

AERIAL OUTFITS

Aerial Outfits are designated by one or two letters preceded by the word "group" and referred to as "Aerial Outfit Group"

Group	Service
AB	Main aeriels of Capital Ships, Cruisers and Depot Ships.
AD	Uninsulated wire loop aerial for D/F. Aerial suspended from triatic stay or from a stay from the foremast.
AE	Insulated wire loop aerial for D/F suspended from a stay from the foremast.
AF	Insulated wire loop aerial for D/F situated at the masthead.
AN	Rod aeriels for Submarines.
AP	Rod aeriels for "THAMES" and "PORPOISE".
AQ	Cable aeriels for Submarines.
AR	Cable aerial for "OBERON" Class and later Submarines.
AS	Cable aerial for "UNITY" Class Submarines.
F	Main aeriels of Flotilla Leaders and below, and Second Office aeriels of Flotilla Leaders.
M	Main aeriels of Submarines with sets earlier than 39K, 46M or 47P
N	Small transmitting aeriels of cruisers and above. Small transmitting aeriels of Flotilla Leaders and below and all receiving aeriels.
S	Main aeriels of Submarines with Type 39K and later.
V	For D/F at the masthead of certain Cruisers and larger vessels.
Special	For D/F in Aircraft Carriers.
TA	Used with 8-in. uni-pole aerial trunk.
TB	Used with 8-in. di-pole aerial trunk.
TC	Used with 18-in. aerial trunk.

Aerial
Trunk
Outfits

AERIAL EXCHANGE OUTFITS

Nomenclature :-

The outfits of stores for Aerial Exchange Outfits are supplied independently of other sets. They are distinguished by two letters, the initial letter of which is "E".

Outfit	Principal Components	Remarks
EA	Board, aerial exchange, 6/6, Board, Valve Test. Filter units for aerial.	Obsolescent.
EC	Board, aerial exchange, 10 aerials/12 bays. Board, Valve Test. 12 Filter units for aerials, (9 fitted, 3 in reserve).	Tribal Class destroyers only. The Board, aerial exchanges, in EC and 3D are identical.
ED	Board, aerial exchange, 10 aerials/12 bays. Board, Valve Test. 12 Filter units for aerials, (12 fitted).	Filters are only supplied if ship is fitted with Insulators, Deck, Group OA, for receiving aerials.
EE	Board, aerial exchange, 5 aerials/6 bays.	Leaders, Tribals, Destroyers and Fast Mine- layers with "All Wave Receivers", in which filter units are incor- porated.
EF	Board, aerial exchange, 10 aerials/12 bays.	Cruisers and above with "All Wave Receivers", in which filter units are incorporated.

BATTERY OUTFITS.

The outfits of stores for batteries with their charging arrays are distinguished by two letters, the first of which is "B".

2. Suffix letters (L) and (C) are used with the distinguishing 1 for Battery Outfits to indicate the voltage of the anode battery.

(L) Indicates 50 volt anode battery.

(C) Indicates 100 volt anode battery.

Battery Outfits (L) or (C) are fitted according to the anode volts required for the receiving outfits supplied.

(Note - Battery Outfits BBa and BBb invariably have 100 volt anode batteries and therefore have no suffix.)

3. Receiver filament batteries are of 4 volts (duplicated) in all outfits. Transmitter filament batteries are of 6 volts (duplicated) in all outfits (when fitted).

4. The capacities of the various pattern cells are as follows:-

1551B	....	20	ampere-hour at the 5 hour rate.
5503	....	40	ampere-hour at the 5 hour rate.
6034C	....	3	ampere-hour at the 5 hour rate.
6038A	....	110	ampere-hour at the 5 hour rate.
7541	....	220	ampere-hour at the 5 hour rate.
6706	....	10	ampere-hour at the 20 hour rate.

BATTERY OUTFITS.

