

TYPES 604 and, 604D

SUMMARY OF DATA

PURPOSE

A general purpose medium power (400 watts) M.F. A.M. transmitter for communication between ship/ship, ship/shore and ship/air. It is fitted as one of the main wireless transmitters and replaces Types 49 and TAJ.

TYPE OF TRANSMISSION

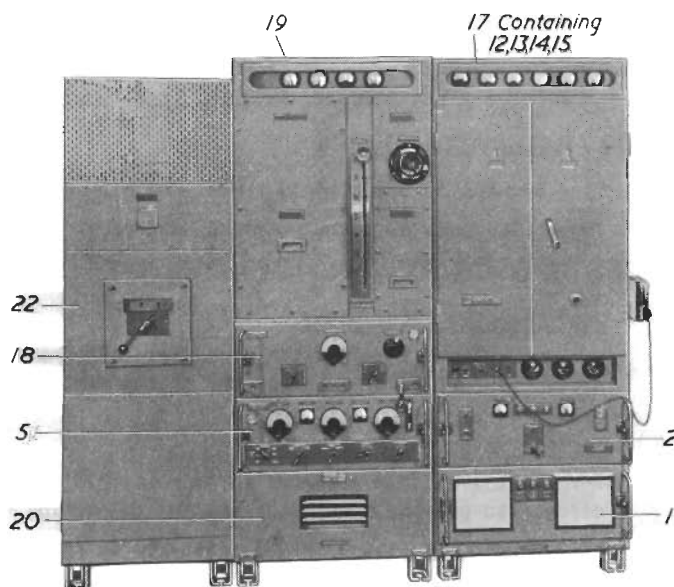
C.W. and M.C.W.

FREQUENCY RANGE

200 - 500 kc/s

MAJOR UNITS

Types 604 and 604D comprise the following units:-



GENERAL VIEW OF EQUIPMENT

Unit	Part. No.	DESCRIPTION	PHYSICAL DATA			
			Height	Width	Depth	Weight
1	W8358	Rectifier Unit SE13	10½"	2'5"	1'5"	130 lb
2	W8359	Modulator and Rectifier Unit Design A	10½"	2'5"	1'2½"	140 lb
12	W9433	Transformer Unit Design 1	14½"	2'3"	1'1"	340 lb
13	54298	Rectifier Unit Design 45	1'9"	2'3"	8⅝"	200 lb
14	W9432	Modulator Unit Design 2	10½"	2'3"	1'5"	120 lb
15	57824	Contacting Unit Design 3	7½"	2'3"	1'2½"	55 lb
16	55057	Bias Unit	8"	2'4"	8"	60 lb
17	57825	Framework Design 3	6'0"	2'5½"	1'11"	530 lb
5	55055	Transmitter 4AD	10½"	2'4½"	1'2½"	69 lb
18	53347	Amplifier M89	10½"	2'4½"	1'11⅞"	96 lb
19	53346	Aerial Tuning Unit for Type 605 M.F. Transmitter	3'1⅝"	2'5⅝"	1'10⅞"	273 lb
20	53349	Framework Design 4	2'10⅞"	2'5½"	1'11"	274 lb
22	58024	Switch-Unit, Aerial, Design 5	6'0"	2'1"	1'11"	400 lb
-	52729	Capacitor 1500 mmfd. mica	Fitted in Unit 22			

Units 1, 2, 12, 13, 14, 15 and 16 are separate panels housed in Unit 17. Units 5, 18 and 19 are separate panels housed in Unit 20. Unit 22 is installed adjacent to Unit 20.

ANCILLARY EQUIPMENT

Patt. No.	DESCRIPTION	REMARKS
53325	Rectifier Unit, Design 46	Only fitted in Cruisers and above, and ships fitted with Wireless and Voice Control Outfits KHA Series

CONTROL CIRCUITS

Type 604 can be operated in 'Local Control' or with any of the standard Wireless and Voice Control Outfits. Type 604D works with the standard Central Wireless Control Outfits (KDA Series).

BRIEF DESCRIPTION OF MAJOR UNITS

Amplifier M89 Patt. 53347

Designed to raise the power level of Transmitter 4AD from 50 watts to 400 watts. Facilities are available for reducing the output of the amplifier to 200 watts by reducing the anode and screen grid H.T. supplies.

Aerial Tuning Unit Patt. 53346

This unit is designed for operation with the Amplifier M89 and comprises a simple series tuned circuit to provide a means of loading and tuning the aerial.

Switch-Unit, Aerial, Design 5, Patt. 58024

This unit consists of a cabinet in which the main R.F. switch is fitted in the upper compartment. The lower compartment houses the Patt. 52729 Capacitor (Aerial Series Condenser). The R.F. switch gives the following facilities:- (a) Isolate (b) Earth (H.F. D/F) (c) Receiver (d) L.P. Condenser 'In' (e) L.P. Condenser 'Out' (f) Spare (g) M.F. Condenser 'In' and (h) M.F. Condenser 'Out'.

A brief description of the other units may be found as follows:-

- Units No. 1 & 2 - Data Sheet on Types 601 and 601D.
- Units No. 12 - 16 inc. - Data Sheet on Types 603 and 603D.
- Unit No. 5 - Data Sheet on Types 602, 602E, 602D and 602ED.

POWER REQUIREMENTS AND CONSUMPTION

- Power Supply - 230 volts 50 c/s single or 3 phase A.C.
- Power Consumption - 3 kW on C.W.
4.5 kW on M.C.W.

HEAT DISSIPATION

- 3.5 kW

AERIAL SYSTEM

The Aerial Tuning Unit will accommodate any aerial of 550 pF to 1100 pF; with an aerial series capacitor it will accommodate up to 3000 pF (capacitance of average trunk can be taken as 7 pF per foot and the capacitance of a single wire aerial as 1.6 pF per foot).

REMARKS

A 'Man Aloft' board is provided on the front of the Switch Unit, Aerial, Design 5 (Unit No. 22). For calibrating Transmitter 4AD, Cruisers and above are supplied with Wavemeter Outfit GJ and a remote indicator from this outfit is fitted adjacent to the transmitter. Smaller ships use Wavemeter Outfit GN (without remote indicator).

No dummy aerial is fitted so the set CANNOT be tested without breaking wireless silence.

HANDBOOK

B.R.1469(1)(2)

ESTABLISHMENT LIST

E696

INSTALLATION SPECIFICATION

B690 - General Fitting
B570 - Fitting in H.M.S. VANGUARD