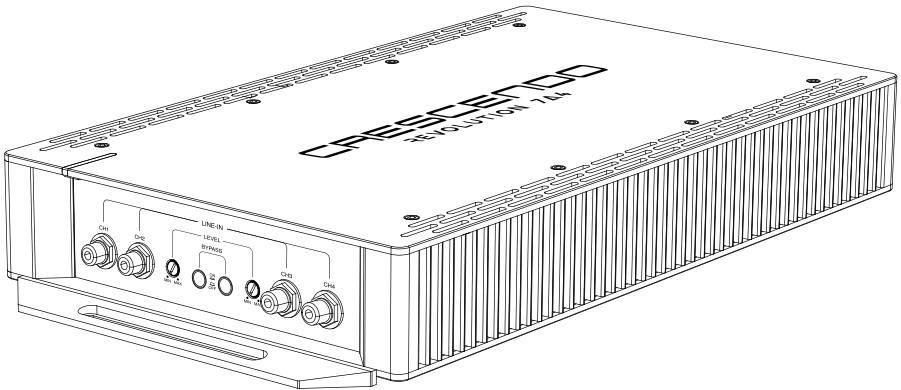


USER MANUAL

# CRESCENDO

REVOLUTION 7Δ4  
HIGH-END AMPLIFIER



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ENGLISH

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## INTRODUCTION

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Congratulations and thank you for selecting the CRESCENDO REVOLUTION 7A4 for your high-end car audio amplifier. CRESCENDO car audio is designed, developed and engineered to the highest levels by using high-grade audio components that are selected and manufactured by world-class manufacturing facilities.

All components are closely inspected and extensively tested through the highest quality control by professionals who are dedicated to fabricating state of the art car audio products. According to our slogan, CRESCENDO is committed to always manufacture 'true audio quality' products.

In order to obtain the best performance, we recommend that the product installation be carried out by an authorized CRESCENDO dealer or a professional car audio installer.

Problems caused by failure to follow the guidelines outlined in the user manual can invalidate the product warranty.

Please carefully read the warranty guarantee and keep your product purchase receipt so that it can be used as proof of claim if needed. Enjoy the convenience of our online warranty registration to activate the CRESCENDO warranty.

Thank you for being our customer.

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## SAFETY INSTRUCTIONS

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**CAUTION:**

The symbol with **“CAUTION”** is intended to alert user to the presence of important instructions. Failure to comply with instructions may result in potential risk or hazard.

**WARNING:**

The symbol with **“WARNING”** is intended to alert user to the presence of critical instructions. Failure to comply with instructions may result in serious consequences.

## PACKAGE CONTENT

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- High-end amplifier CRESCENDO Revolution 7A4
- User manual
- Mounting hardware kit

## CAUTION

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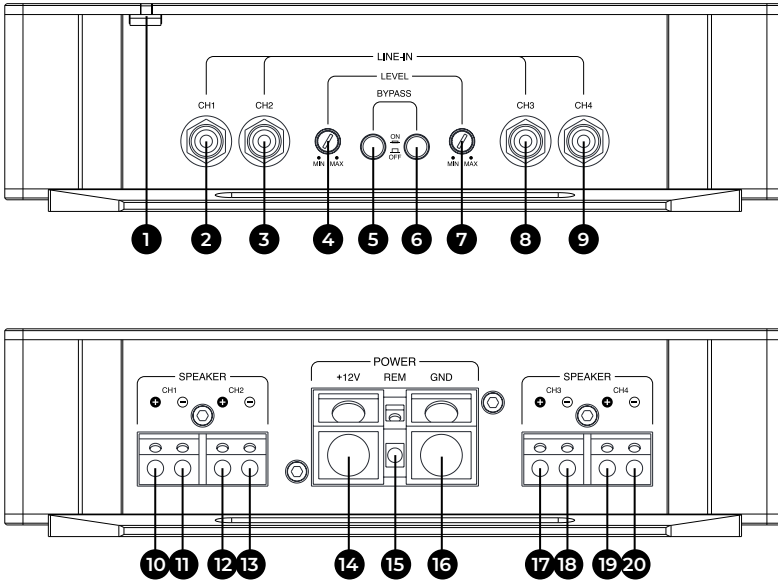


- Do not adjust the amplifier while driving, as it may cause distractions.
- Do not open or modify the amplifier, as this may cause the amplifier to fail or underperform.
- Do not fully cover the amplifier without proper cooling, as this may cause overheating or trigger the amplifier's protection mode, ultimately reducing its longevity.
- Only use the CRESCENDO REVOLUTION 7A4 with a 12 Volt battery source or power supply.
- Use a fuse with the appropriate amperage. Incorrect fuse selection may cause a fire.