OUTFIT	CUP-BOARD.	PATTERN OF CELLS.				CHARGING OF BATTERIES.	REMARKS.
		REC. FIL.	REC. ANODE.	TRANS-FIL.	20 v. BATT.		
BA	D	6038A	6034C		1551B	Boards 2F and one generator.	
BBa	G(C) H(C)*	5503	6034C			20 volts or ship's mains.	Types 49 or 50 in second offices. Type 49 in Flotilla Leaders and Destroyers' main office. Type 51LV. * If in second office except Type 51LV.
BBb	L	5503	6034C		7541	20 volt battery or ship's mains.	Type 50 in main office. Type 49 in main office.
BC	D	6038A	6034C		1551B	20 volt mains.	
BD	F	6038A	6034C		1551B	Boards 2G and 2 generators.	Type 34HX ("HERMES") Types 35S and 36S/M (later fittings). Type 45 in auxiliary office of heavy ships. Type 48/X/Y.
BE	C	6038A	6034C	6038A	1551B	20 volt mains.	Type 37/S/M in second offices of ships earlier than "LEANDER".
BF	E	5503	6034C	6038A		Ship's mains.	Type 44 (100/110 volt ships only).
BG	D	7541	6034C		1551B	Boards 2G and 2 generators.	Types 35S and 36S (earlier fittings). Type 45 (if outfit already supplied).
BJ	C	7541	6034C	7541	1551B	Ship's mains.	Types 37/S/M in destroyers earlier than "ACASTA" class, and where specially approved.
BK	C	6038A	6034C	6038A	1551B	Ship's mains.	Alternative to BJ for Types 37/S/M in destroyers earlier than "ACASTA" class.
BL	D (if any)	7541	6034C			Boards 2L and 2G. 2 Generators.	
BM	H (if any)	5503	6034C			Boards 2K and 2F. 1 Generator.	Type 47/P.
BN	D	7541	6034C			Boards 2K and 2F. 1 Generator.	

BATTERY OUTFITS (Contd.)

OUTFIT.	CUP-BOARD.	PATTERN OF CELLS.				CHARGING OF BATTERIES.	REMARKS.
		REC. FIL.	REC. ANODE	TRANS. FIL.	20 v. BATT.		
BP	G	5503	6034C	5503	1551B	20 volt mains.	Types 37/S/M in second offices of "LEANDER" class and later.
BQ	H	5503	6034C		1551B	20 volt mains.	Type 33HX ("HERMES") Type 45 in auxiliary office of cruisers. Type 75/X (not if set is fitted in auxiliary office where 100 volt anode battery is already supplied.
BR	H(C)	5503	6034C			20 volt mains.	
BS	E	6038A	6034C	6038A	1551B	Ship's mains.	Types 37/S/M in destroyers. "ACASTA" class and later.
BT	D	6038A	6034C			Ship's mains.	Also Pattern 1551B (8 volts) for exercise set.
BU	G	5503	6034C	5503		Ship's mains.	Type 37/S/M in Netlayer and similar small craft fitted with transmitter 4H.
BV	D	6038A	6034C			Boards 2K and 2F. 1 Generator.	Type 39X*. 83. * Ships fitted with outfit BL to retain it.
BW	H	5503	6034C		1551B	Ship's mains.	Type 33A ("SANDPIPER" only). Types 37/A/S/M in sloops, gunboats, etc., not fitted with transmitter 4H. Type 38S/M.
BX	J	1551B	6034C		1551B	Ship's mains.	Type 43/A if fitted in separate office.
BY	J	1551B	6034C			Ship's mains.	Type 33A if in separate office. Type 45 if in separate office. SD, RA, RC, RM, LMI, FAL, FHI, FH2.
BZ		6038A	6034C		1551B	Generator and separate apparatus.	Types 2, 14.

A.C. SUPPLY OUTFITS.

