

*Stalen
Bijlage*

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A.P. 2549C

Volume 1

FIRST EDITION
January, 1945

RECEIVER
TYPE R.1545

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Minister of Aircraft Production*

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*Promulgated by order of the
Air Council*

[Signature]



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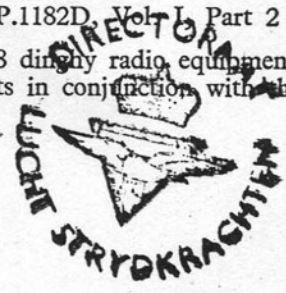
When this volume is amended by the insertion of new leaves the new or amended technical information is indicated by a vertical line in the outer margin. This line is merely to denote a change and is not to be taken as a mark of emphasis.

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LIST OF ASSOCIATED PUBLICATIONS

<i>Title</i>	<i>Publication</i>
Radio set SCR-578	AN 08-10-94*
Air-sea Rescue Airborne Equipment	A.P.1182D, Vol. I, Part 2

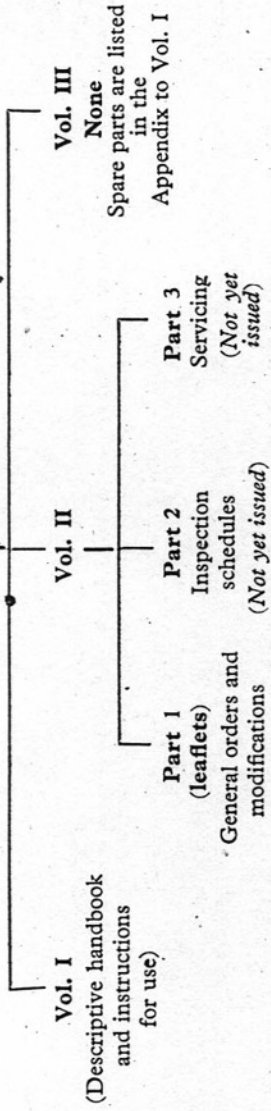
* This is a U.S. publication dealing with the complete SCR-578 dinghy radio equipment, part of which is the transmitter BC-778-A, used in airborne lifeboats in conjunction with the receiver R.1545.



LAYOUT TREE FOR A.P. 2549 C

A.P. 2549 C

RECEIVER, Type R.1545



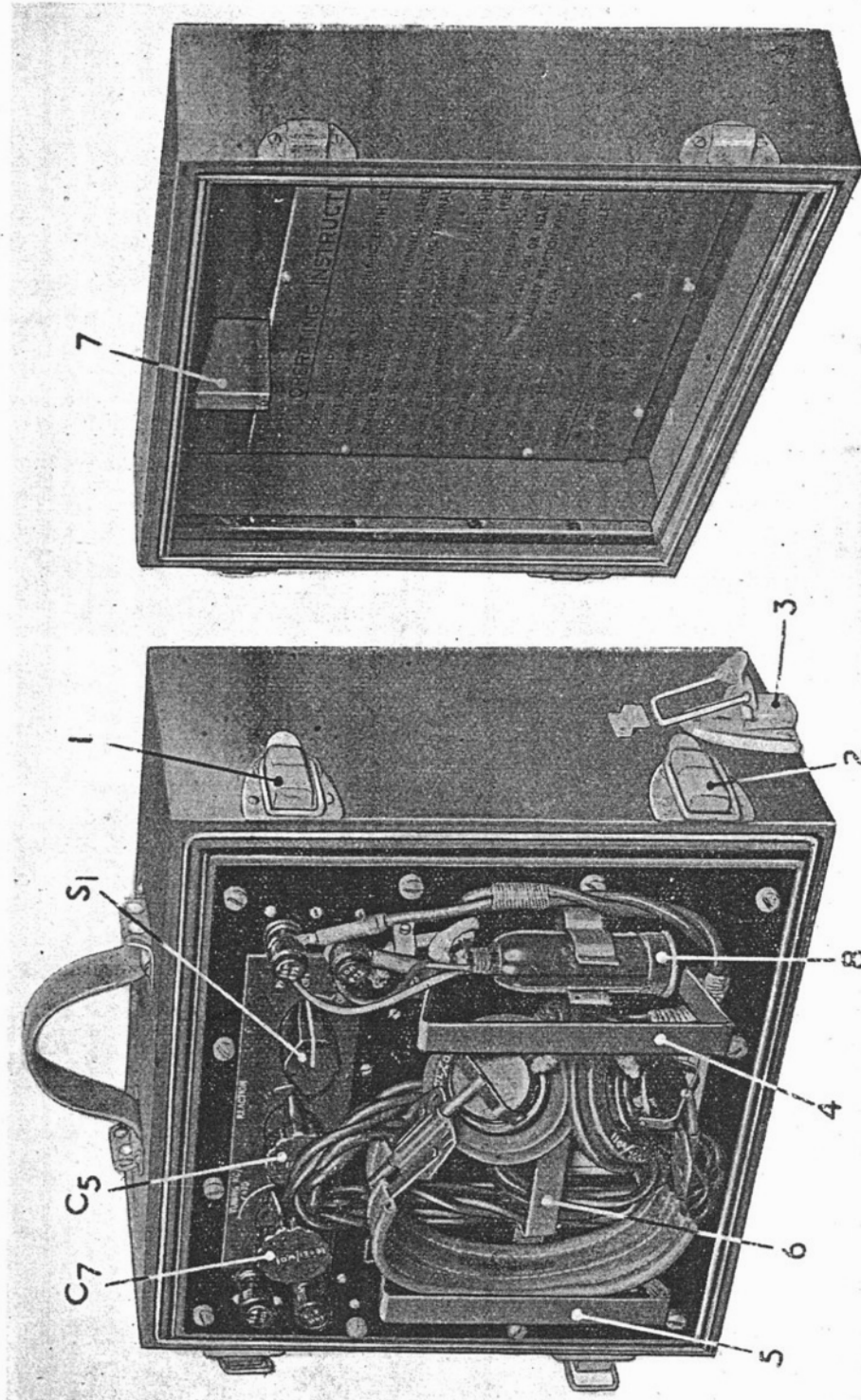
RECEIVER, TYPE R.1545

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- 1. Clips for securing lid
- 2. Clip for attachment of receiver to mounting tray
- 3. Chassis withdrawal handles
- 4. Chassis
- 5. Retaining strap for headphone cord
- 6. Interlock block, preventing replacement of lid when S₁ is ON
- 7. Socket for connection of operator's own phones if required
- 8. Socket for connection of operator's own phones if required

