Rockford Fosgate®

car audio for fanatics

5.3X

390 Watt Amplifier

5-channel w/crossovers

Installation and Operation

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 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 wearables, which include everything from T-shirts and jackets to hats and sunglasses.

To get a free brochure on Rockford Fosgate products and Rockford accessories, in the U.S. call 602-967-3565 or FAX 602-967-8132. For all other countries, call +001-602-967-3565 or FAX +001-602-967-8132.

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.

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 1-800-795-2385. 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 amplifier if it is ever stolen.

Serial Number: _____

Model Number: _____

TABLE OF CONTENTS

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 or refer to the icons listed below. 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.

Sections marked **ADVANCED OPERATION** include in-depth technical information

Sections marked **INSTALLATION** include "slam dunk" wiring connections

Sections marked **TROUBLESHOOTING** include recommendations for curing installation problems

INTRODUCTION

The RF 5.3x is a 5-channel amplifier with four stereo channels and a single bridged/mono channel for accommodating "single amplifier" system designs at a competitive price. Since this manual provides information on the features, installation and operation of the Rockford Fosgate 5.3x amplifier, we suggest you save it for future reference.

We strongly recommend you have your Authorized Rockford Fosgate Dealer install your new Rockford Fosgate amplifier. If you do choose to install your amplifier yourself, please be sure to read the entire manual before beginning.

ACCESSORY PACK

Installation & Operation Manual
(1) Fuseholder
(1) ATC 30 Amp Fuse
(1) 3/32" Allen Wrench

TECHNICAL DESIGN FEATURES

◆ TRANS•ANA
(TRANSconductance Active Nodal Amplifier)

The ***TRANS•ANA*** (**TRANS**conductance **A**ctive **N**odal **A**mplifier) is a circuit that allows the audio signal to pass through the amplifier at low voltage. The signal is directly level-shifted to the fixed high voltage rails via a pair of driver transistors. Signal linearity is assured by an active node formed by the drive transistors at ultrasonic frequencies. This allows amplifier performance similar to trans•*nova* which is highly stable and linear while utilizing the advantages of a non-floating power supply.

THE RESULT: An extended frequency bandwidth accurately supplied to the output stages of the amplifier.

◆ TOPAZ (Tracking Operation Pre-Amplifier Zone)

The ***TOPAZ*** (**T**racking **O**peration **P**re-**A**mplifier **Z**one) circuitry solves ground loop noise problems common to automotive amplifier design. This innovative new development allows vastly improved isolation of the input signal grounds from the power supply ground of the amplifier. This is accomplished by allowing the source unit to control the potential "environment" of the entire input structure or "zone" of the amplifier. This process improves the noise rejection of the amplifier by 30-40dB – an astounding 30-100 times better than amplifiers without TOPAZ.

THE RESULT: Elimination of troublesome ground loop noise between source and amplifier.

◆ MOSFET Devices

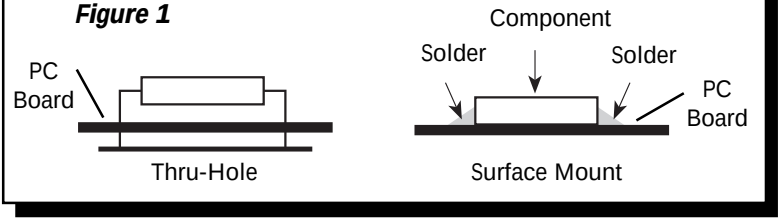
Rockford Fosgate is one of the few manufacturers in the sound community to utilize MOSFET devices in both the ***power supply*** and the ***output stages***. ***MOSFET*** (**M**etal **O**xide **S**emiconductor **F**ield **E**ffect **T**ransistor) devices offer several important inherent advantages over the 30 year old technology of bi-polar design. These advantages include: thermal stability, switching speed, ultra low output impedance and wider bandwidth linearity. In addition, MOSFETs operate very similarly to vacuum tubes in which they are more linear than bipolar transistors. However, MOSFETs can deliver the midrange clarity without the limitations of transient response and high frequency phase shifting normally associated with tube operation.

THE RESULT: Operational characteristics similar to vacuum tubes without the performance limitations of tube design.

◆ DSM (Discrete Surface Mount) Technology

The ***DSM*** (Discrete Surface Mount) manufacturing process combines the advantages of both discrete components and integrated circuitry. Rockford Fosgate is the only American amplifier manufacturer to have invested millions into this process. DSM components differ from conventional discrete components in different ways. They are more compact, more rugged, and they efficiently dissipate generated heat. Using them wherever appropriate allows the advantages associated with discrete circuitry to be retained while also providing room for both highly advanced processing features and generous PC board copper paths where needed. Their short lead-out structures allow maximum audio performance and highest signal-to-noise ratios to be obtained in amplifiers of desirable package size without resorting to "amplifier-on-a-chip" shortcuts. These advantages are shown below in Figure 1.

Figure 1



THE RESULT: Fewer connections, improved reliability, shorter signal paths, superior signal-to-noise ratio and awesome sonic performance.

◆ NOMAD (NOn-Multiplying Advanced Decision)

All Rockford Fosgate amplifiers use an ***analog computer process*** to maximize safe output power under all operating conditions. The innovative ***NOMAD*** (**NO**n-**M**ultiplying **A**dvanced **D**ecision) system is the most sophisticated version of this technique ever used, bringing previously unavailable levels of accuracy, stability, temperature immunity and reliability to this critical process. NOMAD makes advanced decisions based on device voltages to precisely control the awesome levels of current available in the output MOSFETs to safe values – but only when absolutely needed.

THE RESULT: Extremely fast protection system that always protects the amplifier and never degrades the sound.

◆ High Level Inputs

The high level inputs on the Rockford Fosgate amplifiers convert the speaker line outputs (high level) to preamp line inputs (low level). This allows amplifier compatibility with a variety of source units as well as the ability to integrate into factory systems without the need for external adapters.

THE RESULT: Allows compatibility with factory and aftermarket source units.

◆ XCard Crossover

The 5.3x amplifiers utilize internal active crossovers. These crossovers have many performance advantages such as using discrete components for exact frequency adjustments which are far superior to potentiometers. Additionally, the XCard can be configured for high-pass, low-pass and full range operation. With slight modification, many crossover frequencies and slope configurations can be achieved.

THE RESULT: Increased system design flexibility with a precise electronic crossover without the limitations of conventional potentiometer designs.

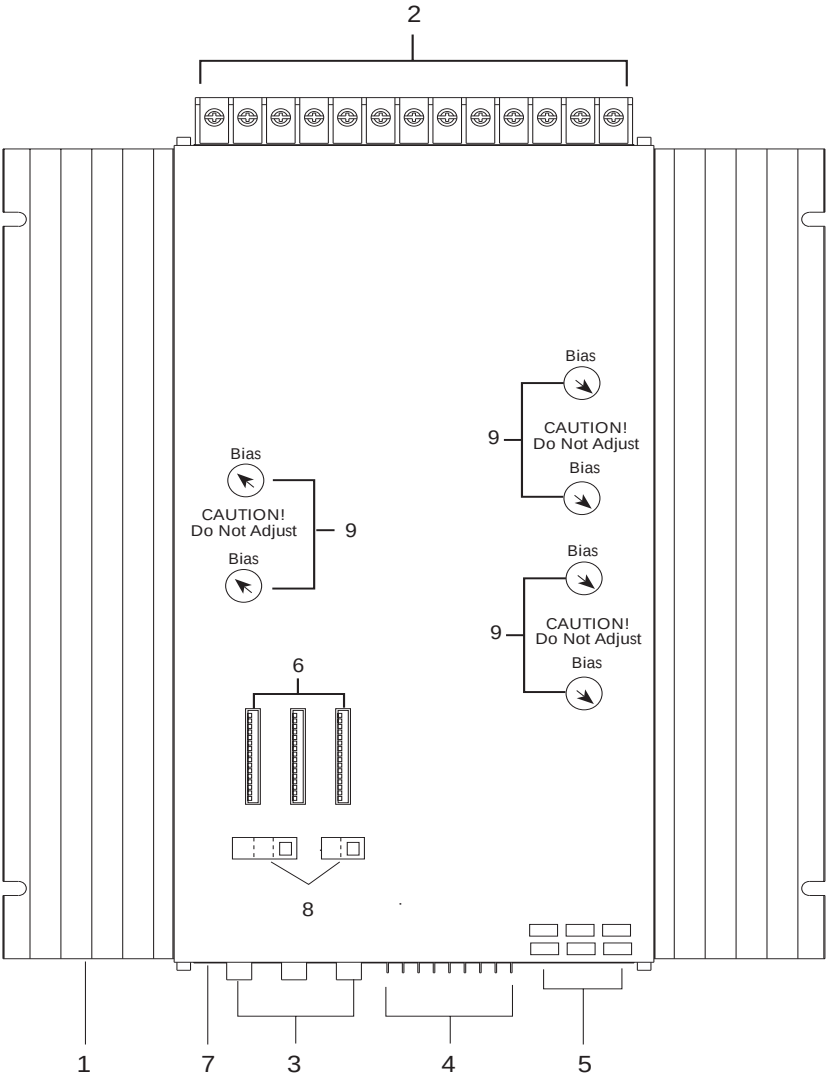
◆ Signal Switching Network

The Signal Switching Network allows the RCA input signals to be distributed to the amplifier channels in many different configurations. Among the many possible configurations, one setting uses a single RCA (L mono) to feed the subwoofer channel, thus simplifying connections needed.

THE RESULT: Allows input signals to be distributed to amplifier channels in many different configurations.

5.3x Design Features

CAUTION! Any adjustment to the Bias controls may damage your amplifier and will void your warranty.



1. **Dual Extruded Heatsinks**
   The dual extruded aluminum heatsinks of this RF amplifier dissipate heat generated by the amplifier's circuitry.

2. **Power/Speaker Barrier Strip**
   The barrier strip uses screw terminals that will accept #10 spade lugs or bare speaker and power wire sizes from 10-18 AWG. These gold-plated connectors are immune to corrosion that will cause signal degradation.

3. **RCA Input Jacks**
   The industry standard RCA jack provides an easy connection for signal level input. They are gold-plated to resist the signal degradation caused by corrosion.

4. **High Level Inputs**
   The high level input connectors accept 1/8" spade lugs for the connection of a source unit that has only speaker line (high level) outputs.

5. **Input Sensitivity Controls**
   The input level controls are preset for 500mV which will match the output of most source units. They can be adjusted to match output levels from a variety of source units.

6. **Internal Crossovers**
   The built-in crossover cards are configurable for a multitude of operating frequencies. The orientation of the card in its socket determines its function of high-pass, low-pass or full range operation.

7. **LED Power Indicator**
   The LED gives a visual indication of the status of the amplifier, lighting when the unit is turned on.

8. **Signal Input Switches**
   These switches allow the input signals to be distributed to the outputs in many different configurations.

9. **Bias Controls**
   The Bias controls are preset at the factory and are not user adjustable. **CAUTION! ANY ADJUSTMENT TO THE BIAS CONTROLS WILL VOID YOUR WARRANTY!**

INSTALLATION CONSIDERATIONS

The following is a list of tools you will need for installing the amplifier:

Wire Cutters	#2 Phillips Screwdriver
Wire Strippers	Assorted wire connectors
Wire Crimpers	Battery Post Wrench
Voltmeter	Electric Hand Drill with assorted bits

This section focuses on some of the vehicle considerations for installing your new amplifier. Checking your battery and present sound system, as well as 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.