- Use the correct cable type. Incorrect cable selection may cause fire, injury, and damage.
- The ground wire must be installed first, followed by the other cables, including the RCA cable. Sequencing errors may cause damage to the ground line of the sound source (head unit).
- Keep all small objects out of children's reach. If swallowed, seek immediate medical attention.
- Prior to installation, disconnect the negative terminal of the car's battery to avoid the risk of injury, fire, or damage.

## PRODUCT FEATURE



- |   |                               |
|---|-------------------------------|
| 1. LED Indicator (Normal/Overheat/Protection) | 11. Channel 1 Negative Output |
| 2. Channel 1 Input: RCA                       | 12. Channel 2 Positive Output |
| 3. Channel 2 Input: RCA                       | 13. Channel 2 Negative Output |
| 4. Gain Adjustment Channel 1 and 2            | 14. 12 Volt Positive Supply   |
| 5. On-Off Bypass Button Channel 1 and 2       | 15. Remote Trigger            |
| 6. On-Off Bypass Button Channel 3 and 4       | 16. Negative/Ground Supply    |
| 7. Gain Adjustment Channel 3 and 4            | 17. Channel 3 Positive Output |
| 8. Channel 3 Input: RCA                       | 18. Channel 3 Negative Output |
| 9. Channel 4 Input: RCA                       | 19. Channel 4 Positive Output |
| 10. Channel 1 Positive Output                 | 20. Channel 4 Negative Output |

## REQUIRED FOR INSTALLATION

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- Volt and resistance meter
- Hand held drills including assorted bits
- Battery terminal post wrench
- Soldering iron and solder
- Wire strippers and cutters
- Fuse holder and appropriate fuse
- Ring connectors for negative cable connection to chassis ground
- Power cord (of suitable size and length)
- Remote/trigger cable (of suitable size and length)
- Ground cable (of suitable size and length)
- Heat shrink tubing according to cable sizes

### NOTE:

1. We recommend using 2 AWG (33 mm<sup>2</sup>) cable for the power (+12 Volt) and ground (GND) connections.
2. We recommend using a 150 Ampere fuse to safeguard the amplifier.



### CAUTION:

If you do not possess the technical skills to perform the installation, it is recommended that you have the installation be carried out by a professional car audio installer.



### WARNING:

Prior to installation, remove the negative (-) battery terminal to prevent damage to the amplifier. Failure to do so may result in damage, fire or electric shock.

Before performing the installation and operating the amplifier, please follow these instructions:

1. Be sure to read the user manual carefully and understand it before attempting to install and operate the amplifier.
2. For safety purposes, remove the negative cable from the battery before starting the installation.
3. Use only high quality components for all parts of the installation.
4. Avoid carrying out installations that require modifications that could lead to malfunctioning operations.
5. Under no circumstances should you attempt to open the amplifier. Refer any service or repair work to qualified personnel authorized by CRESCENDO.

## MOUNTING LOCATIONS

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### **Trunk Mounting**

To ensure optimal operating temperatures, it is recommended to install the amplifier on the trunk floor. This location provides sufficient air circulation for proper cooling.

### **Under Seat Mounting**

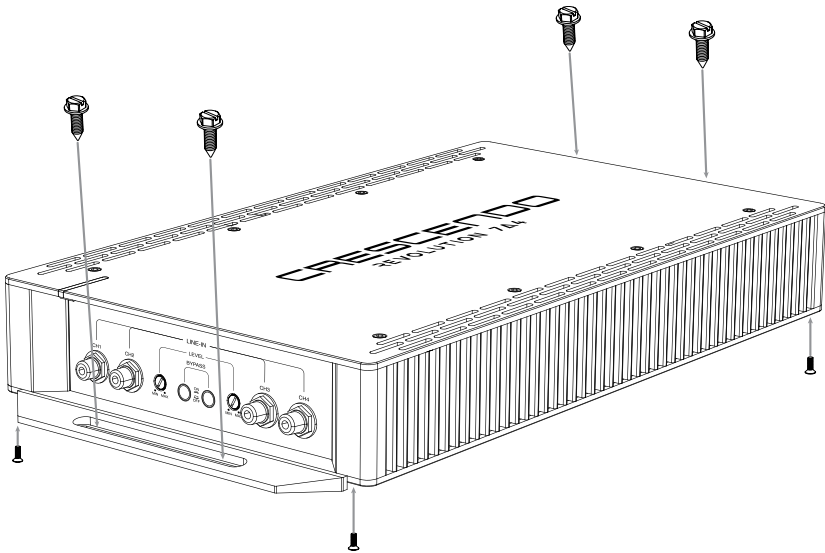
For this type of amplifier, placing it under the seat is suitable.

