

Thank you for your selection of Precision Power high performance mobile audio products. In order to achieve the best results and the utmost satisfaction, please read the accompanying manual thoroughly before installation. For further information call your dealer or Precision Power.

WARNING—Use of this amplifier may cause hearing loss or damage.

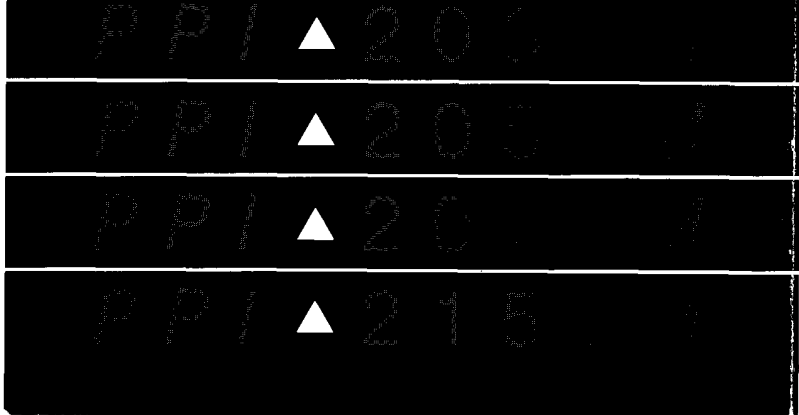
WARNING—Use of this amplifier may impair the ability to hear necessary traffic sounds and thus may constitute a traffic hazard. PPI advises use of audio components at low volume levels while driving.

SPECIFICATIONS

	2030M	2050M	2075M	2150M
Continuous Power Output: (Watts Per Channel into 4 Ohms @ 12V, Stereo)	30W	50W	75W	150W
(Watts into 4 Ohms @ 12V, Bridged)	75W	150W	300W	600W
(Watts Per Channel into 2 Ohms @ 12V, Stereo)	50W	75W	150W	300W
Shipping Weight:	7.5 lbs	7.5 lbs	8 lbs	10 lbs
Dimensions: (H x W x D)	8x2.1x8.5	8x2.1x8.5	8x2.1x9	8x2.1x12
Power Bandwidth: (\pm 1dB)	10Hz-50kHz	SAME	SAME	SAME
Total Harmonic Distortion: (Per IHF A-202)	0.02%	SAME	SAME	SAME
Signal to Noise Ratio: (A-Wtd)	102dB	SAME	SAME	SAME
Damping Factor: (100Hz)	> 500	SAME	SAME	SAME
Dynamic Headroom: (4 Ohms)	2.3dB	SAME	SAME	SAME
Stereo Separation:	> 72dB	SAME	SAME	SAME
Input Sensitivity:	0.30-2.0V	SAME	SAME	SAME
Input Impedance:	10k Ohms	SAME	SAME	SAME
Output Impedance: (Stereo)	2-8 Ohms	SAME	SAME	SAME
(Bridged)	4-8 Ohms	SAME	SAME	SAME
Supply Voltage:	10.5-16 VDC	SAME	SAME	SAME
Fuse:	15A	20A	20A	35A

STANDARD FEATURES

- Ultra-Wide Bandwidth Circuitry
- Bridging Capability
- Gold RCA Input Connectors
- Linear Pulse Regulated Power Supplies
- Phantom Power
- Output Short Circuit Protection Circuitry
- Soft Start
- 100% Solid State
- Adjustable Input Sensitivity
- Two Year Warranty
- Manufactured in the USA



12 VOLT PRIMARY POWER CONNECTIONS

The PPI 2030M, 2050M and 2075M are shipped with a 12 gauge red positive (+) primary power harness, (PPI 2150M is supplied with a 10 gauge positive primary power harness), and two inline fuse holders, one mounted near the amplifier and the other to be mounted near the battery. The fuse near the battery offers protection against damage from shorts to the car chassis between the battery and the amplifier. The second fuse offers additional safety for the amplifier's internal circuitry. The power harness terminates in a large ring terminal for connection directly to the positive terminal of the car battery. The amplifiers are grounded by the 12 gauge black (10 gauge black on the 2150M) wire with the ring terminal, extending from the amplifier chassis.

