

TYPES 607, 607E, 607F, 608, 608E & 608F

SUMMARY OF DATA

PURPOSE

A low power (40 watts C.W., 20 watts M.C.W., 13 watts Voice) H.F. M.F. transmitter receiver used as the main set in coastal craft. It replaces Types TW12 and Receiver 394, and transmitter-receiver CNS1.

TYPE OF TRANSMISSION AND RECEPTION

CW, M.C.W. or Voice (No Voice with transmitter TNS2)

FREQUENCY RANGE

Transmitter TGY2 375 - 500 kc/s and 1.2 - 8.3 Mc/s.

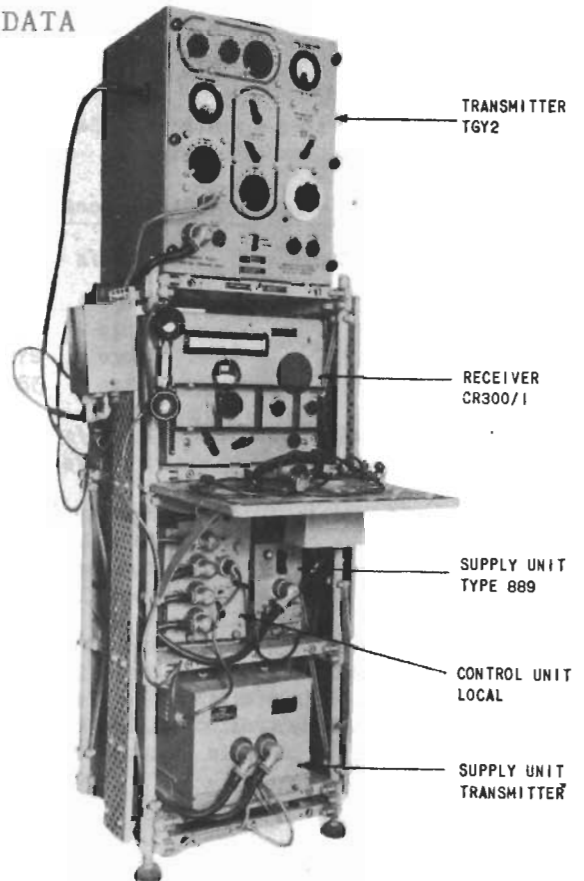
Transmitter TNS2 8 - 20 Mc/s.

Receiver CR300/1 15 kc/s - 25 Mc/s.

MAJOR UNITS

Types 607/E/F comprises principally Transmitter TGY2 and Receiver CR300/1 (Receiver Outfit CDR). Types 608/E/F is the same as Types 607/E/F with the addition of Transmitter TNS2.

Type 607/E/F is mounted in a rack Patt. M459, in the case of Type 608/E/F, Transmitter TNS2 is mounted on a bench to the right of rack.



TYPE 607 EQUIPMENT

Patt. No. (Marconi)	Description	Physical Data			
		Height	Width	Depth	Weight lbs.
M450A	Transmitter Type TGY2	1' 10 1/2"	1' 5 1/2"	1' 5 1/2"	105
M458A	Transmitter Type TNS2 (Type 608/E/F)	2' 2 1/2"	1' 2"	1' 3 1/2"	100
M500A/B	Receiver Type CR300/1	1' 2"	1' 7"	1' 3 1/2"	55
M451	Control Unit local Type 886	1' 2"	9 1/2"	1' 3"	
M454A	Supply Unit, Transmitter Type 888C (Type 607 and 608)	10 1/2"	1' 0 1/2"	1' 8 1/2"	
M453	Supply Unit, Transmitter Type 888A (Type 607E and 608E)	10 1/2"	1' 0 1/2"	1' 8 1/2"	
M455	Supply Unit, Transmitter Type 888D (Type 607F and 608F)	10 1/2"	1' 0 1/2"	1' 8 1/2"	
M487A/B	Supply Unit Type 889	8 1/2"	6 1/2"	1' 1"	25
M459	Rack Assembly	6' 1"	1' 10"	1' 11"	
M452	Control Unit Remote Type 887	1' 2"	1' 4"	9"	35

The total weights of the Type 607 equipment are as follows:-

Type 607 - 420 lbs

Type 607E - 416 lbs

Type 607F - 440 lbs

BRIEF DESCRIPTION OF MAJOR UNITS

Transmitter Type TGY2 - Patt. M450A

Frequency	375 - 500 kc/s and 1.2 - 8.3 Mc/s
Frequency Control	Crystal or Master Oscillator on H.F. Master Oscillator on M.F.
Output	C.W. - 40 - 50 watts M.C.W. - 20 - 25 watts Voice - 12 - 15 watts

The circuit comprises a master oscillator, final stage amplifier and modulator stage each using one valve. Suppressor grid modulation is employed.

