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Congratulations and thank you.....

for choosing **PrecisionPower** audio equipment. At **PrecisionPower** we proudly design, engineer and manufacture audio products at our facility in Phoenix, Arizona. Our award winning engineering team utilizes innovative technology to consistently deliver Absolutely State of the Art™ performance, sound quality, reliability, and value. This **PrecisionPower** product reflects our commitment to offer you unparalleled versatility and quality for years of dependable service and listening enjoyment.

Service



Do not attempt to service **PrecisionPower** products yourself. Performing exploratory surgery on your audio equipment yourself will void the warranty. Many parts of your **PrecisionPower** gear are custom built to our specifications. Our factory parts are not made available to anyone else nor are they for sale. Our goal is to make sure that your **PrecisionPower** product will always sound as good as the day it was purchased. Contact your authorized **PrecisionPower** dealer about obtaining any warranty service through **PrecisionPower**.(See Warranty inside back cover)

FOR YOUR RECORDS:

M o d e l _____

Serial Number _____

Purchase Date _____

Caution!



The extended use of a high powered audio system may result in hearing loss or damage. While **PrecisionPower** systems are capable of "Concert Level" volumes with incredible accuracy, they are also designed for you to enjoy at more reasonable levels all of the sonic subtleties created by musicians. Please observe all local sound ordinances.

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FEATURES / SPECIFICATIONS

Dual 2-Way, or Single 3-Way Active Crossover
Linkwitz-Riley 12dB/octave Slopes
Integral 13 Hz Subsonic Filter
Input Attenuation
Detented Frequency Selection Controls
Gold RCA Input and Output connectors
PowerLock Power, Ground and Remote connector
PWM Power Supply
Designed and Handcrafted in the USA

Specifications



Signal-to-Noise Ratio	>102dB
Total Harmonic Distortion (1KHz, 1VRMS)	0.002%
Crossover Slopes:	12 dB/octave
Crossover Frequencies:	50Hz to 5kHz
Input Impedance	10 K Ω
Maximum Output (10 K Ω Load)	8 VRMS
Supply Voltage	11-15 VDC
Dimensions	5.125"W 7.020" L 1.813"H

FREQUENCY CHART

All crossover frequency controls are detented. Each "click" counted from the full counterclockwise position corresponds to a specific frequency. Refer to this chart and page 6 for set-up instructions.

DETENTS	POSITION	FREQUENCY
1	7 O'clock	49 Hz
2		50 Hz
3		51 Hz
4		52 Hz
5		54 Hz
6		58 Hz
7		62 Hz
8		66 Hz
9		72 Hz
10		78 Hz
11	10 O'clock	86 Hz
12		96 Hz
13		108 Hz
14		124 Hz
15		144 Hz
16		162 Hz
17		178 Hz
18	188 Hz	
19	12 O'clock	200 Hz
20		216 Hz
21		234 Hz
22		252 Hz
23		276 Hz
24		302 Hz
25		336 Hz
26		380 Hz
27		436 Hz
28		502 Hz
29	2 O'clock	592 Hz
30		752 Hz
31		1000 Hz
32	3 O'clock	1248 Hz
33		1568 Hz
34		1930 Hz
35		2448 Hz
36		3056 Hz
37		3680 Hz
38		4352 Hz
39		4704 Hz
40		4890 Hz
41		5000 Hz

INSTALLATION / MOUNTING

NOTE:

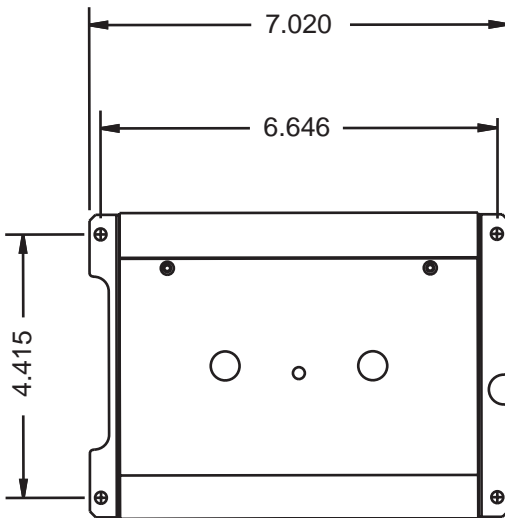
Before beginning, disconnect the negative (-) terminal of the battery to prevent an electrical short to ground. Reconnect the negative terminal only after all connections have been made.