The ground wire should be connected to a welded chassis member. When connecting, use a #8 sheet metal screw, being sure to remove any paint from the surrounding metal. Do not lengthen the ground wire. Failure to adhere to this procedure may result in increased system noise.

When working on or near the car's battery, first disconnect the negative post of the battery before working on the positive terminal to prevent shorting the positive terminal to ground. Reconnect the negative terminal only after all positive terminal connections have been made.

Connect the short 12 gauge red (10 gauge red on the 2150M) wire with the ring terminal and fuse holder directly to the battery. Then route the long power wires starting from the amplifier, avoiding sharp corners, creasing, and sharp car body parts. Cut off excess wire after reaching the battery fuse holder. Slip on the black fuse cap. Strip the power wire 1/8

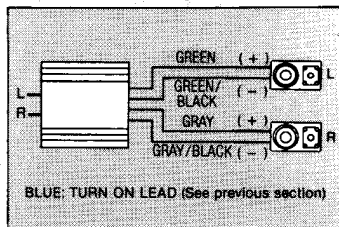
inch. Insert the stripped wire into the silver rivet cap and thoroughly solder. After the solder cools, clean the remaining flux from the rivet cap and insert a 15 amp fuse if using a 2030M, a 20 amp fuse if using a 2050M or a 2075M, or 35 amp fuse if using 2150M.

TURN-ON CONNECTIONS

The application of 12 volts to the blue sensing wire located on the speaker harness connector will "turn on" the amplifier. The blue wire should be connected to the power antenna lead or an appropriate switched lead from the head unit. If no such connection is available, a separate switch or alternate means must be used to control the amplifier.

SPEAKER CONNECTIONS

All wires are located on the speaker harness connector. Always use 16 gauge or larger wire for all speaker connections. NEVER CONNECT ANY SPEAKER LEAD TO THE CAR CHASSIS OR TO ANOTHER LEAD. For optimum performance, speaker impedances should be 4 Ohms or greater, either bridging or stereo. For bridging applications, refer to the bridging section of this manual and also to the crossover/bridging module installation instructions if one is used. (See Figure 1)



TYPICAL STEREO SPEAKER CONNECTIONS

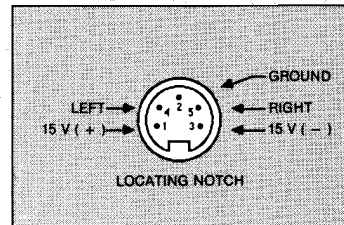
FIGURE 1

INPUT CONNECTIONS

Two RCA jacks (left and right channel) and one five-pin female DIN jack provide input for low level (line out) signal connections. Both inputs (RCA and DIN) are paralleled and feature adjustable input sensitivity.

The five-pin DIN connector is intended to connect the amplifier to external Precision Power or compatible accessories requiring phantom $\pm 15V$ power, such as preamplifiers, equalizers, or electronic crossovers.

The DIN connector is not directly compatible with Kenwood or Alpine car stereo units. (See Figure 2)



DIN CONNECTOR PIN FUNCTIONS

FIGURE 2

INPUT SENSITIVITY

The slotted shaft accessible on the front of the amplifier labeled GAIN adjusts the input sensitivity from 0.3 volts to 2.0 volts. To adjust the input sensitivity, turn the control fully counter-clockwise to minimum. Adjust the radio/head unit volume knob to maximum volume, then turn the gain control on the amplifier clockwise until audible distortion occurs.