Before beginning any installation, be sure to follow these simple rules:

1. Be sure to carefully read and understand the instructions before attempting to install the amplifier.
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 amplifier 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 a fuseholder and appropriate 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.

MOUNTING LOCATION

The mounting location and position of your amplifier will have a great effect on its ability to dissipate the heat generated during normal operation. The design of our aluminum heatsink serves to easily dissipate the heat generated over a wide range of operating conditions. However, to maximize the performance of your amplifier, care should be taken to ensure adequate ventilation.

Trunk Mounting

Mounting the amplifier vertically on a surface with the fin grooves running up and down will provide the best cooling of the amplifier.

Mounting the amplifier on the floor of the trunk will work but provides less cooling capability than vertical mounting.

Mounting the amplifier upside down to the rear deck of the trunk will not provide proper cooling and will severely affect the performance of the amplifier and is strongly ***not*** recommended.

Passenger Compartment Mounting

Mounting the amplifier in the passenger compartment will work as long as you provide a sufficient amount of air for the amplifier to cool itself. If you are going to mount the amplifier under the seat of the vehicle, you must have at least 1" (2.54cm) of air gap around the amplifier's heatsink.

Mounting the amplifier with less than 1" (2.54cm) of air gap around the amplifier's heatsink in the passenger compartment will not provide proper cooling and will severely affect the performance of the amplifier and is strongly ***not*** recommended.

Engine Compartment Mounting

Rockford Fosgate amplifiers should ***never*** be mounted in the engine compartment. Not only will this void your warranty but could create an embarrassing situation caused by the ridicule from your friends.

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 Rockford amplifier without problems, although battery and alternator life can be reduced slightly. To maximize the performance of your Rockford Fosgate amplifier, we suggest the use of a heavy duty battery and an energy storage capacitor.

WIRING THE SYSTEM

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.***

• **For safety**, disconnect the negative lead from the battery prior to beginning the installation.

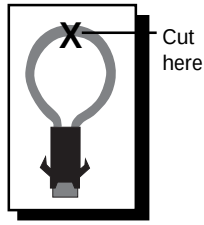
1. Remove the cover and configure the internal XCard crossovers prior to installation. Refer to “Using the XCard” (page 13) for further information.

2. Plan the wire routing. Take care when running signal level RCA cables to keep them 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.

3. Prepare the **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 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 prepare the cable ends as stated above. Connections should be water tight.

Trim the power cable within 18" of the battery and strip 1/2" of insulation from the end of the wire. **Cut the wire loop that is attached to the fuseholder in half and splice the fuse into the power line using appropriate inline connectors.** Use the section of cable that was trimmed earlier and connect it to the other end of the fuseholder.



4. Strip 1/2" from the battery end of the power cable and crimp a large ring terminal to the cable. Use the ring terminal to connect to the battery positive terminal. **Do not install the fuse at this time.**

5. Prepare the **Ground** cable for attachment to the amplifier by stripping 1/2" of insulation from the end of the wire. Insert the bared wire into the GND terminal 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.

6. Prepare the **REM** turn-on wire for connection to the amplifier by stripping 1/2" of insulation from the wire end. Insert the bared wire into the REM terminal and tighten the set screw to secure the cable into place. Connect the other end of the REM wire to a switched 12 volt positive source. The switched voltage is usually taken from the source unit's auto antenna or the accessory lead. If the source unit does not have these outputs available, the recommended solution is to wire a mechanical switch in line with a 12 volt source to activate the amplifier.

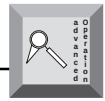
7. Securely mount the amplifier to the vehicle or amp rack. Be careful not to mount the amplifier on cardboard or plastic panels. Doing so may enable the screws to pull out from the panel due to road vibration or sudden vehicle stops.

8. Connect the source signal to the amplifier by plugging the RCA cables/high level inputs into the input jacks at the amplifier.

9. Connect the speakers. Strip the speaker wires 1/2" and insert into the speaker terminal and tighten the set screw to secure into place. Be sure to maintain proper speaker polarity. ***DO NOT chassis ground any of the speaker leads as unstable operation may result.***

10. 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.

USING PASSIVE CROSSOVERS

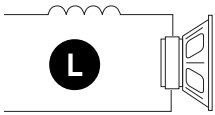


A passive crossover is a circuit that uses capacitors and/or coils and is placed on speaker leads between the amplifier and speaker. The crossover delegates a specific range of frequencies to the speaker for optimum driver performance. A crossover network can perform one of three functions: High-Pass (capacitors), Low-Pass (inductors or coils) and Bandpass (combination of capacitor and coil).

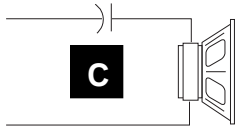
The most commonly used passive crossover networks are 6dB/octave systems. These are easy to construct and require one component per filter. Placing this filter in series with the circuit will reduce power to the speaker by 6dB/octave above or below the crossover point depending on whether it is a high-pass or low-pass filter. More complex systems such as 12dB/octave or 18dB/octave can cause impedance problems if not professionally designed.

Passive crossovers are directly dependent upon the speaker's impedance and component value for accuracy. When passive crossover components are used in multiple speaker systems, the crossover's effect on the overall impedance should be taken into consideration along with the speaker's impedance when determining amplifier loads. ***CAUTION: The Rockford Fosgate amplifiers are not recommended for impedance loads below 2Ω stereo and 4Ω bridged (mono) loads.***

TABLE OF CROSSOVER COMPONENT VALUES



6 dB/Octave Low-Pass



6 dB/Octave High-Pass

Freq. Hertz	Speaker Impedance					
	2 OHMS		4 OHMS		8 OHMS	
	L	C	L	C	L	C
80	4.1mH	1000µF	8.2mH	500µF	16mH	250µF
100	3.1mH	800µF	6.2mH	400µF	12mH	200µF
130	2.4mH	600µF	4.7mH	300µF	10mH	150µF
200	1.6mH	400µF	3.3mH	200µF	6.8mH	100µF
260	1.2mH	300µF	2.4mH	150µF	4.7mH	75µF
400	.8mH	200µF	1.6mH	100µF	3.3mH	50µF
600	.5mH	136µF	1.0mH	68µF	2.0mH	33µF
800	.41mH	100µF	.82mH	50µF	1.6mH	26µF
1000	.31mH	78µF	.62mH	39µF	1.2mH	20µF
1200	.25mH	66µF	.51mH	33µF	1.0mH	16µF
1800	.16mH	44µF	.33mH	22µF	.68mH	10µF
4000	.08mH	20µF	.16mH	10µF	.33mH	5µF
6000	51µH	14µF	.10mH	6.8µF	.20mH	3.3µF
9000	34µH	9.5µF	68µH	4.7µF	.15mH	2.2µF
12000	25µH	6.6µF	51µH	3.3µF	100µH	1.6µF

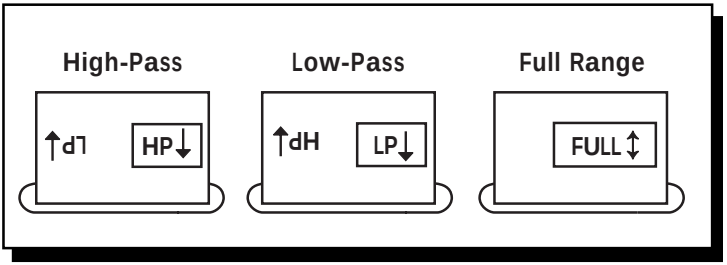
6 dB/Octave High-Pass and Low-Pass Filters

L = Low-Pass (Inductor)
C = High-Pass (Capacitor)

For more information, see your Authorized Rockford Fosgate Dealer.

USING THE XCARD

The crossover functions are controlled through the use of an XCard and can be set for high-pass, low-pass or full range operation. Each crossover card has two faces: one face operates **Full Range**, the other has arrows to indicate the edge for selecting **HP** (high-pass) or **LP** (low-pass) operation. Orient the card with the desired operating edge, indicated by the arrow, toward the socket terminals inside the amplifier. Firmly, but carefully, plug the card into the socket.



CUSTOMIZING THE XCARD

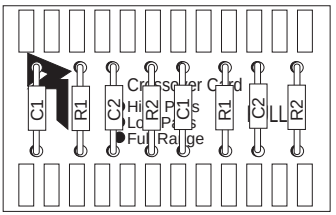
The crossover point can be altered by changing the 4 resistor values. Use the following formula to select the appropriate resistor value to be placed on the XCard.

$\frac{3386}{f_o}$ **= R (in kΩ) for .047μf cap**

$\frac{7234}{f_o}$ **= R (in kΩ) for .022μf cap**

The actual formula is:

$$R = \frac{1}{2\pi f_o c}$$



Where: R = Ω
f_o = desired crossover frequency
c = capacitor in farads
ex: .047 x 10^{-6} for .047mf cap

RESISTOR CHART

Our tests have shown that using 0.047µf capacitors for frequencies below 100Hz, and 0.022µf capacitors for frequencies above 100Hz, result in more linear crossover control. Refer to the Specifications page to determine the capacitor value of each supplied XCard.

Butterworth Alignment Q = .707
1% resistors used with 0.047µF caps

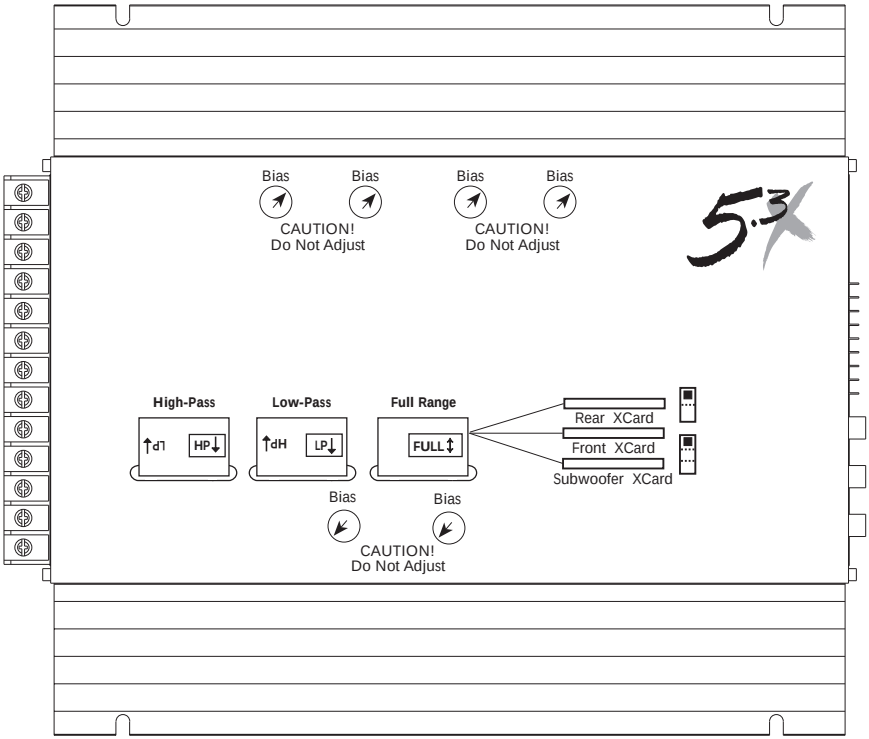
Frequency	R1	R2
20Hz	**169kΩ**	**169kΩ**
25Hz	**133kΩ**	**133kΩ**
30Hz	**110kΩ**	**110kΩ**
35Hz	**95.3kΩ**	**95.3kΩ**
40Hz	**84.5kΩ**	**84.5kΩ**
45Hz	**75kΩ**	**75kΩ**
50Hz	**68.1kΩ**	**68.1kΩ**
55Hz	**61.9kΩ**	**61.9kΩ**
60Hz	**56.2kΩ**	**56.2kΩ**
65Hz	**52.3kΩ**	**52.3kΩ**
70Hz	**48.7kΩ**	**48.7kΩ**
75Hz	**45.3kΩ**	**45.3kΩ**
80Hz	**42.2kΩ**	**42.2kΩ**
85Hz	**40.2kΩ**	**40.2kΩ**
90Hz	**37.4kΩ**	**37.4kΩ**
200Hz	16.9kΩ	16.9kΩ
300Hz	11.3kΩ	11.3kΩ
400Hz	8.45kΩ	8.45kΩ
500Hz	6.65kΩ	6.65kΩ
600Hz	5.62kΩ	5.62kΩ
700Hz	4.75kΩ	4.75kΩ
800Hz	4.22kΩ	4.22kΩ
900Hz	3.74kΩ	3.74kΩ
1kHz	3.40kΩ	3.40kΩ
1.2kHz	2.80kΩ	2.80kΩ
2kHz	1.69kΩ	1.69kΩ
3kHz	1.10kΩ	1.10kΩ
4kHz	845Ω	845Ω
5kHz	665Ω	665Ω
6kHz	562Ω	562Ω
7kHz	487Ω	487Ω
8kHz	422Ω	422Ω