## AMPLIFIER MOUNTING

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When determining the installation location, please keep in mind that the amplifier generates heat. Therefore, choose a location where air can flow freely around the amplifier. Do not cover the amplifier with materials such as carpet, acrylic, or hide it behind car panels/compartments.

Securely mount the amplifier to the vehicle. Refer to **Figure 1**.



**Figure 1**



**CAUTION:**

Do not cover the amplifier with carpet or acrylic.

## FUSE

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CRESCENDO REVOLUTION 7A4 is equipped with two 50-Ampere fuses inside the amplifier. If a fuse becomes broken, please replace it with the same amperage. You can access the fuse by opening the top cover of the amplifier.

## POWER CONNECTIONS

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A high quality power cord connection will deliver the best performance from the CRESCENDO REVOLUTION 7A4 high-end amplifier.

The negative power cable or ground cable is equally important as the positive power cord, so both cables should be of the same size.

The recommended power cord size for the REVOLUTION 7A4 is 2 AWG (33 mm<sup>2</sup>). This is the largest size that the CRESCENDO REVOLUTION 7A4 amplifier can accommodate.

The positive power cord must be equipped with a FUSE located within a maximum distance of 40 cm from the main battery (refer to **Figure 2**). If an additional battery is used, a fuse must be placed within a maximum distance of 40 cm before and after the additional battery (refer to **Figure 3**).

The maximum fuse size is **100 Ampere** for the power cord size **4 AWG** (21 mm<sup>2</sup>) and **150 Ampere** for the power cord size **2 AWG** (33 mm<sup>2</sup>).

**CAUTION:**

Connect the positive power cable to the battery at the very end of the installation phase, after completing all of the installation processes.

## POWER CONNECTIONS

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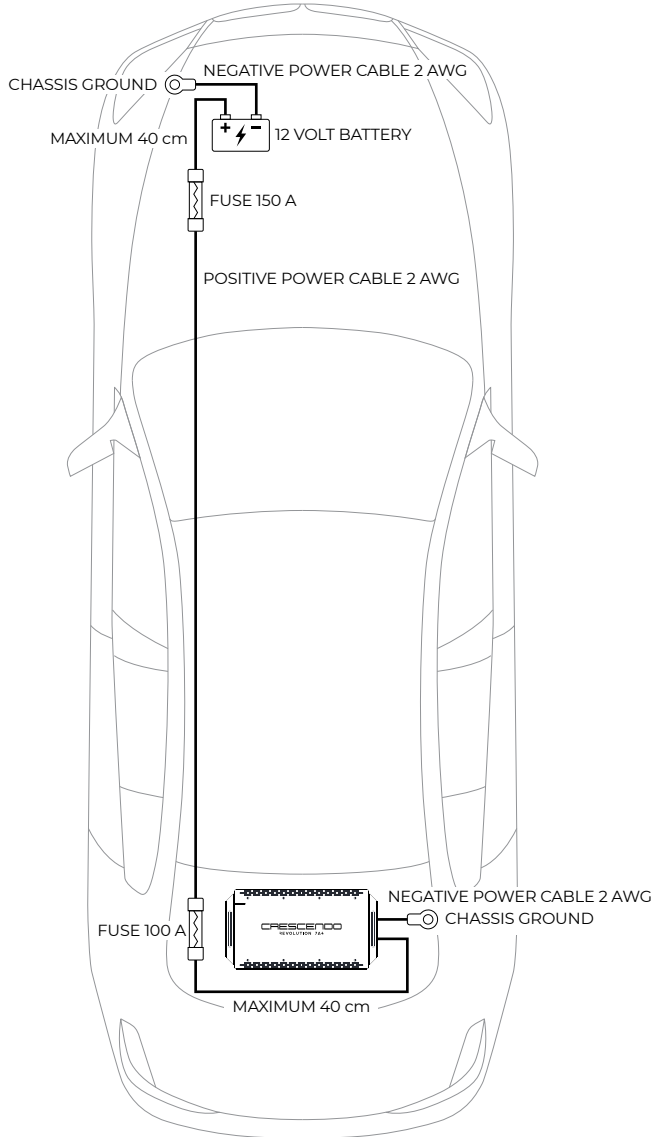