Transmitter Type TNS2 - Patt. M458A

Frequency 2 - 20 Mc/s
Frequency Control Crystal or Master Oscillator
Output C.W. - 40 - 50 watts

The circuit comprises a master oscillator, harmonic generator, final stage amplifier and modulator stage. Suppressor grid modulation is employed.

Receiver CR300/1 - Patt. M500A/B (Receiver Outfit CDR)

Frequency Range 15 kc/s to 25 Mc/s in eight ranges:-
Range 1 15 - 85 kc/s Range 5 1.0 - 2.6 Mc/s
Range 2 85 - 210 kc/s Range 6 2.6 - 6.8 Mc/s
Range 3 210 - 550 kc/s Range 7 6.8 - 17.0 Mc/s
Range 4 380 - 1000 Kc/s Range 8 15.0 - 25.0 Mc/s

Intermediate Frequency 98 kc/s on Ranges 1 and 4
570 kc/s on other ranges

Outputs 2 watts into built-in loudspeaker
10 milliwatts for local phones
2 watts for remote loudspeaker
10 milliwatts for remote phones

The circuit is basically a straightforward superheterodyne using one signal amplifier valve, a frequency changer, two intermediate frequency amplifier valves, a combined 2nd detector and first low frequency amplifier and an output stage. In addition there is a separate Beat Note oscillator valve whilst an eighth valve functions as an accurate crystal-controlled calibrating oscillator to provide a check of frequency every 500 kc/s throughout the range. There is a built-in loudspeaker.

CONTROL CIRCUITS

The equipment can be controlled either locally or remotely. The length of control cable must not exceed 150 ft. The remote control unit (Patt. M452) includes a morse key, microphone handset, built-in loudspeaker with volume control. The set may also be adapted for use with Control Outfits KHA series.

POWER REQUIREMENTS AND CONSUMPTION

Types 607 and 608 - 220V D.C. 600 watts into Patt. M454 Transmitter Supply Unit
Types 607E and 608E - 24V D.C. 600 watts into Patt. M453 Transmitter Supply Unit
Types 607F and 608F - 230V 50 c/s A.C. 600 watts into Patt. M455 Transmitter Supply Unit
Receiver Outfit CDR (Receiver CR300/1) can operate from any of the above three sources of supply using Patt. M487 Receiver Supply Unit.

When Types 607E and 608E is fitted as an emergency set or in 110V/220V ships Battery Outfit BBZ is fitted, this outfit consists of two 24V 144 amp hour batteries with charging board and resistance.

The approximate consumption is as follows:-

Transmitter Type TGY2 - 500 watts
Transmitter Type TNS2 - 500 watts
Receiver CR300/1 - 60 watts

AERIAL SYSTEM

Four inch trunk and wire aerial. The aerial and trunk capacity must not be less than 250 mmf. The four inch trunk should not exceed 16 ft in length.