Fig. 1.—Receiver R.1545, lid of case removed

CONCISE DETAILS OF
RECEIVER R.1545

<i>Purpose of equipment</i>	Designed for use in airborne lifeboats in conjunction with transmitter BC-778-A												
<i>Type of wave</i>	C.W., M.C.W., and R/T												
<i>Frequency range</i>	470 kc/s to 530 kc/s												
<i>Maximum sensitivity</i>	R.T. input of 30 μ V., modulated 30 per cent. at 400 c/s, gives output not less than 5mW.												
<i>Output impedance</i>	600 ohms												
<i>Valves</i>	<table border="0"> <tr> <td><i>Function</i></td> <td></td> <td><i>Description</i></td> </tr> <tr> <td>R.F. amp.</td> <td>...</td> <td>Pentode</td> </tr> <tr> <td>Detector</td> <td>...</td> <td>Pentode</td> </tr> <tr> <td>Output</td> <td>...</td> <td>Pentode connected as triode</td> </tr> </table>	<i>Function</i>		<i>Description</i>	R.F. amp.	...	Pentode	Detector	...	Pentode	Output	...	Pentode connected as triode
<i>Function</i>		<i>Description</i>															
R.F. amp.	...	Pentode															
Detector	...	Pentode															
Output	...	Pentode connected as triode															
					All valves are type ARP.12 (Stores Ref. 10E/ZA7023) or V.P.23 (Stores Ref. 10E/317). One spare valve is carried in the receiver												
<i>Power input</i>	435 watts.												
<i>Power output</i>	8 mW into 600 ohms												
<i>Stores Ref.</i>	10D/2134												
<i>Approx. overall dimensions...</i>	<table border="0"> <tr> <td><i>Length</i></td> <td><i>Height</i></td> <td><i>Depth</i></td> </tr> <tr> <td>12$\frac{1}{2}$ in.</td> <td>11 in.</td> <td>9$\frac{1}{4}$ in.</td> </tr> </table>	<i>Length</i>	<i>Height</i>	<i>Depth</i>	12 $\frac{1}{2}$ in.	11 in.	9 $\frac{1}{4}$ in.						
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12 $\frac{1}{2}$ in.	11 in.	9 $\frac{1}{4}$ in.															
<i>Weight</i>	22 $\frac{1}{2}$ lb. including batteries and headphones												
<i>Associated equipment</i>	Transmitter BC-778-A Switch unit, type 188 Aerial winch, type 10 Aerial system, type 411 Aerial system, type 249 Condenser unit, type 126												

RECEIVER, Type R.1545

(Stores Ref. 10D/2134)

Introduction

1. The receiver R.1545 is a self-contained battery-operated receiver for 500 kc/s operation (actual coverage 470-530 kc/s), designed for installation in airborne lifeboats Mk. I, IA, and II. When used in conjunction with a transmitter BC-778-A, two-way W/T communication is available. Provision is made in the lifeboat installation for the use either of a 300-ft. kite-flown aerial or of the whip aerial at the top of the lifeboat mast. The receiver is mounted in a resin-bonded plywood case with a webbing carrying handle and a detachable lid. When the lid is in position the case is water-tight and buoyant. A "dry" accumulator and H.T. batteries are held by clamps and mountings behind the receiver panel.

2. A pair of 600-ohm lightweight headphones is supplied with the receiver and is stowed on the front panel, but a socket type 359 is also provided so that the user can plug in his own helmet equipment if necessary. The design of the instrument is such that it can be brought into use rapidly, and operated with ease by users who may be suffering from the effects of cold, wet, and exposure. The clips for releasing the lid and securing the case in its mounting are of a size ample to obviate fumbling even in difficult conditions, and, provided they have been correctly stowed, the headphones can be removed by a single direct pull without fear of the cords tangling or catching. The cords are not of the tinsel type, so that if accidentally broken they can be bared and re-connected to the output terminals without difficulty.

3. The dimensions of the receiver are: length $12\frac{1}{2}$ in., breadth 11 in., and depth $9\frac{1}{4}$ in. Including batteries and headphones, the weight is $22\frac{1}{2}$ lb.

GENERAL DESCRIPTION

R.F. circuit

4. A diagram of the receiver is given in fig. 2, from which it will be seen that a straightforward R.F. amplifier, detector, and A.F. amplifier circuit is adopted. The aerial terminal is directly connected to a tapping of the pre-tuned iron-dust core inductance L_1 , which is adjusted to 490 kc/s. This setting brings the "hump" of the response curve nearer to the middle of the band 470 to 530 kc/s than if the coil were tuned to 500 kc/s, and provides a more even response over the whole band. Instructions for making this adjustment are given in para. 44.

5. Tuned anode coupling is used between the R.F. valve, V_1 , and the detector stage, the tuned circuit consisting of coil L_2 and variable condenser C_7 . A trimmer, C_8 , is connected across C_7 in order to align the settings of C_7 with the calibrations marked on the front panel. Instructions for the alignment procedure will be found in para. 47.

Detector stage

6. The detector stage is of the conventional leaky grid type. It will be noticed that the grid is returned to the junction of resistances R_4 and R_5 connected across the L.T. supply. The grid thus receives a positive bias of about 0.8 volts, which improves the sensitivity of the stage without being high enough to make reaction control fierce.

7. An R.F. stopper consisting of the choke L_4 and by-pass condensers C_{11} , C_{12} , is provided in the anode circuit of the detector valve V_2 . Part of the R.F. voltage in the anode circuit is fed back to the grid of V_2 by means of the reaction coil L_3 , which is coupled to L_2 and forms a single assembly with that coil. The amount of feedback is controlled by the variable condenser C_5 .

Output circuit

8. Transformer T_1 (ratio 1:2.5) couples the detector stage to the output valve V_3 , which is triode-connected by having its second and third grids connected to anode. Grid bias for V_3 is developed by the flow of H.T. current through resistance R_6 between the earth line and H.T. negative, the grid and filament of V_3 being connected to opposite ends of this resistance. An 8:2:1 transformer, T_2 , matches the output to the 600-ohm telephones supplied with the receiver.

