



Rockford Fosgate®

Systems

T152S

T162S

T1682S

Tweeter

T1T

Installation & Operation

Installation et fonctionnement
Instalación y funcionamiento
Einbau und Betrieb
Installazione e funzionamento

Power Series

Component Systems

INTRODUCTION

Dear Customer,

Congratulations on your purchase of the world's finest brand of car audio speakers. At Rockford Fosgate we are fanatics about musical reproduction at its best, and we are pleased you chose our product. Through years of engineering expertise, hand craftsmanship and critical testing procedures, we have created a wide range of products that reproduce music with all the clarity and richness you deserve.

For maximum performance we recommend you have your new Rockford Fosgate product installed by an Authorized Rockford Fosgate Dealer, as we provide specialized training through Rockford Technical Training Institute (RTTI). Please read your warranty and retain your receipt and original carton for possible future use.

Great product and competent installations are only a piece of the puzzle when it comes to your system. Make sure that your installer is using 100% authentic installation accessories from Connecting Punch in your installation. Connecting Punch has everything from RCA cables and speaker wire to Power line and battery connectors. Insist on it! After all, your new system deserves nothing but the best.

To add the finishing touch to your new Rockford Fosgate image order your Rockford accessories, which include everything from T-shirts and jackets to hats and sunglasses.

To get a free brochure on Rockford Fosgate products and Rockford accessories, visit our web site at: www.rockfordfosgate.com or, in the U.S. call 1-800-669-9899 or FAX 1-800-398-3985.

For all other countries, call +001-480-967-3565 or FAX +001-480-967-8132.

PRACTICE SAFE SOUND™

Continuous exposure to sound pressure levels over 100dB may cause permanent hearing loss. High powered auto sound systems may produce sound pressure levels well over 130dB. Use common sense and practice safe sound.

If, after reading your manual, you still have questions regarding this product, we recommend that you see your Rockford Fosgate dealer. If you need further assistance, you can call us direct at 1-800-669-9899. Be sure to have your serial number, model number and date of purchase available when you call.

The serial number can be found on the outside of the box. Please record it in the space provided below as your permanent record. This will serve as verification of your factory warranty and may become useful in recovering your unit if it is ever stolen.

Serial Number: _____

Model Number: _____

TABLE OF CONTENTS

Introduction	2	Installation - Tweeters	5-6
Safety Instructions	3	Installation - Speakers	6-7
What This Manual Covers	3	Troubleshooting	8
Installation	4-5	Specifications	9-10
Installation Considerations	4	Limited Warranty Information	11
Mounting	4	International Instructions	12

NOTE: Review each section for more detailed information.

GETTING STARTED

Welcome to Rockford Fosgate! This manual is designed to provide information for the owner, salesperson and installer. For those of you who want quick information on how to install this product, please turn to the *Installation Section* of this manual. Other information can be located by using the Table of Contents. We, at Rockford Fosgate, have worked very hard to make sure all the information in this manual is current. But, as we are constantly finding new ways to improve our product, this information is subject to change without notice.


SAFETY INSTRUCTIONS


WARNING


This symbol with “**WARNING**” is intended to alert the user to the presence of important instructions. Failure to heed the instructions will result in severe injury or death.

CAUTION

This symbol with “**CAUTION**” is intended to alert the user to the presence of important instructions. Failure to heed the instructions can result in injury or unit damage.

 **CAUTION:** To prevent injury and damage to the unit, please read and follow the instructions in this manual. We want you to enjoy this system, not get a headache.

 **CAUTION** If you feel unsure about installing this system yourself, have it installed by a qualified Rockford Fosgate technician.

 **CAUTION** Before installation, disconnect the battery negative (-) terminal to prevent damage to the unit, fire and/or possible injury.

Visit our web site for the latest information on all Rockford products.


www.rockfordfosgate.com


INSTALLATION

INSTALLATION CONSIDERATIONS

The following is a list of tools needed for installation:

Volt/Ohm Meter	1/8" diameter heatshrink tubing
#2 Phillips screwdriver	Wire strippers
Battery post wrench	Wire crimpers
Hand held drill w/assorted bits	Wire cutters

 **CAUTION:** If you feel unsure about installing this system yourself, have it installed by a qualified Rockford Fosgate technician.

 **CAUTION:** Before installation, disconnect the battery negative (-) terminal to prevent damage to the unit, fire and/or possible injury.

