

transmitted, but it is 40 db below the wanted sideband. When this SSB signal is received at a level of 20 db over S9, the unwanted sideband will be present at a level of approximately S5. The same is true of carrier suppression. With carrier suppression of 50 db, and a signal level of 20 db over S9, carrier will be present at a level of approximately S3 to S4. Reports of nearby stations as to the level of suppression must be considered carefully.

TUNING

All signal generation is accomplished at a reference frequency of 5173.5 kc. The carrier oscillator operates at 5173.5 kc as supplied from the factory, and with this crystal the transceiver generates upper sideband signals on 20 meters, and lower sideband signals on 40 and 75 meters. For other sideband operation, a crystal operating at approximately 5176.5 kc must be used. See Page 28. The tuning dial of the Swan has two marks, USB and LSB. The area between these marks represents the passband of the crystal lattice filter, approximately 3 kc. Since the carrier oscillator is used for BFO injection in the receive position, it is not possible to receive USB signals if transmission is on LSB, and vice versa. Table I shows the frequencies used in the transceiver as shipped from the factory

TABLE I
SWAN 240 TRANSCEIVER FREQUENCIES

Band	Tuning Range	VFO Freq. Range
20 Meters	13,990 to 14,380 kc	8,813.5 to 9,203.5 kc
40 Meters	6,900 to 7,340 kc	12,073.5 to 12,513.5 kc
75 Meters	3,640 to 4,030 kc	8,813.5 to 9,203.5 kc

The VFO tuning range on 20 and 75 meters is the same. The sum of the VFO frequency and the reference frequency, 5173.5 kc USB results in a 20 meter USB signal. On 75 meters the difference of the two frequencies is used, resulting in a 75 meter LSB signal.

The VFO operates as a frequency doubler on 20 and 75 meters, and as a tripler on 40 meters.