9. A three-pole on-off switch S_1 (annotated S_{1A} , S_{1B} in fig. 2), breaks H.T. negative and L.T. negative when in the OFF position. The two poles S_{1B} in the L.T. circuit are connected in parallel.

VALVES AND POWER SUPPLIES

10. Pentode valves of type ARP12 (Stores Ref. 10E/ZA7023) or VP.23 (Stores Ref. 10E/317) are used in all positions. Four valves are supplied with the receiver, one being carried as a spare in a socket at the back of the panel. The valves are vari-mu directly-heated pentodes, with 2-volt filaments taking a current of 0.05 amp. The anode and screen-grid voltage ratings are 150 V., but in this installation a 48-volt H.T. supply is used. With headset connected, no signal being received, and the receiver not oscillating, the L.T. consumption is 0.15A and the H.T. consumption 3.0 mA. When the receiver is used for maintaining the prescribed lifeboat listening watches of 30 min. in each period of two hours, a freshly charged accumulator and new H.T. batteries will provide approximately 14 days' service.

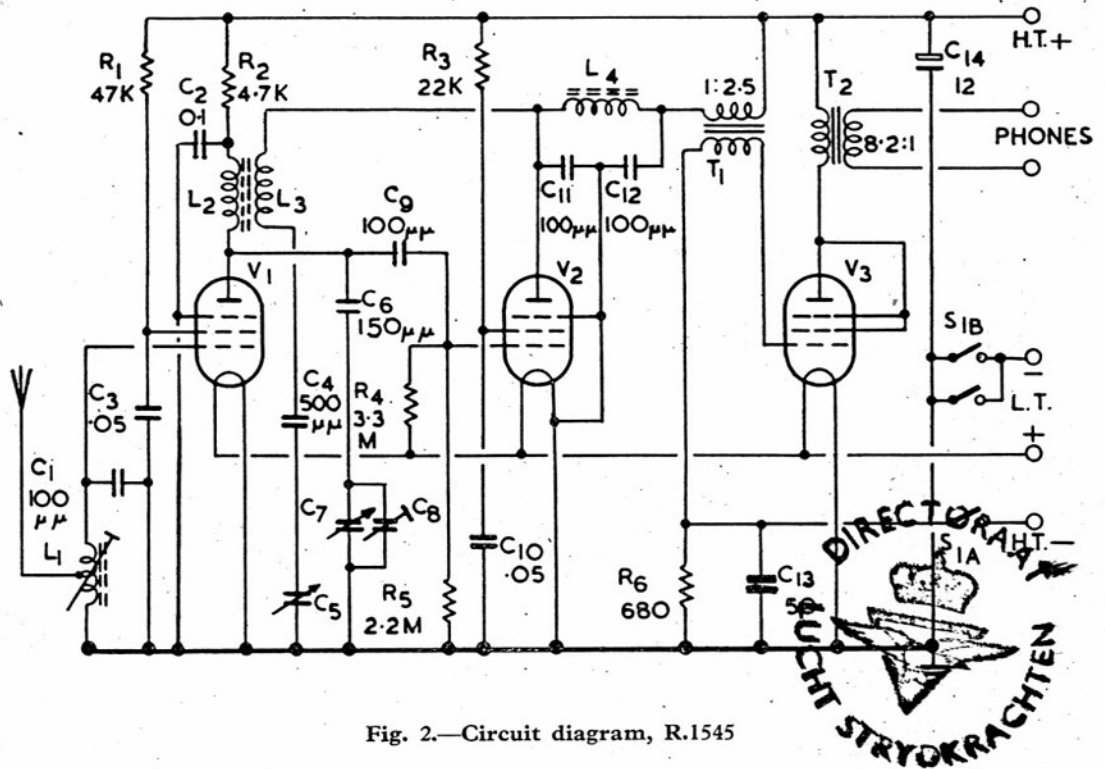


Fig. 2.—Circuit diagram, R.1545

L.T. and H.T. batteries

11. The L.T. supply is derived from a 2-volt, 15 amp. hr. "dry" type accumulator (Varley type VPT.9/15X, Stores Ref. 5J/3191). Three dry batteries in series, each nominally 15 V., but measuring approximately 16 V. when new, provide the H.T. supply, 48–49 V. These are normally batteries type B (Stores Ref. 5J/3016), but, if not available, batteries inert, 15-volt (Stores Ref. 5J/50) can be used. The precautions to be observed when using batteries of the latter type are given in para. 37.

CONSTRUCTIONAL DETAILS

12. A view of the receiver in its case, with the lid removed, is given in fig. 1. The "Gothic" type clips (1) and (2) are for securing the lid, and similar ones are fitted at the other end of the case. Clip (3) is one of the two clips (the second one being at the other end of the case) for securing the receiver in its mounting tray. Twelve coin-slot screws hold the receiver chassis in the case and are so positioned that the chassis can be screwed home only if inserted the right way round, namely with the tuning controls and ON-OFF switch adjacent to the carrying handle at the top of the case.

13. Handles (4) and (5) are for withdrawing the chassis, and also provide a stowage as shown for the lightweight telephones. They are of sufficient height to form a flat surface on which the chassis will stand when placed face downwards on a bench (provided the telephones have been removed): Should it be necessary to carry an earth wire and sinker with the receiver, the wire can be connected to the EARTH terminal and wound round the left-hand handle (5), and the sinker stowed at the bottom of the spring clip which holds the mic-tel. socket type 359 (8).

14. The retaining strap (6) enables the headphone cords to be stowed in such a way that they can be withdrawn in a single movement. When replacing the headphones the cords should be left connected to the PHONES terminals and gathered into a loop of suitable size for insertion under the retaining strap from the top. This enables headphones and cords to be withdrawn with an upward pull. The method of headphone stowage can be seen in greater detail in fig. 5.

Controls

15. There are four terminals on the panel, the left-hand pair being AERIAL and EARTH, and the right-hand pair PHONES. The lightweight headphones and the type 359 mic-tel. socket are both connected to the PHONES terminals. The socket is retained in a spring clip when not in use. From left to right the controls on the panel are TUNING (condenser C_7), REACTION (condenser C_5) and the ON-OFF switch. An interlock block (7, fig. 1) in the lid of the case is fixed in such a position that the lid cannot be replaced if the switch has been left ON. The scale of the TUNING control is calibrated at 470, 500, and 530 kc/s. A close-up view of the panel is given in fig. 5.

