SPECTRUM COMMUNICATIONS CORP.
1055 W. GERMANTOWN PK.
NORRISTOWN, PA. 19401
215 - 631 - 1710

SCR200/SCR450 RECEIVER BOARD

1.0 INSTALLATION

1.1 The board should be mounted in a shielded housing with the standoffs provided. Use a housing which allows at least ½" of clearance on all sides (around the board) and at least 1" above the board. This is necessary to prevent stray coupling around the various high gain RF and IF stages. Poor performance may result if these precautions are not followed.

For proper operation as a repeater receiver, the SCR200 or SCR450 receiver board must be mounted in a tightly shielded housing of at least a minimum size of 6½ X 5 3/4 X 2". The box should have tightly sealed seams to prevent stray transmitter RF from entering. 1000pF or larger feedthrough capacitors must be used for all leads (except ground) which enter or leave the housing. (The use of ferrite beads just inside the feedthrough will improve the effectiveness of the shielding/filtering, but this is not usually necessary.) A UHF or Type N connector is recommended for RF input. Double shielded coax cable is highly recommended for use throughout all repeater systems (RG9, 223, or 214/U).

1.2 See the Receiver Schematic and Board Layout for connections such as Local Monitor Volume and Squelch pots, 13 VDC input, etc. Shielded wire must be used for connections to the Monitor Volume pot, (and Repeat Audio Level pot - if the board is used for repeater or link receiver application). Note that for repeater or link application, R603, the Rpt. AF Level pot (not supplied) is used to set the AF level into the repeater or link transmitter. The transmitter's audio input impedance should be greater than 1 K ohm. (Use shielded wire to transmitter's AF Input terminal.) Also note that if it is desired to decrease the "bass" response ("Lows") of the repeated audio, a low value coupling cap (.001 to .01uF typ.) should be wired in series with the transmitter's AF Input terminal.

1.3 For Spec Comm SCR200/SCR450 Receiver/Housing Assembly: See Figure 1 which lists the housing Feedthru Cap Numbers. These Feed-Thru cap numbers correspond to the "E numbers" listed on the SCR200 or SCR450 Schematic. Simply add 1000 to the board terminal number for the corresponding housing feedthru cap number.

2.0 METERING FUNCTIONS

2.1 This receiver board is quite unique in that it has three different metering functions "built in" on-board. These include Discriminator, Deviation, and Signal Strength Meter functions. These functions (should you desire to use them) can be extremely useful to the operator at the receiver site. Now the frequency, peak deviation, and relative signal strength of all the system's users can be checked - very quickly and easily...without the hassle of bringing in each transceiver to a shop for testing. (See the Schematic Diagram for hook-up.) A 1mA DC Panel Meter should be used, (preferably the custom Spec Comm "Signal/Deviation" Meter.) (Internal resistance must be about 1K ohm.) See para.'s 5.1.4 to 5.1.7 for Calibration and Adjustments. (Dev. and Disc.