



Congratulations on your selection of Precision Power high performance mobile audio products. Because of the unique capabilities of the DPX-222 and for the best results and the utmost satisfaction, please read the accompanying manual thoroughly before installation and retain it for future reference.

CAUTION—Use of a high power stereo system may cause hearing loss or damage.

CAUTION—Use of a high power stereo system 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

Signal-to-Noise Ratio:	> 102dBV
THD:	< 0.004% (1 kHz, 1 Vrms)
Input/Output Gain:	-50 to + 10 dB
Frequency Response: (within bandpass)	< ± 1 dB
Sub Crossover Frequency (- 3 dB):	50 Hz - 275 Hz
Front Crossover Frequency (- 3 dB):	50 Hz - 5 kHz
Rear Crossover Frequency (- 3 dB):	50 Hz - 500 Hz
Input Impedance:	10 k Ohms
Maximum Output: (10 k Ohm load)	8.0 Vrms
Crossover Slope:	(Low) 18 dB/Octave (High) 12 dB/Octave
Power Requirements: (via DIN connector)	± 15 volts, 35 mA
Dimensions:	1.0"H x 3.6"W x 6.0"D

FEATURES

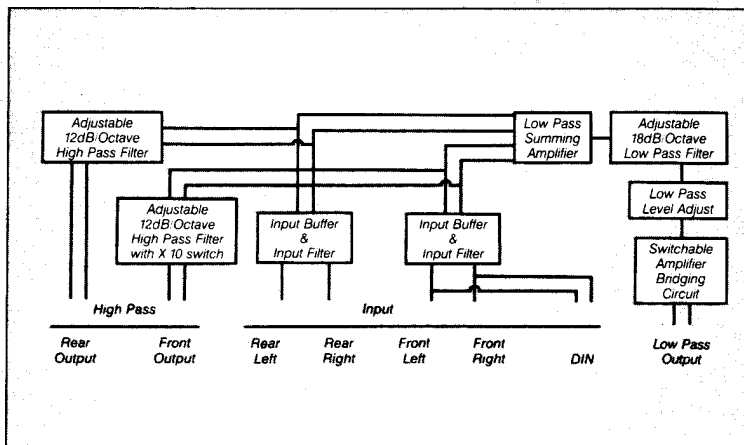
- Ultra-Wide Bandwidth Circuitry
- Subsonic Filter
- Front and Rear Inputs and Outputs
- 18 dB/Octave Lowpass Slope
- Adjustable Crossover Points
- Mono Lowpass Bridging Ready
- Sealed Modular Potentiometers
- Gold RCA Input Connectors
- Phantom Powered
- 100% Solid State
- LED Power Indicator
- Two Year Warranty
- Manufactured in the USA

To best take advantage of the DPX-222's unique capabilities, please read the following instructions before beginning. As with any high performance piece of equipment, care should be taken to familiarize yourself with these instructions before attempting to install this unit. If you encounter difficulties during or after installation and are unable to resolve the problem, contact your dealer or call Precision Power for further assistance.

INTRODUCTION

The DPX-222 is an extremely versatile dual active electronic crossover for mobile audio systems where two or more amplifiers and subwoofers are utilized for extended low-frequency reproduction.

The DPX-222 features an 18 dB/octave crossover slope (low band) and 12 dB/octave (high band). Butterworth active crossover filters are used to tightly limit the outputs to their intended passbands. These filters also yield the best combinations of amplitude and phase response.



DUAL ACTIVE ELECTRONIC CROSSOVER
FIGURE 1

CONNECTIONS

Inputs—Two sets of RCA inputs are provided to allow connection directly to preamp source units featuring dual preamp outputs. This allows fading between front and rear highpass amplifiers without affecting subwoofer level.

If only the front highpass amplifier is used, the fader on the source unit can function as a subwoofer/highpass balance control.

One DIN input, paralleled to the front RCA inputs, is provided for connection directly to PPI preamplifiers. If only one set of inputs (RCA or DIN) is used, and all three outputs of the DPX-222 are utilized, it will be necessary to connect an RCA jumper from the front RCA inputs to the rear RCA inputs.

(See Figure 1)

Outputs—Three DIN outputs (subwoofer lowpass plus front and rear highpass) allow six-channel bi-amp or tri-amp system flexibility.

Each DIN output should be connected to its respective PPI amplifier via Phantom Power DIN cables (available from PPI in various lengths).

Power—The DPX-222 is *Phantom powered*: it receives ± 15 VDC from an external source through any of its DIN connectors. Any Precision Power amplifier will automatically provide phantom power to the DPX-222 if it is connected by a DIN cable. Since the DPX-222 is powered by the amplifier, it will turn on and off simultaneously with the amplifier. If the DPX-222 is used in a system without a Precision Power amp, a Phantom Supply Module (Precision Power PSM-100) must be used. The PSM-100 supplies ± 15 volts to the DPX-222 and also adapts the DIN output connector to standard RCA phono jacks.

INSTRUCTIONS ▲ DPX - 222 ▲

CONTROLS

The crossover frequencies for each output are controlled by rotary potentiometers, which provide individual high resolution and independently adjustable crossover points for exact adjustment of satellites and subwoofers. This allows staggering of the high- and lowpass band points to equalize undesirable mid-bass "boom" centered between 150-200 Hz, while optimizing the performance of each speaker system.

Front highpass frequency— This control adjusts the front highpass roll-off frequency crossover point (-3 dB). Frequencies *below* the selected crossover point will be attenuated on the highpass output at a rate of 12 dB/octave.

Rear highpass frequency— This control adjusts the rear highpass roll-off frequency crossover point (-3 dB). Frequencies *below* the selected crossover point will be attenuated on the highpass output at a rate of 12 dB/octave.