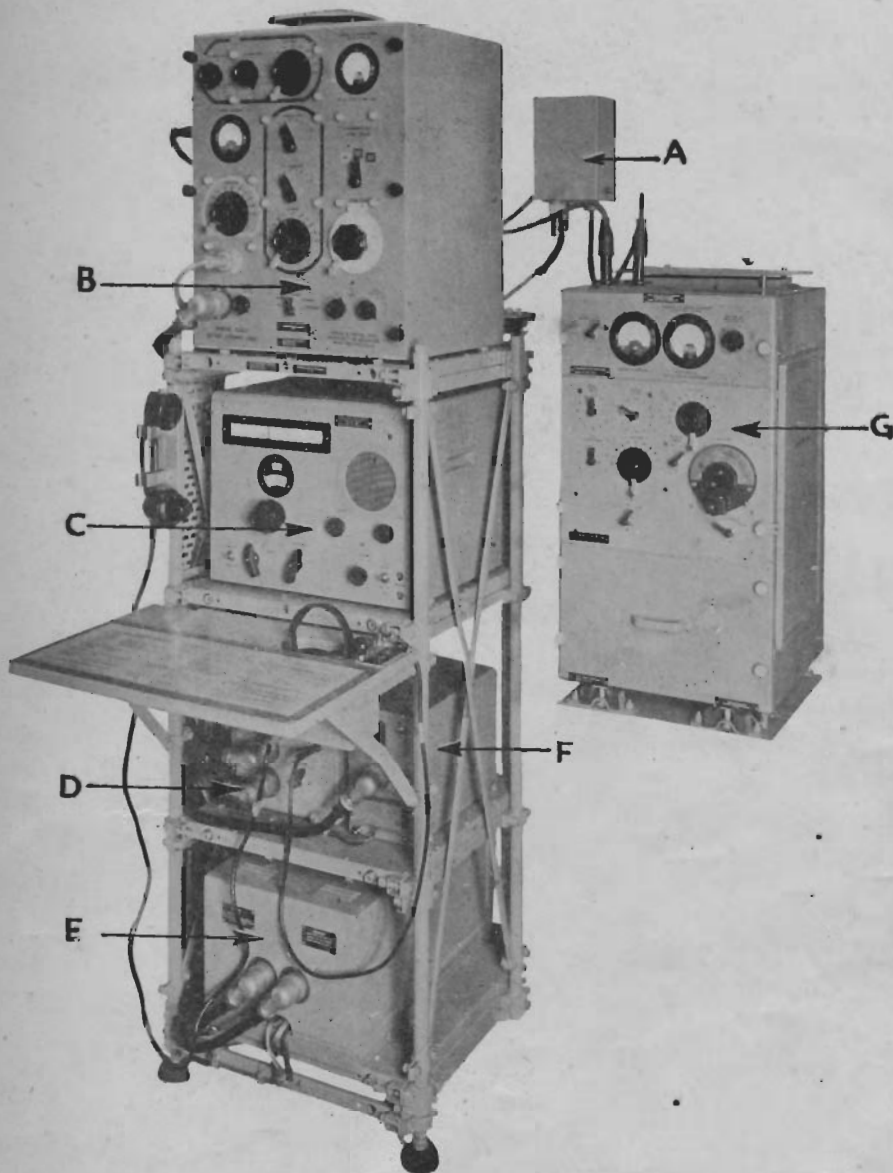
REMARKS

Listening-through facilities are provided.

HANDBOOK B.R.1407

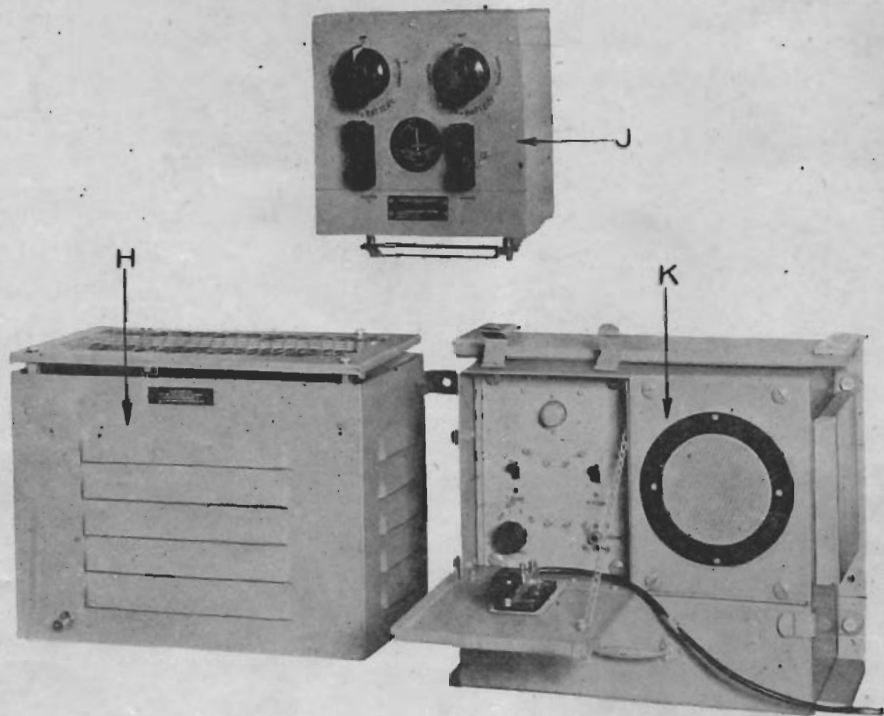
ESTABLISHMENT LIST E.712

INSTALLATION SPECIFICATION B.402



- A. Aerial Listening-Through Relay.
- B. Type TGY. 2 Telegraph-Telephone Transmitter.
- C. Type CR. 300/1 Receiver.
- D. Local Control Unit.
- E. Transmitter Supply Unit.
- F. Receiver Supply Unit.
- G. Type TNS. 2 Telegraph Transmitter (optional).

