

1-Farad Capacitor  
ORC1

1-Farad Capacitor  
Digital Display  
ORC1D

2-Farad Hybrid  
Capacitor  
Digital Display  
ORC2D



## Installation & Application Manual

### INTRODUCTION

Thank you for purchasing the ORION Capacitor or Hybrid Capacitor.

These capacitors allow you to help maintain continuous power to other devices, such as amplifiers, in your audio system.

Please read, understand and follow all instructions before connecting the capacitor. If, after reading your manual, you still have questions regarding this product, we recommend that you see your ORION dealer. If you need further assistance, you can call us direct at (800) 876-0800 or (760) 598-6200 or visit us at: [Http://www.orioncaraudio.com](http://www.orioncaraudio.com)

### INSTALLATION

Fig. 1

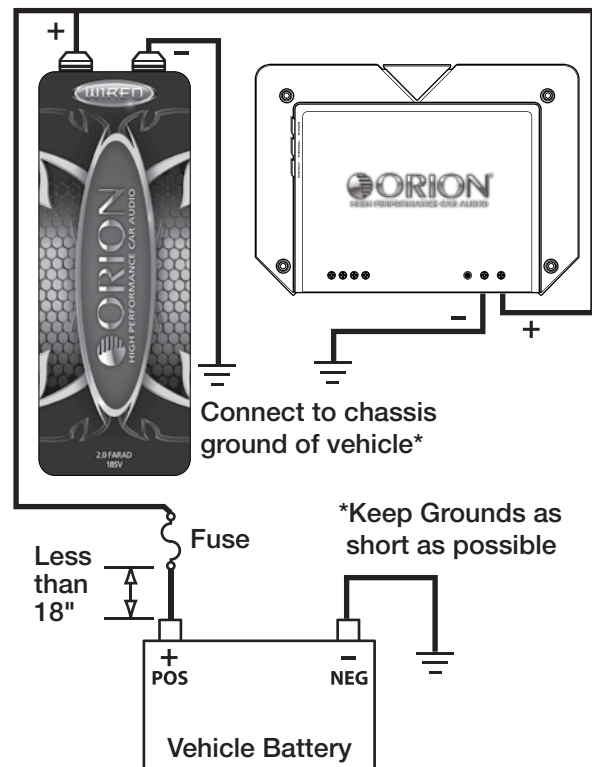
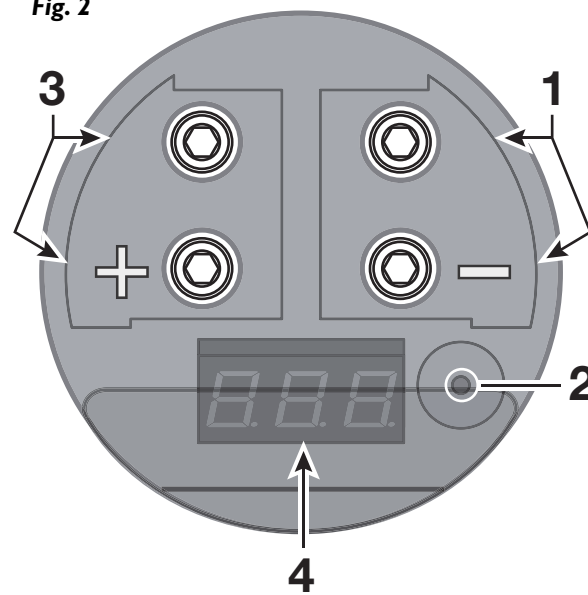
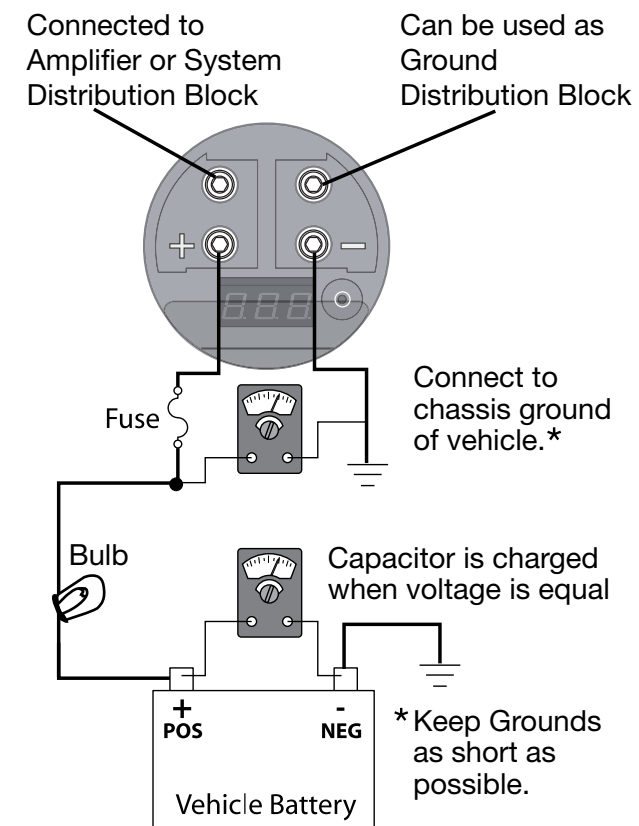