Mounting



To prevent damage to the crossover while driving, mount it in a secure place. Choosing the appropriate location will depend upon your vehicle and the complexity of your system design. Typical mounting locations include the trunk and passenger compartment (floor or under seat). Never mount the crossover in a location that would subject it to immersion or exposure to water.

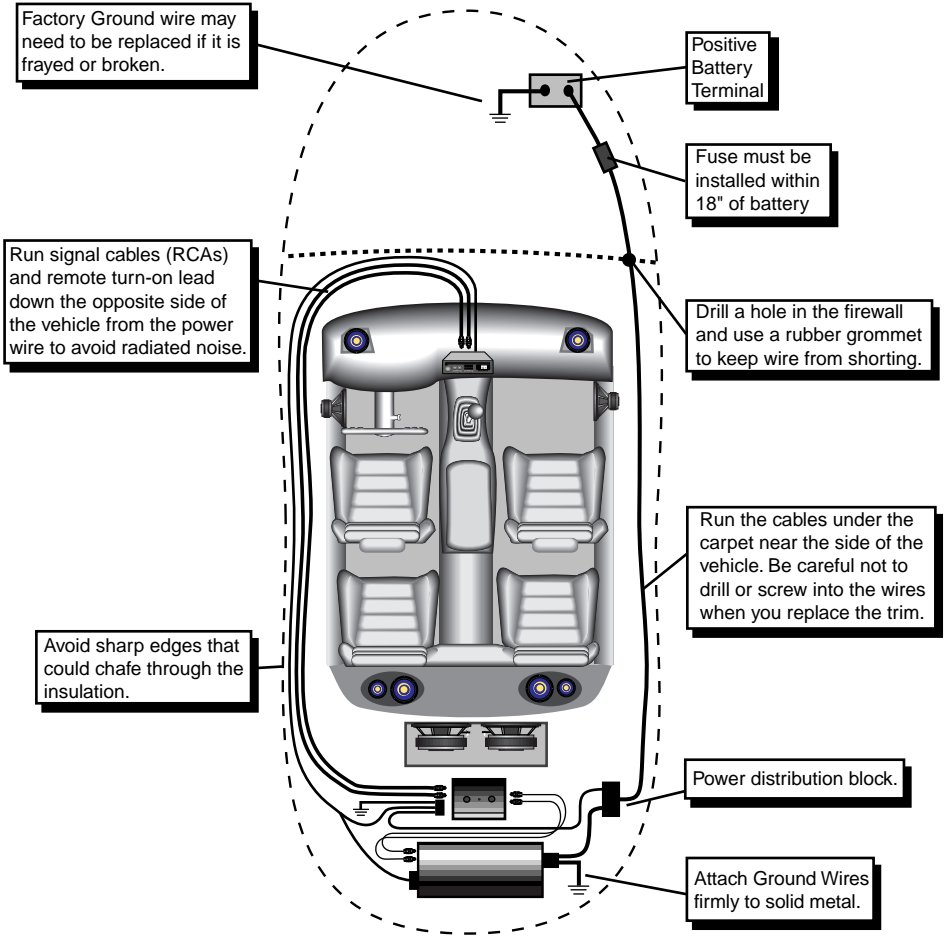
Once a location has been chosen, securely mount the **EPX-223** with four mounting screws. Be Careful! Inspect the area underneath to be sure you are not drilling into wires, brake or fuel lines, etc. that could be damaged by the drill bit or screws.



Dimensions

5.125"W
7.020"L
1.813"H

WIRING



NOTE



Before beginning, disconnect the negative (-) terminal of the battery prior to working on the positive (+) terminal to prevent a short to ground. This is important, unless you want to spend the rest of your life with a nickname like "Sparky," or "Smokey." Reconnect the negative terminal only after all connections have been made.

