

## TYPE CS5B

## SUMMARY OF DATA

## PURPOSE

A high power (10 kW) H.F. transmitter fitted in major Royal Naval Shore Wireless Stations.

## TYPE OF TRANSMISSION

C.W.

## FREQUENCY RANGE

12 to 30 Mc/s.

## MAJOR UNITS AND PHYSICAL DATA

The transmitter is contained in four standard steel cabinets approximately 7 ft. high. These cabinets 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
181LE10A	(C) Exciter Unit	850
28LE15A	(D) Final R.F. Amplifier	500
L77184/2	(F) Isolator Door and Interlock Panel	150
246LU917A	(H) Filament Rectifier (Final Amp)	400
RD1009B	(J) Water Cooling and Circulating Equipment	1500
RL700846	(K) Main E.H.T. Transformer	600
22LE13A	(L) Main E.H.T. Rectifier	850
8LU28A	(M) Main E.H.T. Filter	1100
24LU28A	(E) Output Coupling Unit	400
L77188/3	(S) The Enclosure	2200

The total weight is approximately 4½ tons.

## BRIEF DESCRIPTION

The transmitter comprises a ten position crystal oscillator or alternatively the oscillator may be self excited and used as a tunable oscillator. This is followed by four frequency doubler stages, three or four being used accordingly to radiated frequency required, three stages being used below 23 Mc/s and four for higher frequencies. The output from the doubler is fed to a penultimate amplifier operating at the radiated frequency and using two triodes in push-pull. A final class "C" R.F. amplifier employing two CV 570's triode water cooled valves in push-pull raises the power to the required output of 10 kW. Slight variation of neutralisation is required on each working frequency. Tuning is effected by fitted capacitors and tunable lecher lines.

## 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. Using an electronic keying unit, high speed signalling up to 200 words per minute may be obtained.

## POWER REQUIREMENTS

380 - 415 volts, 3 phase 4 wire 50 cycles A.C. 30 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 supplied which gives a rough frequency check on the transmitter.

**HANDBOOK**

**Standard Telephone and Cables Ltd. Handbook No. 336.**

**ESTABLISHMENT LIST**

**Nil**

**INSTALLATION SPECIFICATION**

**Nil (Information supplied with Handbook)**