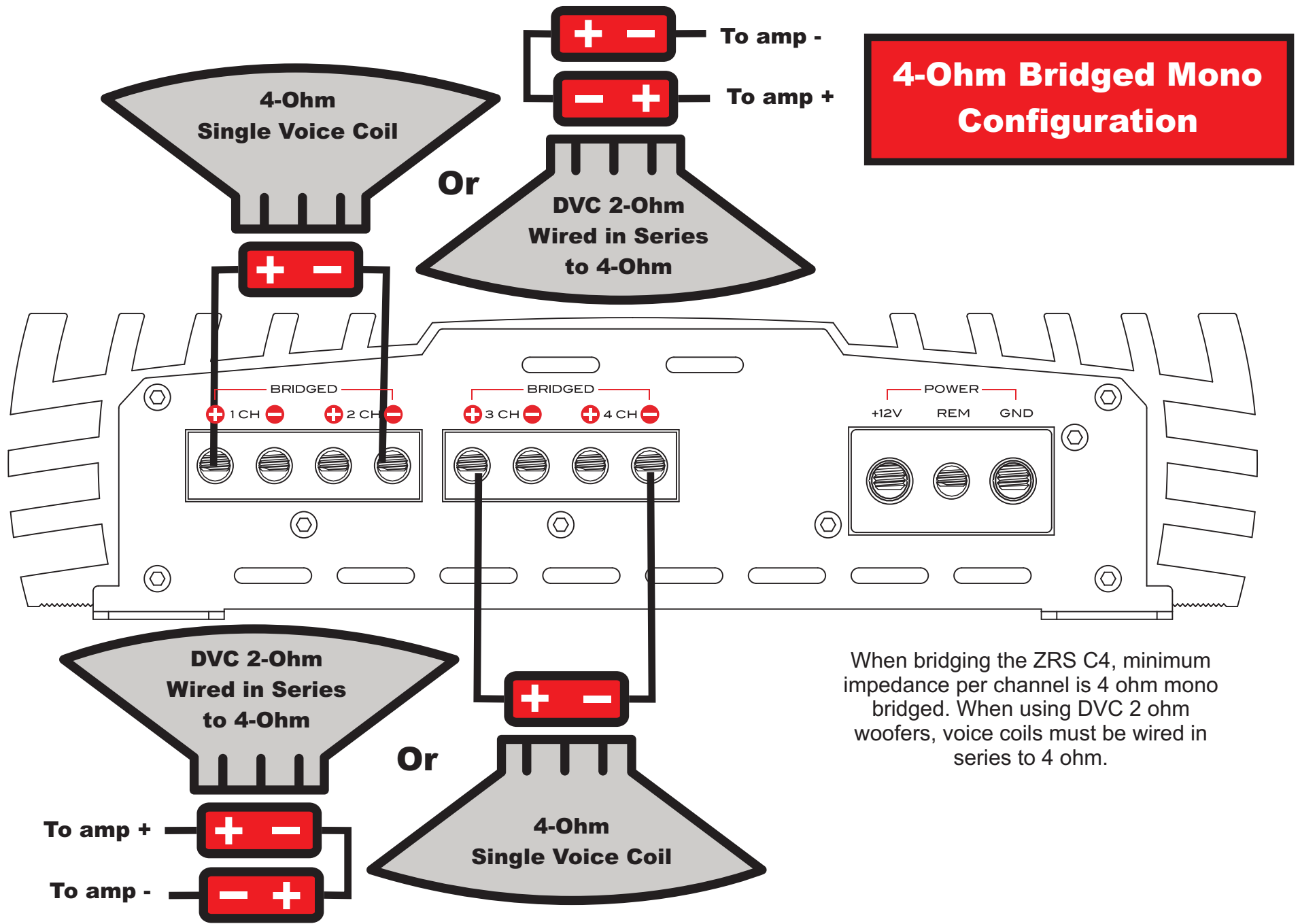
Over the years we have received amplifiers back to our service department with melted power/ground terminals. The cause of this is a bad ground connection. When there is a lack of good ground, heat builds up at the weakest point which happens to be the contact screw of the amplifier terminal. Over time the heat generated will begin to melt the terminal. It is a good practice to feel the power and ground wires with your hands, near their amplifier connection after having played the amp for a while. If the wires feel hot to the touch you probably have a bad or loose connection. If you are sure of your connections and the wires still feel hot to the touch, you should upgrade the gauge of wire to next heaviest gauge.

