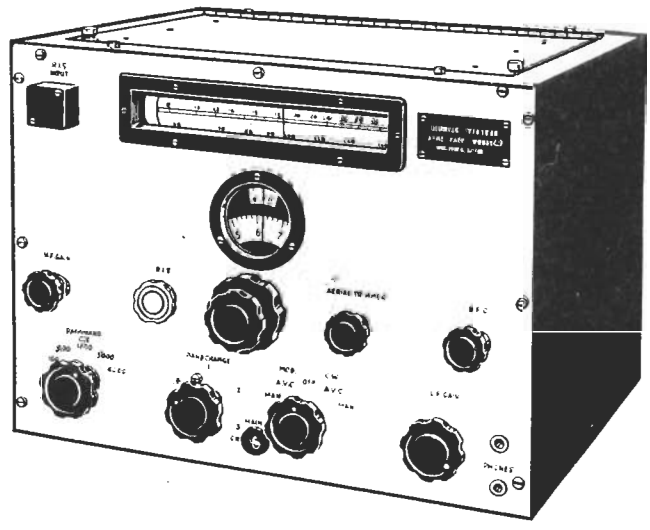
CDC
CDL

RECEIVER OUTFITS CDC and CDL

SUMMARY OF DATA

PURPOSE

Standard M.F. and H.F. Receiver Outfit fitted in H.M. Ships and Royal Naval Shore Wireless Stations, Receiver Outfits CDC (Ships) and CDL (Shore) of which the main component is Patt. W2835A-E Receiver B28, is being replaced by Receiver Outfits CDW and CAQ (Patt. 57140/B. Receiver B40).



RECEIVER B28

TYPE OF RECEPTION

C.W. and Voice

FREQUENCY RANGE

60 kc/s - 420 kc/s continuous and 500 kc/s - 30 Mc/s continuous covered in six ranges.

The Intermediate Frequency is 465 kc/s.

PHYSICAL DATA

Height	Width	Depth	Weight
12¼"	16"	16½"	82 lb

BRIEF TECHNICAL DESCRIPTION

In Receiver B28 two signal frequency stages of amplification employing variable mu-valves are used before the mixer valve, which is of the triode hexode type. The triode section is not used and the frequency change oscillator is a separate valve. The mixer output voltage at the intermediate frequency of 465 kc/s is applied to the I.F. Amplifier embodying three stages, with suitable couplings and a crystal gate for varying the bandwidth. The third I.F. amplifier operates a double-diode-triode incorporating the signal detector, the automatic volume control rectifier and the first audio frequency amplifier. An independent frequency beat oscillator is provided for C.W. reception and is coupled to the signal detector. An output stage and the mains rectifier valve and associated circuits complete the circuit arrangement.

ELECTRICAL CHARACTERISTICS

Sensitivity:- (for Average Receiver)

On Voice (M.C.W. (30% Mod. at 1000 c.p.s.)) — 2 μV - 60 kc/s to 11 Mc/s) for a 10 db Signal to
4 μV - 11 Mc/s to 30 Mc/s) Noise Ratio

On C.W. — 2 μV - 60 kc/s to 11 Mc/s) for a 20 db Signal to
4 μV - 11 Mc/s to 30 Mc/s) Noise Ratio

Selectivity:-

I.F. Selectivity

Pass Band Switching Position	Total Bandwidth for 6 db attenuation
6000 c/s	6 kc/s
3000 c/s	2.7 kc/s
1200 c/s	1.2 kc/s
300 c/s	0.35 kc/s

Audio Frequency Response:- The audio frequency response is consistent to within ± 4.5 db of a mean figure for all frequencies between 100 and 6000 c/s.

Maximum Power Output:-
Loudspeaker - 2W into 3 ohms or 1000 ohms
Line - 2mW into 600 ohms
Phones - 0.3mW into high impedance phones

POWER REQUIREMENTS AND CONSUMPTION

Receiver B28 is designed to operate either from A.C. or D.C. supplies as below.

(a) A.C. Supply

200/250 volts 50 c/s with a consumption of 85 watts.

(b) D.C. Supply

(i) H.T. and L.T. Batteries.
H.T. 250 volts 100 mA reduced to 160 volts 60 mA if desired.
L.T. 6 volts 4 amps.

or (ii) Battery and Patt. W2702 Rotary Converter Unit.
6 volts 8 amps total supply.

AERIAL SYSTEM

Facilities are available for connecting 100 ohms balanced or unbalanced or high impedance aerial.

REMARKS

Receiver B28 is a Marconi Receiver Type CR100/1/4/5/7/8.

HANDBOOK

B.R.1430

ESTABLISHMENT LISTS

E504 (CDC) E602 (CDL)

INSTALLATION SPECIFICATIONS

B192 (CDC) B314 (CDL)