Figure 2

# POWER CONNECTIONS

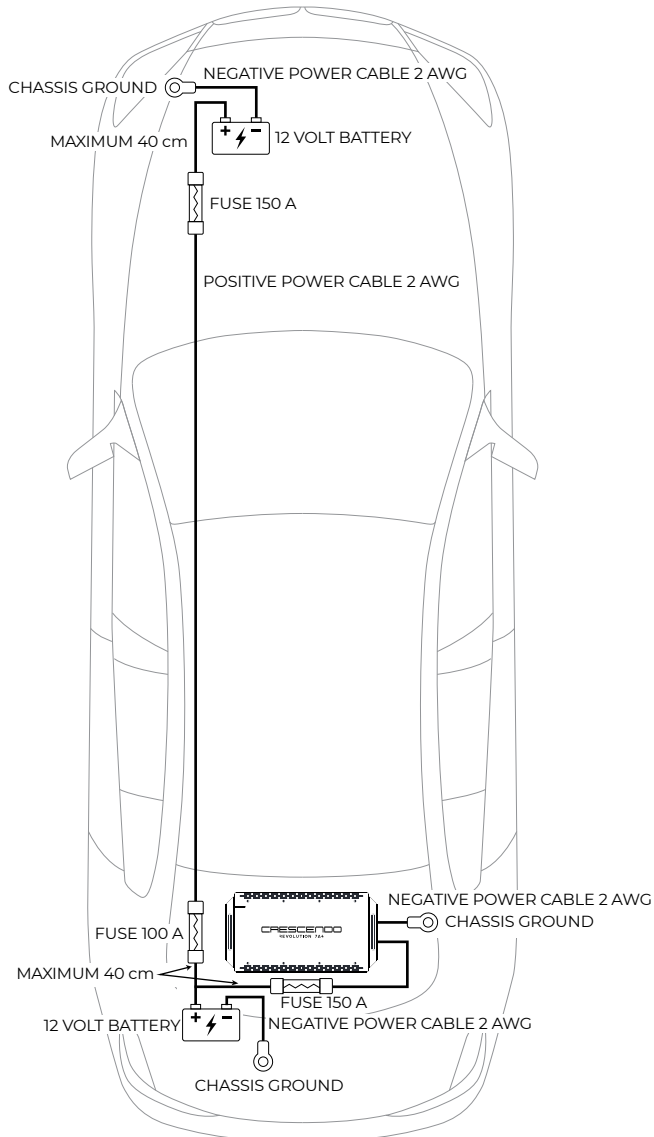


Figure 3

## RCA INPUT CONNECTIONS

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The CRESCENDO REVOLUTION 7A4 amplifier only accepts unbalanced (RCA) low level signals from digital media players, compact disc players or digital signal processors. High performance cables from Harmonic Harmony brand are recommended.

**WARNING:**

Do not dis-connect or re-connect the RCA cable while the amplifier is active (ON).

## SPEAKER CABLE CONNECTIONS

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The recommended speaker cable size for the CRESCENDO REVOLUTION 7A4 amplifier is between 18 and 12 AWG (0.8 to 3 mm<sup>2</sup>).

## REMOTE CABLE CONNECTIONS

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It is advisable to choose a remote control cable with a high-quality dielectric protection to prevent future issues. This is due to the challenging environment of the vehicle, which is exposed to hot and cold temperatures as well as extreme vibrations.

## GAIN SENSITIVITY ADJUSTMENT

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Adjust the sensitivity setting according to the power output from the sound source, ranging from 5 Volts to 900 mVolts.