16. Both lid and case are of resin-bonded plywood, and are provided with a labyrinth water seal with rubber tube joints; this renders the case watertight and buoyant when the lid is in position.

Chassis assembly

17. The receiver chassis assembly (fig. 3 and 4) is constructed of mild steel. The panel seats on to a rubber tube joint cemented to the upper surface of a supporting batten extending round the interior of the wooden case. The sub-chassis, on which are mounted the valves and components, is fixed at right angles to the back of the panel. The short length of cable P.T.9M shown in fig. 3 is the screened connector from the AERIAL terminal to L_1 .

18. The battery clamps and accumulator housing, at the back of the panel, are shown in fig. 4. Clamps (1) and (2) are hinged. When the coin-slot screw (3) is released they can be swung apart to release the accumulator. The base of the accumulator fits into a mild-steel housing (4). Clamp (1) has a felt lining on its underside, and when in position bears also on top of the three 15-volt H.T. batteries. A third hinged clamp (5), also secured by a coin-slot screw (6), must be released to withdraw the H.T. batteries (instructions for doing this are in para. 39). Both coin-slot screws are captive. The spare valve (7) carried in a holder adjacent to the accumulator housing, can be seen in this figure.

INSTALLATION AND OPERATION

19. As can be seen in fig. 1, a plate with operating instructions is fixed inside the lid of the receiver case. Since many of these instructions will not be applicable to new installations in airborne lifeboats, for details of connecting and working the receiver in a particular lifeboat the instruction book provided in the boat must be consulted.

Mk. I and IA lifeboats

20. Mountings for the receiver and its associated transmitter are provided on the port side of the lifeboat forward of the port engine hatch. The aerial terminals of the transmitter and receiver are connected to the terminals of a switch unit, Type 188 (Stores Ref. 10F/2529), also on the port side, aft of the transmitter mounting. The earth terminals of both instruments are connected to an earth terminal on the same unit. The latter terminal is connected by bonding strips to two copper earth plates attached to the centre anchorage bolts on the aft side of each engine.

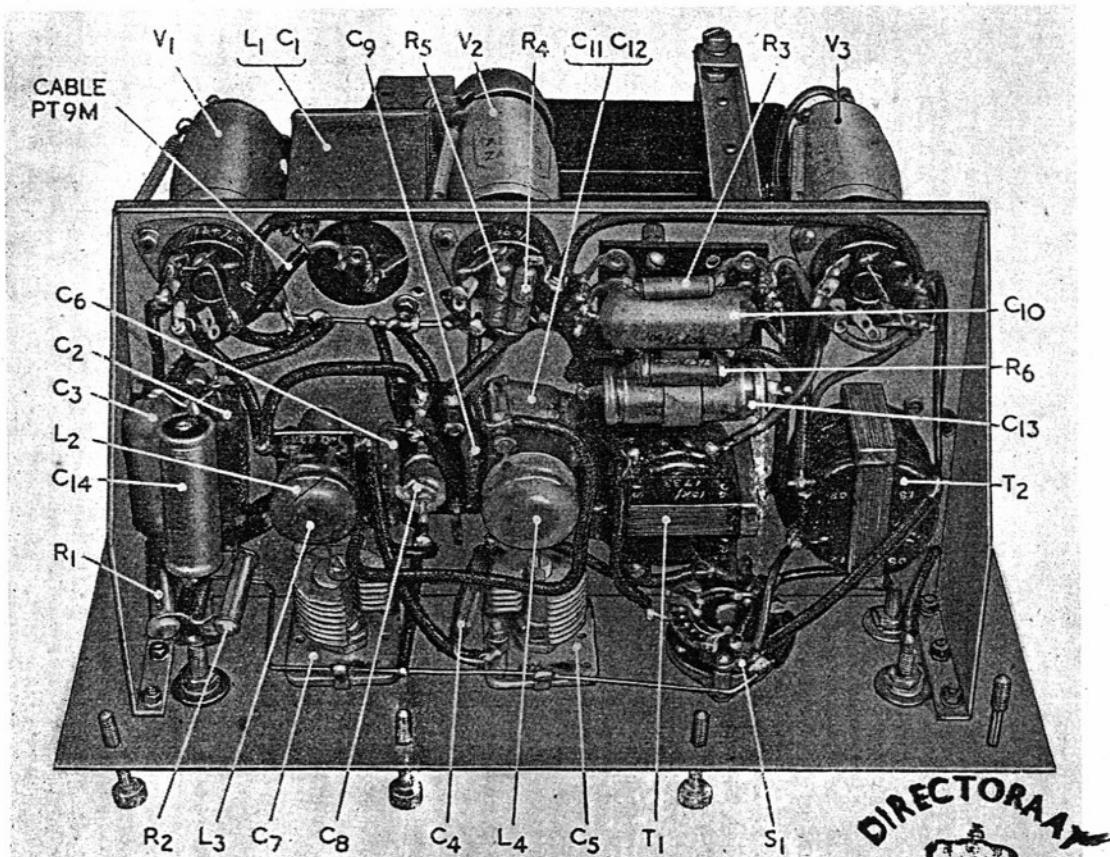
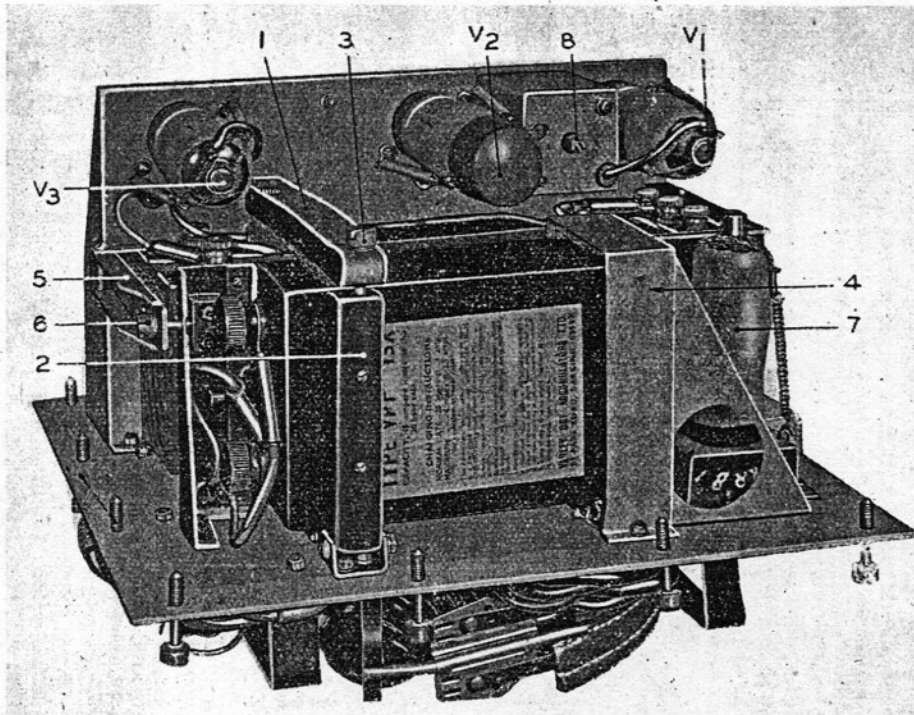