The remote turn on connection is located on the barrier strip next to the power and ground connections. This connection is responsible for turning the amplifier on and off with the rest of the system. A smaller gauge wire can be used to make this connection to your radio's power antenna lead. Should your system not have any turn on leads, you can wire the remote terminal to an accessory lead, which turns on, with your cars ignition.

The ZRS Series amplifiers feature RCA preamp inputs. Run RCA cables from your sound source to the inputs of the amplifier. We suggest the use of high quality shielded RCA patch cords to help reduce and eliminate unwanted electrical noise to your system.

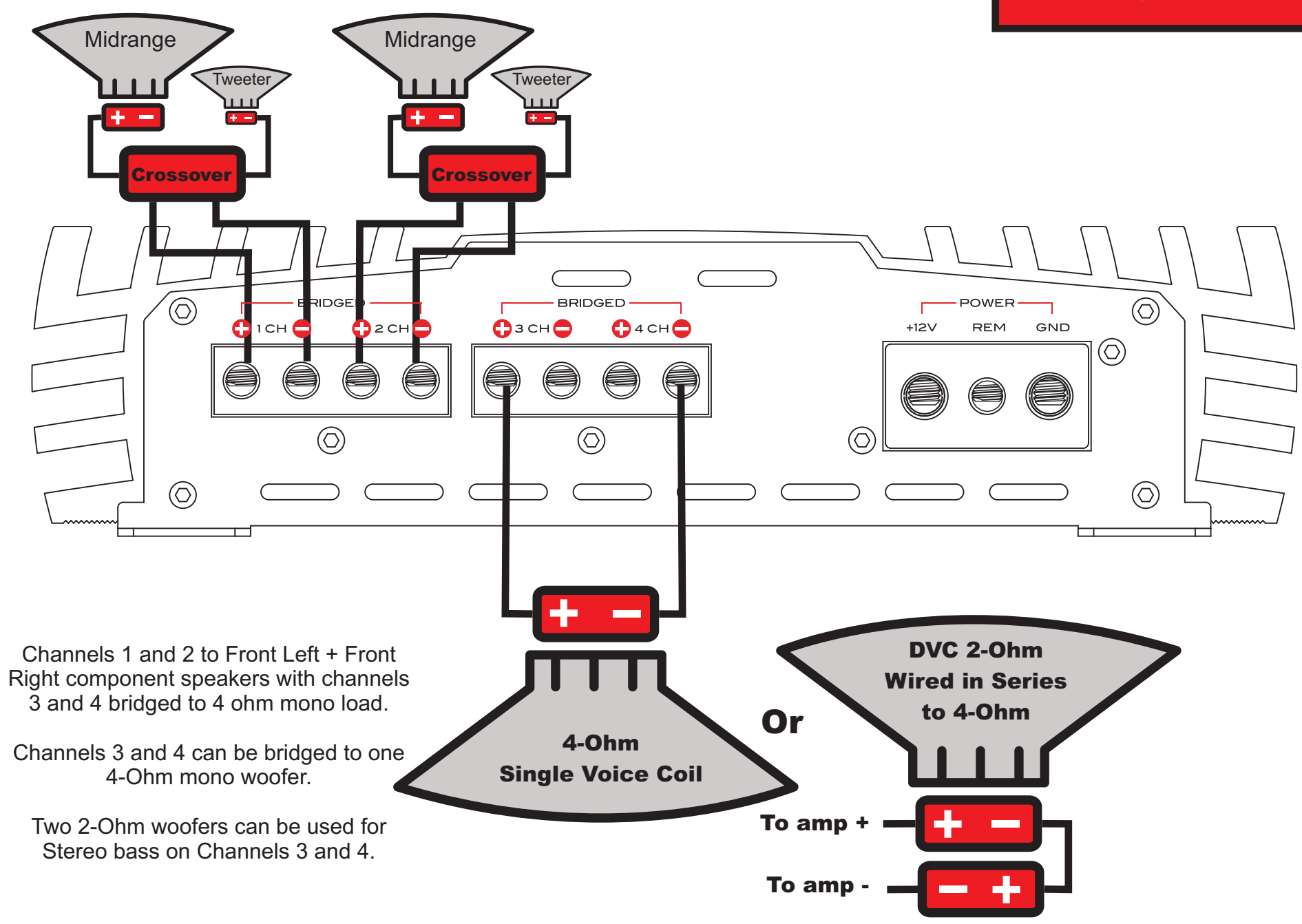
To avoid electrical noise from being injected in to your sound systems be sure to run the RCA cables on the opposite side of the vehicle that you used to carry the power and ground leads of the amplifier.

