

— Installation assistance available at: —

# RFTECH

— [www.rockfordfosgate.com/rftech](http://www.rockfordfosgate.com/rftech) —

# P U N C H<sup>®</sup>

## POWERED ENCLOSURE

- P300-8P**
- P300-10**
- P300-10T**
- P300-12**
- P300-12T**
- P500-12P**

102418JF

1230-71030-02

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**ROCKFORDFOSGATE.COM**



Serial Number: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Installation & Operation

## Introduction

Dear Customer,

Congratulations on your purchase of the world's finest brand of car audio amplifiers. 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 Rockford Fosgate in your installation. Rockford Fosgate has everything from RCA cables and speaker wire to power wire 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 to jackets.

Visit our web site for the latest information on all Rockford products; [www.rockfordfosgate.com](http://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 +001-480-966-3983.

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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.

### 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.

### PRATIQUEZ UNE ECOUTE SANS RISQUES

Une exposition continue à des niveaux de pression acoustique supérieurs à 100 dB peut causer une perte d'acuité auditive permanente. Les systèmes audio de forte puissance pour auto peuvent produire des niveaux de pression acoustique bien au-delà de 130 dB. Faites preuve de bon sens et pratiquez une écoute sans risques

### PRACTIQUE EL SONIDO SEGURO

El contacto continuo con niveles de presión de sonido superiores a 100 dB puede causar la pérdida permanente de la audición. Los sistemas de sonido de alta potencia para automóviles pueden producir niveles de presión de sonido superiores a los 130 dB. Aplique el sentido común y practique el sonido seguro.


### PRAKTIZIEREN SIE SICHEREN SOUND


Fortgesetzte Geräuschdruckpegel von über 100 dB können beim Menschen zu permanentem Hörverlust führen. Leistungsstarke Autosoundsysteme können Geräuschdruckpegel erzeugen, die weit über 130 dB liegen. Bitte wenden Sie gesunden Menschenverstand an und praktizieren Sie sicheren Sound.

### OSSERVATE LE REGOLE DEL SUONO SENZA PERICOLI

La costante esposizione a livelli di pressione acustica al di sopra dei 100dB possono causare la perdita permanente dell'udito. I sistemi audio ad alta potenza possono produrre livelli di pressione acustica ben superiori ai 130dB. Si consiglia il buon senso e l'osservanza delle regole del suono senza pericoli

### Safety

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.  **WARNING**

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.
- If you feel unsure about installing this system yourself, have it installed by a qualified Rockford Fosgate technician.
- Before installation, disconnect the battery negative (-) terminal to prevent damage to the unit, fire and/or possible injury.

Model	P300-10	P300-12	P300-8P
Description	10" Powered Subwoofer	12" Powered Subwoofer	8" Powered Subwoofer
Power Rating (RMS/Peak)	300W / 600W	300W / 600W	300W / 600W
Crossover Slope	12dB/Oct	12dB/Oct	12dB/Oct
Crossover Frequency	Variable 50Hz-200Hz	Variable 50Hz-200Hz	Variable 50Hz-200Hz
Punch Bass	Variable 0 - +12dB @ 45Hz	Variable 0 - +12dB @ 45Hz	Variable 0 - +12dB @ 45Hz
Frequency Response	35Hz - 200Hz	35Hz - 200Hz	35Hz - 200Hz
Input Sensitivity	100mV - 3V	100mV - 3V	100mV - 3V
Fuse Rating	20A (2 X 10A)	20A (2 X 10A)	20A (2 X 10A)
Overall Dimensions (HxWxD)	13.3" x 18.0" x 8.9"/5.9" (33.7cm x 45.7cm x 22.6/15cm)	15.0" x 19.8" x 11.0"/7.0" (38.1cm x 50.3cm x 28/17.8cm)	11.38" x 17.6" x 4.84"/3.69" (28.9cm x 44.8cm x 14.1/9.36cm)