Butterworth Alignment Q = .707
1% resistors used with 0.022µF caps

Frequency	R1	R2
20Hz	357kΩ	357kΩ
25Hz	287kΩ	287kΩ
30Hz	237kΩ	237kΩ
35Hz	205kΩ	205kΩ
40Hz	178kΩ	178kΩ
45Hz	162kΩ	162kΩ
50Hz	143kΩ	143kΩ
55Hz	130kΩ	130kΩ
60Hz	121kΩ	121kΩ
65Hz	110kΩ	110kΩ
70Hz	102kΩ	102kΩ
75Hz	95.3kΩ	95.3kΩ
80Hz	90.9kΩ	90.9kΩ
85Hz	84.5kΩ	84.5kΩ
90Hz	80.6kΩ	80.6kΩ
200Hz	**35.7kΩ**	**35.7kΩ**
300Hz	**23.7kΩ**	**23.7kΩ**
400Hz	**17.8kΩ**	**17.8kΩ**
500Hz	**14.3kΩ**	**14.3kΩ**
600Hz	**12.1kΩ**	**12.1kΩ**
700Hz	**10.2kΩ**	**10.2kΩ**
800Hz	**9.9kΩ**	**9.9kΩ**
900Hz	**8.6kΩ**	**8.6kΩ**
1.0kHz	**7.15kΩ**	**7.15kΩ**
1.2kHz	**6.04kΩ**	**6.04kΩ**
2.0kHz	**3.57kΩ**	**3.57kΩ**
3.0kHz	**2.37kΩ**	**2.37kΩ**
4.0kHz	**1.76kΩ**	**1.76kΩ**
5.0kHz	**1.43kΩ**	**1.43kΩ**
6.0kHz	**1.21kΩ**	**1.21kΩ**
7.0kHz	**1.02kΩ**	**1.02kΩ**
8.0kHz	**909Ω**	**909Ω**

XCard Access

The internal XCard crossover(s) are accessible by removing the top cover from the amplifier. The XCard should be inserted with the filter side (HP, LP or FULL RANGE) facing the metal contacts inside the socket.



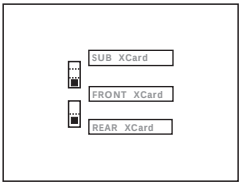
- **Remove six Allen Screws** from cover with supplied Allen wrench (3/32")
- **Insert XCard** into socket with HP, LP, or FULL RANGE facing metal contacts.

FACTORY DEFAULTS
Rear XCard = Full Range
Front XCard = Full Range
Subwoofer XCard = 80Hz LP

USING THE SIGNAL SWITCHING NETWORK

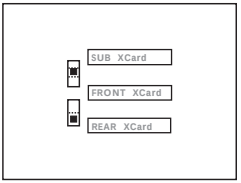
The Signal Switching Network allows the RCA input signals to be distributed to the outputs in many different configurations. **The orientation of *both switches* configure the distribution pattern .** The switches can be oriented in the following configurations.

Configuration #1
(Mono Sub Input)



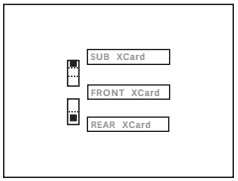
Front inputs => **Front** outputs
Rear inputs => **Rear** outputs
Subwoofer (L Mono) input => **Subwoofer** outputs

Configuration #2



Front inputs => **Front** outputs
Rear inputs => **Rear** outputs
Subwoofer inputs => **Subwoofer** outputs

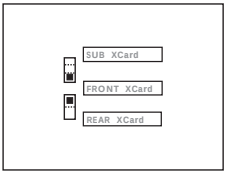
Configuration #3



Front inputs => **Front** outputs
Rear inputs => **Rear** outputs
Front & Rear inputs *summed* => **Subwoofer** outputs

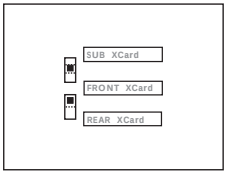
Factory Default Setting

Configuration #4
(Mono Sub Input)



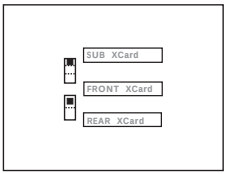
Front inputs => **Front & Rear** outputs
Subwoofer (L Mono) input => **Subwoofer** outputs

Configuration #5



Front inputs => **Front & Rear** outputs
Subwoofer inputs => **Subwoofer** outputs

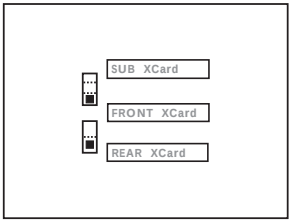
Configuration #6

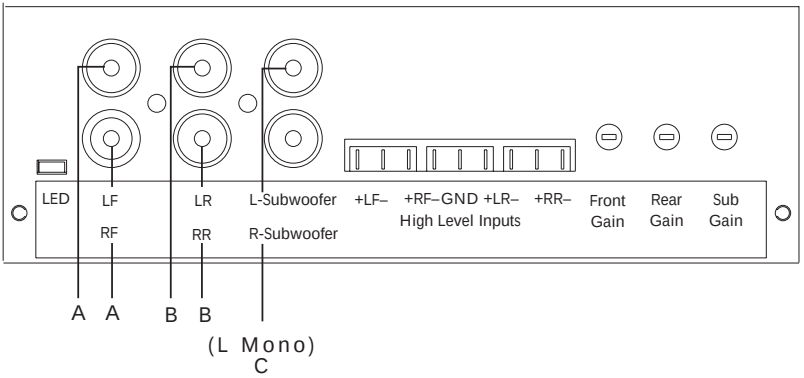


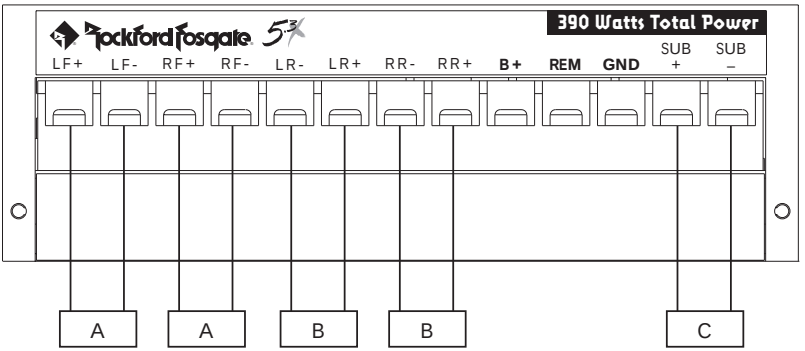
Front inputs => **Front, Rear &**
Subwoofer outputs

Configuration #1

Front inputs => **Front** outputs
Rear inputs => **Rear** outputs
Subwoofer (L Mono) inputs => **Subwoofer** outputs

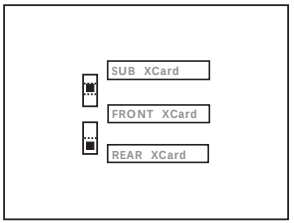


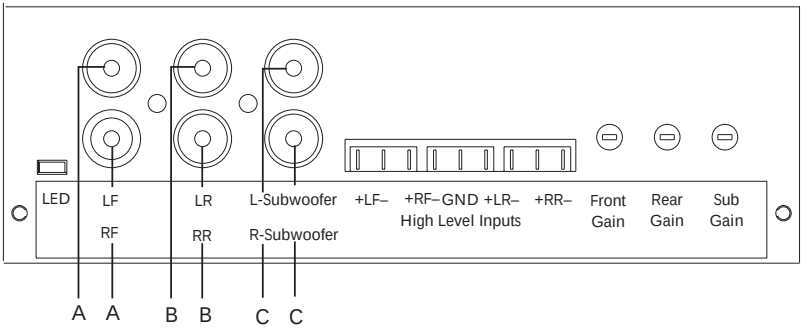


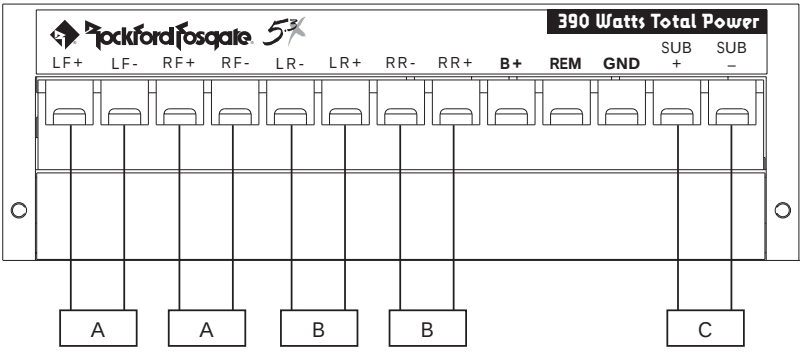


Configuration #2

Front inputs => **Front** outputs
Rear inputs => **Rear** outputs
Subwoofer inputs => **Subwoofer** outputs



