

PA-1 HD

PA-1

PRE-AMPLIFIER



Dear Customer:

Congratulations on your purchase of America's finest car audio components. At Rockford Fosgate we are committed to 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 produced 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). The length and nature of your warranty are dramatically affected if you install the product yourself. Please read your warranty and return your receipt and original carton for possible future use.

For your musical enjoyment, Rockford Fosgate offers everything from two channel Punch® amplifiers, the more powerful four channel Power amplifiers, to three lines of speakers: Pro Series, The Punch®, and Series One™. In addition, we offer two-, three- and four-way speaker systems, and subwoofer and full range enclosures. For sound reproduction at its best, we offer signal processors: equalizers, pre-amps, and crossovers.

To insure overall installation quality, Rockford provides top quality wire, connectors, carpet, grille cloth, "Colours" speaker grilles and amplifier shrouds, high output alternators, and many more accessories through our Perfect Interface division.

To add the finishing touch to your new Rockford Fosgate image, order your Rockford P.O.P which includes everything from t-shirts and jackets, to key chains and neon hats.

To get a free brochure on Rockford Fosgate products and Rockford P.O.P., please call 602-967-3565 or FAX 602-967-8132.

And Remember.. .

PRACTICE SAFE SOUND™

CONTINUOUS EXPOSURE TO SOUND PRESSURE LEVELS OVER 100dB
MAY CAUSE PERMANENT HEARING LOSS. HIGH-POWERED AUTOSOUND
SYSTEMS MAY PRODUCE SOUND PRESSURE LEVELS WELL OVER 130dB.
USE COMMON SENSE AND PRACTICE SAFE SOUND.

INTRODUCTION

The Rockford Fosgate PA-I HD / PA-1 is an automotive stereo pre-amplifier which will provide state-of-the-art sound in cars, vans, boats, or wherever a 9 to 16 volt battery is available.

The Punch® adjustable input circuits are designed to match almost any music source, from low preamp levels to speaker levels, with negligible noise.

Three rotary potentiometers control bass, midbass, and treble equalization circuits specially designed to compensate for the response errors present in most mobile installations.

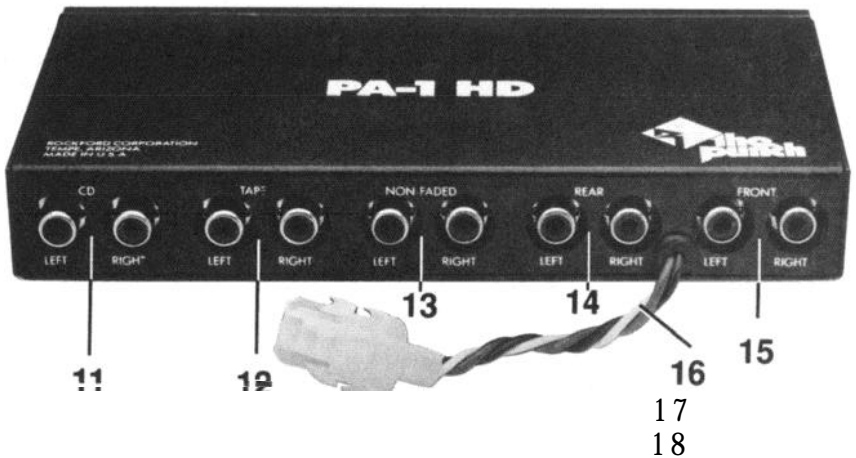
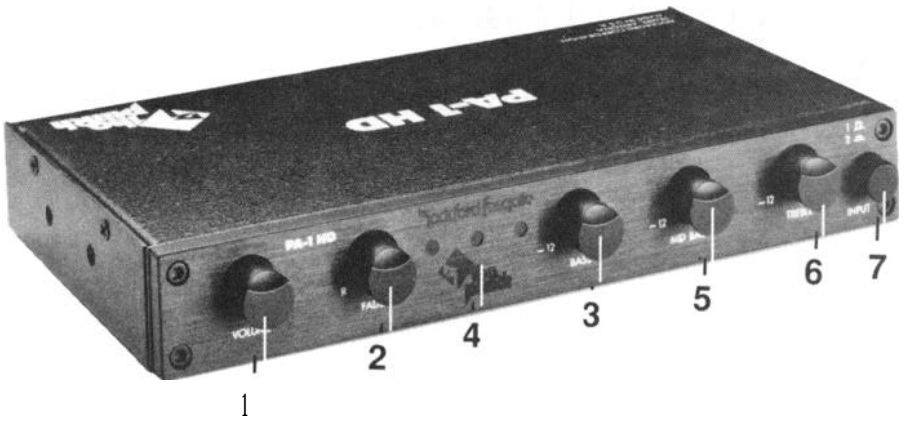
Unlike conventional tone controls, the Punch® equalization corrects the specific problems of poor low bass response, mid-bass bulge, and high frequency rolloff. The result is full-range sound without excessive boost in areas where it is not needed.