See illus.-1.1 for additional dimensions

Model	P300-10T	P300-12T	P500-12P
Description	10" Powered Subwoofer	12" Powered Subwoofer	12" Powered Subwoofer
Power Rating (RMS/Peak)	300W / 600W	300W / 600W	500W / 1000W
Crossover Slope	12dB/Oct	12dB/Oct	12dB/Oct
Crossover Frequency	Variable 50Hz-200Hz	Variable 50Hz-200Hz	Variable 50Hz-200Hz
Punch Bass	Variable 0 - +12dB @ 45Hz	Variable 0 - +12dB @ 45Hz	Variable 0 - +12dB @ 45Hz
Frequency Response	35Hz - 200Hz	35Hz - 200Hz	20Hz - 200Hz
Input Sensitivity	100mV - 3V	100mV - 3V	130mV - 5V
Fuse Rating	20A (2 X 10A)	20A (2 X 10A)	30A (2 X 15A)
Overall Dimensions (HxWxD)	13.31" x 21.73" x 11.0"/7.0" (33.8cm x 55.2cm x 20.1/12.2cm)	14.96" x 25.83" x 8.46"/4.8" (38cm x 65.6cm x 21.5/12.2cm)	12.88" x 24.76" x 10.91/7.71" (32.7cm x 62.9cm x 27.7/189.2cm)

See illus.-1.1 for additional dimensions

## CEA 2031

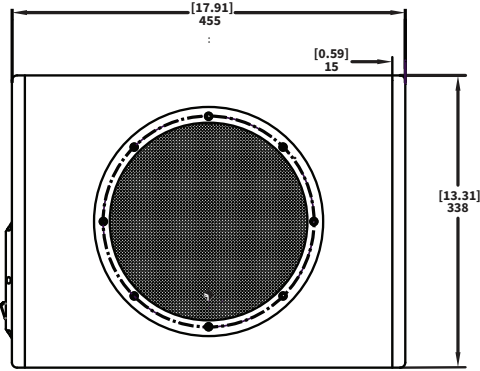
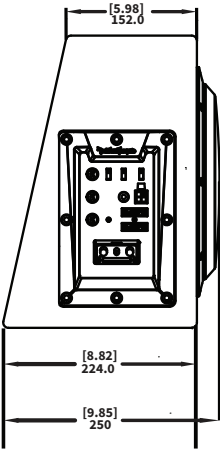


Power handling on Rockford Fosgate speakers conform to CEA-2031 industry standards. This means your speaker has the capacity to handle power under continuous demand, not instantaneous power handling, that over time can damage voice coils.

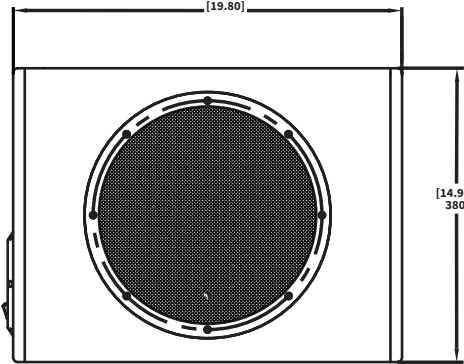
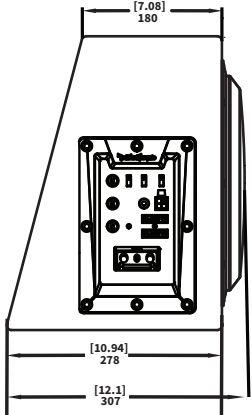
## CEA 2006