Subwoofer/lowpass level— This control adjusts the output level of the lowpass from zero volts output (no output) to +10 dB relative to input signal level to allow balancing of low-frequency output to accommodate individual tastes.

Subwoofer/lowpass frequency— This control adjusts the roll-off frequency crossover point (-3 dB) of the lowpass. Frequencies *above* the selected crossover point will be attenuated on the lowpass output at a rate of 18 dB/octave.

SWITCHES

X 10—This switch is provided to permit tri-amp systems where the desired highpass frequency range exceeds 500 Hz.

With this switch 'IN', the front highpass range of adjustment becomes 500-5000 Hz. The rear highpass range remains 50-5000 Hz.

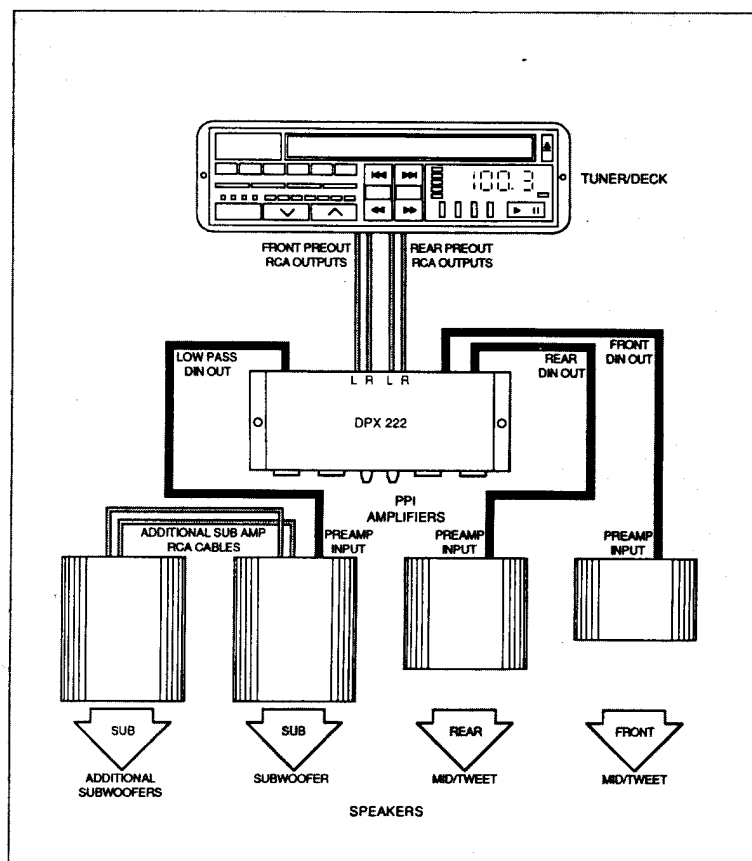
Mono Bridging—This switch is provided to bridge Precision Power amplifiers for single channel subwoofer applications.

With the switch 'OUT', the amplifier remains wired as a standard two channel amp.

With the switch 'IN', one channel of the LOWPASS output is *inverted*, 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 also doubles the required 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, however. 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. And since the amplifier is delivering more power to the load, it will also run much hotter. (See Figure 2)

NOTE: TO WIRE A PPI AMPLIFIER FOR MONO BRIDGED OPERATION, SPEAKER WIRE IS CHANGED.

Refer to the wiring guide on the reverse side of the next page if bridging an amplifier.



FRONT/REAR SUB-SAT
FIGURE 2

AMPLIFIER BRIDGING — SPEAKER WIRING GUIDE

When using the BGM-100, DPX-222, or OMX-232 to bridge an amplifier, the amplifier's output is taken across the *driven* output terminals of an amplifier. Typically, the speaker's positive terminal (+) is connected to the left positive output (+) of the amplifier, and the speaker's negative terminal (-) is connected to the amplifier's right positive output (+); the amplifier's negative (-) leads are left unconnected (insulated or cut off).

PPI-200 series amps:	YEL ORG BLK (2)		Speaker Positive Speaker Negative Not Used
PPI-400 series amps:	YEL & YEL/BLK ORG & ORG/BLK BLK (4)		Speaker Positives Speaker Negatives Not Used
PPI-400 series amps:	WHEN BRIDGING ONLY THE LOW END		
High Frequency:	YEL/BLK BLK BLK ORG/BLK		Right Speaker Pos Right Speaker Neg Left Speaker Pos Left Speaker Neg
Low Frequency:	YEL ORG BLK (2)		Speaker Positive Speaker Negative Not Used
PPI-2000 series amps:	ORG YEL BLK (2)		Speaker Positive Speaker Negative Not Used
PPI-3050/4200 amps:	ORG/BLK YEL/BLK ORG YEL BLK	GRN GRY WHT VIO W/BLK (4)	Speaker Positive Speaker Negative Speaker Positive Speaker Negative Not Used
PPI-3050/4200 amps:	WHEN BRIDGING ONLY THE LOW END		
High Frequency:	ORG/BLK BLK BLK YEL/BLK	GRN GRN/BLK GRY/BLK GRY	Left Speaker Pos Left Speaker Neg Right Speaker Neg Right Speaker Pos
Low Frequency:	ORG YEL BLK	WHT VIO W/BLK (2)	Speaker Positive Speaker Negative Not Used

The **Precision Power 2000M** (MOSFET POWER) series are internally bridgeable and do not require the use of a bridging module in bridging applications—to bridge the **2000M** series of amps, refer to the information shipped with these amplifiers. The **PPI-4050** is also internally bridgeable (on the low end only). The **Precision Power 2200, 2200M, 2300, and 2300M** are **NOT** bridgeable.

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
7901 East Pierce Street
Scottsdale, AZ 85257

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.