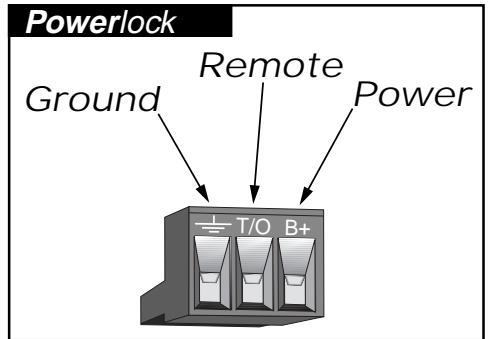
WIRING

The next step is to connect the Power, Ground, and Remote wires to your **EPX-223**. The power wire should run from the mounting location through the vehicle to the battery or power distribution block. Avoid sharp corners, creases, and sharp body parts. When passing through any metal wall (i.e. firewall etc.), a grommet must be used to prevent the wire from chaffing and shorting to ground.

The ground wire should be of the same gauge as the power wire. As a rule of thumb, use as short a length of wire as possible.

Find a location near the crossover that is metal (the floor is ideal) and clean an area about the size of a quarter to bare metal. Drill a pilot hole in the middle of this area. Be Careful! Inspect the area underneath to be sure you are not drilling into wires, brake or fuel lines, etc. Terminate the wire with a ring connector and attach it to the bare metal using a #8 sheet metal screw and washer (not supplied). We suggest crimping and/or soldering this connection. After the connection is complete, coat the area with silicone or some similar material to prevent rust from developing.

Finally, the remote wire needs to run to the power antenna (or amplifier remote) lead of the head unit. This wire supplies a 12 volt signal to the **EPX-223** when the main system is activated. Once you have routed the power, ground, and remote wires through



the vehicle, it is time to connect the wires to the **EPX-223**. Be sure that you have not reconnected the ground cable to the negative post of the battery.

Cut off excess wire and, using wire strippers, strip the power, ground and remote cables about 1/8 inch. Locate the power, ground, and remote **Powerlock** connector (supplied). On the top of the connector are three slotted screws. With a small flat-bladed screwdriver, loosen the screws before attempting to insert the cables. After you have inserted the stripped end of each cable into the connector, secure it by tightening the associated screw. Check that each connection is tight. If the wires are secure, the connector may be plugged into the **EPX-223**.

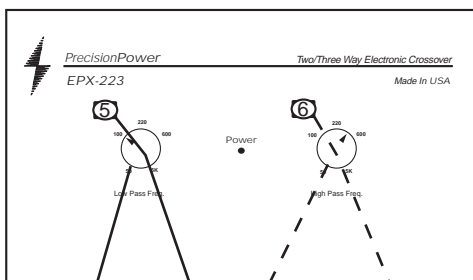
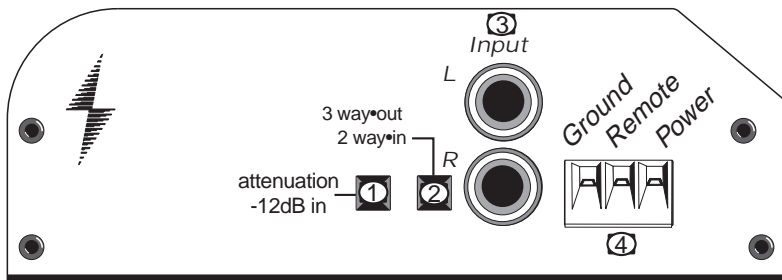
FUNCTIONS

① -12dB Input Attenuation Switch: Push this switch IN for high level input capability. May be used for speaker level input from common ground head units or for high voltage line drivers.

② 3-Way/2-Way Switch: Push this switch IN for dual 2-way operation, or OUT for 3-Way operation.

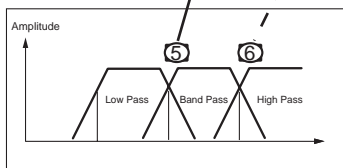
③ RCA Inputs: Connect the RCA cables from the head unit, preamplifier, or another processor here.

④ Connect Ground, Remote turn on and Power wires to the **PowerLock** connector and plug it in here.