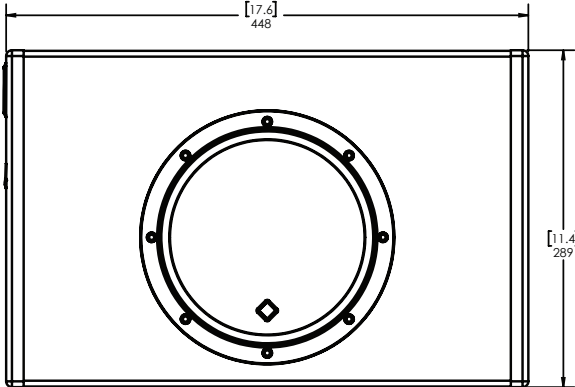
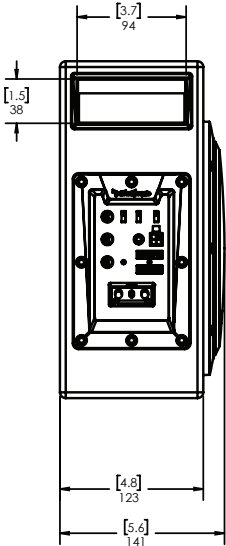
Power ratings on Rockford Fosgate amplifiers conform to CEA-2006 industry standards. These guidelines mean your amplifier's output power ratings are REAL POWER numbers, not inflated marketing ratings.



