

TYPE CS3B

SUMMARY OF DATA

CS3B

PURPOSE

A medium power (5 kW) H.F. transmitter fitted in major Royal Naval Shore Wireless Stations.

TYPE OF TRANSMISSION

C.W.

FREQUENCY RANGE

3 to 22 Mc/s.

MAJOR UNITS AND PHYSICAL DATA

The transmitter is contained on three standard steel cabinets approximately 7 ft. high, these, together with a blank panel form the front side of an enclosure approximately 11½ ft. square, in which are located:-

S.T.C. Ref. No.	Description	Weight (lb)
196LE4A	(A) Distribution Unit (Power Supply)	500
RD380E	(B) Main Control and Distribution Unit	850
181LE8B	(C) Exciter Unit	850
28LE12B	(E) Final R.F. Amplifier Unit	1000
L77184-2	(F) Isolator Doors and Interlock Panel	150
246LU917A	(H) Filament Rectifier (for Final R.F. Amp.)	400
RD1009B	(J) Water Cooling and Circulating Equipment	1500
RL700846	(K) Main E.H.T. Transformer	1600
22LE13A	(L) Main E.H.T. Rectifier	850
8LU137B	(M) Main E.H.T. Filter	1100
L77188/1	(S) Enclosure	2200

BRIEF DESCRIPTION

The transmitter comprises a crystal controlled oscillator, or alternatively the oscillator may be self excited and used as a tunable oscillator. This is followed by three doubler stages, one or more being used according to the output frequency required and selected by a three position switch. The frequency doublers are followed by a 500 watt amplifier using a double screen valve CV 1506. This drives the final R.F. Amplifier consisting of a pi network of inductances and capacitors tuning the grids of two water cooled triodes - CV 570's in push pull. A similar network tunes the anode circuit and feeds into a 600 ohms transmission line giving an aerial output of approximately 5 kW. The transmitter is neutralised on the four switched bands at 3, 4.8, 8 and 14 Mc/s. Tuning is effected by means of fixed capacitors and variable inductance.

CONTROL CIRCUITS

The equipment includes an operator's control unit by means of which high tension supplies may be switched on and off from a point up to 500 yards away. Remote keying may be carried out from any distance.

POWER REQUIREMENTS

380 - 415 volts, 3 phase 4 wire, 50 cycles A.C. 20 kVA.

AERIAL SYSTEM

Balanced open wire twin feeders of 600 ohms impedance to rhombic or V.F.T.D. aerial.

REMARKS

The transmitter may be tuned "off the air" by using a dummy load. A monitoring unit is not supplied with this transmitter.

HANDBOOK

Standard Telephones and Cable Ltd. Handbook No. 306-B

ESTABLISHMENT LIST

Nil

INSTALLATION SPECIFICATION

Nil (Information supplied with Handbook)