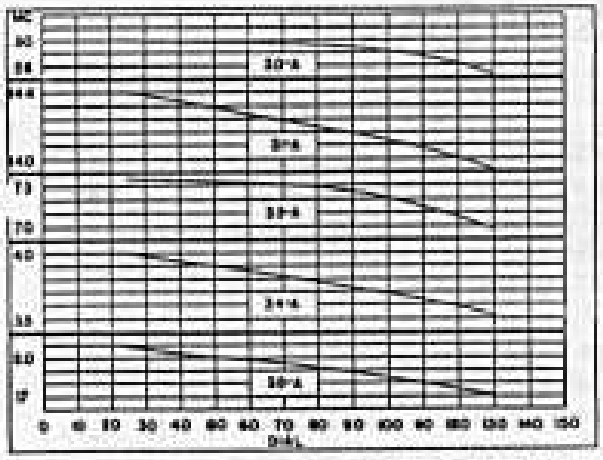
quency to which the receiver is tuned.

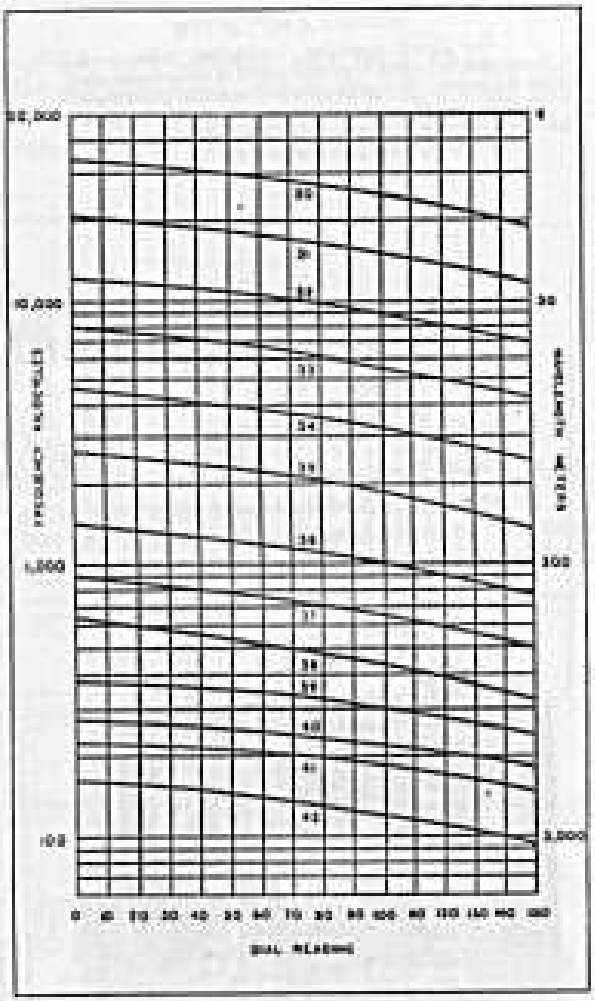
To the left of the main dial is the R.F. amplifier trimmer capacitor. This control is used to compensate for minor mistracking of the R.F. amplifier stage, as may be caused by antenna detuning. The trimmer knob should be adjusted to give maximum sensitivity, in the following manner: The regeneration control should be advanced beyond the point of detector oscillation. As the R.F. amplifier trimmer capacitor is rotated back and forth or "rocked," the regeneration control should be slowly retarded. At one adjustment of the latter, the detector will oscillate only with the R.F. amplifier trimmer set at a definite point. It is at this point that the R.F. amplifier and detector circuits track, and the receiver has maximum sensitivity.

Below the main dial is the R.F. gain control. The control disc is arbitrarily calibrated from 1 to 9. The purpose of the gain control is to adjust the amplification of the R.F. amplifier tube. Amplification increases as the control is turned toward 1. The graduated R.F. gain control makes possible reasonably accurate measurement of signal input, as follows: With the receiver tuned to either a modulated or unmodulated carrier, the R.F. gain control should be retarded until the signal is barely audible. The gain control disc number centered in the panel opening below the main dial will indicate the signal input in S units, a term commonly used by radio operators.

The regeneration control is located to the right of the main dial. It is used to adjust the voltage applied to the screen of the detector tube. As the control knob is turned in a clockwise direction, the amplification of the detector tube increases up to the point at which oscillation takes place. When receiving modulated signals (phone), best sensitivity will be had with the detector operated just below the point of oscillation. For C.W. (code) reception, the detector must be oscillating to produce a beat note, the frequency of which will be determined by the main dial setting.



DWG. NO. 2 — BANDSPREAD COIL CALIBRATION CURVES



DWG. NO. 3 — GENERAL COVERAGE COIL CALIBRATION CURVES

At the left side center of the cabinet front panel is mounted a toggle switch. When the change-over switch mentioned under "Power Requirements" is set at "6.3," the panel toggle switch is used to open the receiver "B" circuits and silence the receiver as may be necessary during periods of transmission. With the change-over switch referred to above set at "1.5," the panel toggle switch is used as a battery ON-OFF control, opening both the filament and "B" circuits. It is also used to silence the receiver during transmission periods. With this system, power consumption is reduced to a minimum during "stand-by" periods.

A headphone output jack is located at the center right section of the cabinet front panel. The headphones used should be of the magnetic type having an impedance of approximately 20,000 ohms, as is usually the case when the DC resistance is from 2000 to 3000 ohms. The headphone jack is connected in series between the plate of the output tube and B+. Crystal headphones and some special types should not, therefore, be used with the SW-3 unless a coupling transformer is employed.