



VHF Telephone Receivers

Types HR55 and HR56 (AM)



7280

DESIGNED FOR OPERATION on one spot frequency, these amplitude modulated receivers find application as fixed stations in main control centres and for general monitoring purposes.

The receivers are built with standard 19 in. front panels and may be housed in a sturdy metal cabinet or, alternatively, may be mounted in a suitable rack or rack cabinet; this latter arrangement permits receivers to be mounted in banks if required. Facilities for remote control are incorporated.

All controls are on the front panel which carries an on/off switch, volume control, power indicator lamp, and fuses. Each receiver incor-

porates its own loudspeaker and provision is also made for connecting an alternative external low impedance loudspeaker. A 600 Ω output is also included. The complete assembly may be withdrawn from the cabinet or rack to permit easy servicing.

These equipments are designed to operate within an ambient temperature range of -10 to $+45^{\circ}\text{C}$ and are suitable for use in tropical climates.

CIRCUITS

The receivers are of the double superheterodyne type. The stages are: RF amplifier, first mixer,

second mixer, second IF amplifier, detector, noise limiter and output amplifier. The local oscillator is crystal controlled. A muting circuit, whose level is adjustable, incorporates a relay which may be used to operate external circuits, for example a call bell. The receivers incorporate their own power supply units.

DATA SUMMARY

Frequency ranges: Type HR 55 70–100 Mc/s.
Type HR 56 156–184 Mc/s.

Frequency tolerance: 20 parts in 10^6 without a crystal oven and 8 parts in 10^6 with a crystal oven, within an ambient temperature range of -10 to $+45^\circ\text{C}$. Crystal trimming is provided.

Service: AM telephony.

AF response: Flat to within 3 dB from 300–3000 c/s.

Audio output: 1 watt into $3\ \Omega$ loudspeaker and 10 mW into $600\ \Omega$ unbalanced.

Noise factor: HR 55, better than 6 dB.
HR 56, better than 8 dB.

Spurious response: HR 55 better than -75 dB, including image frequency, referred to the working frequency. HR 56 better than -70 dB.

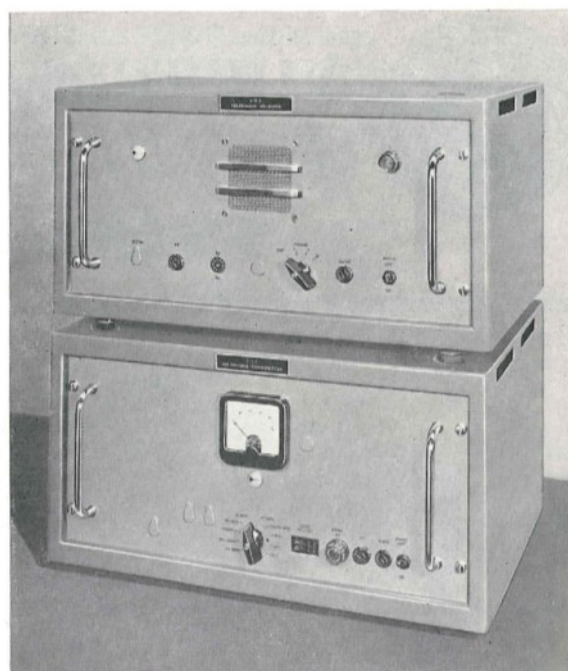
Selectivity: Wide or narrow bandwidth as required.

Distortion: Less than 8% with 1 watt output, at 1000 c/s.

Muting: Will operate down to $1\ \mu\text{V}$ input with adjustable control.

Oscillator radiation: Less than $0.02\ \mu\text{W}$.

Input impedance: $75\ \Omega$.



Type HR 55 receiver mounted integral with its associated transmitter of the HX 50 series.

1728

Power supplies: 100–130 or 200–250 V, 50–60 c/s single-phase AC.

Power consumption: 64 W (approx.)

Dimensions (overall):

	Height	Width	Depth	Weight
<i>Chassis only</i>				(approx.)
	$8\frac{3}{4}$ in.	19 in.	12 in.	39 lb
	(22 cm)	(48 cm)	(30 cm)	(17.7 kg)
<i>Receiver in case</i>				
	$11\frac{3}{4}$ in.	$20\frac{3}{4}$ in.	$16\frac{1}{4}$ in.	60 lb
	(30 cm)	(53 cm)	(42 cm)	(27.3 kg)

These receivers have been Type Approved by the British Post Office.

Marconi

MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED

Marconi House, Chelmsford

Telephone: Chelmsford 3221. Telex: 1953. Telegrams: Expanse Chelmsford Telex