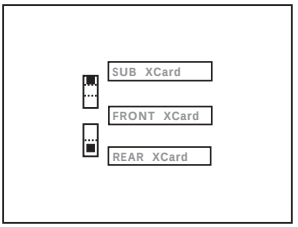


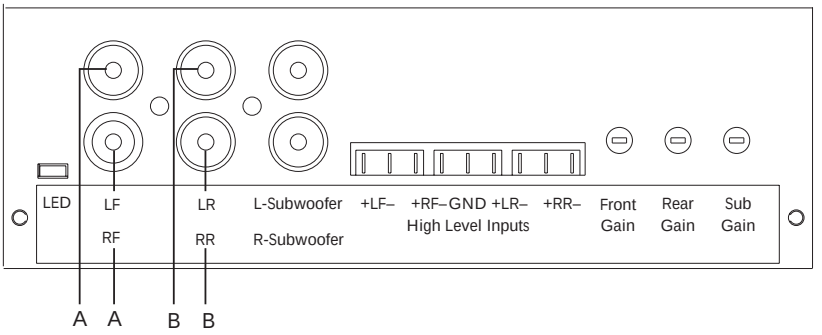


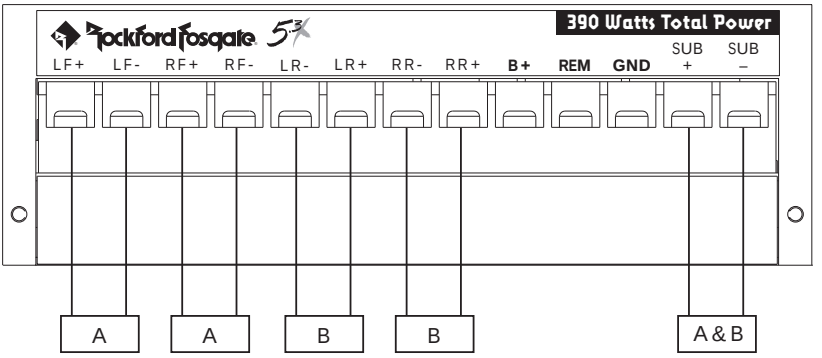
Configuration #3

Front inputs => **Front** outputs
Rear inputs => **Rear** outputs
Front & Rear inputs *summed* => **Subwoofer** outputs

Factory Default Setting

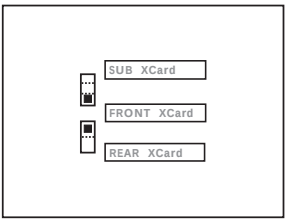


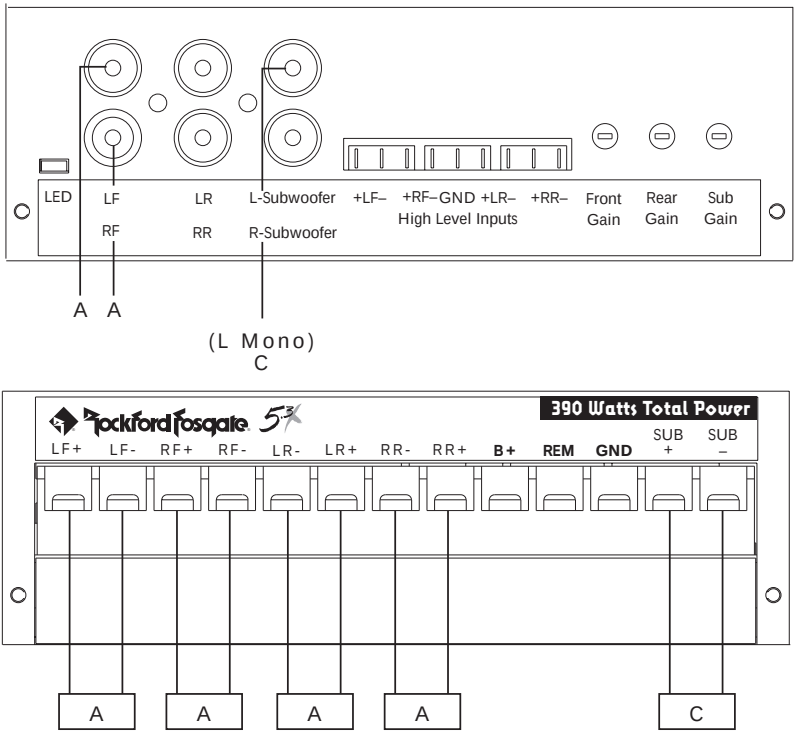




Configuration #4
(Mono Sub Input)

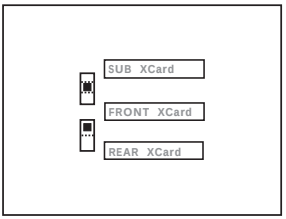
Front inputs => **Front & Rear** outputs
Subwoofer (L Mono) inputs => **Subwoofer** outputs

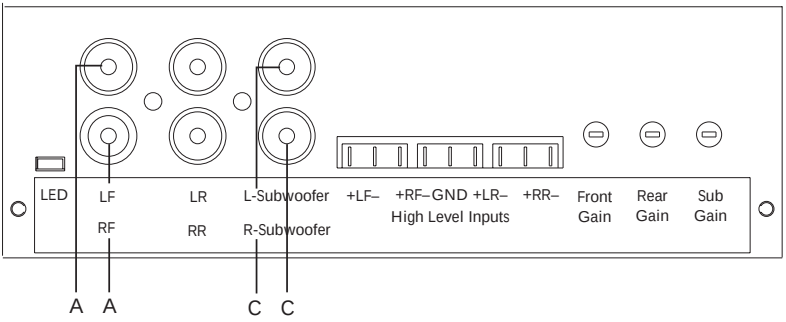


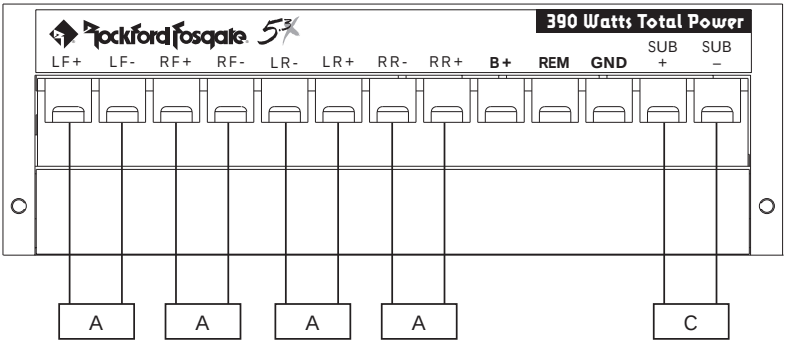


Configuration #5

Front inputs => **Front & Rear** outputs
Subwoofer inputs => **Subwoofer** outputs

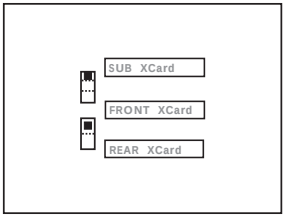


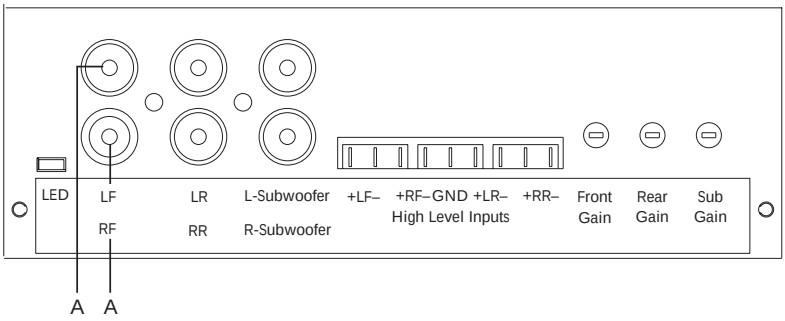


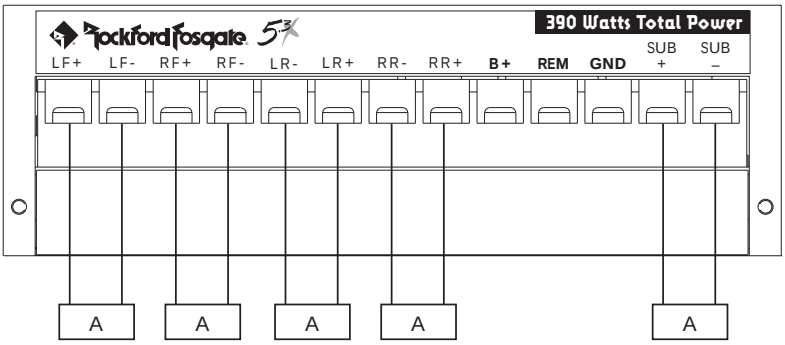


Configuration #6

Front inputs => **Front, Rear & Subwoofer** outputs

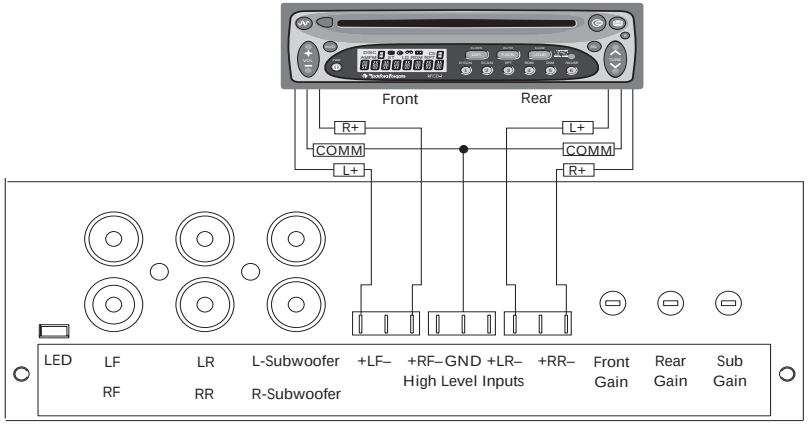






High Level Input – "Single Ended" Type

This configuration is used for source units that have "Single Ended" speaker outputs. Only the "+" output is "hot," whereas the "–" or "common" are common grounded. To verify your source unit has these outputs, connect an ohm meter across the "–" output and radio chassis for a reading of 0Ω.



Use "Configuration #6" of Signal Switching Network when using front inputs only

Use "Configuration #3" of Signal Switching Network when using front & rear inputs

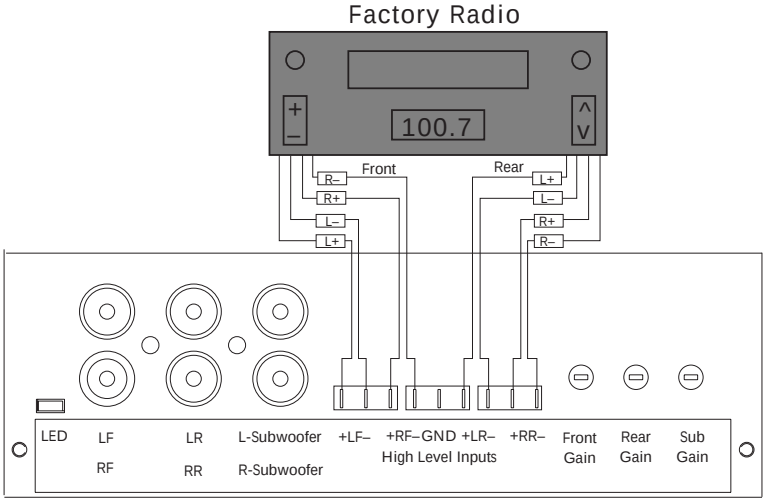
- **L+ and R+ Inputs** are connected to corresponding "+" speaker outputs
- **L– and R– Inputs** are *not used*
- **GND Input** is connected to "–" speaker outputs
- **Configuration #6*** is used with FRONT inputs to achieve Sub output
- **Configuration #3*** is used with FRONT & REAR inputs to achieve Sub output

*** Refer to previous pages for *Signal Switching Network* configurations**

CAUTION: Use 1/8" female connectors when using the high level inputs and DO NOT solder wires directly to the connector

High Level Input – "B.T.L." Type

This configuration is used for source units that have "B.T.L." speaker outputs (**B**ridged **T**ransformer **L**ess ***not*** **B**acon **T**omato & **L**ettuce). Both "+" and "–" outputs are considered "hot" or "floating."