TYPE TGY. 2—TNS. 2—CR. 300/1 EQUIPMENT.



- H. Charging Resistance.
- J. Battery Charging Switchboard.
- K. Remote Control Unit.

ADDITIONAL OPTIONAL UNITS FOR TYPE TGY. 2—TNS. 2—CR. 300/1 EQUIPMENT

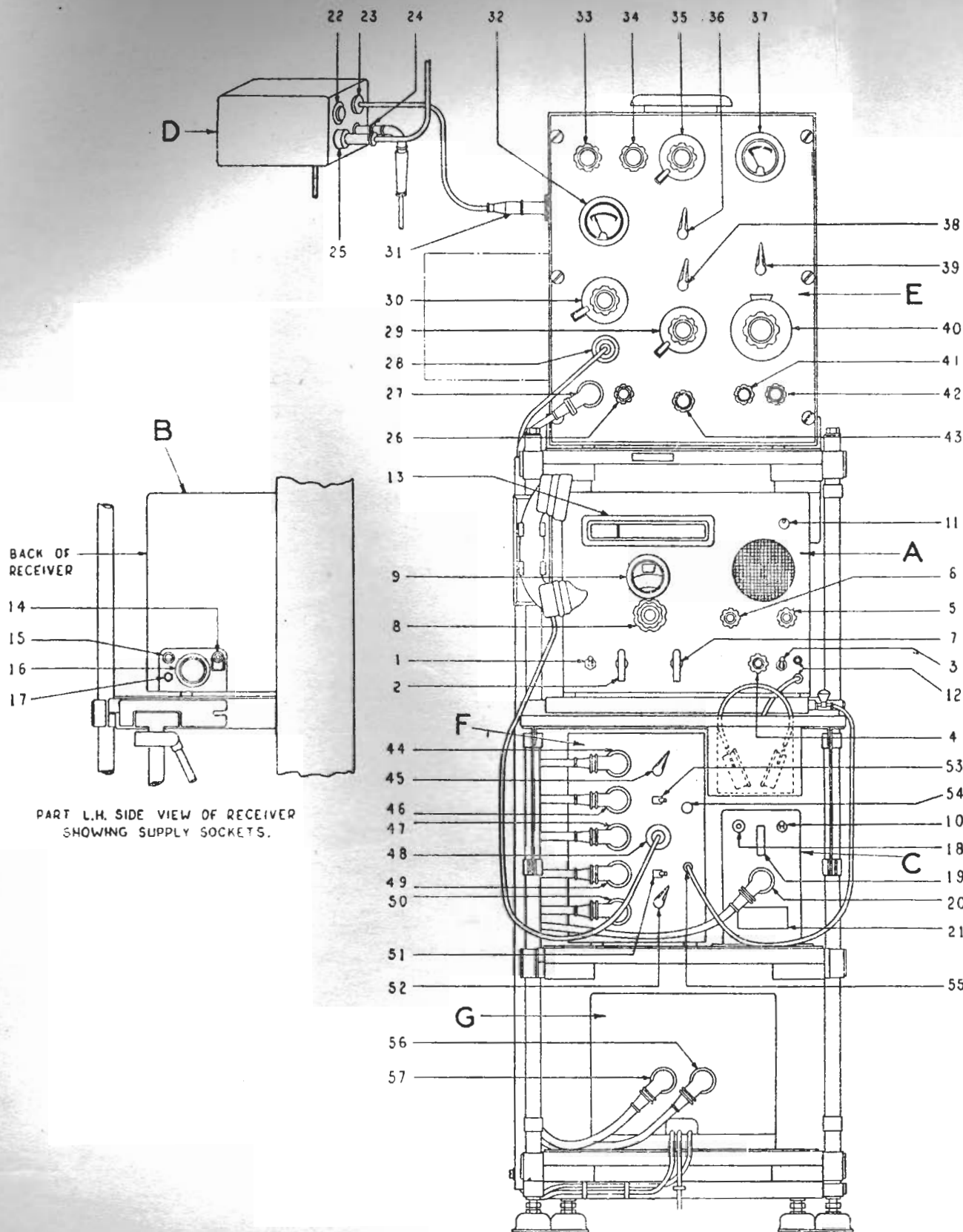
INDEX TO CONTROLS, ETC.

for

TYPE TGY. 2—TNS. 2—CR. 300/1 EQUIPMENT.