Before beginning any installation, follow these simple rules:

1. Be sure to carefully read and understand the instructions before attempting to install the Unit.
2. For safety, disconnect the negative lead from the battery prior to beginning the installation.
3. For easier assembly, we suggest you run all wires prior to mounting your unit in place.
4. Use high quality connectors for a reliable installation and to minimize signal or power loss.
5. Think before you drill! Be careful not to cut or drill into gas tanks, fuel lines, brake or hydraulic lines, vacuum lines or electrical wiring when working on any vehicle.
6. Never run wires underneath the vehicle. Running the wires inside the vehicle provides the best protection.
7. Avoid running wires over or through sharp edges. Use rubber or plastic grommets to protect any wires routed through metal, especially the firewall.
8. Mount the speakers/crossovers away from electrical sources (other than the amplifier) i.e., power cables, electronic fuel pumps, vehicle computers, and other potential noise sources.
9. Mount the speakers/crossovers away from areas of extreme heat or moisture.

MOUNTING

Speakers/Tweeters

1. Determine where the speakers will be mounted. Ensure an area large enough for the speaker to mount evenly. Be sure that the mounting location is deep enough for the speaker to fit; if mounting in a door, operate all functions (windows, locks, etc.) through their entire operating range to ensure there is no obstruction.
2. When mounting the speaker(s) on the rear deck of the vehicle, check the operation of the rear hatch or trunk lid. Make sure the torsion bars and other moving parts are not obstructed by the speaker(s) installation.
3. Refer to the specification chart to determine the proper diameter hole to cut for your speaker model.

Crossovers

1. Make sure there is a flat area large enough for the crossover to mount.
2. For best results, mount the crossover(s) next to the amplifier for a decorative finish to the installation and provide an easy upgrade (no new wires to run) for a bi-amp Rockford Fosgate system in the future.

Use this section when installing Tweeters or Systems

A solid front stage with a good image is one of the most difficult tasks to achieve in a vehicle. No car has the optimum listening environment. This makes proper sound staging very difficult to accomplish. Most speakers tend to be placed where they will fit easily, as opposed to where they can perform the best. The mounting location of your speakers will have a great effect on the sound quality of your stereo system. The special care taken to place the speakers will yield many hours of listening enjoyment in return. Several important recommendations should be followed.

- Place the speakers where they have a direct path to the listening area.
- For the best integration between the midrange and tweeter, the tweeter should be placed less than 2" from the midrange (Figure 1).
- If you cannot place the tweeter less than 2" from the midrange, then place the tweeter more than 7" from the midrange. Placing the tweeter 2"-7" from the midrange can cause destructive interference (frequency response problems) which will affect the speaker's ability to reproduce the frequency range around the crossover frequency of the system.
- Whenever possible, place the tweeter directly above or below the midrange as this maximizes the imaging (point source) capability of the speakers (Figure 1).
- Sound radiated from a "point source" provides the best stereo imaging because the separation of the acoustical centers between the midrange and tweeter for each channel is at the optimum distance. In a closed environment such as an automobile, horizontal speaker alignment (Figure 2) can cause amplitude and phase differences which will degrade not only the imaging, but also the frequency response. This is due to the path length differences between the midrange and tweeter. Mounting the speaker with minimum path length difference will ensure the best staging and imaging possible from your audio system.

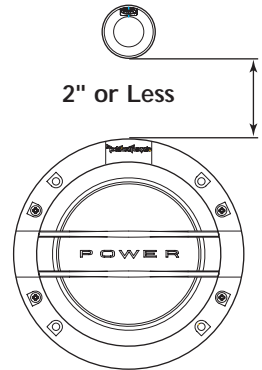


Figure 1

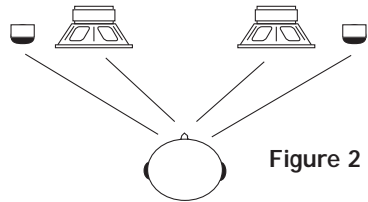
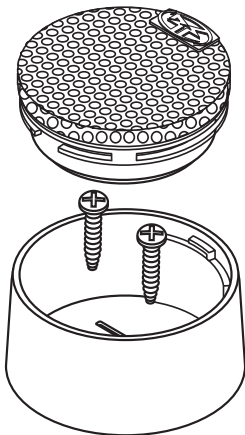