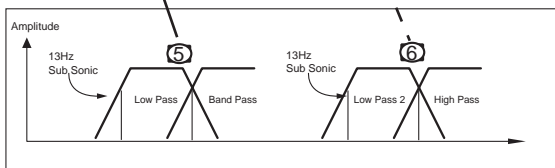


⑤ Low Pass
2-Way Mode: Sets Low Pass frequency to Low Pass Outputs, and High Pass frequency to Band Pass Outputs.
3-Way Mode: Sets Low Pass frequency to Low Pass Outputs, and High Pass frequency to Band Pass Outputs.

⑥ High Pass
2-Way Mode: Sets Low Pass frequency to Low Pass 2 Outputs, and High Pass frequency to High Pass Outputs.
3-Way Mode: Sets Low Pass frequency to Band Pass Outputs, and High Pass frequency to High Pass Outputs.

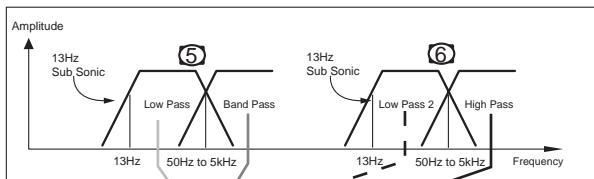
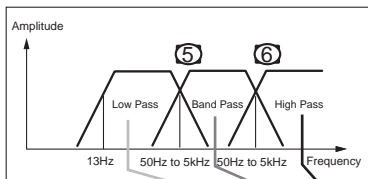


Three-Way Mode



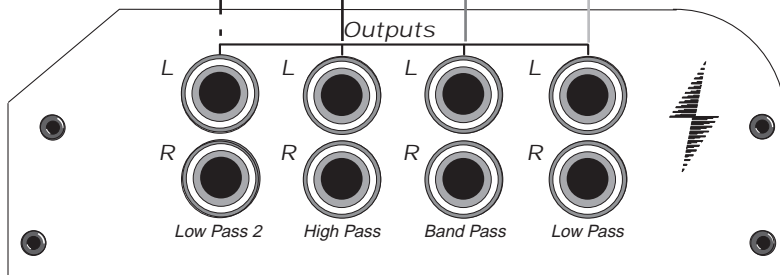
Two-Way Mode

FUNCTIONS



Three-Way Mode

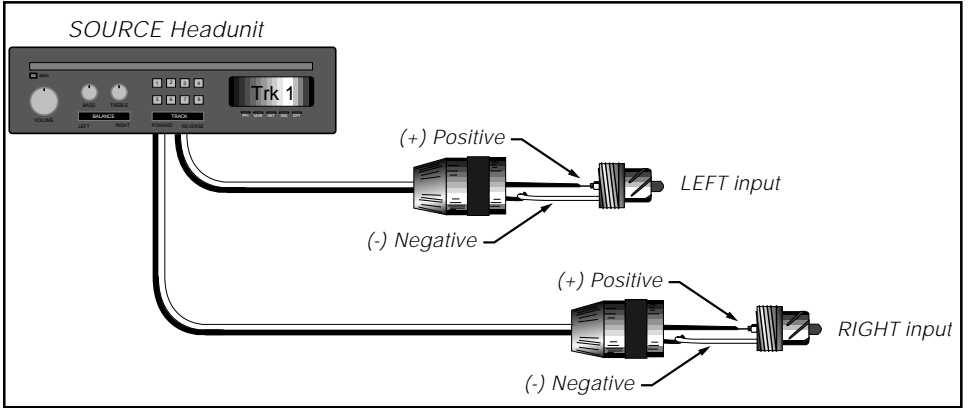
Two-Way Mode



TO ACTIVELY CROSS THESE SPEAKERS:	USE THESE OUTPUTS:
Subwoofer / Mid Range / Tweeters	Low Pass / Bandpass / High Pass
Subwoofer / Mid Bass / Full Range	Low Pass / Bandpass or Low Pass 2 / High Pass, or both

INPUT

To use Speaker Level Inputs (common ground headunits only), connect RCA plugs to the front or rear speaker leads as shown, and push IN the Attenuation switch.



WARNING: If you are using a source unit with bridged high powered (or "floating ground") speaker outputs, a suitable high to low level adapter must be used. If you are unsure about your head unit see your local Precision**Power** dealer or call **1-800-62POWER**.



TROUBLE SHOOTING

NO SOUND

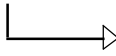
Is the LED lit?