## BRIDGED MONO

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The REVOLUTION 7A4 produces 3.2 times more power in bridged mono configuration compared to the stereo configuration. **However, it's essential to note that in the bridged mono configuration, one of the RCA signal's polarities must be inverted (180 degrees) in the Digital Signal Processor.**

## LED INDICATOR (3 CONDITIONS)

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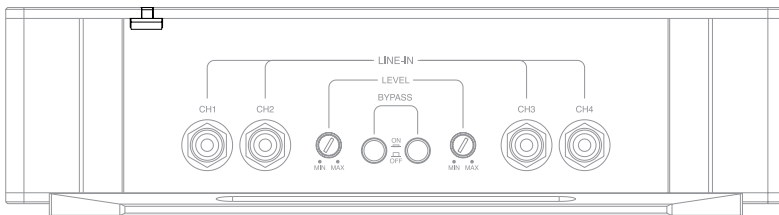
The LED will illuminate blue to indicate normal operation of the amplifier, turn purple if the amplifier is overheated, and turn red when the amplifier is in protection mode.



### CAUTION:

If the amplifier enters protection mode, disconnect all previously connected cables and perform a comprehensive inspection in a sequential manner. Ensure that you identify and address any installation errors before reconnecting the cables.

If the amplifier is overheated, please consider adding fans.



**Figure 4**

## WIRING ILLUSTRATION

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1. The CRESCENDO REVOLUTION 7A4 is connected to the front 3-way speakers in a combination of active/passive setup. Refer to **Figure 5**.
2. The CRESCENDO REVOLUTION 7A4 is connected through a Digital Signal Processor (DSP) to 2-way loudspeakers and 1 subwoofer in a mono configuration.

**For a bridged mono configuration, one of the RCA signal's polarities must be inverted (180 degrees).** Refer to **Figure 6**.