Figure 2

Surface Mount

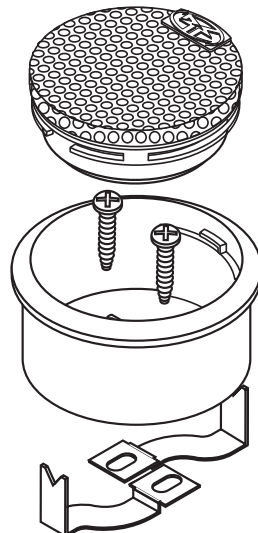


Tweeter

Screws

Bottom Housing

Flush Mount



Clips

INSTALLATION-TWEETERS

Wiring Tweeter to Crossover

1. Use illustrations for proper connection.
2. Be sure to maintain speaker polarity

Setting Crossover

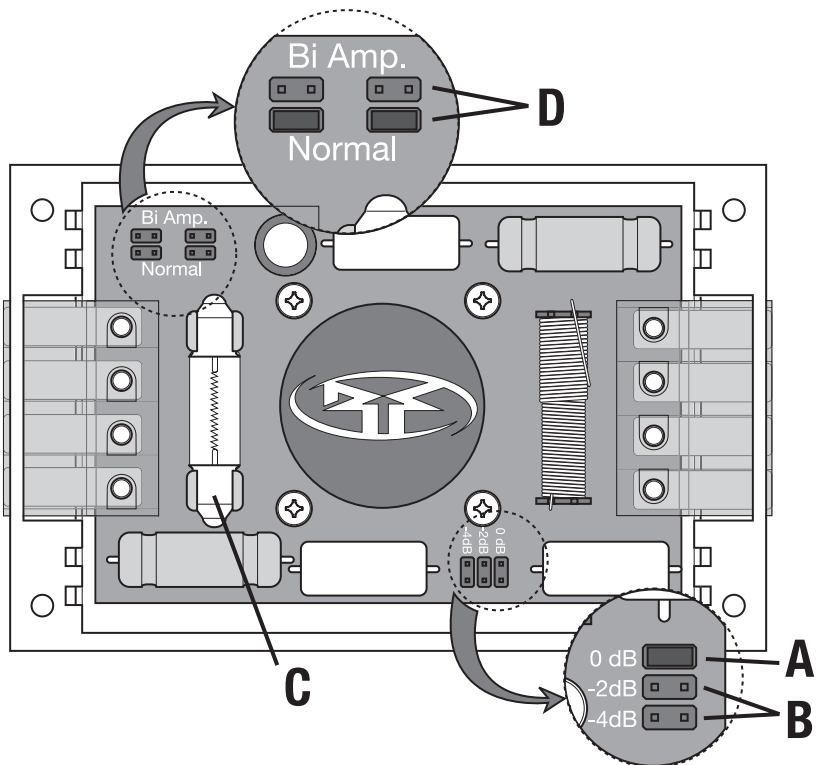
- A 0dB Tweeter Level matches the amplitude of the tweeter to the speaker
- B -2dB/-4dB Tweeter Level reduces the amplitude of the tweeter -2dB or -4dB lower than the midrange. (ex. ideal for tweeters located high in door panels and midranges located low in the kick panel)
- C Replaceable Tweeter Protection Bulb acts as a fuse to protect against overload. If the bulb burns out, remove the burned out bulb and insert a new bulb (12 volt, 10 watts) into the retainer clips.
- D Bi-Amping –The Power components have the ability run separate channels of amplification to the tweeter and speaker on the same crossover. This can be done to allow for more control of the output of each individual speaker.

NOTE: When NOT bi-amping the crossover, connect to the MID inputs only. The jumpers must be in the "Normal" position.