Fig. 2



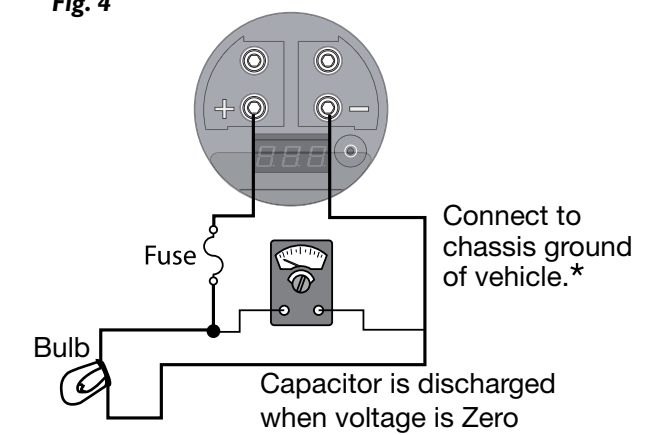
### CHARGING

Fig. 3



### DISCHARGING

Fig. 4



**SAFETY INFORMATION**

- ⚠ **CAUTION:** To prevent injury and damage to the unit, please read and follow the instructions in this manual.
- ⚠ **CAUTION:** If you feel unsure about installing this system yourself, have it installed by a qualified ORION technician.
- ⚠ **CAUTION:** Before installation, disconnect the battery negative (-) terminal to prevent damage to the unit, fire and/or possible injury.
- ⚠ **CAUTION:** Polarity must be observed and maintained during installation to eliminate the possibility of damaging the capacitor, the battery, or other associated equipment.

**POWER WIRING CONSIDERATIONS**

Installation is simple and straightforward. When installing the capacitor, we recommend using the same gauge wire as that of the power connection to the amplifier. Ground the capacitor to the nearest chassis ground using the same gauge wire as that used for the power connection. It is strongly recommended the capacitor be fused at the battery. The fuse value should be the same as that of the power connection to the amplifier. This fuse should be installed 18" or less from the battery (See illustration). If the capacitor is to be used in a multi-amp system, a power distribution block may be used between the capacitor and the amplifiers. It should be wired using the same gauge wire as that of the main system.

The positive side of the capacitor will be connected to the positive side of the amplifier's power connection (B+).

- ⚠ **CAUTION:** Do Not Overtighten Screws! Stripped or broken terminals are NOT covered by the warranty

**INSTALLATION / MOUNTING**

See Figure 1

The ORION Reinforcement Capacitor should be mounted as close to the amplifier as possible, within 18" (0.5m) of the amplifier, keeping the wire runs short to reduce voltage losses in the cables. Use the mounting brackets supplied to secure the capacitor as close to the amplifier as possible. The capacitor may be mounted in any position; however, care should be taken to ensure the venting hole on the top is unobstructed at all times. This vent is a relief valve should the electrical polarity become crossed. Should the capacitor be damaged, fluid will exit from this vent rendering the capacitor useless.

- ⚠ **CAUTION:** To prevent damage to the capacitor, do not install in locations where it will be exposed to water, oil or mistreatment.

Install in a dry, safe place within 18" (0.5m) of the amplifier. The positive lead connects to the terminal marked with a "+" symbol. The negative terminal is not marked. If these wires are reversed, fluid from inside the capacitor will leak out of the vent plug on the top. Do not install a damaged cap. Use care when handling damaged capacitors, treat them like a fully charged lead acid battery.

**CHARGING**

1. Connect the capacitor Negative (-) and battery Negative (-) to chassis ground of vehicle.
2. Connect one bulb end through fuse to capacitor Positive (+). It is highly suggested that you place a fuse before the capacitor.
3. Connect the other bulb end to battery Positive (+).
4. When connection is made, the charging is started.
5. Once a full charge has been reached and the capacitor module reads the same voltage as the battery. See Fig. 3. Remove the bulb.
6. Connect the power wire leading to capacitor module to the positive (+) battery post. Attention, small sparks may occur. See Fig. 1.
7. Make sure all power and ground connections are made and secure at the capacitor module.

**DISCHARGING**

- ⚠ **WARNING:** To prevent serious personal injury, fire and/or damage, ensure the capacitor has been properly discharged before servicing the vehicle and/or system components.

1. Disconnect the power wire going to the capacitor module from the battery.
2. Connect one bulb end to the capacitor Negative(-) through fuse.
3. Connect the other one bulb end to the capacitor Positive(+). See Fig. 4.
4. When connection is made, the capacitor is discharging.
5. When the voltage meter readout is close to zero, the capacitor is discharged.

