RECEPTION SETS AR88D AND AR88LF

TECHNICAL HANDBOOK - DATA SUMMARY

PURPOSE

General purpose communications receivers for M.C.W., C.W. and R.T., designed to withstand wide climatic and supply voltage variations.

DESCRIPTION

The receivers consist of two R.F. stages, a mixer, local oscillator, three I.F. stages, a detector, noise limiter, B.F.O., A.F. amplifier, output stage and power supply system. The I.F. amplifiers incorporate variable selectivity, and a crystal filter. The sets are normally housed in steel cases but can be rack mounted.

PHYSICAL DATA (In case)

Weight:	100 lb.
Height:	11 in.
Width:	19¼ in.
Depth:	19¼ in.

FREQUENCY

AR88D

Coverage:	535kc/s to 32Mc/s in six bands
Intermediate frequency:	455kc/s

AR88LF

Coverage:	73 to 550kc/s and 1.48 to 30.5Mc/s in six bands
Intermediate frequency:	735kc/s

PERFORMANCE

Sensitivity; both sets:
C.W. - less than 3.0μV for 20db. signal-to-noise ratio at 500mW to loudspeaker
M.C.W. - less than 10μV for 20db. signal-to-noise ratio at 500mW to loudspeaker

Maximum undistorted output; both sets:
2.5W to loudspeaker or line

Distribution - Class 910. Code No. 4

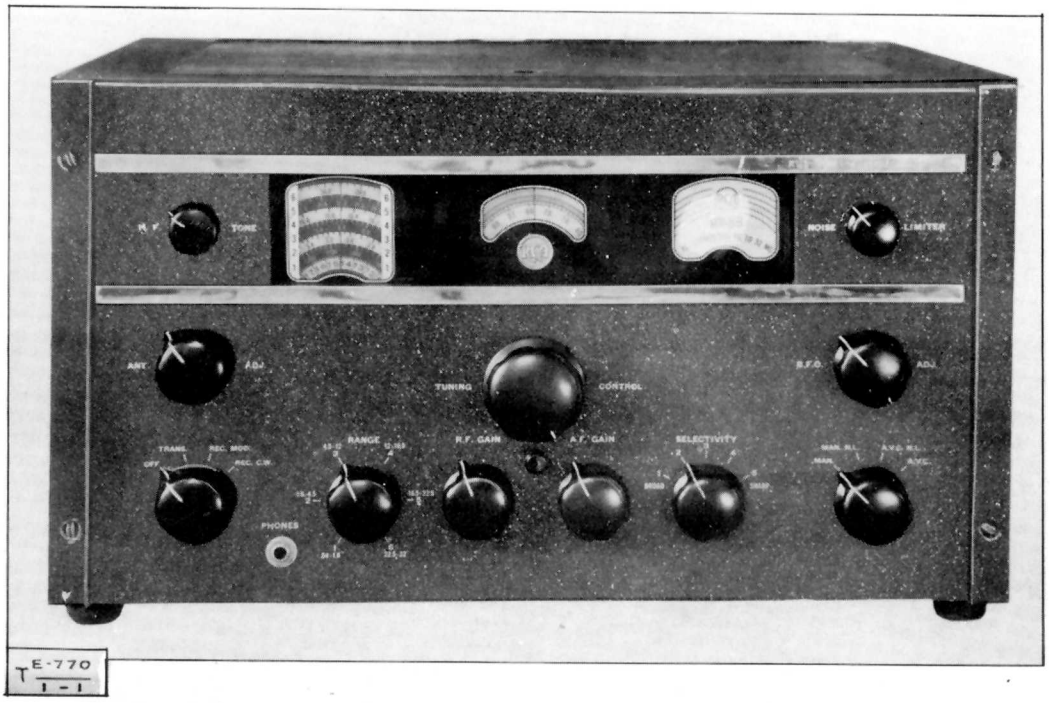

Fig 1 - General view of Reception set AR88D

Output impedances:-

AR88D

2.5Ω to speaker
600Ω to balanced line
20,000Ω to headphones

AR88LF

2.5Ω to speaker
20Ω to unbalanced line
20Ω to headphones

Selectivity

Selectivity control position	*Bandwidth at -6db.*	
	AR88D	*AR88LF*
1	13kc/s	16kc/s
2	7kc/s	8kc/s
3	3kc/s	4kc/s
4	1.5kc/s	2kc/s
5	0.4kc/s	0.55kc/s

POWER REQUIREMENTS

AR88D: 100 - 165V or 190 - 260V, 50 - 60c/s, 100VA
AR88LF: 115 or 230V, 25 - 60c/s, 100VA

Alternatively each receiver may be fed with following D.C. supplies:-

L.T. 6V at 4A
H.T. 250 - 300V at 90mA

AERIAL

The receivers are designed for coupling to a 200Ω transmission line, except on the low frequency general broadcast bands. For these and general use a single wire 25 to 50 ft. long can be used.

VALVES

Circuit ref.	*Function*	*Valve type*	
		AR88D	*AR88LF*
V1 - V2	R.F. amplifiers	CV 1978	CV 1978
V3	Local oscillator	CV 1933	CV 1933
V4	Mixer	CV 1966	CV 1966
V5 - V7	I.F. amplifiers	CV 1978	CV 1978
V8	Detector and A.V.C.	CV 1930	CV 1930
V9	Noise limiter	CV 1930	CV 1930
V10	A.F. amplifier	CV 591	CV 591
V11	Power amplifier	CV 1940	CV 511
V12	B.F.O.	CV 1933	CV 1933
V13	Voltage stabilizer	CV 216	CV 216
V14	Rectifier	CV 1856	CV 1856
V16	Gas gap protector	-	CV 651

REMARKS

The Reception set AR88D was originally manufactured as the Reception set AR88. It still bears this name on the front panel. The change in designation occurred between the serial Nos. 003000 and 010000 and coincided with a change in the design of the output transformer to provide a 600Ω balanced line output and a 20,000Ω headphone output. The output impedances of the original Reception set AR88 are as follows:-

AR88 with serial Nos. below 003000:-

2.5Ω to speaker
20Ω to headphones

AR88 with serial Nos. above 003000:-

2.5Ω to speaker
600Ω to headphone and unbalanced line

57/Maint/4017

END