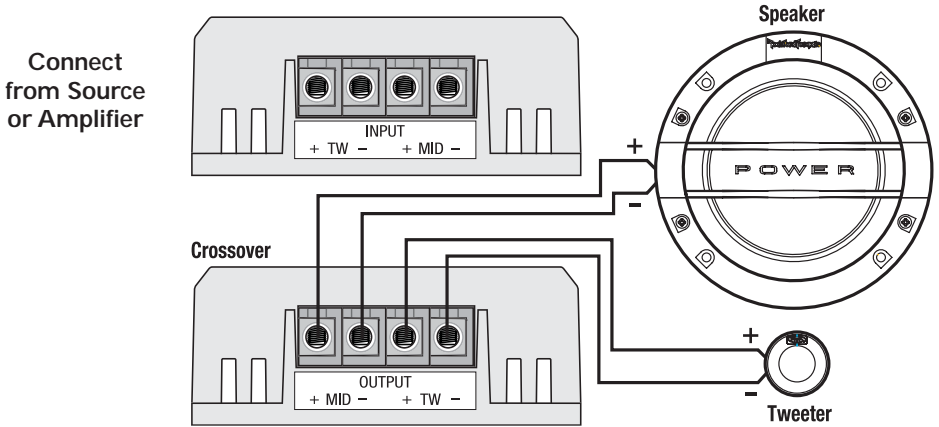
To Bi-amp

1. Make sure the system is off.
2. Connect the speaker outputs from the amplifier that will drive the speaker to the MID inputs on the crossover. Then connect the speaker outputs from the amplifier that will drive the tweeter to the TW inputs on the crossover.
3. Move the jumpers from the "Normal" position to the "Bi Amp" position.

View from bottom of crossover



NOTE: When NOT bi-amping the crossover, connect to the MID inputs only. The jumpers must be in the "Normal" position.

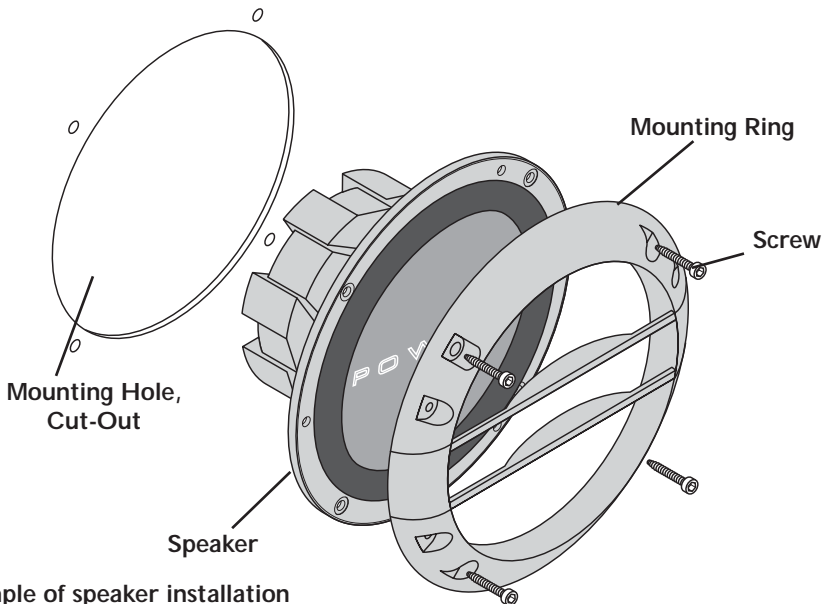


Use this section when installing Systems

1. Cut the proper size hole for the speaker.

NOTE: See Specifications for proper hole size.

2. Place the mounting ring over the mounting hole and mark the location of the screw mounting holes.
3. Remove the ring. Drill the holes for the screws using a 1/8" drill bit.
4. Route the wire through the mounting hole cut-out.
5. Attach the wires. Observe proper speaker polarity.
6. Place the mounting ring over the speaker.
7. Place the speaker into the hole and screw the speaker into place.



Example of speaker installation

TROUBLESHOOTING

Symptom	Diagnosis	Remedy
<i>No sound from speakers</i>	Wires not connected properly. Amplifier has no output. Speaker wires are shorted to each other or to the chassis of vehicle. Speakers are blown.	Check wiring, repair or replace. Check with working amplifier and repair or replace as needed. Check wiring with a volt/ohm meter and repair or replace as needed Check with working speaker and repair or replace as needed.
<i>Distorted sound from speakers</i>	Incorrect wiring between crossover and speakers	Check wiring, repair or replace.
<i>Tweeters "burn up" easily</i>	Excessive power from amplifier Equalizer (if available) has excessive boost in the high frequency range	Check gain settings on amplifier and readjust as necessary Check settings on equalizer and readjust as necessary
<i>Engine noise from one or more speakers</i>	Wires shorted to chassis of vehicle. Speaker wires are routed near high power source. (Power cables, vehicle computers, etc.) Crossover is mounted near high power source.	Check wiring with a volt/ohm meter and repair or replace as needed Re-route speaker wiring away from noise sources. Move crossovers away from noise sources.