Use "Configuration #6" of Signal Switching Network when using front inputs only

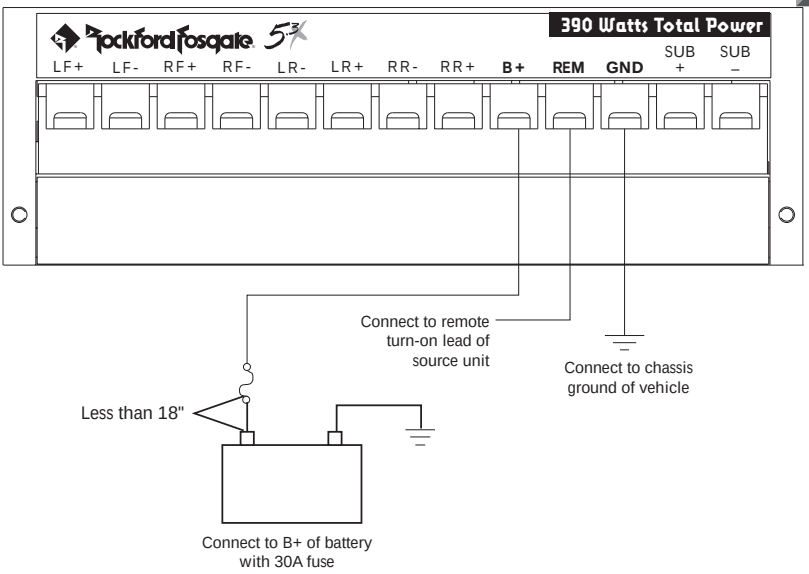
Use "Configuration #3" of Signal Switching Network when using front & rear inputs

- **L+ and R+ Inputs** are connected to corresponding "+" speaker outputs
- **L– and R– Inputs** are connected to corresponding "–" speaker outputs
- **GND Input** *is not used* unless noise problems arise
- **Configuration #6*** is used with FRONT inputs to achieve Sub output
- **Configuration #3*** is used with FRONT & REAR inputs to achieve Sub output

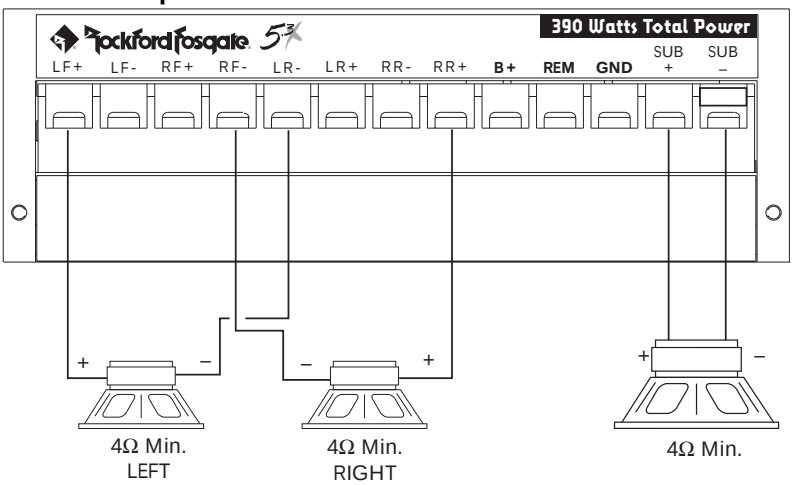
*** Refer to previous pages for *Signal Switching Network* configurations**

CAUTION: Use 1/8" female connectors when using the high level inputs and DO NOT solder wires directly to the connector

Power Connections

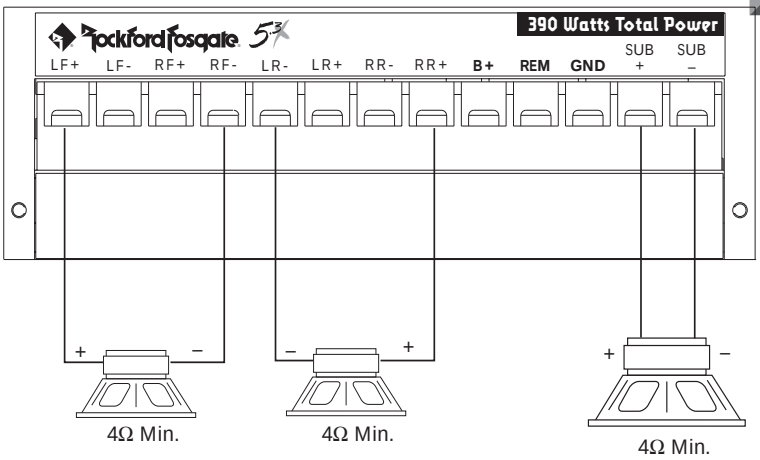


3-Channel Operation



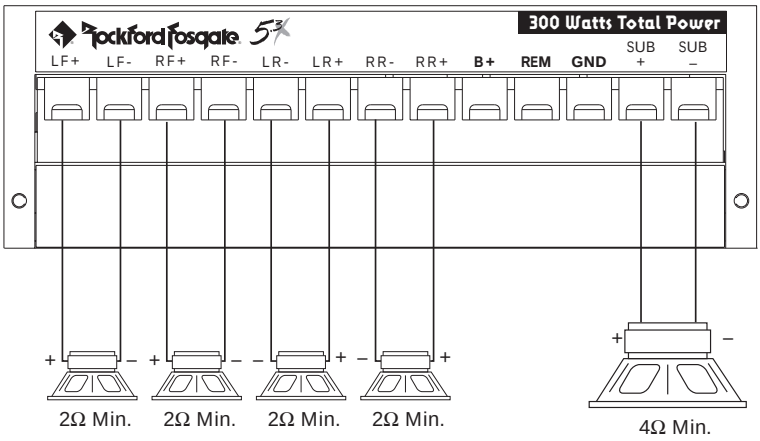
- **Front/Rear Gain Controls** *set equally* to balance left and right speakers
- **Sub Gain Control** operates *independently*
- **Impedance Load** for Left bridged channel should be *4Ω minimum*
- **Impedance Load** for Right bridged channel should be *4Ω minimum*
- **Impedance Load** for Sub bridged/mono channel should be *4Ω minimum*
- **Front/Rear XCard** *set identically* as High-Pass, Low-Pass or Full Range
- **Sub XCard** can be set for High-Pass, Low-Pass or Full Range

3-Channel Mono Operation



- **Front/Rear Gain Controls** *set equally* to balance the speakers
- **Sub Gain Control** operates *independently*
- **Impedance Load** for Front bridged channel should be *4Ω minimum*
- **Impedance Load** for Rear bridged channel should be *4Ω minimum*
- **Impedance Load** for Sub bridged/mono channel should be *4Ω minimum*
- **Front/Rear XCard** *set* as High-Pass, Low-Pass or Full Range
- **Sub XCard** can be set for High-Pass, Low-Pass or Full Range

5-Channel Operation



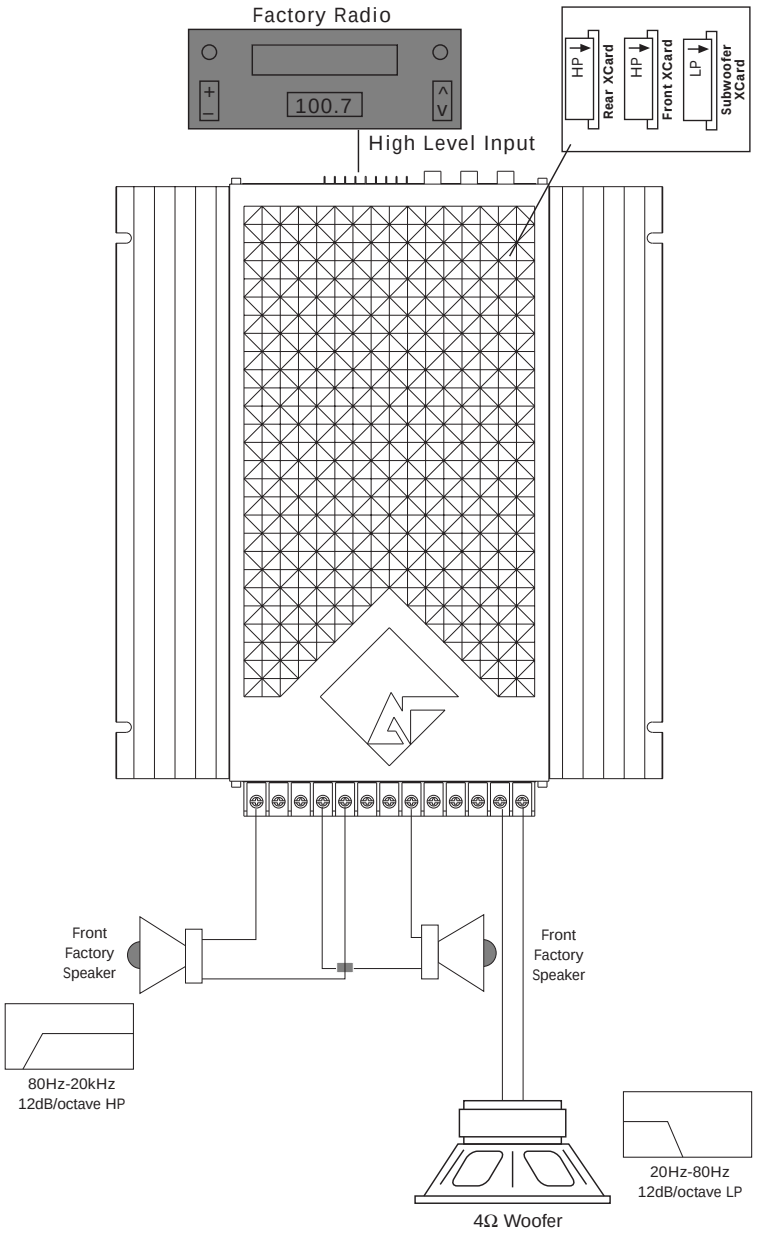
- **Front/Rear/ Sub Gain Controls** operate *independently*
- **Impedance Load** for Front/Rear channels should be *2Ω minimum*
- **Impedance Load** for Sub bridged/mono channel should be *4Ω minimum*
- **Front/Rear XCard** *set* as High-Pass, Low-Pass or Full Range
- **Sub XCard** can be set for High-Pass, Low-Pass or Full Range

