RECEIVER TYPE HRO

SUMMARY OF DATA

RECEIVER TYPE HRO

PURPOSE

M.F. and H.F. Receiver fitted in some Royal Navy Shore Wireless stations.

TYPE OF RECEPTION

C.W. or Voice.

FREQUENCY RANGE

50-530 kc/s continuous.
480 kc/s - 30.0 Mc/s continuous.

Frequency coverage is by nine plug-in coils as follows:-

Frequency	Coil Set	Frequency	Coil Set
14.0 - 30.0 Mc/s	A	900 - 2050 kc/s	E
7.0 - 14.4 Mc/s	B	480 - 960 kc/s	F
3.5 - 7.3 Mc/s	C	180 - 430 kc/s	G
1.7 - 4.0 Mc/s	D	100 - 200 kc/s	H
		50 - 100 kc/s	J

The plug-in coil sets normally supplied with this receiver are types A, B, C, D.

PHYSICAL DATA

	Height	Width	Depth	Weight
Table Model	9"	17½"	12"	51 lb with 9 coil sets
Rack Model	8¾"	Panel 19" Cabinet 17"	12"	53 lb with 9 coil sets

BRIEF TECHNICAL DESCRIPTION

Receiver HRO comprises two signal frequency amplifier stages, a mixer and separate oscillator. There is a selectivity switch incorporating a crystal gate for single signal reception. The 456 kc/s intermediate frequency stages are followed by a double diode pentode serving the three functions of signal and AGC rectification and 1st audio amplifier. This in turn is followed by a pentode output stage. AGC and an associated signal strength meter are provided for use on M.C.W. reception. A switched variable beat frequency oscillator is provided for C.W. reception.

ELECTRICAL CHARACTERISTICS

C.W. Sensitivity:- 1.7 - 14 Mc/s range 1 to 2 μV) for 20 db signal to
14 - 30 Mc/s range 2 to 4 μV) noise ratio

Selectivity:- (a) Manually operated:-
Crystal Filter off:-

Ratio	Bandwidth
2	3.0 kc/s
10	7.5 kc/s
100	14.0 kc/s
1000	21.5 kc/s

(b) Crystal Filter in:-

Min. Selectivity 2.5 kc/s
Max. Selectivity 200 c/s

Max. Power output:- Undistorted Power Output 1.5 watts.
AGC characteristic:- Flat within ± 10 db between 1.0 and 100,000 microvolts.

POWER REQUIREMENTS AND CONSUMPTION

Receiver requires 240V 70 mA D.C. and 6.3V 3.1 A A.C. supplied from a Power Pack (230V A.C. 50/60 c/s A.C. supply). Consumption is 70 watts. In some cases the necessary supplies are derived from a Vibrator Unit working from a 6V battery.

HEAT DISSIPATION

70 watts.

AERIAL SYSTEM

Aerial input impedance:- Approx. 500 ohms suitable for use with balanced or unbalanced input.

REMARKS

This is an American receiver.

HANDBOOK - U.S. Navy.

ESTABLISHMENT LIST Nil.

INSTALLATION SPECIFICATION Nil (Installation information is contained in handbook)