FEATURES

- Hard Anodized Parabolic Aluminum Cone
- Proprietary Cast Aluminum Basket
- Foamed Rubber Surround
- Multiple Tweeter Mounting Configurations

Tweeters

- Inverted Titanium Dome

Nominal Diameter - inch (mm) 1-3/32 (27.94mm)

Nominal Impedance (ohms) 4 Ω

Frequency Response 4kHz-22kHz

Power Handling (Watts RMS/Peak) 100 / 200
(with supplied crossover)

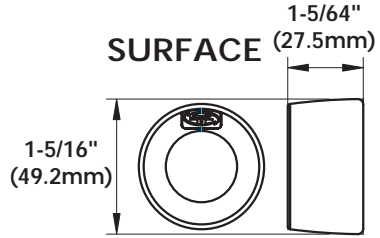
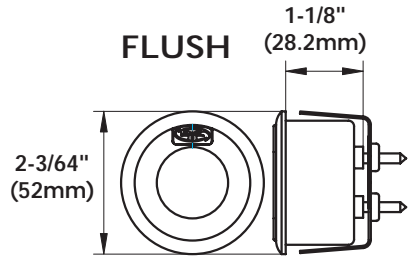
System Crossover

Crossover Frequency 3200Hz @ 4 Ω

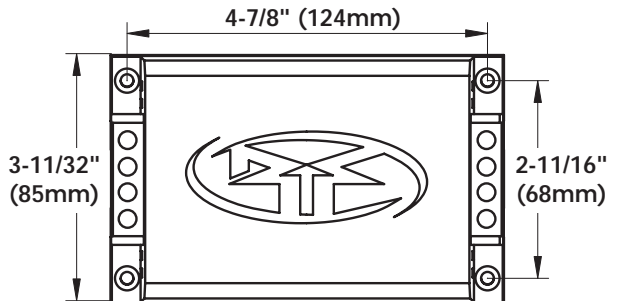
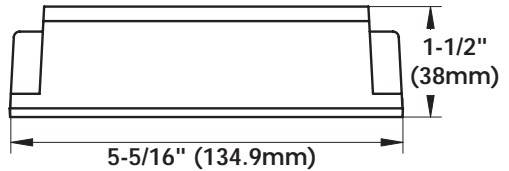
Crossover Slope 24dB/octave High-Pass
12dB/octave Low-Pass