# WIRING ILLUSTRATION

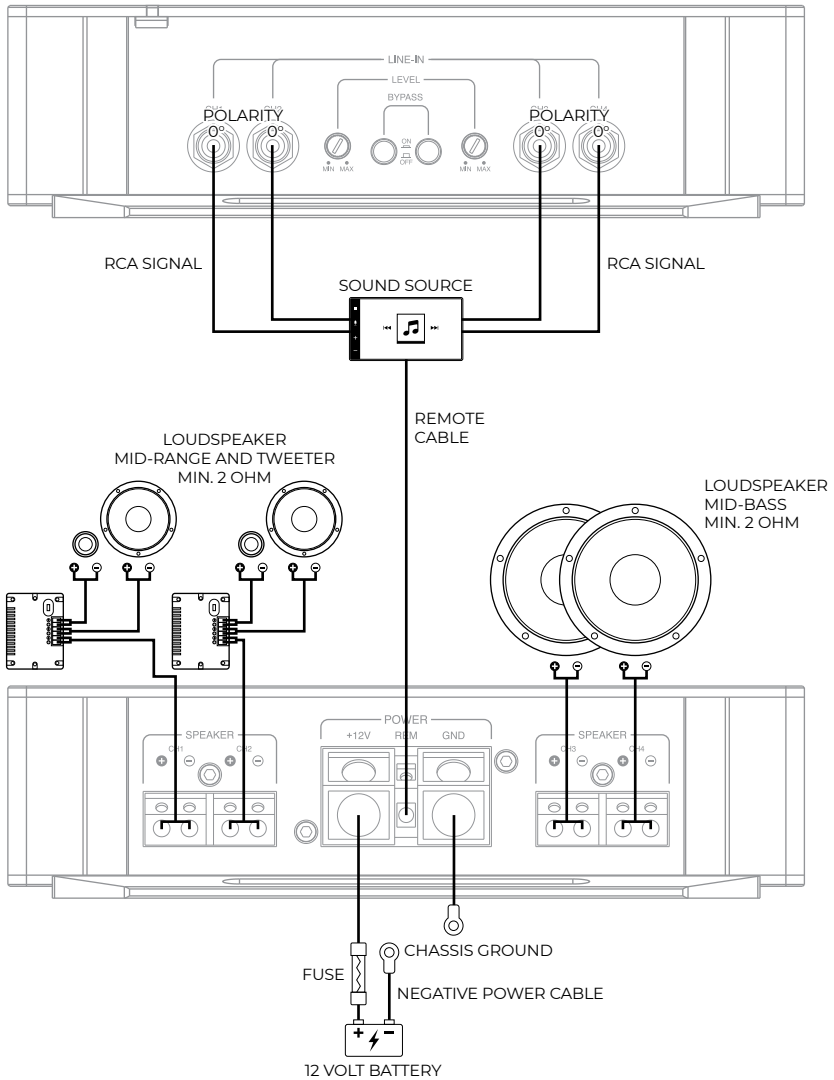


Figure 5

# WIRING ILLUSTRATION

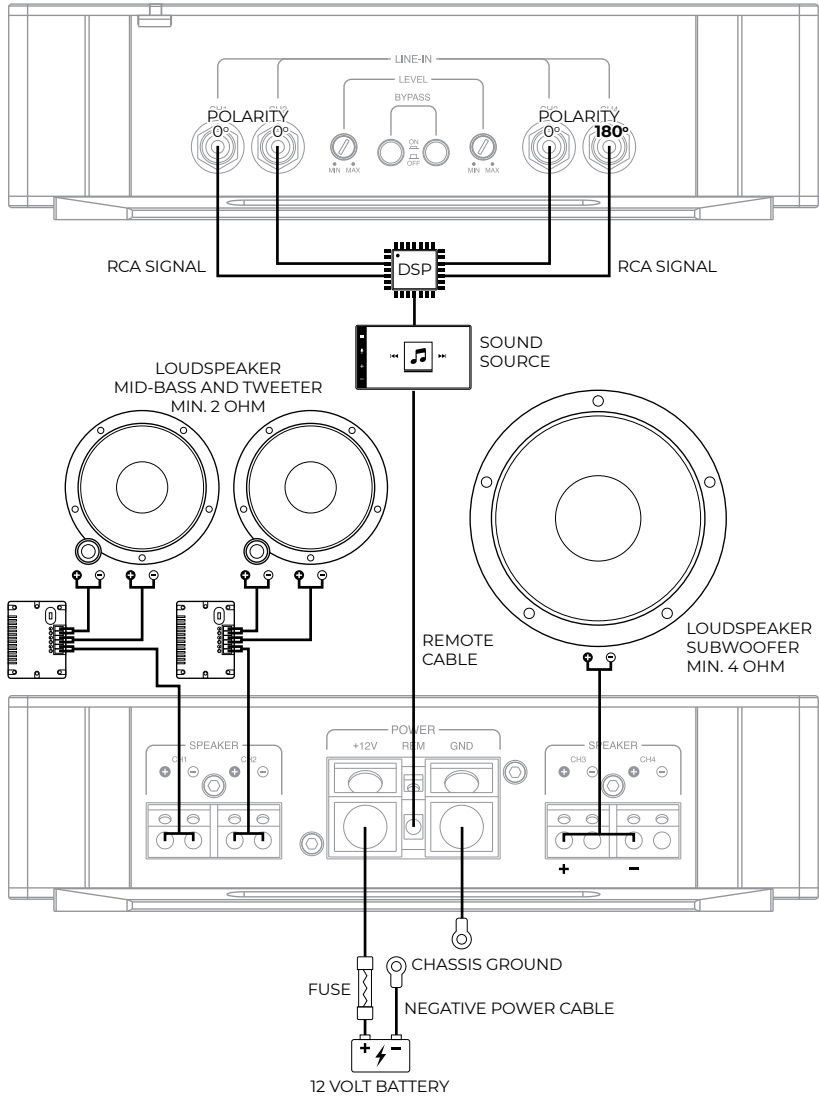
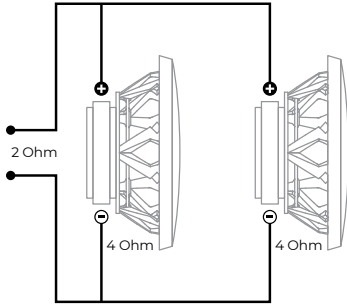


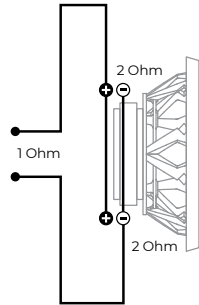
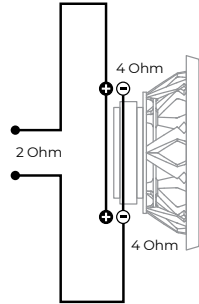
Figure 6