SYSTEM DIAGRAMS

230 Watt System (rated @ 4 ohms)

Step #1

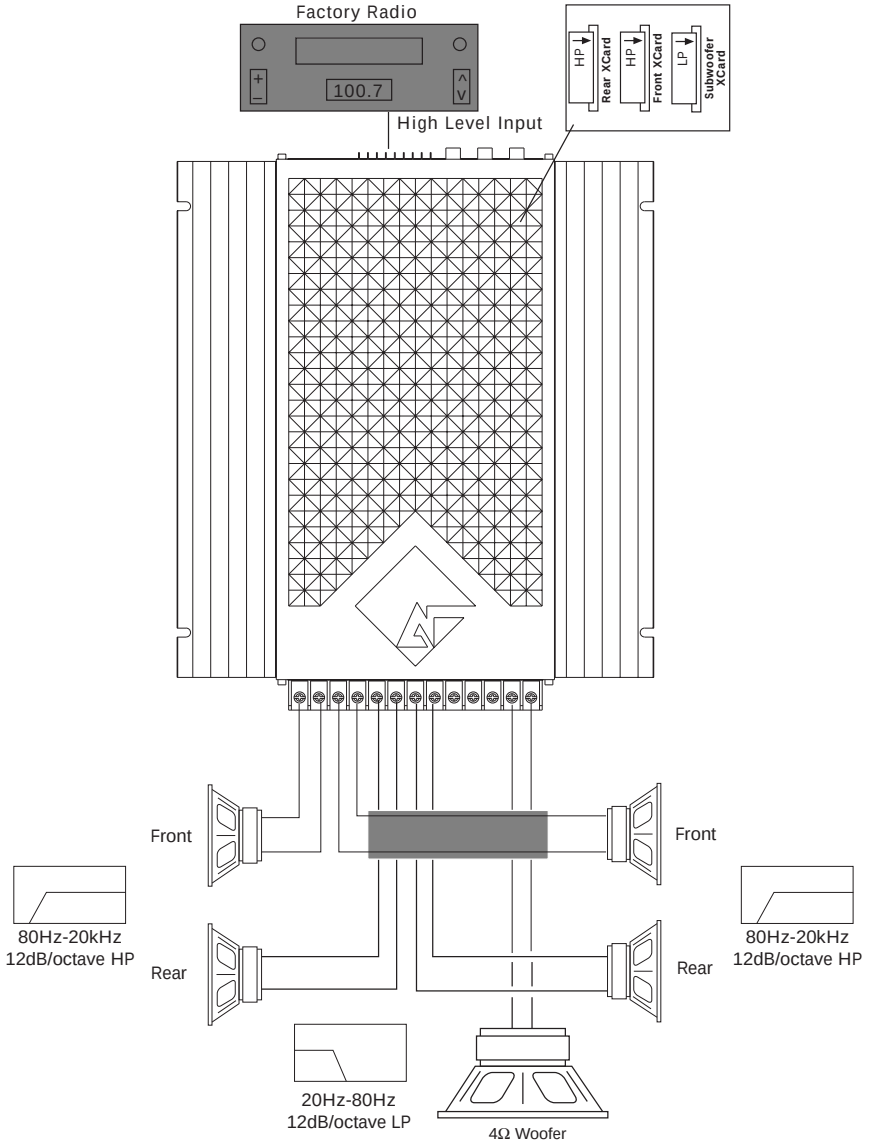
Upgrade the factory system with an RF5.3x amplifier and mono subwoofer.



230 Watt System (rated @ 4 ohms)

Step #2

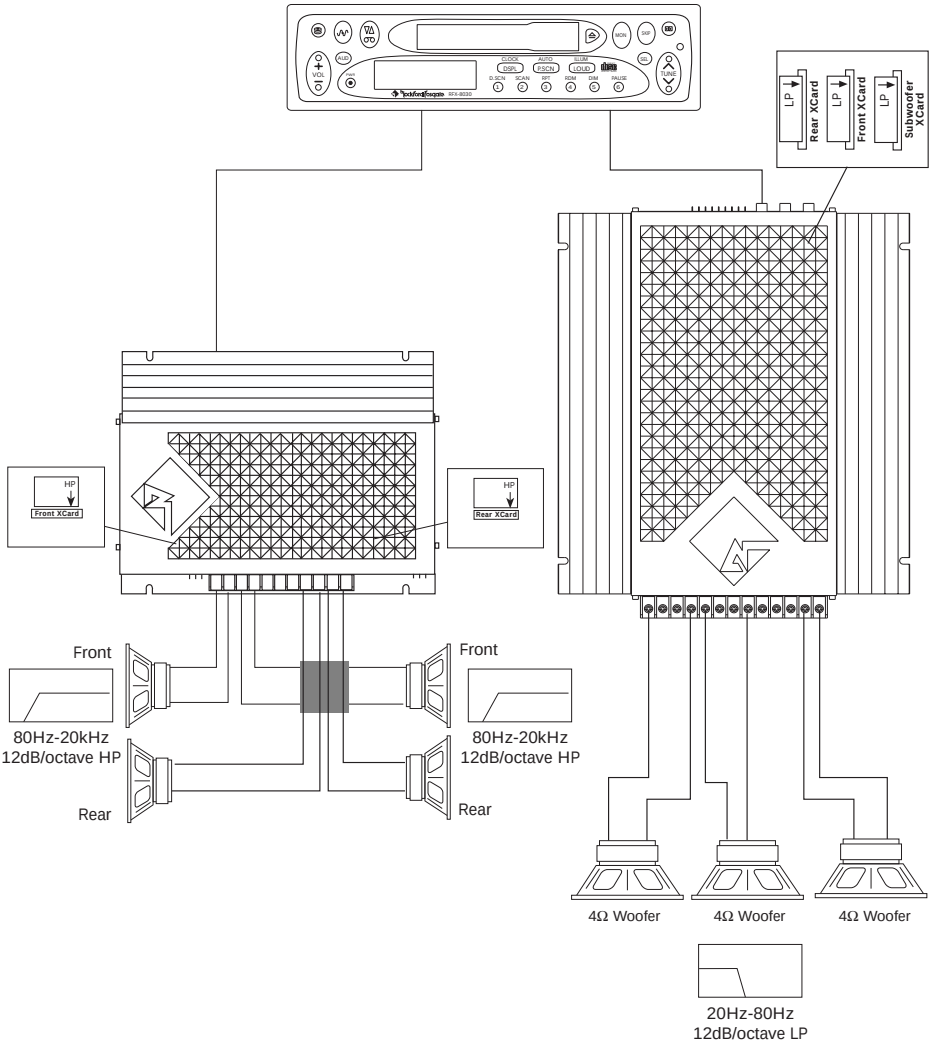
Further upgrade the factory system by replacing the front factory speakers and adding “rear fill” speakers.



350 Watt System (rated @ 4 ohms)

Step #3

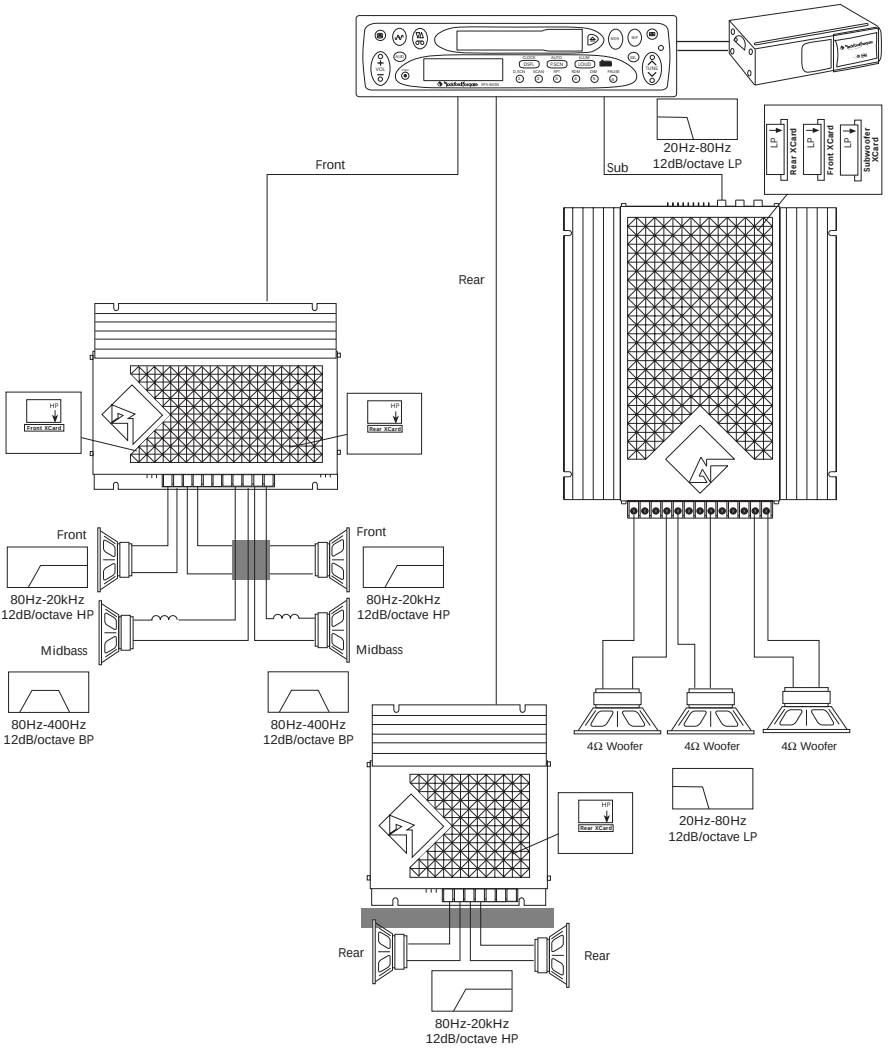
Replace the factory source unit with an RFX-8030, adding a 4.6x amplifier and more subwoofers.



410 Watt System (rated @ 4 ohms)

Step #4

Complete the system by adding a CD changer, midbass speakers, and dedicating an RF-2.6x for “rear fill.”



Symptom	Diagnosis	Remedy
Amplifier does not turn on (Power LED is off)	Voltage applied to the REM terminal of the amplifier is not between 10.5 and 15.5 volts or there is no voltage present.	Check the alternator, battery, fuse, and wiring and repair as necessary. If the voltage is above 15.5 volts, have the electrical system inspected by an authorized car service center.
	Voltage to the B+ terminal of the amplifier is not between 10.5 and 15.5 volts or there is no voltage present.	Check the alternator, battery, fuse, and wiring and repair as necessary. If the voltage is above 15.5 volts, have the electrical system inspected by an authorized car service center.
	Amplifier is not properly grounded.	Check wiring and repair as necessary.
Amplifier has no sound (Power LED is on)	RCA Input from source unit is not connected or not functioning properly.	Check connections, substitute with known working source and cables and repair or replace as necessary.
	XCard is missing or not placed properly in crossover slots.	Check XCard position and repair or replace as necessary.
	Speaker leads are shorted to each other or to the chassis of the vehicle.	Disconnect existing speakers and test with known working speakers and wires. If amplifier plays, check and repair wiring and installation of speakers as necessary.
	Speakers are defective.	Disconnect existing speakers and test with known working speakers. If amplifier plays, check and repair speakers as necessary.