OUTFIT.	MACHINES.	PRINCIPAL USES.	REMARKS.
DDA	2 - 200 watt alternators (220 v. or 110 v.)	Certain Submarines prior to "CLYDE" and "SALMON".	For use in Submarines only.
DDB	Uses transmitter filament alternator (500 cycles)	"PORPOISE" only.	
DDC	2 - 200 watt alternators (220 v. or 110 v.) 2 Boosters.	"CLYDE", "SALMON" and later submarines.	
DDD	2 800 watt alternators (220 v. or 110 v.) 2 Boosters.	"T" and "U" submarines.	
DE	2 - 800 watt alternators (220 volts) 2 Boosters.	C. R.R. in cruisers.	Any one of three rectifiers in C.R.R. can be supplied from emergency machine in 2nd Office (outfit DG).
DG	1 - 100 watt alternator (20 volts)	2nd W/T office of cruisers and above.	Normal supply obtained from auxiliary office. Has 2 position switch. <u>In Position 1</u> :- Rectifier for 2nd office is supplied from auxiliary office. DG machine supplies C.R.R. <u>Position 2</u> :- Rectifier for 2nd office is supplied from outfit DG.
DH	2 - 800 watt alternators (220 volts or 110 volts) 1 - 100 watt alternator (20 volts) 2 Boosters.	Auxiliary office of cruisers and above. Main office of Leaders and below	Also supplies 2nd office (which is only fitted with outfit DG). Emergency 20 volt alternator fitted with DH supplies own office only.
DDB	2 - 800 watt alternators (220 v.) 2 Boosters.	For use with Type 73X.	
DED	1 - 800 watt alternator (220 v.) 1 Booster.	2nd W/T office of Leaders.	Where an alternative source of supply is available from main office.

A.C. SUPPLY OUTFITS (Contd.)

OUTFIT.	MACHINES.	PRINCIPAL USES.	REMARKS
DJ	2 - 200 watt alternators (220 or 110 volts) 1 - 100 watt alternator (20 volts) 2 Boosters	Destroyers, Escort vessels and below.	
DK	1 - 100 watt alternator (20 volt)	2nd office of Flotilla Leaders and Tribals.	2nd office is normally supplied from main office.
DL	2 - 2 $\frac{1}{2}$ kW. alternators (220 v. or 110 v.) 1 - 100 watt alternator (20 v.) 2 Boosters.	C.R.R.'s of cruisers and above. Auxiliary offices of cruisers. Main office of Tribals, Flotilla Leaders and below.	
DLC	2 - 2 $\frac{1}{2}$ kW. alternators (220 v. or 110 v.) 1 - 100 watt alternator (20 v.) 2 Boosters.	Transmitter rooms of ships fitted with C.C.S.	20 v. emergency alternator is only fitted if T.R. contains Type 49C.
DM	Transmitter alternators (500 cycles).	No.1 T.R. of "WARSPITE" only.	
DSA	1 - 400 watt alternator (220 v.)	S.R.E.	

A.C. SUPPLY OUTFITS (Contd.)

OUTFIT.	MACHINES.	PRINCIPAL USES.	REMARKS.
DN	Transmitter alternators (500 cycles). 1 - 100 watt alternator (20 volt).	No. 2 T.R. of "WARSPITE" only.	
DO	1 - 200 watt alternator (220 v.) 1 Booster.	D/F offices where another source of supply is not available.	
DQB	2 - 800 watt alternators. (220 v. or 110 v.) 2 Boosters	Auxiliary office of capital Ships and carriers. Main office of mine-sweepers and patrol vessels.	Also supplies 2nd office.
DRB	2 - 2½ kW. alternators	C.R.R. of cruisers and above. 2nd office of depot ships. Auxiliary office of cruisers. Main office of Leaders & below.	
DRC	2 - 2½ kW. alternators (220 v.) 2 Boosters.	Transmitter rooms of C.C. ships.	

Note 1:- In ships fitted with A.C. outfits which include a 20 volt alternator a special 20 volt battery is fitted to drive it if 20 volt ship's supply is not available.

Note 2:- As a general rule outfits DND, DQB, DRB and DRC are intended for offices fitted with all-wave receivers.

