INTRODUCTION

The new HQ-180 communications receiver has been designed to provide the most solid contacts under all conditions of reception. It will provide years of top performance with a minimum of maintenance. The HQ-180 has a self-contained power supply operating from a 60 c.p.s., 105-125 volt a-c source. The model HQ-180C incorporates a telechron automatic electric clock timer in its design. The export model, HQ-180E, will operate from a 50-60 c.p.s., 115-230 volt a-c source. Because of the power supply operating frequency and voltage of the export model, the clock (automatic timer) is not incorporated in this model. Approximate power consumption is 120 watts.

The HQ-180 is an eighteen tube triple conversion superheterodyne receiver (double conversion, .54 to 7.85 megacycles) that has been designed to provide the best possible performance for reception of AM, SSB and CW signals. The most important performance characteristics of a communications receiver have been made adjustable by means of the front panel knobs.

The RF tuning system covers the following bands:

MAIN TUNING DIAL

.54 to	1.05 mc	calibrated in	10 kc divs.
1.05 to	2.05 mc	calibrated in	10 kc divs.
2.05 to	4.04 mc	calibrated in	20 kc divs.
4.0 to	7.85 mc	calibrated in	50 kc divs.
7.85 to	15.35 mc	calibrated in	100 kc divs.
15.35 to	30.0 mc	calibrated in	100 kc divs.

BAND SPREAD TUNING DIAL

Arbitrary scale			0 to 100 divs.
3.44 to	4.040 mc	calibrated in	5 kc divs.
6.810 to	7.3 mc	calibrated in	5 kc divs.
13.980 to	14.425 mc	calibrated in	5 kc divs.
20.925 to	21.60 mc	calibrated in	5 kc divs.
27.890 to	29.7 mc	calibrated in	10 kc divs.

A built-in 100 kcs crystal calibrator provides marker signals at every 100 kcs on all bands for checking dial calibration accuracy.

The dial calibration reset knob enables you to adjust the frequency calibration to approach frequency meter standards on each amateur band.

A tuned RF stage with the addition of an antenna trimmer assures maximum sensitivity and a high signal to noise ratio for outstanding reception of weak and distant signals. A manual sensitivity (RF gain) control prevents overloading by strong signals.

The most prominent features in the HQ-180 receiver are the selectivity and sideband selectors. They enable you to adjust for optimum reception under the most adverse conditions with each type of signal. The panel knob indicates fixed and precisely known band widths approaching mechanical filter type of skirt selectivity.

One special feature of the HQ-180 is a "razor sharp" adjustable slot filter to eliminate co-channel interference. Proper adjustment of its slot frequency and depth controls provides attenuation of approximately 60 db for an interfering signal.

The first IF (3035 kcs) used from 7.85 to 30.0 mcs is made highly selective by the use of a crystal filter. This minimizes noise and spurious responses.

To compensate for wide input signal variation, the receiver incorporates a fast attack (charge), adjustable decay AVC and switch with OFF-SLOW-MEDIUM-FAST positions suitable for all types of reception.

CW and SSB signals are detected by a separate linear product detector for the highest signal to noise ratio and freedom from interference.

A continuously variable (audio type) noise limiter provides limiting on both positive and negative noise pulses.

The "S" meter indicates carrier level on all types of reception where AVC is used. It is calibrated for AM signals with the AVC on SLOW-MEDIUM-FAST to indicate the accuracy of tuning and the relative strength.

The receiver possesses the Auto Response feature which automatically narrows and widens the frequency range of the audio output, according to the gain required. This feature permits higher fidelity reception on stronger signals, while providing the sharp cut-off required in receiving communications under adverse conditions. A second advantage of the Hammarlund Auto-Response is the rapid damping of the audio power in the speaker voice coil which greatly minimizes undesirable speaker "hangover". The receiver may be used with either speaker or headphones. AC hum is made inaudible by means of adequate filtering.

Large comfortable controls in logical groupings are provided for greatest operating ease. The front panel is clearly marked to permit full attention to the operation at hand.

The HQ-180 was designed with you in mind. You will have many hours of pleasure in operating this truly fine communications instrument.