Fig. 3.—Underside of sub-chassis

21. Leads from the kite aerial winch (aerial winch, type 10, Stores Ref. 10B/2457) and from the emergency aerial on the lifeboat mast (aerial system, type 249, Stores Ref. 10B/1666) terminate in plugs type 72 (Stores Ref. 10H/9000) on the switch unit; a socket connected by a sheath-covered cable to the moving arm of the switch can be fitted on to either plug according to which aerial is to be used. By means of the switch the aerial in use is connected either to receiver or transmitter. These arrangements are shown in the typical installation diagram, fig. 6.

22. The aerial winch type 10 can be fitted into a forward rowlock socket on either the port or starboard side of the boat, the choice depending on the wind direction, as the kite which supports the aerial system type 411 (Stores Ref. 10B/2456) has to be launched from the leeward side of the boat. The leads from the KITE AE. plug on the switch unit type 188 are attached to stowage terminals adjacent to each position until operation is required, when they are connected to the terminal on the winch.



- 1, 2. Combined H.T. battery and accumulator clamp
3. Coin-slot screw for releasing clamp
4. Mild-steel housing for base of accumulator
5. H.T. battery clamp
6. Coin-slot screw for releasing clamp
7. Spare valve
8. Pre-set tuning adjustment for L_1

Fig. 4.—Chassis assembly, showing location of batteries

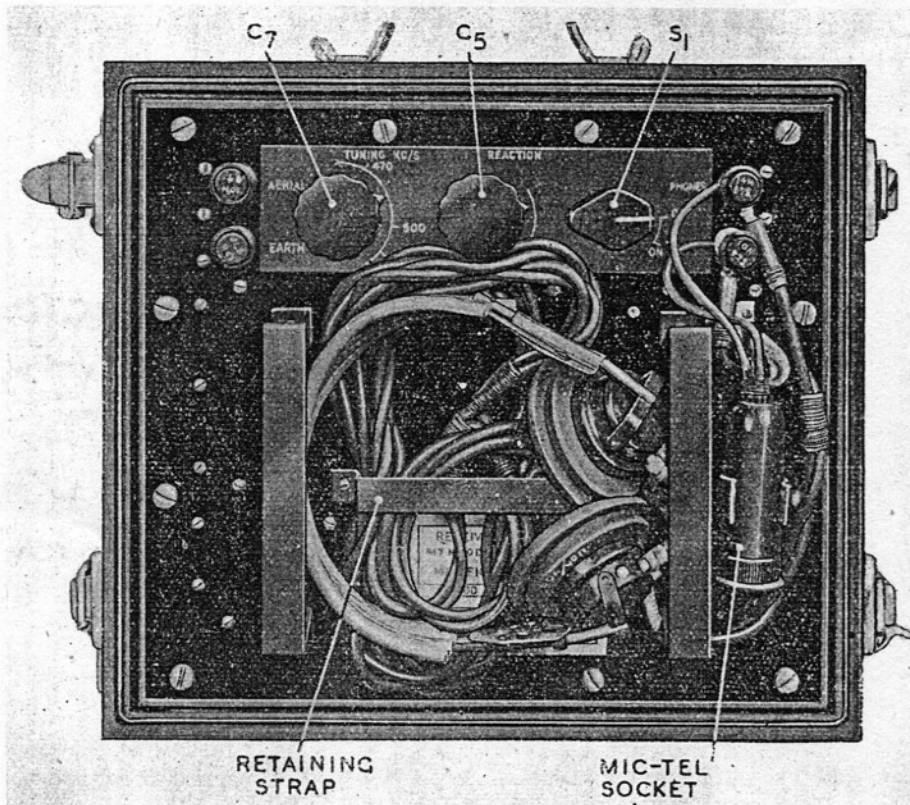


Fig. 5.—Receiver front panel

23. The lead from the plug marked EMERGENCY AE. on the switch unit type 188 is connected to a terminal on the condenser unit, type 126 (Stores Ref. 10C/13313) at the base of the lifeboat mast. Internal wiring connects the condenser unit to the emergency aerial at the top of the mast.

24. An earth wire is attached to the condenser unit type 126 and is taken to a terminal on the deck adjacent to the foot of the mast. This terminal is connected to the bonding strips running to the earth plates mentioned in para. 20.

Installation of receiver

25. The receiver is stowed in the port midship hatch of the lifeboat. On removal from the hatch it is fitted to the mounting, type 788 (Stores Ref. 10A/19307) by means of the "Gothic" clips (para. 12) on the receiver case and the catches on the mounting. In Mk. I and IA lifeboats the mounting is on the port side close to the fore hatch. The transmitter mounting is just aft of that for the receiver.

26. When the receiver has been secured, with its panel facing inboard, the lid of the case is removed by releasing the four "Gothic" clips which hold it.

27. The aerial system type 249, which is stowed with the mast, is erected by swinging the aerial rod upwards until it lies in line with the mast, and locking it in this position by pressing the clip lever upwards. Having erected the mast, the lead attached to the condenser unit type 126 is connected to the terminal on the deck adjacent to the foot of the mast (para. 24), and the lead from the EMERGENCY AE. plug on the switch unit type 188 is connected to the terminal on the condenser unit.

28. The aerial winch type 10 is stowed, with the transmitter, in the fore hatch. The winch is fitted into the rowlock socket on the side of the boat required and is anchored against accidental withdrawal by means of a length of cord attached to the spigot of the winch, with a loop at its free end for fixing to a hook suitably positioned in the boat.