WAVEMETERS AND OSCILLATORS

	Frequency Range in Kilocycles.	Remarks and Accuracy.
Wavemeters		
Patt. 1492B	35-2720	1.0% Obsolete.
G2	47,000-100,000	1.0%
G3	24,000-50,000	1.0%
G6	18,750-33,300	1.0% Obsolete.
G7	5,000-25,000	0.5% Obsolescent.
G8	1,500-6,000	0.5% Obsolescent.
G9	30-3,000	0.5% Obsolete.
G11	10-46	0.5%
G12	2,300-6,000	1.0% Obsolete.
G13	6,000-20,000	1.0% Obsolete.
Oscillators		
G31	2,300-15,000	Used with G7, G8.
G33	15-24,000	Used with G56.
G35	15-25,000	Used with G61, G62.
G36	For Type 72X.	
Wavemeters		
G56	15-24,000	0.4%
G57	100-24,000	0.4%
G58	20,500-80,000	Obsolete.
G59	70,000-240,000	1.0%
G60	For Type 72X	
G61	1,000-25,000	± 1 kc/s over whole range.
G62	15-2,100	± 0.1 kc/s over whole range.

WAVEMETER OUTFITS.

WAVEMETER OUTFIT.	USE.	MAIN UNITS.
GA	Heterodyne wavemeter with rack, and used as a portable wavemeter when required.	G56 G33 Supply unit box carrying. Rack.
GB	Heterodyne wavemeter fitted in existing rack or to be used as a portable wave-meter.	G56 G33 Supply unit box carrying.
GC	Non portable heterodyne wavemeter supplied with a rack.	G56 G33 Rack.
GD	Non portable heterodyne wavemeter fitted in an existing rack.	G56 G33
GE	Portable heterodyne wavemeter.	G56 Supply unit box carrying.
GF		
GG		
GH	Crystal wavemeter, rack mounted, for ships without central control.	G61 G62 G35/2 Wavemeter Transmitter Exchange. Power Unit. Rack.
GI	Crystal wavemeter, rack mounted, for C.R.Rs. in ships with central control.	G61 G62 G35/2 Power Unit. Rack.
GJ	Crystal wavemeter, rack mounted, for T.Rs. in ships with central control.	G61 G62 G35 Wavemeter Transmitter Exchange. Power Unit. Rack.
GK	Crystal wavemeter, rack mounted, for ships where space is restricted.	G61 G35 Power unit. Rack.
GL	Crystal wavemeter, rack mounted for hangars of aircraft carriers.	G61 G62 G35 Power unit. Rack.
Marconi Radiation Indicator Type 200A.		

WARNING TELEPHONES

TYPE	SOURCE OF OSCILLATORY CURRENT.	NATURE OF MACHINES.	REMARKS
401	Transmitter. Amplifier. (Special Valves).	Motor Generator.	Obsolete.
402	14 Panels consisting of 1 Transmitting. 2 Amplifying. 1 Relay. 8 Power Valve. 2 Controlling. 8 NR15A. 48 NR16A*.	2 Motor Generators. 120 watts, 9 v., and 63 watts, 21 v.	*16 additional for a 5 group installation.
403	2 Panels NT18 4 NR26 2 NR27 4 NR28 4	Motor alternator. 800 watts, 230 v., 50 cycles, 24 v. battery.	
404	2 Panels (1) Input unit. Amplifier intermediate. Supply Unit. (2) Amplifier Power. Fuse Unit. * 2 NT18 1 NR26 1 NR27 4 NR28	Motor Alternator. 800 watts, 230 v., 50 cycles, 24 v. battery.	For Type 404A. 2 NR47 2 NUB 2 NT36 in lieu of NT18. *Add driver unit for 404A.
405	3 Frameworks consisting of Input amplifier. Intermediate amplifier. Power amplifier. Input unit. Supply unit, power. Switch unit, output. 4 NT36 4 NU7 2 NR45 6 NR31 2 NR46 2 NR47 2 NU3	Motor Alternator 1 1/2 kW. - 230 v., 50 cycles.	
406	<u>2 Frameworks</u> <u>1st Frame</u> consisting of combined input, intermediate and L/F amplifier. Power amplifier 100 watts. Switch Unit input.	230V. 50 cycle single phase.	In C.W.S. ships Distributor Board in C.C.O. annexe.
406	<u>2nd Frame</u> consisting of combined input intermediate and L/F amplifier. Power amplifier 100 watts. Switch unit output. 8 NR31 4 NR44 2 NR45 2 NR46 4 NT36 2 NU12	Power 1300 V/A or 650 V/A for each channel.	In Non C.W.S. ships special 5KW A/C Supply outfit.