FEATURES DESCRIPTION (PA-1 HD pictured)

- 1 Volume Control
- 2 Front to rear fader, along with a non-faded output.
- 3 Bass equalizer designed to compensate for the special acoustic problems of automobiles
- 4 L.E.D. lights (differs slightly on PA-I)
- 5 Midbass equalizer designed to address the mid bass bulge common to most cars
- 6 Treble control to set the desired level of brilliance
- 7 Input: -1: Tape -2: CD
- 8 CD switchable input gain
- 9 Tape switchable gain
- 10 Clipping indicators adjustable gain
- 11 CD inputs
- 12 Tape Inputs
- 13 Non-faded Outputs
- 14 Rear Outputs
- 15 Front Outputs
- 16 Power Connection (White Wire)
- 17 Ground Connection (Black Wire)
- 18 Turn-on Connection (Red Wire)

- Adjustable gains for optimum signal to noise ratio.
- Full floating supply for superior noise ratio.

- Handcrafted in U.S.A.



INPUT LEVEL CONTROLS

The PA-I HD / PA-1 input level controls are accessible with a jeweler's screwdriver through four holes in the cover (left and right tape [#9] and left and right compact disc [#8]). The controls are factory preset to a level which matches most 500 millivolt to 1 Volt rated preamp-output source units.

If you are using the speaker-out leads of the source unit, turn the PA-I HD / PA-I input controls fully counterclockwise to their minimum gain position.

If the volume control of the source is "touchy" and/or noisy-that is, if just a little volume from the source drives the system into distortion-reduce the PA-I HD/PA-I input gain controls so that the distortion is not audible until the source volume is at about 3/4 of its rotation.

If maximum volume from the source won't drive the amplifier into distortion, increase the PA-I HD / PA-I input gain controls until distortion is audible at about 3/4 volume.

CLIPPING LEVEL INDICATORS

The PA-I HD / PA-I clipping level indicator [#10] controls are accessible with a jeweler's screwdriver through a hole in the cover. The controls are factory preset to a level which matches most 400 millivolt input amplifiers.

The best way to adjust the clipping indicators is to hook an oscilloscope to the output of the amplifier and turn the pot until the clipping lights (the two outside red lights) just flash when the amplifier starts to clip. Without an oscilloscope, adjust the controls so that the clipping indicators flash before clipping becomes audible.

TURN-ON CONNECTION

The PA-I HD / PA-I is turned on by applying Positive 12 Volts to the red wire [#18]. Usually, the red wire is connected to the source unit's "Accessory" or "Auto-Antenna" lead, either of which will go positive when the source is turned on.

Although the majority of high-quality automotive source units have an Accessory or Auto-Antenna output, there are many which may require different turn-on methods. If the source has no Auto-Antenna lead (or if Auto-Antenna goes down during tape operation):

- a.) Find the internal switched power voltage inside the source unit and solder a lead to it. Run the lead out through the back of the unit (being sure to use a grommet for insulation from the case) and connect to the pre-amplifier turn-on wire.
- b) Or: install a switch in the car with one terminal connected to +12 volts and the other to the PA-1 HD / PA-1 red lead.
- c) Or: Connect the PA-1 HD/ PA-I red lead to accessory point at the vehicle's fuse block. In this case the pre-amplifier will be on whenever the vehicle is on. This method will allow the system to amplify any noise and turn-on and turn-off transients, and may therefore be unsatisfactory.