29. The cable from the switch unit to the stowage terminal on the side of the boat on which the aerial winch is fitted, is removed from that terminal and connected to the terminal on the winch.

30. The lead from the EARTH terminal on the switch unit type 188 is connected to the receiver EARTH terminal, and that from the REC. AE. terminal on the switch itself to the receiver AERIAL terminal.

31. Whenever possible the kite aerial is to be used, and for this purpose the socket attached to the short lead from the moving arm of the switch on the switch unit type 188 is pressed firmly home into the plug marked KITE AE. on the switch unit. For reception, the switch on the switch unit type 188 is moved to the REC. position. The kite is stowed in a container below the starboard gunwale.

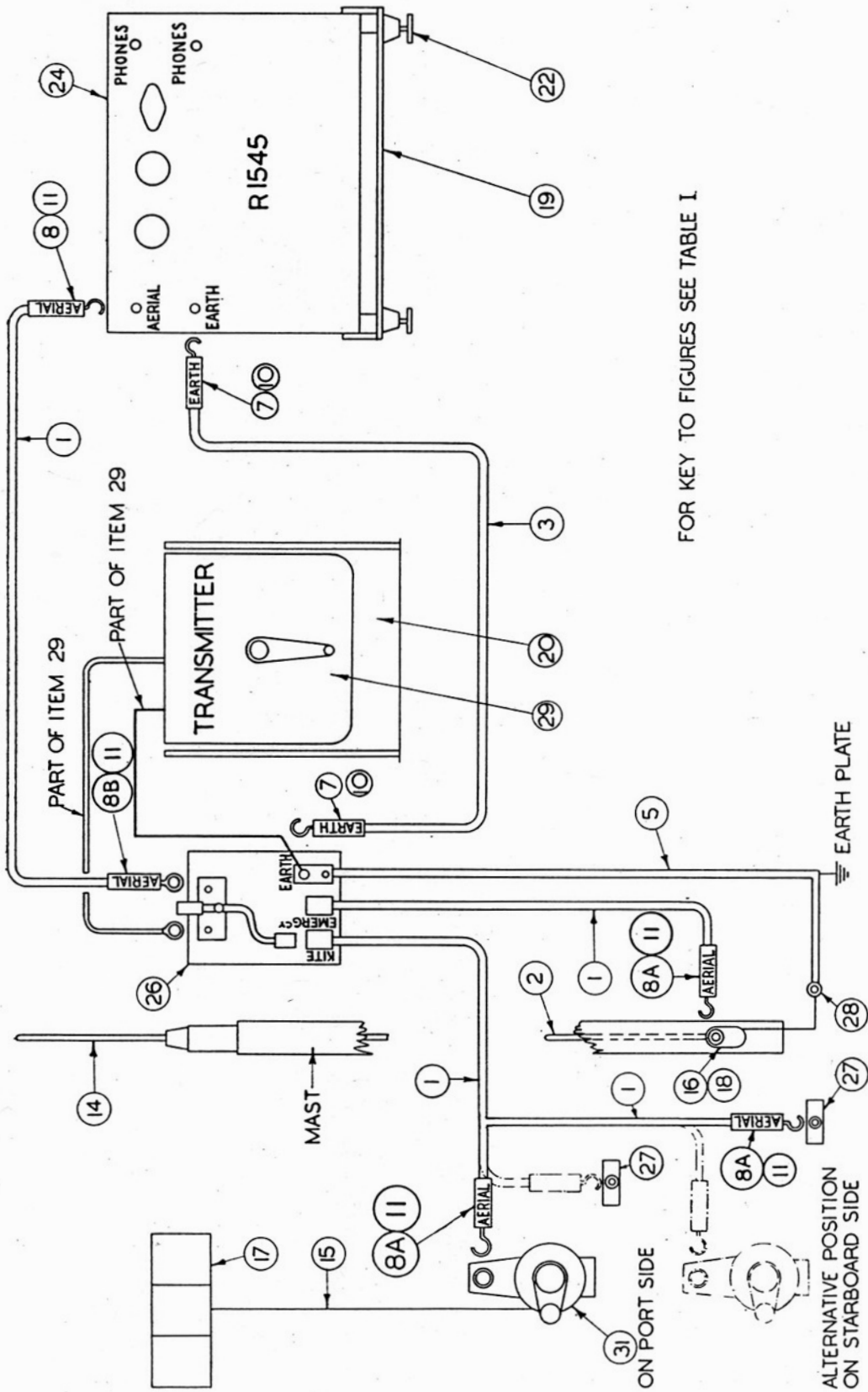
Mk. II lifeboats

32. In Mk. II lifeboats the receiver and transmitter are permanently attached to a W/T shel in a forward position in the boat. The interconnections with the switch unit and the alternative aeriels are similar to those already described, and follow the lines of the typical installation diagram, fig. 6. The kite for the aerial system type 411 is stowed in No. 2 stowage compartment.

Operating instructions

33. Having switched the receiver ON, the REACTION control is turned clockwise until a "rushing" sound in the phones shows that the receiver is oscillating. If the TUNING control is now slowly rotated, signals from shipping should be heard in the neighbourhood of 500 kc/s. Re-adjust the tuning and reaction controls for loud, clear signals.

34. The headphones provided with the R.1545 should be used whenever possible. In emergency, the operator's own headset may be plugged into the type 359 socket on the receiver, but this will result in a mis-match with the output circuit. If the operator's instrument cords have an impedance matching unit, better results will be obtained with the switch on the unit in the LOW position. The headphones supplied with the receiver should be disconnected when another pair is used.