YES

Check Input cables for signal by connecting them straight to the Subwoofer amplifier

NO

Check Power and Remote turn-on wire for voltage. Make sure Ground wire is secure.



ANY SOUND NOW?

YES

Problem is in the Crossover. See your local Authorized *PrecisionPower* Dealer or call 1-800-62**POWER**.

NO

Problem is elsewhere in the system. Check head unit and amplifiers.

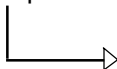
SOUND IN ONE CHANNEL ONLY

Reverse left and right RCA outputs for one band (i.e. subwoofers).

SOUND IS NOW IN

OPPOSITE CHANNEL

Reverse RCA inputs



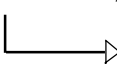
SOUND IS NOW IN

SAME CHANNEL

Problem is in the amplifier, speakers or associated wiring of the silent channel.

OPPOSITE CHANNEL

Reverse RCAs at head unit (Check Balance control)



SOUND IS NOW IN

SAME CHANNEL

Problem is in the Crossover. See your local Authorized *PrecisionPower* Dealer or call 1-800-62**POWER**.

OPPOSITE CHANNEL

Problem is in the head unit

SAME CHANNEL

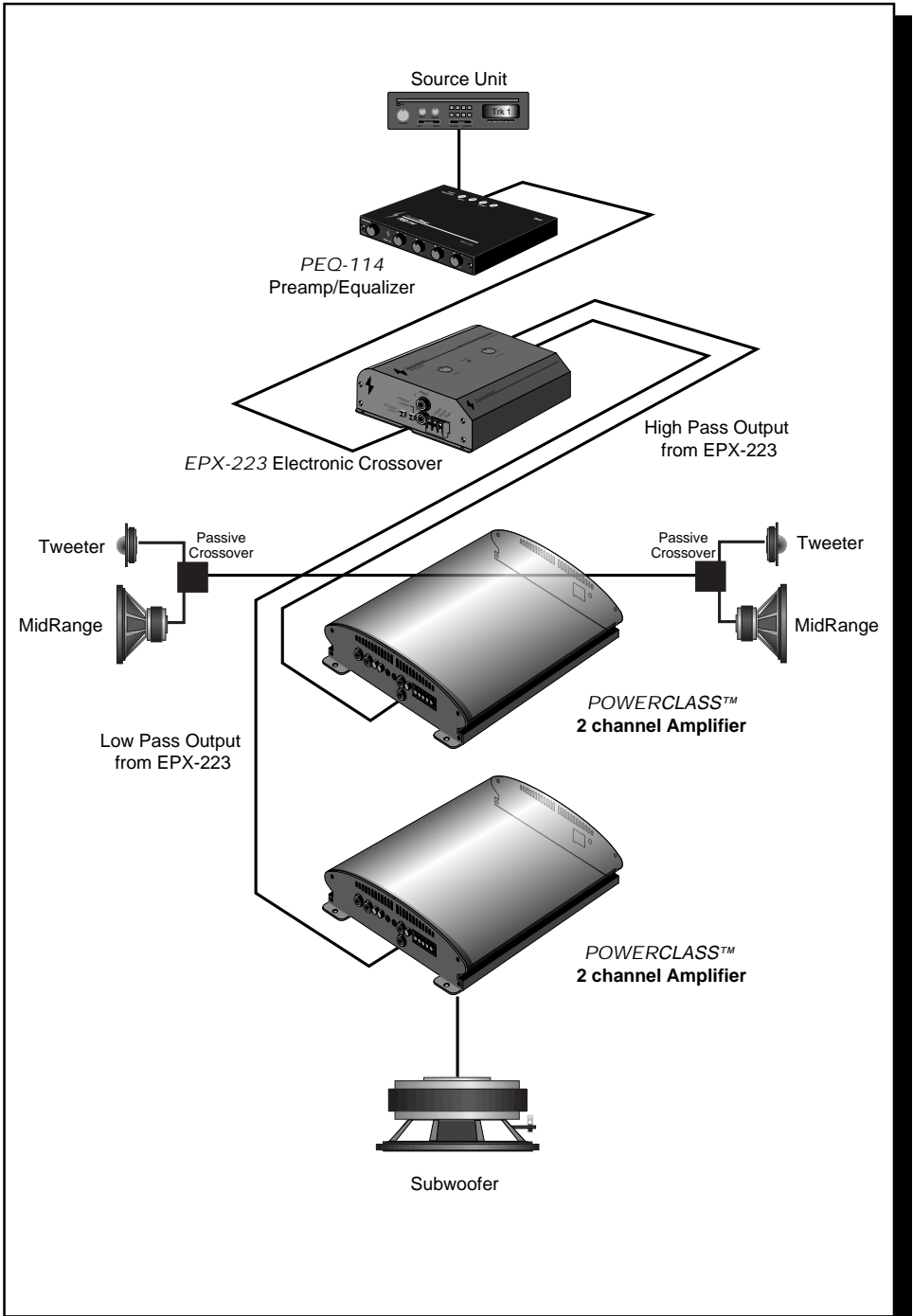
Problem is in the RCA cables

LOW OUTPUT FROM ONE BAND

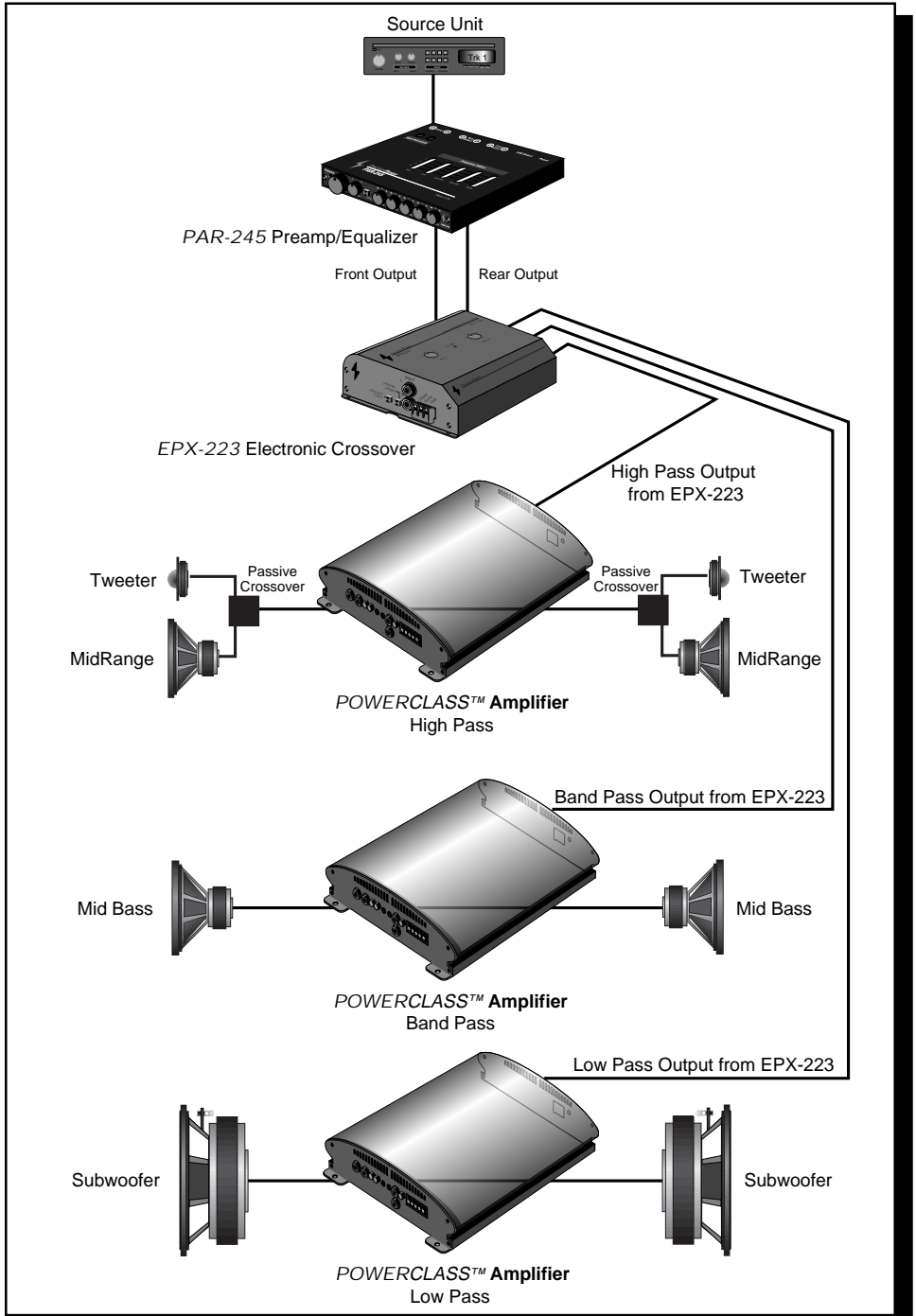
Check crossover frequencies for Low Pass points set higher than High Pass points, and check gain control on the affected amplifier(s).