AMPLIFIER BRIDGING

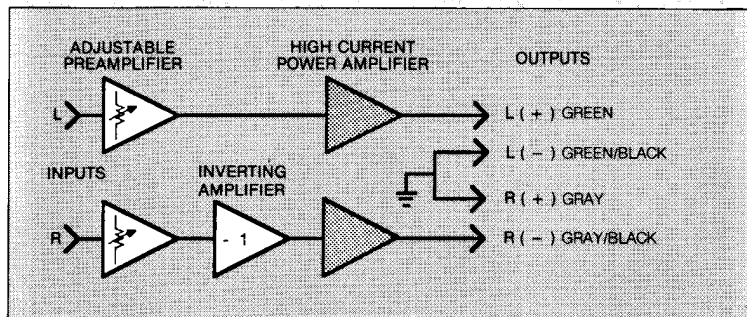
Amplifier Bridging installations are far more complicated than normal stereo systems, and it is recommended that they be attempted only by experienced installers. If you encounter difficulties, please consult your Precision Power dealer for professional installation assistance.

Bridging is a special way of connecting two channels of an amplifier to drive a single (usually mono) speaker system. When an amplifier is bridged, it delivers the sum of the left and right power to a single channel.

The standard method for bridging requires the use of a bridging module or special crossover with bridging capabilities. The input signal to the amplifier is usually mono. The bridging module or crossover inverts one of the channels making it identical in amplitude but 180 degrees out of phase with the opposing channel. The amplifier's output is now taken across the driven output terminals of the amplifier. This doubles the available output voltage (one terminal is going positive, and the other is going negative) and this also doubles the current.

This, in theory, provides four times per channel power or two times the total stereo power into the same load impedance. The additional power does not come without penalty. When bridged, the amplifier runs as if it were driving half of the speakers' impedance; this means the amplifier will be far more particular about speaker impedances (*never bridge into 2 Ohms*). And since the amplifier is delivering more power to the load, it will also run hotter. In addition, the effective damping factor is reduced by a factor of two.

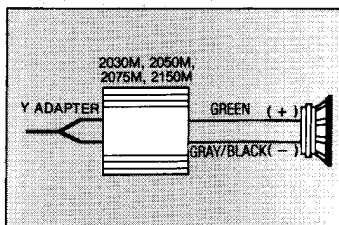
Precision Power models 2030M, 2050M, 2075M and 2150M have the phase of the right channel inverted internally, and it is possible to bridge them without the use of an external bridging module or to use them as conventional stereo amplifiers (as detailed previously). Two popular methods of bridging are presented in the following examples: One way is to use a common signal connected to the amplifier inputs. Another method is to connect the subwoofer across the amplifier output terminals while using the amp to drive conventional stereo speakers. (See Figure 3)



2030M - 2050M - 2075M - 2150M AMPLIFIER SECTION BLOCK DIAGRAM

FIGURE 3

A common signal can be achieved by using an RCA cable "Y" adapter. Plug the outputs of the Y cable into the Left and Rights inputs of the amplifier. The other end of the adapter serves as the input to the amplifier. A common input signal can also be achieved by connecting the amplifier to the low end output of a Precision Power EPX-202, DPX-222, or an OMX-232 crossover via a five-pin DIN cable. The DPX-222 and OMX-232 have a switch to permit amplifier bridging with amplifiers that are not internally bridgeable. DO NOT USE THIS FUNCTION WITH THE 2030M, 2050M, 2075M OR THE 2150M. When a 2030M, 2050M, 2075M or 2150M amplifier is bridged, the speaker positive terminal connects to the solid green wire, and the speaker negative terminal connects to the gray wire with the black stripe. The solid gray wire and the green wire with a black stripe are not used in this application. (See Figure 4)

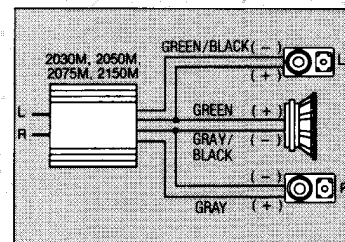


COMMON INPUT METHOD

FIGURE 4

The amplifier may simultaneously drive stereo speakers and a subwoofer. Connect the stereo speakers and input normally as detailed in this manual. The subwoofer positive terminal is then connected to the solid green wire, and the subwoofer negative terminal is connected to the gray wire with the black stripe.