FOR KEY TO FIGURES SEE TABLE I

Fig. 6.—Typical installation diagram

TABLE I
Installation Schedule

Ref. in fig. 6	Stores Ref.	Qty.	Description
1	5E/82		Cable, H.T., Unispark 7
2	5E/81		Cable, H.T., Uniplug 12
3	5E/1358		Cable, L.T., Unicel 4
5	5K/201		Strip, bonding, copper, tinned, $\frac{1}{2}$ in.
7	5K/1809	2	Cable-ends, hook type, crimping, Uniflex 4, 0 B.A.
8	5K/1806	1	Cable-end, hook type, crimping, Unispark, 0 B.A.
8A	5K/1807	3	Cable-ends, hook type, crimping, Unispark, 2 B.A.
8B	5K/912	1	Cable-end, Ross-Courtney type
10	5K/1073	2	Sleeve, identification, Uniflex 4
11	5K/1875	5	Sleeve, identification, Unispark 7
14	10B/1666	1	Aerial system, type 249
15	10B/2456	1	Aerial system, type 411
16	10C/13313	1	Condenser unit, type 126
17	51/161	1	Kite, box, assembly
18	10A/17785	1	Label, type 146
19	10A/19307	1	Mounting, type 788
20		1	Special mounting for item 29
22	10A/19369	4	Plate, anchorage, type 6
24	10D/2134	1	Receiver, type R.1545.
26	10F/2529	1	Switch unit, type 188
27	10H/7323	2	Terminal, 2 B.A., Type F (spring type, insulated, mounted)
28	5K/1058	1	Terminal, spring type, 2 B.A. (fitted adjacent to mast foot)
29	110D/205	1	Transmitter, BC-778-A
31	10B/2452	1	Winch, aerial, type 10

PRECAUTIONS AND SERVICING

35. The receiver is not entirely watertight when the lid of the case is removed, although a considerable degree of protection is retained. Care must be taken to see that the receiver is switched off before attempting to replace the lid, as otherwise the lid cannot be re-fitted on account of the interlock block (para. 15). The positioning of the "Gothic" clips results in the lid being non-reversible.

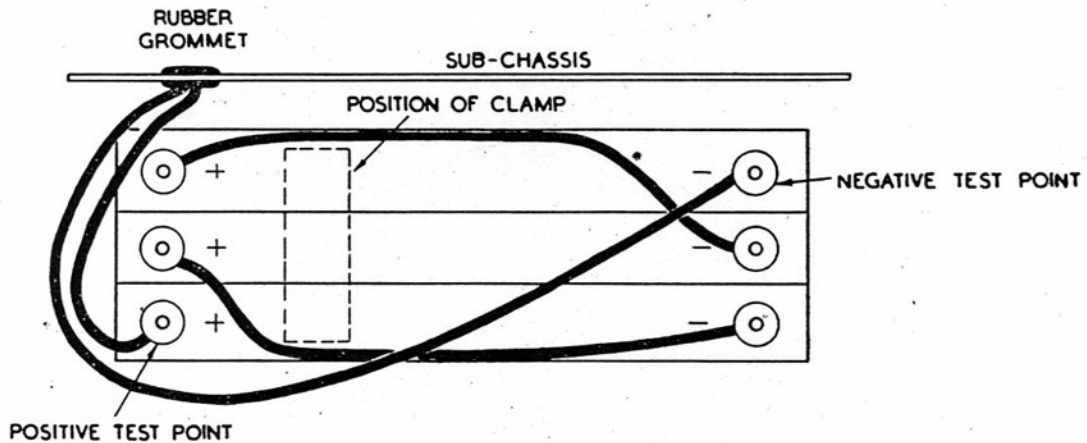


Fig. 7.—Connections to H.T. battery

36. The headphones and the type 359 socket must be securely connected to the PHONES terminals before the receiver is issued for use.

H.T. batteries

37. In order to insert the H.T. batteries, release the clamps shown in fig. 4 by unscrewing the two coin-slot screws and pivoting the clamps clear so that the batteries can be slid into position. If inert 15-volt batteries (Stores Ref. No. 5J/50) are used, the vent plugs at the negative end must be

cut flush after insertion in the vents to permit the batteries to slide under the holding ledge. It may also be necessary to cut down a further row of vent plugs in the way of the clamp (1, fig. 4). Before these batteries are inserted in the receiver they must be shaken to remove any excess of moisture, which would corrode the receiver chassis. A drawing of the connections to the battery terminals is given in fig. 7. The run of the leads must be arranged as shown to ensure that they are not trapped under the felt pad of the top battery clamp when this is replaced.

38. The H.T. battery must be renewed after operational use, or when its voltage on load has fallen to 42, or three months from the time of installation, whichever may occur first. To measure the H.T. voltage, remove the chassis assembly from the case, switch the set on, and connect a high-resistance voltmeter across the positive and negative test points shown in fig. 7.

39. To remove the H.T. battery, first disconnect the positive lead and then disengage the combined H.T. battery and accumulator clamps, (1) and (2) in fig. 4. Disengage and pivot the additional clamp, (5) in fig. 4, which bears against the ends of the batteries, withdraw the H.T. battery, and disconnect the negative lead. To insert an H.T. battery reverse the foregoing process, taking care that the leads are not trapped under the felt pad on the battery clamp.

L.T. accumulator

40. The L.T. accumulator is inserted or withdrawn by releasing the clamps (1) and (2) in fig. 4. When these are pivoted clear, the accumulator can be inserted into or withdrawn from its mild-steel, shoe-type housing, shown at (4) in fig. 4.

41. Immediately prior to insertion, the vent plug must be removed, and the accumulator shaken to ensure that no free acid remains above the solid electrolyte. This is to be in addition to the normal shaking that takes place after charging.

42. The accumulator should be charged after a period of one month even if not in use, and its condition maintained in accordance with the instructions on the accumulator label.

43. When replacing the chassis assembly in the case, the panel must be positioned so that the controls are adjacent to the carrying handle on the case. It has already been pointed out (para. 12) that the fixing screws are so located that they cannot be inserted unless the panel is the right way round.

Adjustment of aerial tuning inductance

44. The iron-dust core of the aerial coil L_1 is adjusted by means of the screw (8) seen in fig. 4 on top of the can containing L_1 and C_1 . A signal generator is required for the operation and should be connected to the AERIAL terminal of the R.1545 through a condenser of $400\mu\mu$ capacity. The generator should be adjusted to give a signal of 30 microvolts, modulated 30 per cent., on a frequency of 490 kc/s.

45. Tune the receiver by means of C_7 for maximum signal strength in the headphones. The reaction condenser, C_5 , should be advanced about half way to the oscillating point, but not to critical reaction, in order to increase sensitivity.

46. When the correct tuning point has been found, release the lock-nut on the trimmer screw of L_1 and adjust the trimmer for maximum signal strength. Re-tighten the lock-nut when the correct adjustment is located.

Alignment of tuning control with scale calibrations

47. The trimmer C_8 is provided to enable the tuning of the anode circuit of V_1 , to be made to coincide with the calibrations on the scale of C_7 . This adjustment should be made after the tuning of L_1 described in para. 44, using the signal generator connected as before and adjusted to give the same output, but working on a frequency of 500 kc/s.