STILL LOW OUTPUT - See your local Authorized *PrecisionPower* Dealer or Call 1-800-62**POWER**.

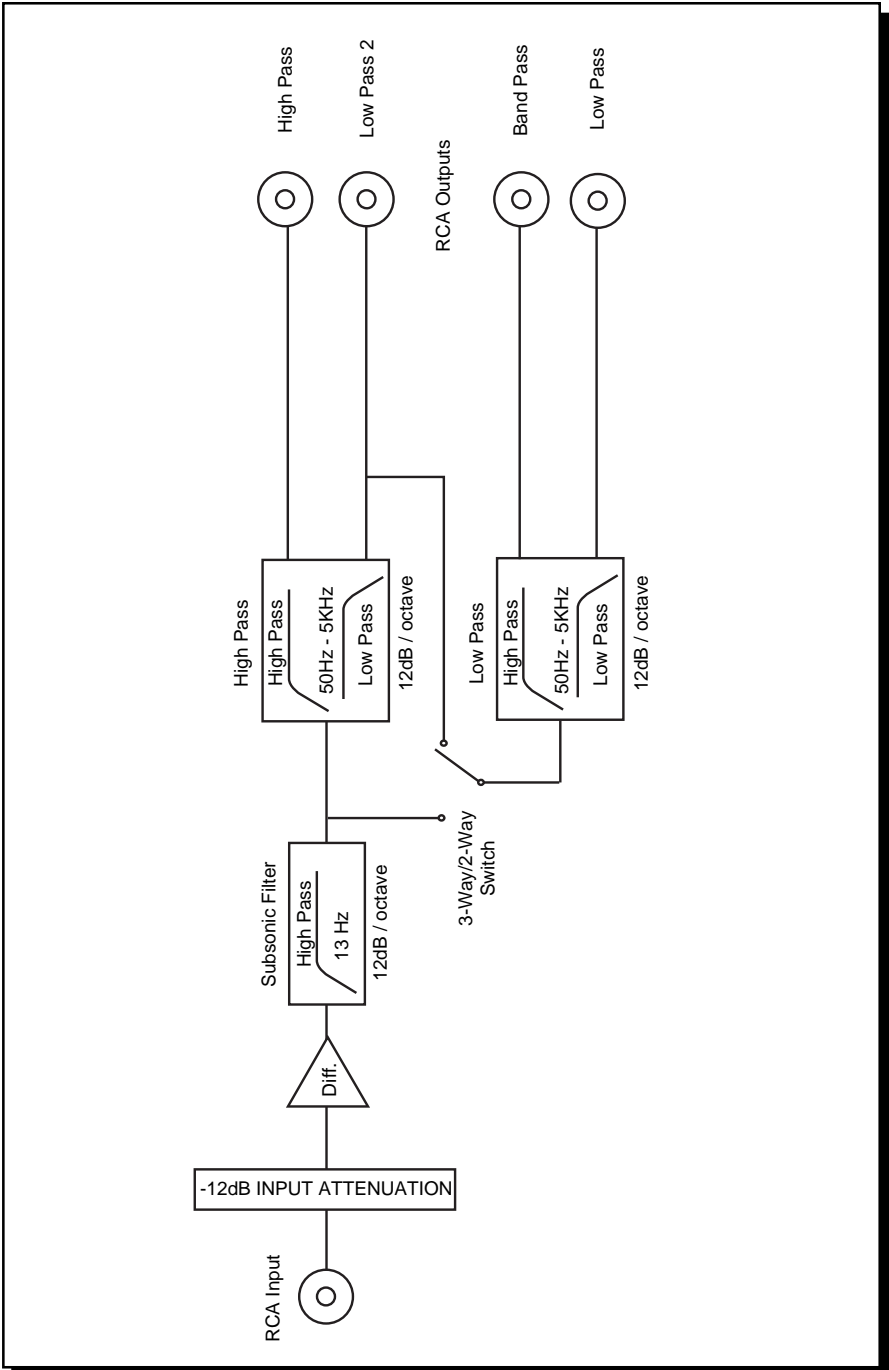
2-WAY SYSTEM DIAGRAM



3-WAY SYSTEM DIAGRAM



BLOCK DIAGRAM



WARRANTY

Three-Year Limited U.S.A. Warranty

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. **PrecisionPower** warrants its products to be free from defects in materials and workmanship under normal use and service for a period of three (3) years from the date of original purchase when the unit is installed by an Authorized Dealer. Non-Authorized Dealer installed products carry a one (1) year parts and ninety (90) days labor limited warranty. The extent and conditions of Limited Warranty are as follows:

1. Authorized Dealer Installed Products: **PrecisionPower** will either repair or replace at no charge, to the original purchaser, any unit which **PrecisionPower's** examination discloses to be defective and under warranty, provided the defect occurs within three (3) years from the date of original purchase when the unit is installed by an Authorized Dealer and the product is returned immediately to **PrecisionPower**. This warranty is not transferable.

2. Non-Authorized Dealer Installed Products: **PrecisionPower** will either repair or replace at no charge, to the original purchaser, any unit which **PrecisionPower's** examination discloses to be defective and under warranty, provided the defect occurs within ninety (90) days from the date of purchase and the product is returned immediately to **PrecisionPower**. Warranty claims beyond ninety (90) days for Non-Authorized Dealer Installed Products will be for parts only and will extend for one (1) year from the date of purchase. This warranty is not transferable.

3. The date of purchase and proof of Authorized Dealer Installation of a PrecisionPower product must be established by an original sales receipt which must accompany the article being returned for warranty work.

4. This warranty shall NOT apply to any **PrecisionPower** product found to have the original factory serial number removed or defaced. All products received (by **PrecisionPower**) for in warranty or out of warranty repair, with their original serial numbers removed or defaced, will NOT be repaired and will be returned to sender, freight collect. Refer to original packaging for the serial number of your component speakers.

