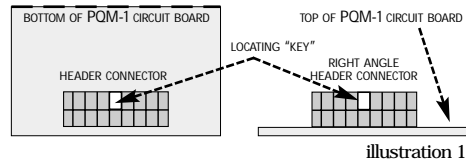


## INSTALLING THE PQM-1

### STEP 1: Locating the Connectors

- Remove the PQM-1 from the packaging and inspect the circuit board.
- Locate the header connectors soldered onto the top and bottom of the circuit board. See illustrations 1.
- Notice that one of the openings on both header connectors is blocked by white filler material. The PQM-1's mounting system utilizes this blocked receptacle as the "key" to insure proper positioning when installing the PQM-1 onto the amplifier's mounting port. See illustration 2 and 3.
- During the "tuning process", the PQM-1 may be installed "vertically" using the right angle header connector. See illustration 2. However, the final mounting position must be in a "horizontal" position (using the header connector on the bottom of the circuit board) to allow the cover to be re-attached. See illustration 3

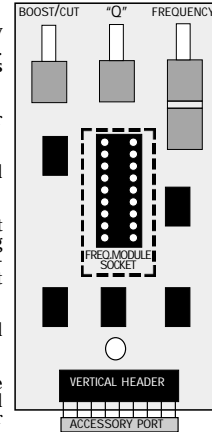


## INSTALLING THE PQM-1

### STEP 2: Adjusting the PQM-1

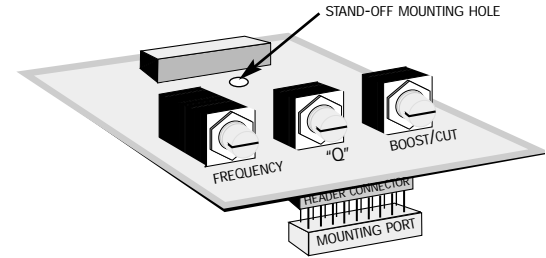
The PQM-1 is designed to be adjusted with the aid of a Real Time Spectrum Analyzer. The analyzer will provide visual feedback when following this simple procedure.

- Plug-in one of the supplied frequency modules into the PQM-1's module socket. It is from this module's range of frequencies that you will select your center frequency.
- Turn-off amplifier. Remove amplifier cover and locate the Accessory Port.
- Remove the two header jumpers and locate the missing pin ("key") on the port.
- Align the blocked receptacle on the right angle header connector with the missing pin and press the PQM-1 onto the mounting port. Note: after adjusting, you must follow Step 3 for final installation.
- Set system to a moderate volume level and play pink noise.
- Rotate the boost/cut control clockwise (fully) to +18 dB. The RTA's display will now show you the position of the center frequency and "Q" settings of the PQM-1.
- Rotate the frequency control to the frequency you wish to adjust.
- Next, rotate the "Q" control to the width of the dip or peak in response that you are equalizing
- Finally, adjust the gain control to achieve the desired response curve.



## INSTALLING THE PQM-1

### STEP 3: Final Installation of the PQM-1



- Turn-off amplifier. Remove PQM-1 from its "vertical" mounting position. See Step 2
- Align the white stand-off with the hole on the rear of the PQM-1 circuit board. Next, align the blocked receptacle with the missing pin on the mounting port. Press the PQM-1 onto the port and secure it to the stand-off by applying downward pressure.
- Turn amp on and audition the system. If further adjustment is necessary, the PQM-1 may be adjusted when mounted in this final mounting position.

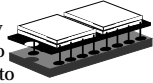
## PQM-1 OPERATION

The PQM-1 is a one band, parametric equalizer. Adjustments are made using the three, circuit board mounted, potentiometers. These controls are simple to operate and provide a wide range of adjustment.



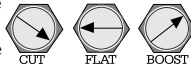
**FREQUENCY CONTROL** is used to select the center frequency for equalization. A clockwise rotation increases frequency while a counterclockwise rotation decreases frequency.

**FREQUENCY MODULE:** The supplied frequency modules divide the audible frequency range into three bands. The range of the modules are: 20 Hz to 200 Hz, 200 Hz to 2 kHz, and 2 kHz to 20 kHz. Simply install one of the modules and its frequencies are selectable via the **FREQUENCY CONTROL**.



**“Q” ADJUSTMENT:** “Q” is the property of an equalizer that determines the range of frequencies affected on either side of the center frequency. “Q” is equal to the center frequency divided by the bandwidth. As “Q” goes up, bandwidth decreases. The PQM-1’s “Q” adjustment ranges from a narrow bandwidth of 10 to a very broad bandwidth of 1. A clockwise rotation increases “Q” while a counterclockwise rotation decreases “Q”.

**BOOST/CUT:** This control is used to boost or cut the level of the center frequency. Its adjustment ranges from **18 dB of cut** at full counterclockwise rotation to **18 dB of boost** at full clockwise rotation. Flat response (0 dB – no cut or boost) occurs at mid rotation when the slot on the control is in the horizontal position.

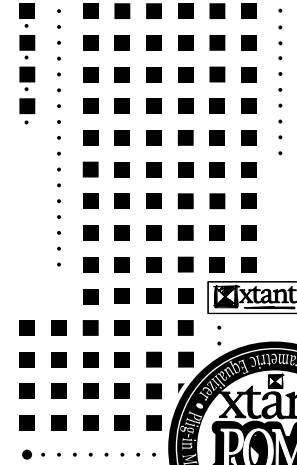


## FOUR - YEAR LIMITED U.S.A. WARRANTY

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Xtant Technologies (Xtant) warrants its amplifiers and accessories to be free from defects in materials and workmanship under normal use and service for a period of four (4) years from the date of original purchase when the unit is installed by an Authorized Xtant Select Dealer. Non-Authorized Dealer installed products carry a one (1) year parts and labor limited warranty. The extent and conditions of Xtant's Limited Warranty are as follows:

1. Authorized Xtant Select Dealer Installed Products: Xtant will either repair or replace at no charge, to the original purchaser, any unit which Xtant's examination discloses to be defective and under warranty, provided the defect occurs within four (4) years from the date of purchase when the unit is installed by an Authorized Xtant Select Dealer and the product is returned immediately to Xtant. This warranty is not transferable.
2. Non-Authorized Xtant Dealer Installed Products: Xtant will either repair or replace at no charge, to the original purchaser, any unit which Xtant's examination discloses to be defective and under warranty, provided the defect occurs within one (1) year from the date of purchase and the product is returned immediately to Xtant. This warranty is not transferable.
3. The date of purchase and proof of Authorized Dealer Installation of an Xtant amplifier and/or accessory must be established by an original (or copy of the original) sales receipt which must accompany the article being returned for warranty work.
4. This warranty shall NOT apply to any Xtant unit found to have the original factory serial number removed or defaced. All products received (by Xtant) 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.
5. The provisions of this warranty shall not apply to any Xtant 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 Xtant's owner's manual. Nor shall this warranty apply to any part which has been subject to misuse, neglect, or accident.
6. Xtant 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 Xtant applicable to its products. Any implied warranty or merchantability or fitness for a particular purpose applicable to Xtant's amplifiers and/or accessories is limited in duration to the duration of this limited warranty. Xtant 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 unit will be serviced on an in-warranty basis within the warranty period for the correction of warranted defects. If improper operation of your Xtant product should occur, contact your Authorized Xtant Select Dealer for assistance with the return and factory repair of your Xtant product. If an Authorized Xtant Select Dealer is not available, please contact Xtant's Customer Relations Department at (602) 970 9900 from 8:00 am to 5:00 pm (MST) for assistance.

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