**DIGITAL STATUS CAP FEATURES**

See Figure 2

1. **Negative Terminal** – Connect to chassis ground.
2. **Reverse Voltage Warning** – A buzzer will sound if the capacitor is connected backwards. Ensure that the Positive (+) and Negative (-) leads are connected correctly.
3. **Positive Terminal** – Connect to Positive (+) side of vehicle's battery.
4. **Voltage Indicator** – With the system turned on, the display will show the DC volts at the capacitor.  
**Auto Turn-On** – Turns on the display during standard operation (voltage fluctuation). After 5 minutes of non-use (no fluctuation) automatically reverts to sleep mode.

**SPECIFICATIONS**

- Rating:** 1 farad  
(ORCI or ORCID)  
2 farad hybrid  
(ORC2D)
- VDC:** 1 farad : 20V surge  
2 farad : 18V surge
- Tolerance:** ±10%
- Dimensions:** 1 farad : 3" x 8.625" (76.2mm x 219mm)  
2 farad : 3" x 8.625" (76.2mm x 219mm)
- Digital Status Caps add 1.2" (30.5mm) to height
- ESR:** 1 farad : <1.95mΩ  
2 farad : <3.00mΩ
- Terminals:** 1/4" 28 thread
- Tools:** 3/16" Allen wrench



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Http://www.orioncaraudio.com

Printed in China

**LIMITED 90-DAY ACCESSORY/1-YEAR CAPACITOR WARRANTY**

This product is sold with a LIMITED 90-day accessory/1-year capacitor manufacturer's warranty. Directed Electronics ("Directed") promises to the original purchaser that the product ("Product") will be free from defects in materials and workmanship under normal use and condition for a period of ninety (90) days for accessories/ one (1) year for capacitors after the date of purchase. A sales receipt and/or warranty registration card is required to provide proof of date of purchase of the Product.

Product defect occurring within the first 90 days for accessories or 1-year for capacitors after retail purchase by the end consumer will be repaired or replaced with new or reconditioned part(s), at Directed's sole election. To obtain warranty service, the Product must be returned, postage pre-paid addressed to Directed, along with a legible copy of the receipt and the following information: Consumer's name, telephone number and address, authorized dealer/purchase location name and address and product description. ALL PRODUCTS RECEIVED BY DIRECTED FOR WARRANTY REPAIR WITHOUT PROOF OF PURCHASE WILL BE DENIED. Note: This warranty does not cover labor costs for the removal or reinstallation of the Product. Product must be returned to the following address: ATTN: WARRANTY DEPARTMENT, Directed Electronics, 1 Viper Way, Vista, CA 92081.

This warranty is non-transferable and does not apply to any Product that has been modified or used in a manner contrary to its intended purpose, and does not cover damage to the Product caused by installation or removal of the Product. This warranty is VOID if the Product has not been purchased from Directed or an authorized Directed dealer, or if the Product has been damaged by accident, unreasonable use, negligence, acts of God, neglect, improper service or other causes not arising out of defect in materials or construction. This warranty does not cover the elimination of externally generated static or noise, or any installation problems related to speakers, accessories, electrical systems, cosmetic damage or damage due to negligence, misuse, abuse, failure to follow operating instructions, accidental spills or customer applied cleaners, damage due to environmental causes such as floods, airborne fallout, chemicals, salt, hail, windstorms, lightning or extreme temperatures, damage due to accidents, road hazards, fire, theft, loss or vandalism, damage due to improper connection to equipment of another manufacturer, modification of existing equipment, or Product which has been opened or tampered with for any reason or which has been damaged due to alteration or service performed by anyone other than Directed. This warranty is only valid for sale of Product within the United States of America. Product sold outside of the United States of America is sold "AS IS," and shall have NO WARRANTY, express or implied.

THIS LIMITED WARRANTY IS THE ONLY WARRANTY FOR THIS PRODUCT. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, AND WARRANTY OF NON-INFRINGEMENT OF INTELLECTUAL PROPERTY ARE EXPRESSLY EXCLUDED TO THE MAXIMUM EXTENT ALLOWED BY LAW, AND DIRECTED NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY LIABILITY IN CONNECTION WITH THE SALE OF THE PRODUCT. DIRECTED HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING ITS LICENSED DEALERS OR INSTALLERS. IN NO EVENT WILL DIRECTED BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFITS). BY PURCHASING THIS PRODUCT, THE CONSUMER AGREES AND CONSENTS THAT ALL DISPUTES BETWEEN THE CONSUMER AND DIRECTED SHALL BE RESOLVED IN ACCORDANCE WITH CALIFORNIA LAWS IN SAN DIEGO COUNTY, CALIFORNIA.

Some states do not allow limitation on how long an implied warranty lasts. In such states, the limitations or exclusions of this Limited Warranty may not apply. Some states do not allow the exclusion or limitation of incidental or consequential damages. In such states, the exclusion or limitation of this Limited Warranty may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

For more information on Orion products please visit [www.orioncaraudio.com](http://www.orioncaraudio.com)