**P300-10**

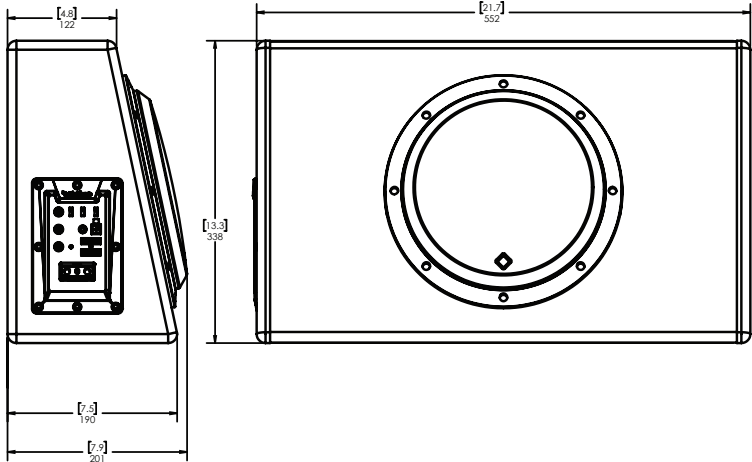


**P300-12**

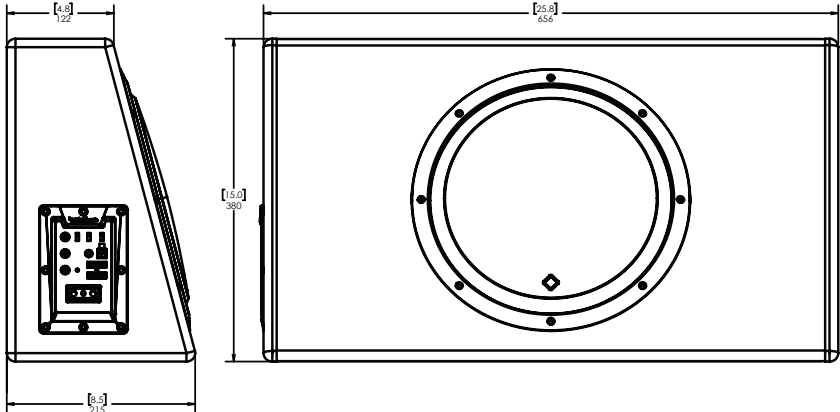


**P300-8P**

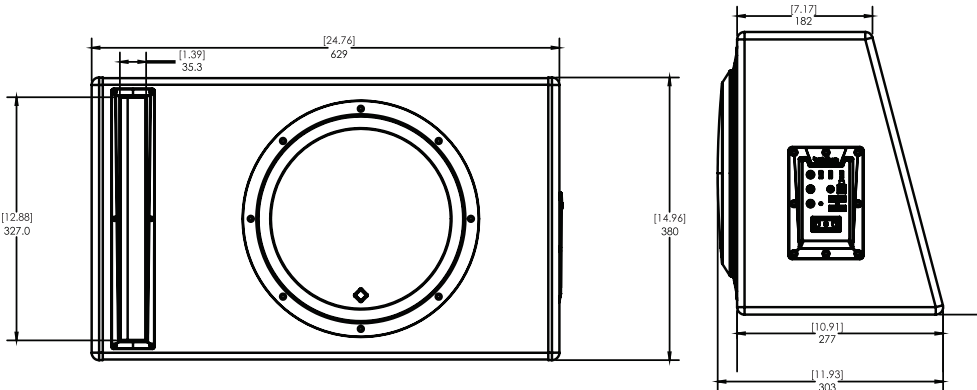
illus.-1.1



**P300-10T**



**P300-12T**



**P500-12P**

# Design Features

## Phase Switch

Allows you to select the output phase of the amplifier between 0° and 180°.

## Input Level

Set the Input Level switch to match the outputs of your source unit.(LO - RCA or HI - Speaker Level)

## Gain Control

The input gain control is preset to match the output of most source units.

## Auto Turn On

Three different automatic turn-on modes can be selected; REM(+12V), DC Offset, and Audio.

## Variable Crossover

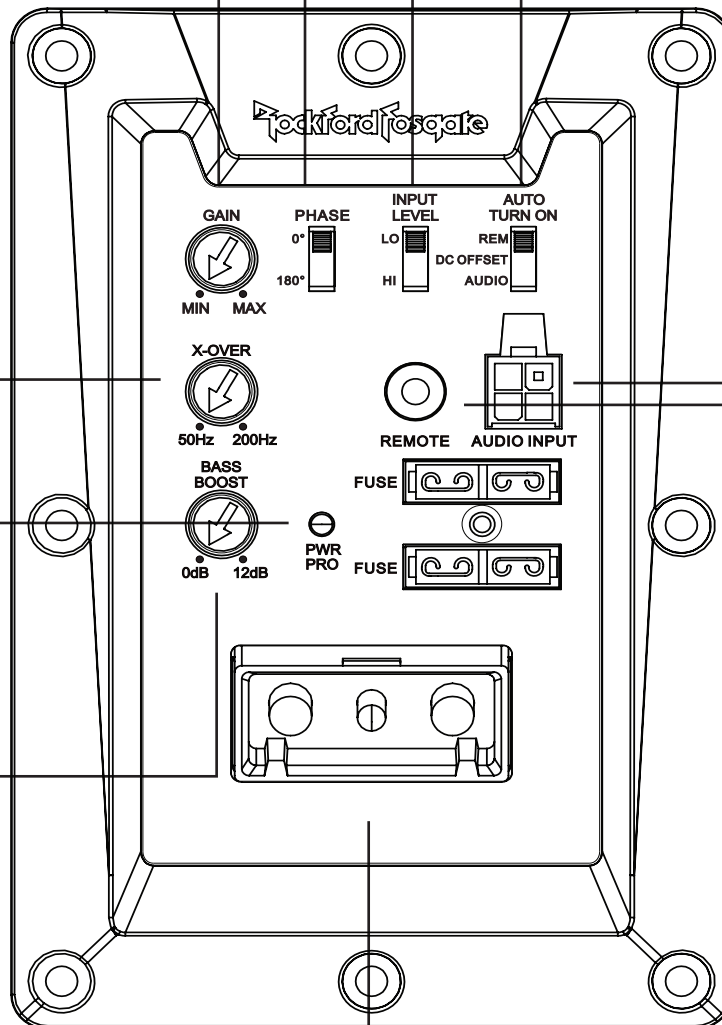
Is a built-in 12dB/octave Butterworth filter with a crossover point variable from 50Hz to 200Hz.

## Audio Input

The RCA/Speaker Harness utilizes either speaker level (high-level) or RCA (low-level) inputs.

## Power/Protect LED

Power LED illuminates blue when the unit is turned on. Protect LED illuminates red if a short circuit or to low of an impedance is detected at the speaker connections. The amplifier will automatically shut down if this occurs.