# SPEAKER WIRING CONNECTION ILLUSTRATION

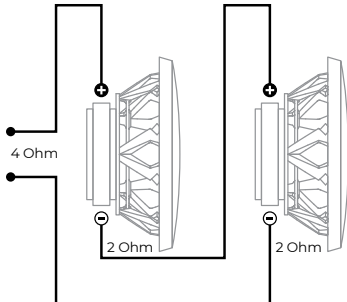
**PARALLEL**



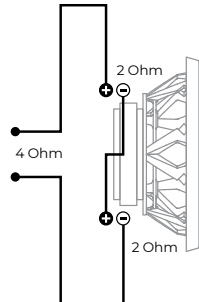
**2 VOICE COIL IN PARALLEL**



**SERIES**




**2 VOICE COIL IN SERIES**





**WARNING:**  
Electric shock risk.



## SPECIFICATION

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Product Name	Crescendo Revolution 7A4
Product Type	Power Amplifier
Weight	4.5 kg
Dimensions	36 cm x 21.5 cm x 5.4 cm
Cosmetic Appearance	Black and Silver
Amplifier Design	Class AB High Bias
Number of Channel	4
Power at 4 $\Omega$ Stereo (14.4 V)	150 W per Channel
Power at 2 $\Omega$ Stereo (14.4 V)	240 W per Channel
Power at 4 $\Omega$ Bridged (14.4 V)	480 W per Channel
Minimum Speaker Load	2 $\Omega$
Input Sensitivity	5 V to 900 mV
Input Impedance at 1 kHz	10 k $\Omega$
Frequency Response (-0.5 dB)	5 Hz - 100 kHz
Total Harmonic Distortion (20 W, 20 Hz - 20 kHz)	0.0035%
Signal to Noise Ratio (A weighted)	110 dBA
Signal to Noise Ratio (CEA - 2006, 1 W)	97 dBA
Effective Damping Factor (20 Hz - 20 kHz)	>150
Working Voltage	10 - 16 Volts
Filter or Active Crossover	No
Preamplifier Bypass Option	Yes
Fuse	2 x 50 Amperes
Protection	Thermal and short circuit

## TROUBLESHOOTING

No.	Symptom	Solution
1	Amplifier is not working	<ul style="list-style-type: none"> <li>a. Check the cables connected to the amplifier, vehicle chassis ground and battery</li> <li>b. Check the overall condition of the battery</li> <li>c. Check the power cord as well as all connections to the battery</li> <li>d. Check all fuses</li> </ul>
2	The LED illuminates red (the amplifier is in protection mode)	<ul style="list-style-type: none"> <li>a. Check for a short circuit in the speaker cables</li> <li>b. Ensure that the loudspeaker impedance does not fall below the minimum load requirements of the amplifier (4 Ohm mono or 2 Ohm stereo) for CRESCENDO REVOLUTION 7A4</li> <li>c. The amplifier might be damaged and needs repair</li> </ul>
3	The LED illuminates purple (the amplifier is overheated)	<ul style="list-style-type: none"> <li>a. Remove the solid layer that covers the amplifier</li> <li>b. Consider adding fans</li> </ul>
4	Sound is not present	<ul style="list-style-type: none"> <li>a. Check the RCA output of the sound source and sensitivity control of the amplifier</li> <li>b. Carefully inspect the RCA cable connection</li> <li>c. Verify the speaker cables and their termination on both the amplifier and loudspeaker</li> </ul>

## TROUBLESHOOTING

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5	Very low sound volume	<ul style="list-style-type: none"> <li>a. Increase the gain sensitivity on the amplifier</li> <li>b. Verify the crossover adjustment on Digital Signal Processor</li> </ul>
6	Loud whining sound	<ul style="list-style-type: none"> <li>a. Check and ensure that the RCA terminals are not directly connected to the vehicle or amplifier casing</li> <li>b. Check the negative wire connection to the chassis ground for both the amplifier and sound source</li> </ul>
7	Sound is distorted or there is a loud hiss	<ul style="list-style-type: none"> <li>a. Ensure that the gain sensitivity control of the amplifier is properly aligned with the output level of the sound source. Setting the gain sensitivity too high can cause sound distortion</li> <li>b. Check for any short circuit between the speaker cable and the chassis ground and make sure there is none</li> </ul>
8	Amplifier is overheating (above 70°C)	<ul style="list-style-type: none"> <li>a. Ensure that the loudspeaker impedance does not fall below the minimum load of the amplifier (4 Ohm mono or 2 Ohm stereo) for CRESCENDO REVOLUTION 7A4</li> <li>b. Ensure that the amplifier is properly ventilated. Consider adding a cooling fan if necessary</li> <li>c. Check for any short circuit between the speaker cable and the chassis ground and make sure there is none</li> </ul>

If the issue remains unresolved or is not addressed in this troubleshooting guide, please reach out to an authorized CRESCENDO distributor or dealer for further assistance.



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