For the controls listed below see Drg. WZ. 1755, Sh. 1, opposite.

<i>Ref.</i>	<i>Title</i>	<i>See Unit</i>	<i>Ref.</i>	<i>Title</i>	<i>See Unit</i>
1	Main On/Off Switch (Receiver)	A	45	Local/Remote Control Change-over Switch	F
2	Phone/C.W./Standby Switch	A			F
3	Automatic Gain Control Switch	A	46	Supply Socket (Receiver Supplies)	F
4	Passband Switch	A	47	Output and Control Socket (Transmitter Supplies)	F
5	L.F. Gain Control	A	48	Telephone Handset Socket	F
6	H.F. Gain Control	A	49	Output and Control Socket (Transmitter Supplies)	F
7	Band Change Switch	A	50	Supply and Control Socket (TGY. 2)	F
8	Tuning Control	A	51	L.T. On/Off Switch	F
9	Logging Scale	A	52	TGY. 2/TNS. 2 Change-over Switch	F
10	Main On/Off Switch (Receiver Supply Unit)	C	53	H.T. On/Off Switch	F
11	Desensitising Control	A	54	H.T. Indicator Lamp	F
12	Phone Jacks	A	55	Key Socket	F
13	Frequency Scales	A	56	Output and Control Socket (Transmitter Supplies)	G
14	R.I.S. Socket	B	57	Output and Control Socket (Transmitter Supplies)	G
15	Aerial Socket	B	58	Aerial Plug (to Aerial Trunk)	H
16	Supply, Output and Control Socket	B	59	Aerial Plug (from TGY. 2)	H
17	Earth Bolt (not used when mounted in Rack)	B	60	Feed Meter Switch	H
18	Indicator Lamp (Receiver Supply Unit)	C	61	Aerial Ammeter	H
19	Input Fuse (Receiver Supply Unit)	C	62	Aerial Tapping Switch	H
20	Output Socket	C	63	Aerial Tapping Switch	H
21	Input Terminals	C	64	Amplifier Range Tapping Switch	H
22	Earth Socket	C	65	Aerial Circuit Tuning Control	H
23	Aerial Gland (Transmitter)	D	66	CW-MCW-T Switch	H
24	Aerial Socket (Receiver)	D	67	Feed Meter	H
25	Aerial Socket (Trunk)	D	68	Filament Voltage Control	H
26	Filament Voltage Control	E	69	Harmonic Generator Tuning Control	H
27	Supply and Control Socket	E			
28	H.T. + VE Socket	E	70	Master Oscillator and Harmonic Generator Range Switch	H
29	Aerial Tuning Control (I.F. Range)	E	71	Master Oscillator Tuning Control	H
30	Aerial Tuning Control (M.F. Range)	E	72	Crystal/L.C. Selecting Switch	H
31	Aerial Plug	E	73	Calibration Charts	H
32	Aerial Ammeter	E	74	H.T. Indicator Lamp	J
33	Aerial Tapping Switch (H.F. Range)	E	75	H.T. On/Off Switch	J
34	Anode Tapping Switch (H.F. Range)	E	76	L.T. On/Off Switch	J
35	Aerial Tuning Control (H.F. Range)	E	77	Loudspeaker Volume Control	J
36	Aerial Tapping Switch (I.F. Range)	E	78	Phone Jack	J
37	Feed Meter	E	79	Key Plug	J
38	Anode Tapping Switch (I.F. Range)	E	80	Telephone Handset Plug	J
39	Range Switch	E	81	Remote Control Cable Plug	J
40	Master Oscillator Tuning Control	E	82	Remote Control Cable Plug	J
41	CW-MCW-R/T Switch	E	83	Control Switch (Battery No. 1)	K
42	Crystal/L.C. Selecting Switch	E	84	Mains Fuses (Charging Input)	K
43	Feed Meter Switch	E	85	Charging Meter	K
44	Supply, Control and Output Socket (Receiver)	F	86	Control Switch (Battery No. 2)	K



PART L.H. SIDE VIEW OF RECEIVER SHOWING SUPPLY SOCKETS.