# ZRS C4



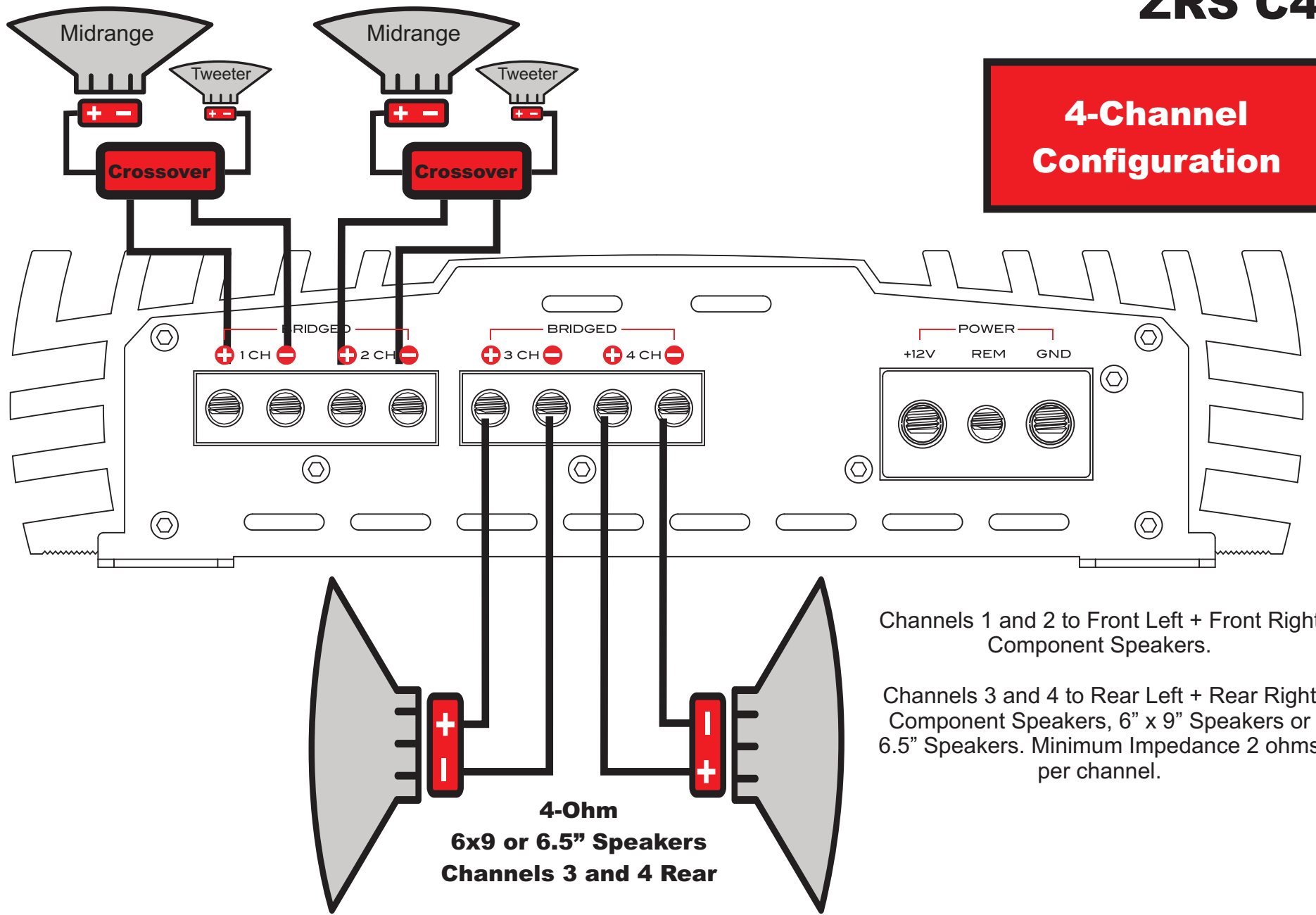
When bridging the ZRS C4, minimum impedance per channel is 4 ohm mono bridged. When using DVC 2 ohm woofers, voice coils must be wired in series to 4 ohm.