Symptom	Diagnosis	Remedy
Speaker Output Low or Distorted	Input gain signal for amplifier is incorrectly set.	Readjust input gains of amplifier.
	Source unit output too low or source unit has no output.	Check system with known working source and repair or replace original source as needed.
	XCard is missing or not placed properly in cross-over slots.	Check XCard position and repair or replace as necessary.
	Low battery voltage or large voltage drops to the amplifier under load.	Check the alternator, battery, fuse, and power and ground wiring. Repair as necessary.
No Output on Front, Rear or Sub Channels	Signal Input Switches not configured properly.	Check Signal Input Switches and reconfigure as necessary.
	XCard(s) missing or not placed properly in cross-over slot.	Check XCard position(s) and repair or replace as necessary.
Low Output on Sub Channel	Signal Input Switches do not configure Sub Channel for single RCA input.	Check Signal Input Switches and reconfigure as necessary.
Amplifier Noise (Turn-on Pop)	Voltage spike from output of preceding component is entering amplifier through input signal.	Disconnect input signal to amplifier and turn amplifier on and off. If noise is eliminated, connect REM lead of amplifier to source unit with a delay turn-on module.
	Voltage spike from remote turn-on lead is entering through REM input terminal.	Use a different 12 volt source for REM lead of amplifier (i.e., battery direct). If noise is eliminated, use a relay to isolate amplifier from noisy turn-on output.

Symptom	Diagnosis	Remedy
Engine Noise	Noise is radiating into RCA signal cable.	Check connections, and run the RCA cables on a different route away from sources of high current.
	Bad component in the signal chain.	Check connections, and bypass additional components (crossovers and equalizers) between the source unit and the amplifier. Connect one component at a time to determine the culprit. Repair or replace components as necessary.
	Noise is radiating into speaker cables.	Disconnect existing speakers and connect a test speaker to the output terminals of the amplifier. If noise is gone, reroute the speaker cables away from sources of high voltage.
	Multiple grounds in the audio system.	Check ground connections and connect amplifiers, signal processors, and other components to a central location or try a different grounding point on the chassis.
	Ground loop between source unit and antenna.	Check connections and disconnect antenna from source unit. If noise is gone, install an antenna ground loop isolator.
Engine noise with high level inputs	No reference ground	Connect GND terminal of high level input to chassis of source unit.

• If noise persists, see your Authorized Rockford Fosgate Dealer.

DYNAMIC POWER MEASUREMENTS

About the Dynamic Power Measurements

The Audio Graph PowerCube is a test instrument used to measure the output of an amplifier in accordance with IHF-202 industry standards. The IHF-202 standard is a dynamic power measurement and was developed as a means of measuring power in a manner that best represents the Real World operation of an amplifier. Many manufacturers, including Rockford Fosgate, at times will measure amplifier power into a fixed resistor (4 ohm, 2 ohm). While this method is useful in some types of evaluation and testing, it is not representative of an amplifier that is connected to a speaker and playing music.

Music

Music is dynamic; the sound waves are complex and constantly changing. In order to simulate this, the IHF-202 standard calls for the input signal to the amplifier to be a 1kHz bursted tone. This signal is input (on for 20 milliseconds) and reduced 20dB for 480 milliseconds. The signal is gradually increased in level until the amplifier's output exceeds 1% Total Harmonic Distortion (THD). At 1% distortion becomes audible, therefore, any power produced above that level is considered *unusable*. Many manufacturers represent their amplifiers' output power in excess of 10% distortion. They use many names for this measurement, such as Total Maximum Power or Maximum Output Power. This is not indicative of the *actual usable output power*.

Listening to Loudspeakers - Not Resistors

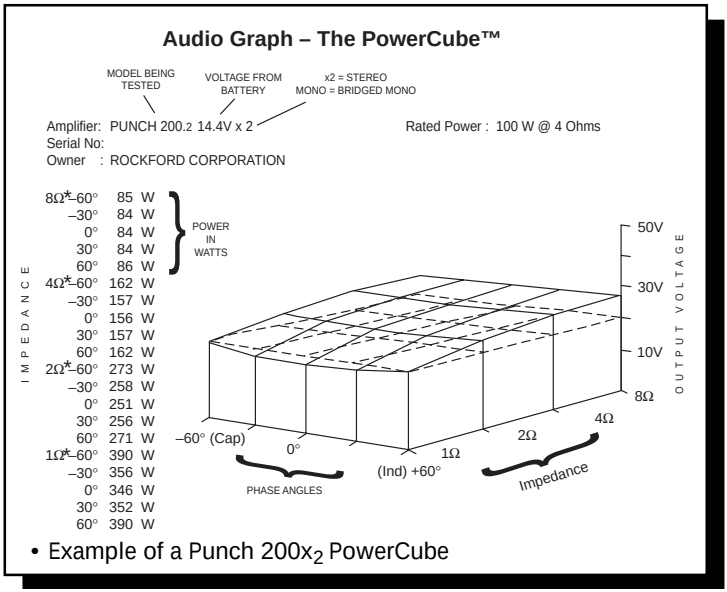
A loudspeaker is not a resistor. A resistor's value (resistance measured in ohms) is fixed. A loudspeaker's impedance is dynamic. It is constantly changing in value, dependent upon the frequency of the input signal. Therefore, measuring power with the amplifier loaded into a 4 ohm resistor is not the same as measuring power with the amplifier connected to a 4 ohm speaker. Most people do not listen to music through a resistor.

A 4 ohm speaker may experience a drop in impedance 4-6 times lower than its nominal (printed) impedance. A speaker will also create phase shifts in the signal that is passed through it. These phase shifts happen because a speaker is an inductor (voice coil) and a capacitor (compliance of the surround/spider), as well as a resistor (voice coil wire).

To simulate a speaker the Audio Graph PowerCube measures output power into 20 different loads. It tests at 8 ohms, 4 ohms, 2 ohms and 1 ohm. Each of these impedances is also tested at –60°, –30°, 0°, +30° and +60° phase angles. These different impedances and phase angles represent the shifts in impedance and phase that can occur in a typical loudspeaker.

Information Cubed
The data acquired in the testing procedure is then graphed in the form of a 3-dimensional cube, hence the name **PowerCube**.

The *Phase Angle* is expressed on the horizontal axis, the *Output Voltage* is presented on the vertical axis and the *Impedance* is displayed on the Z axis. *Output Power,* in watts, is listed on the left hand side for each impedance at each phase angle.



• Example of a Punch 200x$_2$ PowerCube

What is an Amplifier?
An amplifier by definition is a voltage generating device, recreating the signal which is input to it identically but with increased volume. It will be connected to a reactive load (the speaker). The impedance of this load and phase of the signal passing through the load will vary, dependent upon the frequency of the input signal (music).

Therefore, a perfect amplifier will be able to maintain the same output voltage regardless of load characteristics and will not alter the signal it is reproducing. A perfect amplifier when measured by the Audio Graph PowerCube would present data that forms a perfect cube. Unfortunately, amplifiers are not perfect. The laws of physics generally prevent it. A great amplifier is about the best one can hope to attain.

As you can see by the PowerCube and as you will experience by listening, your Punch amplifier is a GREAT AMPLIFIER!

5.3x SPECIFICATIONS

	Front/Rear Channels	Sub Channel
Dynamic Power Rating (IHF 202 Standard) Measured at 14.4 Voltage		
Per channel into a 4Ω Load	40 Watts x 4	
Per channel into a 2Ω Load	65 Watts x 4	
Bridged Mono into a 4Ω Load	130 Watts x 2	130 Watts x 1
Continuous Power Rating (Competition Standard) Measured at 14.4 Battery Voltage		
RMS continuous power **per channel**, all channels driven into a 4Ω load from 20 to 20,000 Hz, with less than 0.30% Total Harmonic Distortion (THD)	30 Watts x 4	
RMS continuous power **per channel**, all channels driven into a 2Ω load from 20 to 20,000 Hz, with less than 0.50% Total Harmonic Distortion (THD)	55 Watts x 4	
RMS continuous power **bridged/mono** into a 4Ω load from 20 to 20,000 Hz with less than 0.50% Total Harmonic Distortion (THD)	110 Watts x 2	110 Watts x 1

Signal-to-Noise Ratio	>100dB (A-weighted)
Bandwidth	10 Hz to 250kHz ± 3dB
Damping Factor @ 4Ω	>200
Frequency Response	20 Hz to 20 kHz ± 0.5dB
Slew Rate	30Vμs
IM Distortion (IHF)	<0.05%
Input Impedance	20,000 ohms
Input Voltage (Low level in-RCA)	Variable from 325mV to 5.5volts
(High level in-BTL)	Variable from 850mV to 15 volts
(High level in – Single Ended)	Variable from 425mV to 7.5 volts

Protection	NOMAD - Internal analog-computer output protection circuitry limits power in case of overload. Thermal switch shuts down the amplifier in case of overheating.
Factory Default Crossover	Front XCard = 80Hz (0.047µf) Rear XCard = 80Hz (0.047µf) Sub XCard = 80Hz (0.047µf)
Crossover Slope	12dB/octave Butterworth
Battery Fusing Ratings (External to Amplifier)	30 Amps
Fuse Type	ATC
Dimensions	10 5/8"W x 11 1/2L x 2"H (26.9cm) x (29.21cm) x (5.08cm)

Specifications subject to change without notice.

LIMITED WARRANTY INFORMATION

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

- **Length of Warranty**
  3 years on electronics
  2 years on source units
  1 year on speakers
  90 days on electronic B-stock (receipt required)
  30 days on speaker B-stock (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
  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**
  Please 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.

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

Ship to: **Speakers**
Rockford Acoustic Design
(Receiving-speakers)
609 Myrtle N.W.
Grand Rapids, MI 49504
RA#:_____


INTERNATIONAL
INFORMATION

Por favor, lea las instrucciones siguientes para la instalación de este producto. El hecho de proceder al montaje sin haber leido estas instrucciones, podria resultar fatal para usted o para el vehiculo.

INTRODUCCIÓN

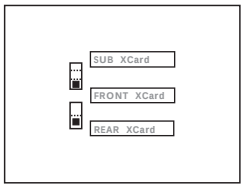
El RFX 5.3x es un amplificador de 5 canales estéreo y un canal puenteado en mono para acomodarse a los diseños de sistemas de "un solo amplificador" con un precio competitivo. Como este manual proporciona información sobre las características, instalación y funcionamiento del amplifiador Rockford Fosgate 5.3x, le sugerimos que lo guarde para futuras referencias.

Recomendamos que contacte con un distribuidor autorizado por Rockford Fosgate para la instalación de su nuevo Amplificador. Sin embargo, si decide instalar este amplificador usted mismo, asegurese de leer todo el manual antes de empezar el montaje.

UTILIZACION DEL CIRCUITO DE CONMUTACION DE SEÑAL

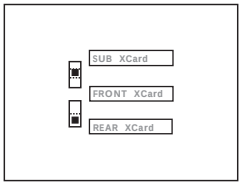
El circuito de conmutación de señal permite distribuir las entradas RCA a las salidas de varias diferentes maneras. **La orientación de ambos conmutadores configura la distribución de señal.** Los conmutadores pueden ser posicionados en las siguientes configuraciones.