48. Set condenser C_7 to the 500 kc/s mark on its calibrated scale. Remove the wax seal from the adjusting screw of C_8 , the location of which can be seen in fig. 3. Switch the receiver on and set the reaction condenser, C_5 , just short of the oscillating point. Adjust the trimmer screw for maximum signal strength. After adjustment, re-seal with Philityne wax. In an emergency sealing wax may be used, but no other substances, as they are liable to clog the screw thread.

Valve cap connections

49. It is important to verify that the top caps of the valves, particularly the cap of V_2 , have a good frictional grip. The caps should be turned so that the connecting leads stand quite clear from the H.T. battery compartment.

APPENDIX 1

NOMENCLATURE OF PARTS

The following list of parts is issued for information only. When ordering spare parts for this receiver the appropriate sections of A.P.1086 and A.P.1086 C must be used.

Stores Ref.	Nomenclature	Qty.	Ref. in fig. 2	Remarks
10D/2134	Receiver, type R.1545			
	<i>Principal components:—</i>			
5E/2151	Cable, L.T., Unirubber 4	6 ft.		Leads to H.T. battery, accumulator and valve caps
5K/911	Cable ends, Ross-Courtney, $\frac{5}{32}$ in. dia. hole $\times \frac{3}{16}$ in.	6		For H.T. battery
5K/1809	Cable end, hook type, 0 B.A., Uniflex 4	1		For L.T. accumulator
5K/1810	Cable end, hook type, 2 B.A., Uniflex 4	1		For L.T. accumulator
10A/13092	Caps, valve, type 16	2		For V ₁ and V ₃
10A/14735	Cap, valve, type 56	1		For V ₂
10D/2317	Case R.1545	1		Resin-bonded plywood, waterproof, with completely removable lid
10C/14634	Choke, H.F., type 681	1	L ₁	10mH, iron-dust core
	<i>Condensers:—</i>			
10C/4322	Type 2227	2	C ₃ , C ₇	6-60 μ F., air, variable
10C/4917	Type 2607	1	C ₈	3-30 μ F., air, variable, trimmer
10C/14052	Type 4624	1	C ₁₃	50 μ F., 12 V. d.c. wkg., electrolytic
10C/14100	Type 4641	1	C ₁₂	12 μ F., 50 V. d.c. wkg., electrolytic
10C/14495	Type 4815	1	C ₂	0.1 μ F., 350 V. d.c. wkg., tubular, paper, wire ends
10C/14606	Type 4874	2	C ₃ , C ₁₀	0.05 μ F., 500 V. d.c. wkg., tubular, paper, wire ends
10C/14657	Type 4901	2	C ₁ , C ₉	100 μ F., 350 V. d.c. wkg., silver mica
10C/4767	Type 2499	1	C ₄	500 μ F., 350 V. d.c. wkg., mica, wire ends
10C/12311	Type 3857	2	C ₁₁ , C ₁₂	100 μ F., 350 V. d.c. wkg., mica
10C/12080	Type 3753	1	C ₆	150 μ F., 350 V. d.c. wkg., silver mica
10D/2284	Coil, aerial	1	L ₁	200 turns, tapped at 50 turns
10D/2285	Coil, R.F.	1	L ₂ , L ₃	Two windings, 240 turns and 60 turns
10H/491	Holdings, valve, type 72	4		Octal
10A/12639	Knobs, type 55	2		For C ₃ , C ₇
10A/11839	Knob, type 11	1		For S ₁
10AB/3570	Retainers, valve, type 132	3		Cord, with two springs
10A/19849	Receivers, telephone, head, type 49, including:—	1		Moisture-proofed. Overall impedance 600 ohms
10HA/1673	Cord, instrument, type 76	1		Headphones cord
	<i>Comprising:—</i>			
10HA/1662	Cord, instrument type 75	1		6 ft. 6 in. of 55/42 copper wire, V.I.R. covered, and 4 termination plugs
5K/1809	Cable ends, hook type, 0 B.A., Uniflex 4	2		
5K/1073	Sleeves, identification	2		Uniflex 4
110A/700	Cushions, receiver, head	2		Moulded, soft rubber, 3 in. dia.
110A/701	Headband, type HB7	1		Lightweight spring steel, leather covered, with adjustable stirrups
10A/19136	Receivers, telephone, head, type 47	2		Moisture-proof. D.C. resistance 120 ohms
	<i>Resistances:—</i>			
10W/6081	Type 6081	1	R ₁	47,000 ohms, $\frac{1}{2}$ watt
10W/1850	Type 8/17	1	R ₂	4,700 ohms, $\frac{1}{2}$ watt
10W/7466	Type 7466	1	R ₅	2.2 megohms, $\frac{1}{2}$ watt
10W/9593	Type 2844	1	R ₄	3.3 megohms, $\frac{1}{2}$ watt
10W/9692	Type 2921	1	R ₆	680 ohms, $\frac{1}{2}$ watt
10W/6838	Type 6838	1	R ₃	22,000 ohms, $\frac{1}{2}$ watt

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Ref. in fig. 2</i>	<i>Remarks</i>
10H/2206	Socket, type 359	1		Mic-tel
10F/2478	Switch, type 1495	1	S ₁	Rotary, single wafer, 3-pole, on-off. Two poles wired in parallel.
5E/	Cable, H.F., P.T.9M		9 in.	Aerial terminal to L ₁
10H/872	Terminals, type 1	4		2 B.A., insulated
10K/1732	Transformer, type 1831	1	T ₂	8:2:1
10K/1733	Transformer, type 1832	1	T ₁	1:2:5
10E/ZA7023	Valves ARP12	4	V ₁ , V ₂ , V ₃	Octal base, Vari-mu. H.F. pentode. One spare.
10E/317	or Valves VP23	4	V ₁ , V ₂ , V ₃	Octal base. Vari-mu. H.F. pentode. One spare
	<i>Accessories:—</i>			
5J/3191	Accumulators, lead acid	1		2 V., 15 amp. hr.
5J/3016	Batteries, dry, 15 V., H.T., type B	3		
	or			
5J/50	Batteries, inert, 15 V.	3		See para. 11 and 37 of main chapter.
5J/1335	Filler, glass	1		Required when 5J/50 is used.