POWER CONNECTION

The White wire [#16] must be connected directly to a positive terminal of the battery or to the fuse block to provide a power source with a low voltage drop and low noise. If the power wire must be extended, use only 18-gauge or larger wire and make a good splice.

It is best to use as short a wire run as possible. DO NOT run the power wire next to the input cabling to the pre-amplifier: it will induce noise.

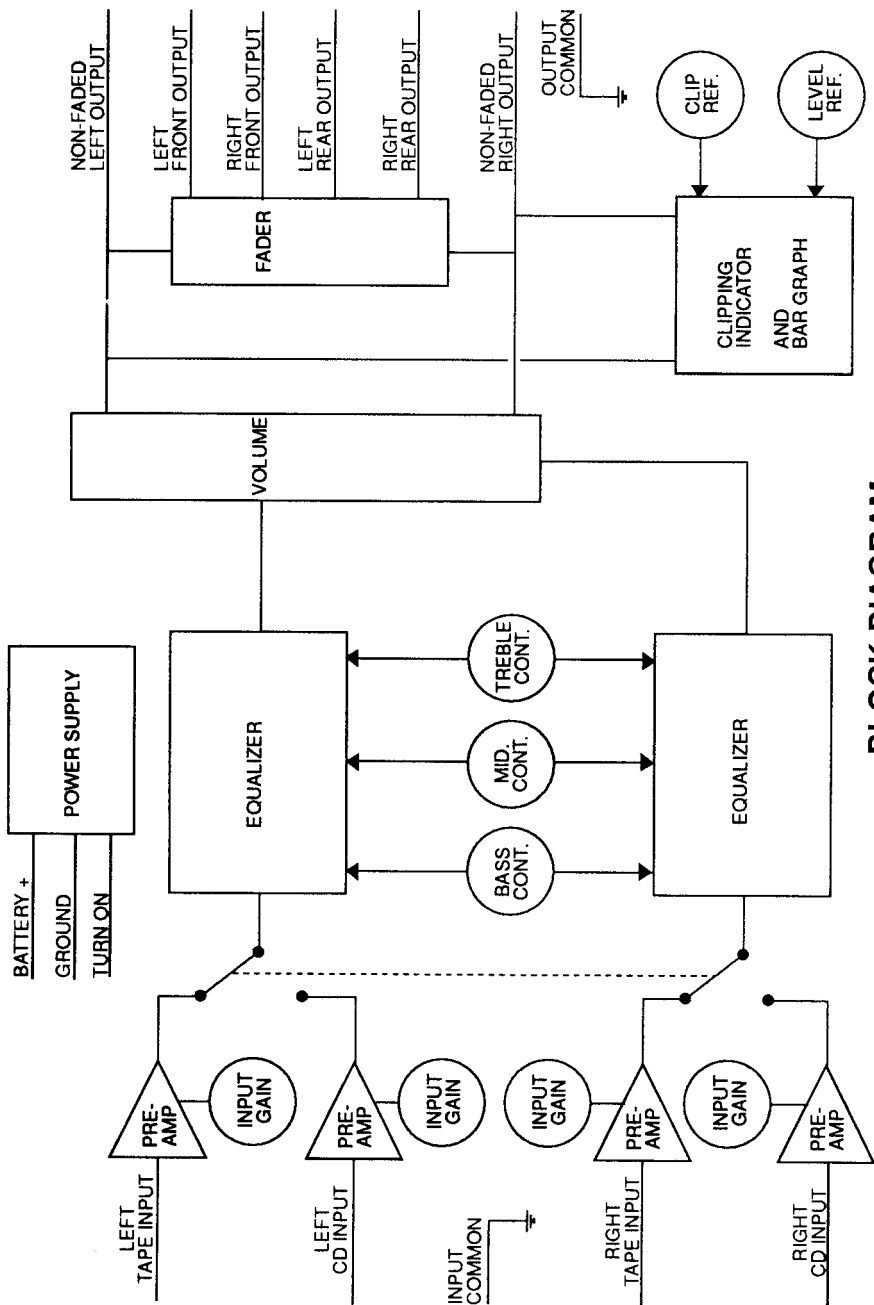
Avoid running the White power wire near the radio's antenna or power leads, or near sensitive equipment or harnesses. The White power wire could induce noise.