## Punch Bass

This is an adjustable Bass control adjustment variable from 0dB to +12dB @ 45Hz.

## Power Connector

The power connector allows for quick connection and disconnection of the amplifier's Remote, power and ground source. The power and ground are set-screw wire connectors and will accommodate 4 AWG. The remote is a set-screw wire connector and will accommodate 8 AWG.

## Remote Punch Level

When connected, the "Gain Control" is linked and allows you to remotely control the output level of the amplifier from the dash or center console.

## Contents

- Punch Powered Loaded Enclosure
- RCA/Speaker Harness
- Power Connector
- Remote Punch Level Control
- Installation & Operation Manual
- 2X 10A Fuses Spare/2X 15A Fuses Spare (P500-12P only)

## Installation Considerations

The following is a list of tools needed for installation:

- Fuse-holder and fuse. (See specifications for fuse rating)
- Volt/Ohm Meter
- Wire strippers
- Wire crimpers
- Wire cutters
- #2 Phillips screwdriver
- Battery post wrench
- Hand held drill w/assorted bits
- Assorted connectors
- Adequate Length—Red Power Wire
- Adequate Length—Remote Turn-on Wire
- Adequate Length—Black Grounding Wire

This section focuses on some of the vehicle considerations for installing your new powered loaded enclosure. Pre-planning your system layout and best wiring routes will save installation time. When deciding on the layout of your new system, be sure that each component will be easily accessible for making adjustments.

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

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

**⚠ CAUTION** 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. Route all of the RCA cables close together and away from any high current wires.
5. Use high quality connectors for a reliable installation and to minimize signal or power loss.
6. 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.
7. Never run wires underneath the vehicle. Running the wires inside the vehicle provides the best protection.

8. Avoid running wires over or through sharp edges. Use rubber or plastic grommets to protect any wires routed through metal, especially the firewall.

9. ALWAYS protect the battery and electrical system from damage with proper fusing. Install the appropriate fuse holder and fuse on the +12V power wire within 18" (45.7 cm) of the battery terminal.

10. When grounding to the chassis of the vehicle, scrape all paint from the metal to ensure a good, clean ground connection. Grounding connections should be as short as possible and always be connected to metal that is welded to the main body, or chassis, of the vehicle. Seatbelt bolts should never be used for connecting to ground.

## Mounting Locations

### Trunk or Passenger Compartment Mounting

Choose a structurally sound location to mount your powered loaded enclosure. Mount the enclosure in such a manner that the amplifier has a minimum of 1" (2.54cm) of air gap around the amplifier's heatsink to provide proper cooling to ensure optimum performance of the amplifier is strongly recommended.

## Battery and Charging

Amplifiers will put an increased load on the vehicle's battery and charging system. We recommend checking your alternator and battery condition to ensure that the electrical system has enough capacity to handle the increased load of your stereo system. Stock electrical systems which are in good condition should be able to handle the extra load of any Prime Series amplifier without problems, although battery and alternator life can be reduced slightly. To maximize the performance of your amplifier, we suggest the use of a heavy duty battery and an energy storage capacitor.

## Wiring the System

**⚠ CAUTION** If you do not feel comfortable with wiring your new unit, please see your local Authorized Rockford Fosgate Dealer for installation.

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

**⚠ CAUTION** Avoid running power wires near the low level input cables, antenna, power leads, sensitive equipment or harnesses. The power wires carry substantial current and could induce noise into the audio system.

1. Plan the wire routing. Keep RCA cables close together but isolated from the amplifier's power cables and any high power auto accessories, especially electric motors. This is done to prevent coupling the noise from radiated electrical fields into the audio signal. When feeding the wires through the firewall or any metal barrier, protect them with plastic or rubber grommets to prevent short circuits. Leave the wires long at this point to adjust for a precise fit at a later time.