Configuración n°1
(Entrada de Subwoofer en mono)



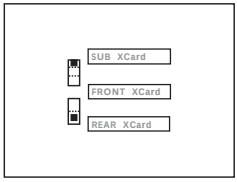
Entrada **Frontales** => Salidas **Frontales**
Entrada **Posteriores** => Salidas **Posteriores**
Entradas de **Subwoofer** => Salidas de **Subwoofer**
(Izquierda Mono)

Configuración n°2



Entrada **Frontales** => Salidas **Frontales**
Entrada **Posteriores** => Salidas **Posteriores**
Entradas de **Subwoofer** => Salidas de **Subwoofer**

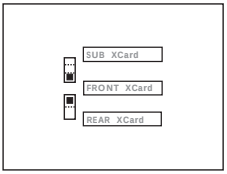
Configuración n°3



Entrada **Frontales** => Salidas **Frontales**
Entrada **Posteriores** => Salidas **Posteriores**
Entradas **Frontales y Posteriores** => Salidas de **Subwoofer**

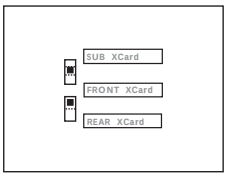
Configuración Standard de Fábrica

Configuración n°4
(Entrada de Subwoofer en mono)



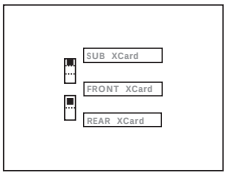
Entrada **Frontales** => Salidas **Frontales y Posteriores**
Entradas de **Subwoofer (Izquierda Mono)** => Salidas de **Subwoofer**

Configuración n°5



Entrada **Frontales** => Salidas **Frontales y Posteriores**
Entradas de **Subwoofer** => Salidas de **Subwoofer**

Configuración n°6



Entrada **Frontales** => Salidas **Frontales, Posteriores y Subwoofer**

Veuillez lire les instructions suivantes relatives à l'installation de ces produits. Ne pas suivre ces instructions pourrait entrainer des dommages à vous-même ou à votre véhicule.

INTRODUCTION

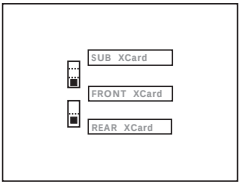
Le RF5.3x est un amplifiacteur à 5 canaux avec quatre canaux stéréo et un canal mono. Ce manuel contient des informations importantes sur l'installation et le fontionnement de l'appareil. Nous vous conseillons de bien le conserver.

Nous vous recommandons vivement de faire installer votre nouvel amplificateur Rockford Fosgate auprès d'un installateur agréé Rockford Fosgate. Néanmoins, si vous décidez d'installer vous-méme votre amplificateur, assurez-vous e lire l'entièreté e ce manuel avant de commencer.

UTILISATION DU RÉSEAU DE COMMUTATION DU SIGNAL

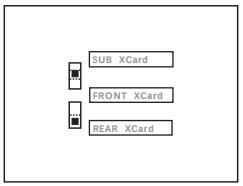
Le réseau de commutation du signal permet au signal provenant des RCA e'entrée d'être distribué vers les sorties dans de multiple configurations. **L'orientation des deux commutateurs configure la distribution de signal.** Les commutateurs peuvent être orientés afin d'obtenir les configurations suivantes:

Configuration #1
(Entrée Sub Mono)



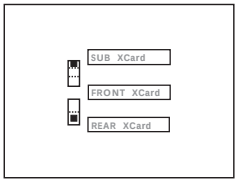
Entrée **avant** => Sortie **avant**
Entrée **arrière** => Sortie **arrière**
Entrée **sub** (gauche mono) => Sortie **sub**

Configuration #2



Entrée **avant** => Sortie **avant**
Entrée **arrière** => Sortie **arrière**
Entrée **sub** => Sortie **sub**

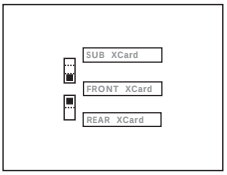
Configuration #3



Entrée **avant** => Sortie **avant**
Entrée **arrière** => Sortie **arrière**
Entrée **sub** => Sortie **sub**
(somme avant & arrière)

Réglages d'usine

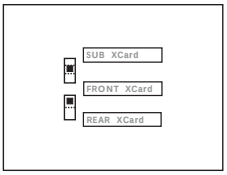
Configuration #4
(Entrée Sub Mono)



Entrée **avant** => Sortie **avant & arrière**
Entrée **sub** (gauche mono) => Sortie **sub**

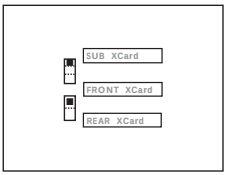
FRANÇAIS

Configuration #5



Entrée **avant** => Sortie **avant & arrière**
Entrée **sub** => Sortie **sub**

Configuration #6



Entrée **avant**s => Sortie **sub, avant & arrière**

Bitte lesen Sie sich die folgende Bedienungsanleitung sorgfältig durch, dies kann Ihr Fahrzeug und das Produkt vor Beschädigung schützen.

EINLEITUNG

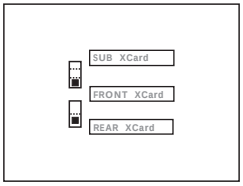
Der RF 5.3x ist ein 5-Kanal Verstärker mit vier Stereo Kanälen und einem einzelnen gebrückten/mono Kanal, um ein anpaβbares "ein Verstärker" System, zu einem Konkurrenzlos günstigen Preis anzubieten. Dieses Handbuch enthält Informationen über die Installation und die Handhabung des Verstärkers und wir schlagen vor, daβ Sie dieses Handbuch an einem sicheren Ort aufbewahren, wo Sie es jederzeit wiederfinden.

Wir raten Ihnen Ihren Verstärker nur von einem authorisierten Rockford Fosgate-Händler einbauen zu lassen, sollten Sie die Montage selber vornehmen, so lesen Sie sich diese Anleitung bitte sorgfältig durch.

BENUTZEN DES SIGNAL NETZWERKES

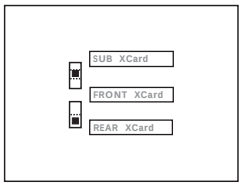
Das Schaltbare Signal Netzwerk erlaubt es, die Eingangssignale den verschiedenen Ausgangen optimal zuzuteilen. Die verschiedenen Stellungen der Schalter sind in den folgenden Beispielen dargestellt.

Beispiel #1
(Werkseinstellungen)



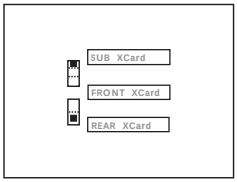
Vordere Eingänge => **Vordere** Ausgänge
Hintere Eingänge => **Hintere** Ausgänge
Subwoofer (L Mono) Eingänge => **Subwoofer** Ausgänge

Beispiel #2



Vordere Eingänge => **Vordere** Ausgänge
Hintere Eingänge => **Hintere** Ausgänge
Subwoofer Eingänge => **Subwoofer** Ausgänge

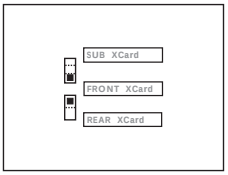
Beispiel #3



Vordere Eingänge => **Vordere** Ausgänge
Hintere Eingänge => **Hintere** Ausgänge
Vorgere & Hintere Eingänge
addiert => **Subwoofer** Ausgänge

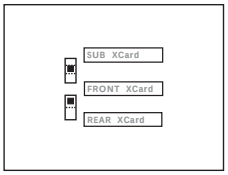
Werkseinstellungen

Beispiel #4
(Werkseinstellungen)



Vordere Eingänge => **Vordere & Hintere** Ausgänge
Subwoofer (L Mono) Eingänge => **Subwoofer** Ausgänge

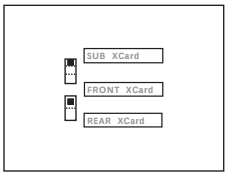
Beispiel #5



Vordere Eingänge => **Vordere & Hintere** Ausgänge
Subwoofer Eingänge => **Subwoofer** Ausgänge

DEUTSCH

Beispiel #6



Vordere Eingänge => **Vordere, Hintere** & **Subwoofer** Ausgänge

Leggere le seguenti istruzioni per l'installazione del prodotto. Evitare di seguire le istruzioni potrebbe risultare pericoloso per Voi e per il vostro veicolo.

INTRODUZIONE

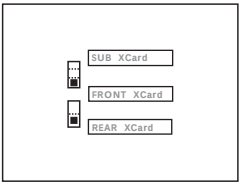
RF 5.3x é un amplificatore a cinque canali di cui 4 stereo ed uno ponticellato mono che permette di realizzare un sistema con un “singolo amplificatore” ad un prezzo competitivo. Il manuale fornisce molte informazioni sul funzionamento e sulle caratteristiche del RF 5.3x e vi suggeriamo di conservarlo per un prossimo impiego.

Raccomandiamo inoltre di farvi installare il vostro nuovo amplificatore da un installatore autorizzato Rockford Fosgate. Se decidete di procedere da soli, assicuratevi di aver letto l'intero manuale prima di procedere.

IMPIEGARE LA RETE DI SELEZIONE DEGLI INGRESSI

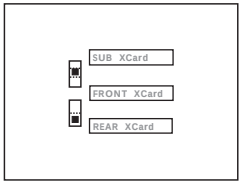
La rete di selezione degli ingressi permette al segnale RCA di essere diretto alle uscite in molti modi distinti. **La posizione di entrambi i selettori stabilisce la configurazione adottata.** I selettori possono essere configurati nei modi seguenti:

Configurazione #1
(Ingresso sub mono)



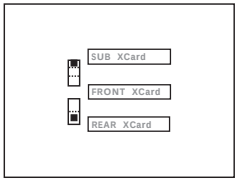
Ingressi **anteriori** => Uscite **anteriori**
Ingressi **posteriori** => Uscite **anteriori**
Ingressi **Subwoofer (LMono)** => Uscite **Subwoofer**

Configurazione #2



Ingressi **anteriori** => Uscite **anteriori**
Ingressi **posteriori** => Uscite **anteriori**
Ingressi **Subwoofer** => Uscite **Subwoofer**

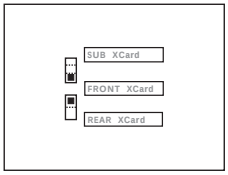
Configurazione #3



Ingressi **anteriori** => Uscite **anteriori**
Ingressi **posteriori** => Uscite **anteriori**
Ingressi anteriore & posteriore *sommati* => Uscite **Subwoofer**

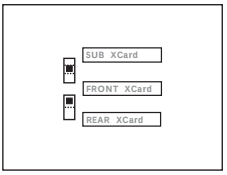
Configurazione originale

Configurazione #4
(Ingresso sub mono)



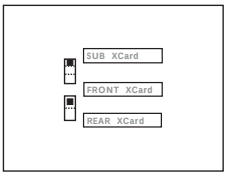
Ingressi **anteriori** => Ingressi **anteriori & posteriori**
Ingressi **Subwoofer (LMono)** => Uscite **Subwoofer**

Configurazione #5



Ingressi **anteriori** => Ingressi **anteriori & posteriori**
Ingressi **Subwoofer** => Uscite **Subwoofer**

Configurazione #6



Ingressi **anteriori** => Ingressi **anteriori, posteriori & subwoofer**

ITALIANO

MADE IN THE USA

This product is designed, developed and assembled in the USA by a dedicated group of American workers. The majority of the components used in the construction of this product are produced by American companies. However, due to the global nature of their manufacturing facilities and the electronics parts industry in general, some parts may be manufactured in other countries.

Rockford Fosgate
Rockford Corporation
546 South Rockford Drive
Tempe, Arizona 85281 U.S.A.
In U.S.A., (602) 967-3565
In Europe, Fax (49) 4207-801250
In Japan, Fax (81) 559-79-1265

11/96
MAN-1381-A