## 3-Channel Configuration

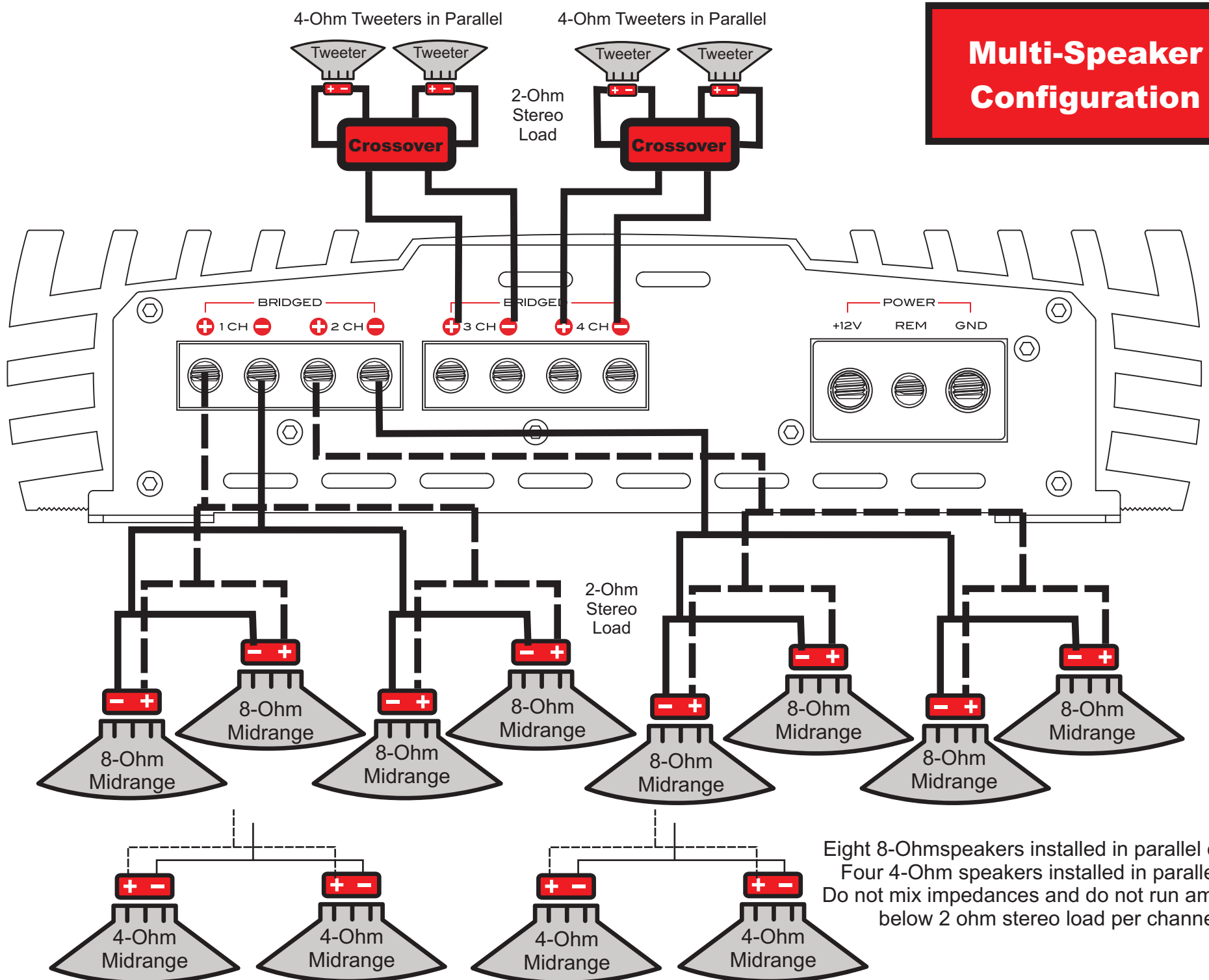


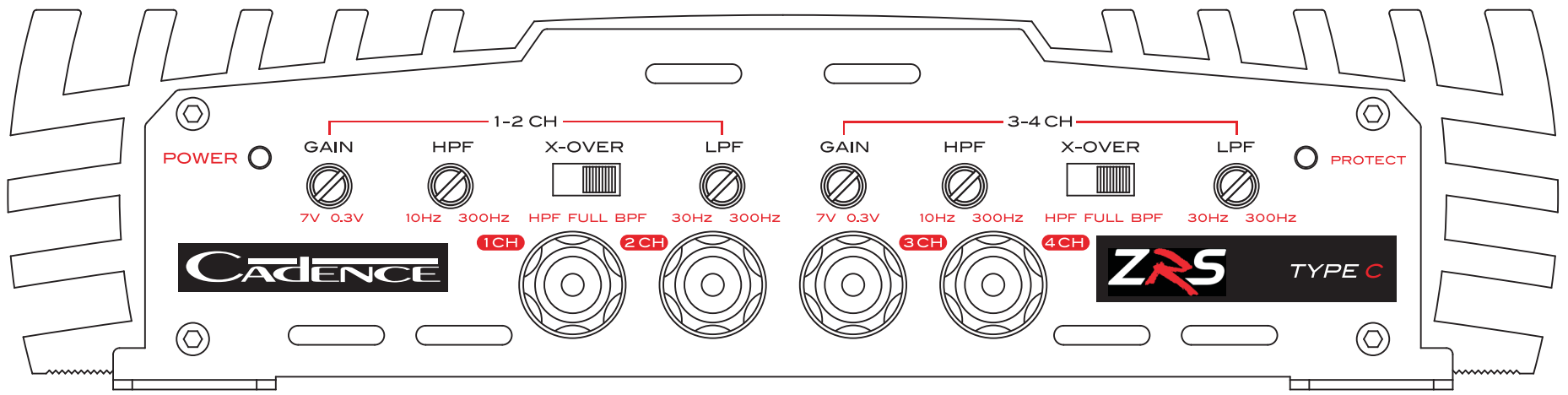
# ZRS C4

## 4-Channel Configuration



## Multi-Speaker Configuration





**4-Channel Band Pass Configuration.**

The ZRS C4 features a unique band pass system where by channels 1 and 2 can be configured to a band pass system while separately setting channels 3 and 4 to their own band pass frequencies. This band pass system is especially useful when installing multiple midrange and tweeter speakers. Please see below for detailed instructions.

Set Channels 1 and 2 Crossover Switch to BPF (Band Pass Filter) and adjust the HPF (High Pass Filter) knob to the frequency you wish to choose to block low frequency signals. In the drawing below we set the knob to approximately 30Hz. Set the LPF (Low Pass Filter) to the frequency you wish to choose to block high frequency signals, we chose 300Hz. Now channels 1 and 2 will only play signals between 30Hz and 300Hz.

Set Channels 3 and 4 Crossover Switch to BPF (Band Pass Filter) and adjust the HPF (High Pass Filter) knob to the frequency you wish to choose to block low frequency signals. In the drawing below we set the knob to approximately 30Hz. Set the LPF (Low Pass Filter) to the frequency you wish to choose to block high frequency signals, we chose 300Hz. Now channels 1 and 2 will only play signals between 30Hz and 300Hz.

The Band Pass Setting is especially useful when setting up component speakers where you want to actively block low frequencies from reaching your midrange speakers and tweeters and for multiple midrange speaker installations. When using a 3-way amplifier system installation, the ZRS C4 is the perfect midrange/midbass power amplifier.