# Installation

2. Prepare the RED wire (power cable) for attachment to the amplifier by stripping 1/2" of insulation from the end of the wire. Insert the bared wire into the B+ terminal of the power connector and tighten the set screw to secure the cable in place.

NOTE: The B+ cable MUST be fused 18" or less from the vehicle's battery. Install the fuseholder under the hood and ensure connections are water tight.

3. Trim the RED wire (power cable) within 18" of the battery and splice in a inline fuse holder (not supplied). See Specifications for the rating of the fuse to be used. DO NOT install the fuse at this time.

4. Strip 1/2" from the battery end of the power cable and crimp an appropriate size ring terminal to the cable. Use the ring terminal to connect to the battery positive terminal.

5. Prepare the BLACK wire (Ground cable) for attachment to the amplifier by stripping 1/2" of insulation from the end of the wire. Insert the bare wire into the GROUND terminal of the power connector and tighten the set screw to secure the cable in place. Prepare the chassis ground by scraping any paint from the metal surface and thoroughly clean the area of all dirt and grease. Strip the other end of the wire and attach a ring connector. Fasten the cable to the chassis using a non-anodized screw and a star washer.

NOTE: Keep the length of the BLACK wire (Ground) as short as possible. Always less than 30".

6. Prepare the Remote turn-on wire for attachment to the amplifier by stripping 1/2" of insulation from the end of the wire. Insert the bared wire into the REMOTE terminal of the power connector and tighten the set screw to secure the wire in place. Connect the other end of the Remote wire to a switched 12 volt positive source. The switched voltage is usually taken from the source unit's remote amp on lead. If the source unit does not have this output available, the recommended solution is to wire a mechanical switch in line with a 12 volt source to activate the amplifier.

NOTE: In the event that a switched +12V is not available, either DC offset or Audio sense can be selected for amplifier turn-on.

7. Connect the power connector to the mating connector at the amplifier.

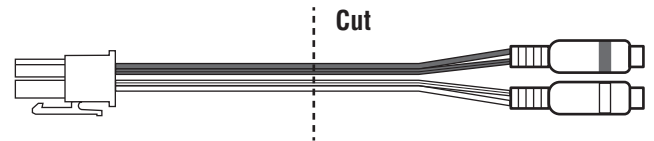
8. Connect from source signal by plugging the RCA cables into the RCA/Speaker Harness input jacks, then insert the four-pin Molex connector into the mating four pin INPUT connector at the amplifier.

	REM	LOW INPUT	HI-LEVEL INPUT	NOTES
AUTO TURN ON				
AUDIO DC OFFSET REM				Requires 4mV signal
AUDIO DC OFFSET REM				Needs 6V DC on factory speaker wires
AUDIO DC OFFSET REM				Use hi-level or low-level input

NOTE: When the installation requires a High Level(Speaker) input, the RCA/Speaker Harness will need to be cut on the speaker wire side of the y-splitter. Then connect the white to the left(+), white/black to the left(-), grey to the right(+), and grey/black to the right(-) corresponding vehicle wires.

Always ensure power is off or disconnected at the amplifier before connecting RCA cables. Failure to do so may cause damage to the amplifier and/or connected components.

illus.-4.1



## CAUTION

9. Perform a final check of the completed system wiring to ensure that all connections are accurate. Check all power and ground connections for frayed wires and loose connections which could cause problems. Install inline fuse near battery connection.



## Adjusting Gain

1. Turn amplifier gain to minimum (counter-clockwise).
2. Turn the source unit volume up to 7/8 maximum (or when distortion is just inaudible).
3. Slowly increase amplifier gain control until adequate volume is achieved.

NOTE: Best signal to noise and dynamic range are realized with gain set to minimum. For a more in depth setting procedure, contact Rockford Technical Support.



### CAUTION

Avoid setting amplifier gain high as noise and distortion will greatly increase.

