

wave ratio (SWR) of not over 2.0 to 1 at the band in use. Trap dipoles using one set of traps will usually be satisfactory for 80 and 40, sometimes also for 15. The "Hy-Gain Hy-Tower" is suitable for all bands. Several manufacturers make three-band beams suitable for 20, 15 and 10 meters. The point is that the antenna, be it a simple dipole or vertical or complicated beam, should closely match a 50 ohm coaxial cable on the band in use.

- (b) Crystal or VFO frequency: See table below for crystal frequencies for the various bands. The VFO output frequencies should be the same as the marked crystal frequencies; such is the case with virtually all manufactured commercial VFO's now in production.

BAND	80 (3.5-4.0)	40 (7.0-7.3)	20 (14.00-14.35)	15 (21.00-21.45)	10 (28.00-29.7)
XTAL or VFO Freq. (Mc.)	3.5 to 4.0 or *1.75 to 2.0	7.0 to 7.3 or *3.5 to 3.65	7.0 to 7.175	7.0 to 7.15	7.0 to 7.425 **
<p>* Possibility of tuning to wrong harmonic exists with these frequencies. Be absolutely sure GRID tuning knob is in the 80-40 range when tuning for maximum grid current.      ** see Page 15</p>					

- 5-4 - CRYSTAL or VFO: (a) Crystal: Any crystal of the proper frequency (see 5-3) and proper pin spacing and size (FT-243 type holder, 1/2 inch pin spacing, .093 diameter pins) can be plugged into the front panel XTAL socket. Be sure the XTAL-VFO switch on the rear panel is in the XTAL or uppermost position. Follow tuning instructions in the remainder of this section.
- (b) VFO: Any STABLE VFO with output on the proper frequencies (see table in 5.3) and sufficient output to drive the grid of a 6CL6 can be used in place of a crystal to control the frequency of the SB-175. The VFO should be of the high-impedance output type, that is, the output should be taken from the plate of the last stage of the VFO through a small coupling condenser to the output jack. It should not be a link-coupled output, as this may