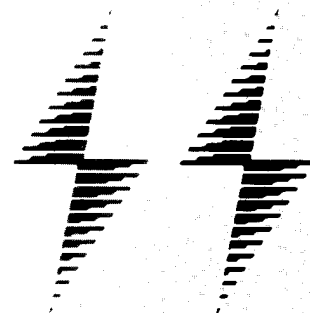
(See Figure 5)



STEREO SPEAKERS AND SUBWOOFER

FIGURE 5

In all cases it is important that both channels of an amp that's bridged are driven with a signal. If only one channel is driven, the undriven channel must sink and source all the current of the other channel's output as if it were ground. This makes the undriven channel work just as hard as the driven channel, but with no increase in power to the load. Another precaution for bridged operation is not to "common" any speaker leads, since the leads are actually amplifier outputs and not ground.



TROUBLE SHOOTING GUIDE

If for some reason your system fails to operate properly, please refer to this guide. If you are unable to resolve the problem, consult your dealer or call Precision Power toll free at 1-800-62-POWER for further assistance.

SYMPTOM:	CHECK:	CURE:
No Sound	Is the power LED illuminated?	Check fuses in power wire. Be sure Turn-on lead is connected. Check signal leads. Check gain control. Check Tuner/Deck volume level. Clean contacts on fuse holders.
No sound in one channel	Check Speaker Leads	Inspect for short circuit or an open connection.
	Check Audio Leads	Reverse Left and Right cables to determine if it is occurring before the amp.
	Check Mono Bridge and Bi Amp Crossover Switches	Depress switches to ensure proper position with respect to the installation.
	If problem is with amplifier	Have your dealer inspect the unit.
Amp turning off at low volume levels	Check speakers for damage or short	Have your dealer inspect the speakers
Amp turning off at medium or high volume levels	Check speaker load impedance	Be sure proper speaker load impedance recommendations are observed. (If you use an ohmmeter to check speaker resistance, please remember that DC resistance and AC impedance may not be the same.)

LIMITED WARRANTY

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Precision Power Inc., (PPI) warrants its amplifiers and accessories to be free from defects in materials and workmanship under normal use and service for a period of two years from the date of original purchase. The extent and conditions of PPI's Limited Warranty are as follows:

1. PPI warrants that it will either repair or replace at no charge, any unit which PPI's examination discloses to be defective and under warranty, provided the defect occurs within two years from the date of purchase, and the product is returned immediately to PPI.
2. The date of purchase of a PPI Amplifier and/or Accessory must be established by an original sales receipt which must accompany the article being returned for warranty work.
3. The provisions of this warranty shall not apply to any PPI unit 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 PPI's owner's manual. Nor shall this warranty apply to any part which has been subject to misuse, neglect, or accident.
4. PPI does not authorize any other person to assume any other liability in connection with its products. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY PPI APPLICABLE TO ITS PRODUCTS. ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO PPI'S AMPLIFIERS AND/OR ACCESSORIES IS LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY. PPI 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.
5. Your unit will be serviced on an in-warranty basis within the warranty period for the correction of warranted defects. Do not return the article to your dealer. Return the article including your name, telephone number, and return address with the description of the problem to:

Precision Power
Warranty Department
4829 South 38th Street
Phoenix, AZ 85040

TO RETURN ARTICLES OUT OF WARRANTY. Return the article, postage prepaid, in the original protective carton. Include in the package 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. Fifty Dollars (\$50.00) (labor), plus parts will be charged for all product repairs. The repaired unit will be returned to the customer with an itemized statement C.O.D.

Further information regarding system design is presented in the accessory manual, which covers the use of PPI pre-amps, bridging modules, and crossovers.