## Adjusting Crossover Frequency

The crossover frequency can be adjusted between 50-200Hz. The crossover is set to LP (Low Pass) only. Turn the crossover adjustment knob all the way down. With the system playing, turn the crossover adjustment knob up slowly until the desired crossover point is achieved.

## Phase Switch

Allows you to conveniently switch the output phase of the amplifier between 0° and 180°. This has the same effect as physically reversing the Positive (+) and Negative (-) speaker wires

## Input Level

Set the Input Level switch to match the outputs of your source unit. (LO - RCA or HI - Speaker Level)

## Auto Turn On (illus.-3.1)

Three different automatic turn-on modes can be selected; REM(+12V), DC Offset, and Audio.

Remote: Set the switch to REM to use the remote turn-on lead from your source unit.

DC Offset: Set the switch to DC Offset to detect a DC offset from the HI-Level speaker outputs when the source unit has been turned on.

Audio: Set the switch to Audio to detect the incoming audio signal from your source unit and automatically turn on your powered loaded enclosure.

NOTE: Using either the DC Offset or Audio mode causes the REM on the power connector to have +12V out for turning on additional amplifiers.

## Punch Bass

This works along with the crossover switch on the amplifier. When set to Low-Pass (LP) operation, this is a variable Bass Boost. Set this to your personal preference while listening to the system.



### CAUTION

Over excursion and subsequent damage may occur at high levels of boost.

## Remote Punch Level Control

When connected, the "Gain Control" is linked and allows you to remotely control the output level of the amplifier from the dash or center console..

## Troubleshooting

NOTE: If you are having problems after installation follow the Troubleshooting procedures below.

Step 1. Check Amplifier for proper connections. Verify that POWER light is on. If POWER light is on skip to Step 3, if not continue.

1. Check in-line fuse on battery positive cable. Replace if necessary.
2. Check fuse(s) on amplifier. Replace if necessary. Do not exceed 10A.
3. Verify that Ground connection is connected to clean metal on the vehicle's chassis. Repair/replace if necessary.
4. Verify there is 9 to 14.4 Volts present at the positive battery and remote turn-on cable. Verify quality connections for both cables at amplifier, stereo, and battery/fuseholder. Repair/replace if necessary.

Step 2. Protect light is on.

1. If the Protect light is on, this is a sign of a possible short in the speaker connections. Check for proper speaker connections and use a volt/ohm meter to check for possible shorts in the speaker wiring. Too low of a speaker impedance may also cause Protect to light.

Step 3. Check Amplifier for audio output.

1. Verify good RCA input connections at stereo and amplifier. Check entire length of cables for kinks, splices, etc. Test RCA inputs for AC volts with stereo on. Repair/replace if necessary.
2. Disconnect RCA input from amplifier. Connect RCA input from test stereo directly to amplifier input.

Step 4. Check Amplifier if you experience Turn-on Pop.

1. Disconnect input signal to amplifier and turn amplifier on and off.
2. If the noise is eliminated, connect the REMOTE lead of amplifier to source unit with a delay turn-on module.

OR

1. Use a different 12 Volt source for REMOTE lead of amplifier.

Step 5. Check Amplifier if you experience excess Engine Noise.

1. Route all signal carrying wires (RCA, Speaker cables) away from power and ground wires.

OR

1. Bypass any and all electrical components between the stereo and the amplifier(s). Connect stereo directly to input of amplifier. If noise goes away the unit being bypassed is the cause of the noise.

OR

1. Remove existing ground wires for all electrical components. Reground wires to different locations. Verify that grounding location is clean, shiny metal free of paint, rust etc.

OR

1. Add secondary ground cable from negative battery terminal to the chassis metal or engine block of vehicle.

OR

1. Have alternator and battery load tested by your mechanic. Verify good working order of vehicle electrical system including distributor, spark plugs, spark plug wires, voltage regulator etc.

# Warranty

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

## **Length of Warranty**

Speakers, Signal Processors, PRIME and PUNCH Amplifiers – 1 Year  
POWER Amplifiers – 2 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.