**RCA PREAMP INPUT**

High end Tiffany Style RCA connectors are used for the preamp inputs ensuring tight loss-less signal connections for ensured high fidelity.

**INPUT GAIN CONTROL**

The ZRS C4 amplifies features advanced input gain control from 0.3 volts to 7 volts so that it can operate efficiently and at full power from any head unit pre amp signal.

**HEAVY DUTY HEATSINK**

Super heavy-duty heatsink guarantees that your amplifier will stay cool no matter how hard you pound it. Computerized thermal protection circuitry guarantees the amplifiers stability.

**POWER & DIAGNOSTIC LED INDICATORS**

ZRS amplifiers feature sophisticated IC controlled protection circuitry. If the amp goes in to a diagnostic condition from thermal over load or speaker short circuit the LED will light and amp will shut down.

**12dB HIGH PASS CROSSOVER SLOPE**

Channels 1 and 2 electronic crossover features sophisticated 12dB High Pass filter circuitry. The 12dB filter ensures a more gradual cutoff necessary for front speaker stages and tweeters where frequency overlap is critical for high quality sound reproduction,

**24dB LOW PASS CROSSOVER SLOPE**

Channels 3 and 4 electronic crossover features sophisticated Linkwitz-Riley 24dB Low Pass filter circuitry. The 24dB filter ensures a steep cutoff of high frequencies and assists the amplification circuitry emphasize its power output in the set frequency range thereby increasing the audio spectrums headroom.

**CONNECTION TERMINALS**

The ZRS C4 features heavy duty bolt down terminals, the power and ground terminals accept 4 gauge wire while the speaker terminals can accept 10 gauge wire.

Before you begin with your installation, disconnect the NEGATIVE (-) terminal from your car's battery. This safety precaution will avoid possible short circuits while wiring your amplifier. Cadence amplifiers operate on 12-volt negative ground systems only.

It is recommend that you layout your sound system design on paper first. This will help you during the installation so that you will have a wiring flow chart and not miss-wire any of your components.

Mount the amplifier in the trunk or hatch area of your vehicle. Never install an amplifier in the engine compartment or on the firewall. Please be sure to leave breathing room around the amplifier heat sink so that it can dissipate the heat it produces efficiently. The amplifier can be installed either horizontally or vertically.

When mounting the amplifier on the trunk floor, be sure to watch for your gas tank, gas lines and electrical lines. Do not drill or mount any screws where they might penetrate the gas tank of your car.

Once the system is operational, the first thing to do, is set all crossover points to approximate settings. In the case of the basic sub woofer system Low Pass filter crossover at 100 Hz or so. Set the Bass Boost equalizer controls to 0 dB ( Flat Switch Position.)

Now you should set the amplifiers Input Sensitivity adjustment. The knob accessible on the side of the amplifier marked INPUT GAIN adjusts the input sensitivity from 300mV to 7Volts.

To adjust the input sensitivity, turn the control using a small flat head screwdriver fully counter clock wise to the minimum position. Do not apply any pressure while turning as this might break the control unit. Adjust your radio volume level to maximum volume. Now turn the level control on the amplifier clockwise towards the Maximum marking until audible distortion occurs. When you begin to hear any distortion in the sound, back down one notch and your amp is set. It is helpful to have a second person to help you set the gain.

When setting up a multi-amp system, set each amplifier's gain separately. Start off with the bass amplifier, then adjust the highs amplifier's level control to match.

Once you are satisfied with the level control settings, use any equalizer controls to adjust the system tonal level for personal preference. Keep in mind that after equalizing, you may have to go back and reset the amplifiers level controls.

**The level control of any car amplifier should not be mistaken for a volume control. It is a sophisticated device designed to match the output level of your source unit to the input level of the amplifier. Do not adjust the amplifier gain to maximum unless your input level requires it.**

**If your unit has been professionally installed please do not change the gain settings set by the installer, he is the professional!**

Your system can also be extremely sensitive to noise when the LEVEL is set to maximum and does not match your input signal. The gain adjustments need to be made only once when first setting up the system.