Filter Q Butterworth

Tweeter Protection Optical Compression



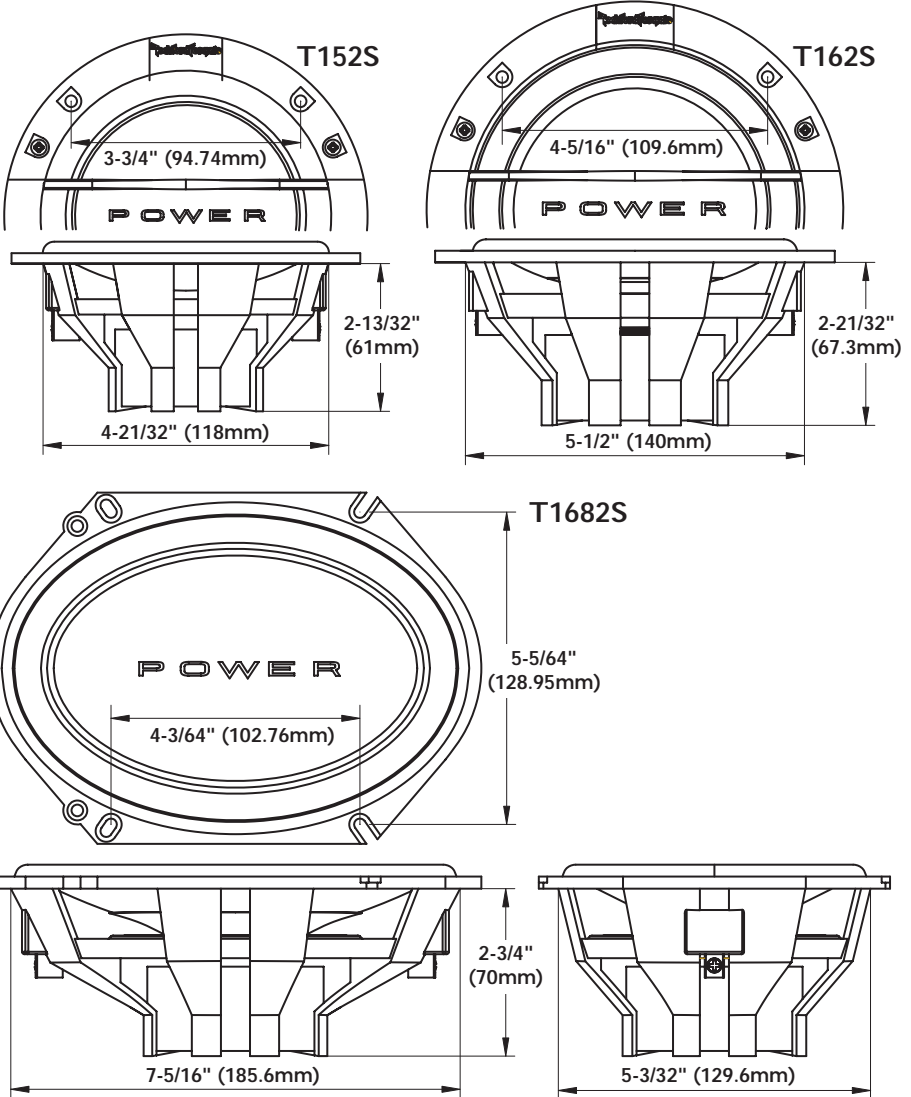
System Crossover Dimensions



Specifications subject to change without notice

SPECIFICATIONS

System Model	T152S	T162S	T1682S
Nominal Diameter - inch (mm)	5-1/4 (133)	6-1/2 (165)	6 x 8 (152.4 x 203.2)
Nominal Impedance (ohms)	4 Ω	4 Ω	4 Ω
Frequency Response	70Hz-22kHz	60Hz-22kHz	55Hz-22kHz
Sensitivity (SPL@1w/1m)	88dB	89dB	89dB
Power Handling(Watts RMS/Peak)	100 / 200	100 / 200	100 / 200
Mounting Diameter - inch	4-21/32	5-1/2	5-3/32 x 7-5/16
Mounting Diameter - mm	118	140	129.6 x 185.6
Mounting Depth - inch (mm)	2-13/32 (61)	2-21/32 (67.3)	2-3/4 (70)



Specifications subject to change without notice

Rockford Corporation offers a limited warranty on Rockford Fosgate products on the following terms:

Length of Warranty

Source Units, Speakers, Signal Processors and PUNCH Amplifiers – 1 Year
POWER Amplifiers – 2 Years Type RF Amplifiers – 3 Years
Any Factory Refurbished Product – 90 days (receipt required)

What is Covered

This warranty applies only to Rockford Fosgate products sold to consumers by Authorized Rockford Fosgate Dealers in the United States of America or its possessions. Product purchased by consumers from an Authorized Rockford Fosgate Dealer in another country are covered only by that country's Distributor and not by Rockford Corporation.

Who is Covered

This warranty covers only the original purchaser of Rockford product purchased from an Authorized Rockford Fosgate Dealer in the United States. In order to receive service, the purchaser must provide Rockford with a copy of the receipt stating the customer name, dealer name, product purchased and date of purchase.

Products found to be defective during the warranty period will be repaired or replaced (with a product deemed to be equivalent) at Rockford's discretion.

What is Not Covered

1. Damage caused by accident, abuse, improper operations, water, theft, shipping
2. Any cost or expense related to the removal or reinstallation of product
3. Service performed by anyone other than Rockford or an Authorized Rockford Fosgate Service Center
4. Any product which has had the serial number defaced, altered, or removed
5. Subsequent damage to other components
6. Any product purchased outside the U.S.
7. Any product not purchased from an Authorized Rockford Fosgate Dealer

Limit on Implied Warranties

Any implied warranties including warranties of fitness for use and merchantability are limited in duration to the period of the express warranty set forth above. Some states do not allow limitations on the length of an implied warranty, so this limitation may not apply. No person is authorized to assume for Rockford Fosgate any other liability in connection with the sale of the product.

How to Obtain Service

Contact the Authorized Rockford Fosgate Dealer you purchased this product from. If you need further assistance, call 1-800-669-9899 for Rockford Customer Service. You must obtain an RA# (Return Authorization number) to return any product to Rockford Fosgate. You are responsible for shipment of product to Rockford.

EU Warranty

This product meets the current EU warranty requirements, see your Authorized dealer for details.

Ship to: **Electronics**
Rockford Corporation
Warranty Repair Department
2055 E. 5th Street
Tempe, AZ 85281
RA#: _____

Ship to: **Speakers**
Rockford Acoustic Design
Speaker Returns
3056 Walker Ridge Dr.
Walker, MI 49544
RA#: _____

Rockford Fosgate®

Installation assistance available at:

RFTECH

www.rockfordfosgate.com/rftech



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