



## SWAN MODEL 210 FREQUENCY CONTROL UNIT

### SWAN MODEL 210 FREQUENCY CONTROL UNIT

Model 210 Frequency Control Unit is designed for full coverage of the 50-54 mc band when used with the model 250 transceiver. The unit matches the 250 in height, depth, and styling. Telay switching is built-in, and a selector knob on the front panel provides for selection of frequency control. In position 1 the VFO in the 250 is used for both transmit and receive. In position 2 the 250 VFO is used for transmit and the external 210 VFO is used to receive. In position 3 the 210 VFO is used for both transmit and receive.

An adaptor socket must be installed on back of the 250 transceiver to accommodate the 210. This adaptor socket and installation kit is included with the 210. See page 24 for details.

### CIRCUIT THEORY

Q1, the 2N706 Oscillator operates in the common base configuration, as a Colpitts oscillator. See Figure 6. Capacitors C1801, C2001, and C2003 effectively tap the oscillator across only about 10 percent of the tank circuit. This results in exceptional stability. Q2, the Emitter Follower, is used for matching the impedance of the coaxial cable to the transceiver, as well as for isolation. The KC tuning dial provides vernier tuning over a 0 to 500kc range, and the MC dial is adjusted to cover the desired range.

### ALIGNMENT

For frequency calibration of the model 210 external oscillator, refer to page 11 for instructions on calibration of the internal VFO in the model 250 transceiver. The same procedure applies to the model 210. Actual oscillator frequency is listed in the accompanying chart.

Transceive Frequency	Injection Freq. From VFO Amp.	Oscillator Frequency
49.5 MC	38,802 KC	12,934.0 KC
50.0	39,302	13,100.6
50.5	39,802	13,267.3
51.0	40,302	13,434.0
52.0	41,302	13,767.3
53.0	42,302	14,100.6
54.0	43,302	14,434.0