The White wire is provided with an in-line 3/4 ampere fuse. Do not use a larger fuse or the pre-amplifier will not be adequately protected.

GROUND CONNECTION

The ground wire [#17] must be connected directly to the vehicle chassis, near the pre-amplifier. Ground loops are aggravated by the length of the ground wire or any resistance in the ground path. For this reason we do not recommend extending the ground wire in any installation.

The ground point in the car should be a piece of chassis metal that is welded to the main body of the vehicle. Painted surfaces should be scraped or sanded clean before the ground lug is bolted down. (Cover the bare-metal area with paint or grease to prevent rust.)



**BLOCK DIAGRAM
PA-1 HD / PA-1**

SPECIFICATIONS

NOISE:

Signal to noise less than -90dB.

DISTORTION:

Less than 0.01% THD+N (Total Harmonic Distortion & Noise).

PREAMP FREQUENCY RESPONSE:

All controls flat: 20Hz to 10,000 Hz ± 5 dB

EQUALIZER CONTROLS:

Bass Equalizer: ± 2 dB at 45Hz

Midbass: ± 2 dB at 180Hz

Treble: ± 12 dB at 20,000Hz

CURRENT DRAW:

250 milli-Amperes.

DIMENSIONS: PA-1 HD

6.850" x 3.6" x 1"

174mm x 91.4mm x 25.4mm

DIMENSIONS: PA-1

6.75" x 3.5" x 1.5"

171.4mm x 88.9mm x 38.1mm

NOTE: Specifications subject to change without notice.

ROCKFORD FOSGATE LIMITED ELECTRONICS WARRANTY

Rockford Fosgate warrants all electronics to the original retail purchaser only, to be free from defects in materials or workmanship for a period of two (2) years parts and one (1) year labor providing the product was purchased from and installed by an authorized Rockford Fosgate dealer. Warranty on products purchased from, but not installed by an authorized dealer is one (1) year parts, no labor. This warranty is not transferable. Electronics found to be defective during the warranty period will be repaired or replaced at Rockford Fosgate's discretion. Repaired or replaced electronics will cover the balance of the original warranty period only.

Defective product must be shipped prepaid, together with proof of purchase and installation with a brief description of the problem, to the Rockford Fosgate Dealer from whom you purchased the product or to the factory in Tempe, Arizona in the original factory canon or equivalent. Any shipping loss or damage will be borne by you. If you return your product to the factory, please call 602-967-3565, ext. 3081 for a return authorization number. If, upon inspection at either the Dealership or the factory, a determination is made that the product has failed due to materials or workmanship we will repair or replace it at no charge, and return it in a reasonable length of time. If a determination is made that the product has been abused or is out of the warranty period, it will be repaired and returned C.O.D. for the repair and freight. Warranty does not cover the cabinet or any appearance item, any cost or expense related to the removal or reinstallation of the product, any accessory used in conjunction with the product, or any damage to the product resulting from alteration, accident, misuse or abuse. This warranty does not apply if the parts or labor, which would otherwise be provided without charge under this warranty, are obtained from any other source than Rockford Fosgate or an Authorized Rockford Fosgate service center. Rockford Fosgate limits obligation under any implied warranties under state laws to a period not to exceed the warranty period. This warranty applies only to products sold in the United States of America, or its possessions. For warranty outside the U.S.A., please contact your local agent. This warranty will terminate if the serial number has been removed, tampered with, or defaced. This product has no factory warranty if purchased from any other than an Authorized Rockford Fosgate Dealer.

Ship to:
Rockford Corporation
Warranty Repair Dept.
2055 E. 5th St.
Tempe, Arizona 85281 U.S.A



Rockford Fosgate

A Division of Rockford Corporation

641 South Rockford Drive

Tempe, Arizona 85281 U.S.A.

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