5. The provisions of this warranty shall not apply to any **PrecisionPower** product used for a purpose for which it is not designed, which has been repaired or altered in any way, or which has been connected, installed, or adjusted other than in accordance with the instructions furnished in **PrecisionPower's** owner's manual. Nor shall this warranty apply to any part which has been subject to misuse, neglect, or accident.

6. PrecisionPower does not authorize any other persons to assume any other liability in connection with its products. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY PRECISIONPOWER APPLICABLE TO ITS PRODUCTS. ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO PRECISIONPOWER PRODUCTS IS LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY. PRECISIONPOWER SHALL NOT BE LIABLE FOR THE INCIDENTAL, CONSEQUENTIAL, OR COMMERCIAL DAMAGES RESULTING FROM THE BREACH OF THIS WRITTEN WARRANTY. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts; so the above limitations or exclusions may not apply to you.

7. Your product will be serviced on an in-warranty basis within the warranty period for the correction of warranted defects. If improper operation of your **PrecisionPower** product should occur, contact your Authorized Dealer for assistance with the return and factory repair of your **PrecisionPower** product. If an Authorized Dealer is not available, return the unit including your name, telephone number, return address, a copy of your sales receipt, and a description of the problem to:

PrecisionPower, Inc.
Service Department
4829 S. 38th Street
Phoenix, AZ 85040-2964

TO RETURN PRECISIONPOWER PRODUCTS OUT OF WARRANTY: Return the unit, postage prepaid, in the original protective carton. Please include a description of the problem and, if desired, a request for an estimate of repair costs. Unless a request for an estimate is included, the unit will be repaired as necessary. Please contact **PrecisionPower** Customer Service at 1-800-62-POWER for questions concerning out of warranty repair charges. Repaired unit will be returned with an itemized statement, C.O.D.

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