

WIRELESS SET No. 19
MODIFICATION INSTRUCTION NO. 7

SUMMARY

1. This modification covers the provision of an earth connection between the variometer rectifier circuit and earth.
2. *Items affected:*
All aerial variometers, Mk II, (UK and Cdn sets) without this lead.
3. *Action required:* by first echelon RCOC and RC Sigs personnel concerned.
4. *Stores required:*
4 BA soldering lugs 2 per equip.
20 SWG TC wire and sleeving.

DETAIL

5. Remove eight 6 BA screws from the periphery at the front and rear covers. Remove the front cover. Break the seal at the rear cover and remove.
6. Fit 4 BA soldering tag under 4 BA retaining nut of stem supporting the variometer assembly to front mounting plate. The soldering tag lug should be assembled so that it does not foul on bracket or variometer coil.
7. Fit 4 BA soldering tag under nut of retaining screw of aerial transformer unit. This screw is directly above the stem referred to in para 6 above.
8. Make a direct connection between the two soldering tags. Approximately $3\frac{1}{2}$ -in of 20 SWG tinned copper wire covered with 1-mm sleeving will be required. Care should be taken that this connection does not touch bracket or variometer coil.
9. Replace main assembly in case.
10. Refit rear cover, replacing screws. Seal end cap with a small blob of solder between rear end cover and case.
11. Turn pointer of front cover to the index window, and coupling fork of main assembly to number on case corresponding to the setting of the pointer.
12. Replace front cover and refit screws.

END

MODIFICATION INSTRUCTION NO. 8

SUMMARY

1. This modification covers the change of a condenser which may give trouble.
2. *Items affected:*
Condensers, C4P wireless sets No. 19 (UK).
3. *Action required:* by RCOC or RC Sigs personnel concerned.
4. *Stores required:*
Condensers, PIAN (ZA 12254) 1 per equip.
The above stores will be demanded from COO Section Z2 stores, Donnington.
5. *Stores removed:*
Condensers, PIAG (ZA 1938) 1 per equip.
The above stores removed from sets must not be used again and should be held by workshops until a reasonable quantity has been collected and then sent to COO, Donnington, for return to manufacturers. The package must be clearly labelled "defective condensers, ZA 1938, for return to manufacturers, authority WO DME Modification Circular T/W 13".

DETAIL

6. If condenser C4P is of 350v rating (Condenser PIAG—ZA 1938) it should be removed and replaced by a 550v type (Condenser PIAN—ZA 12254). Future supplies of sets will be fitted with PIAN in this position which will be designated C38A in the circuit schematic diagram.
7. This is applicable to sets of the following serials:—

<i>Number</i>	<i>Manufacturer</i>
0 — 6012	Pye Radio
17013 — 17844	Pye Radio
6013 — 6226	E. K. Cole
12013 — 13022	Mitcham
20013 — 20180	AGI

END

MODIFICATION INSTRUCTION NO. 9

SUMMARY

1. This modification covers the addition of a protecting shield to prevent breakages to the porcelain push button.
2. *Items affected:*
Junctions, distribution, Nos. 1 and 3 (UK and Cdn Sets).
3. *Action required:* by RCOC or RC Sigs personnel concerned.
4. *Stores required:*
Shields, protecting, No. 2 (ZA 20037) 1 per equip
The above stores will be demanded from the Commandant, COD, Donnington, quoting "WO DME Modification Circular T/W 61".

DETAIL

5. The protecting shield will be fitted under the fixing nut of the driver's push button.
T/W 61

END

MODIFICATION INSTRUCTION NO. 10

SUMMARY

1. This modification covers the addition of a bracket to protect the "B" aerial from being damaged by impact with trees, etc.
2. *Items affected:*
"B" Set aerials (UK and Cdn Sets).
3. *Action required:* by RCOC and RC Sigs personnel concerned.
4. *Stores required:*
Aerial base No. 9, brackets protecting 1 per equip
The above stores will be demanded from COO P1 (B), Donnington, quoting "WO DME Modification Circular T/W 51, together with serial numbers of equipment for which the parts are required.

DETAIL

5. (a) Remove aerial base from its mounting.
(b) Remove aerial feeder from aerial base.
(c) Slip the new bracket over the aerial base mounting.
(d) Replace aerial feeder and aerial base.
(e) Push up the bracket until it locates against the bottom of the aerial base and fix in position.

END

MODIFICATION INSTRUCTION NO. 11

SUMMARY

1. This modification covers a change of wiring of condenser C4CP.
2. *Items affected:*
Supply units No. 1 Mk I* (UK).
3. *Action required:* by first echelon RCOC and RC Sigs personnel.
4. *Stores required:* NIL.

DETAIL

5. To prevent damage to the rotary transformer in event of C4CP becoming defective, the "hot" end of C4CP has been moved from the rotary unit side of fuse F1B to the junction of F1B and L18B.
6. The serial numbers of sets affected are:
39050 to 39559, made by Pye.
7775 to 8294 } made by E K Cole.
10345 to 10963 }

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END

MODIFICATION INSTRUCTION NO. 12

SUMMARY

1. This modification covers the provision of a waterproof cover for the aerial variometer in certain installations.
2. *Items affected:*
All wireless sets No. 19 (UK and Cdn Sets) installed in tanks.
3. *Action required:* by units concerned.
4. *Stores required:*
WS No. 19, aerial variometer covers, waterproof (ZA 10411) ... 1 per equip
The above stores will be demanded from the Commandant, COO, Donnington, quoting "WO DME Mod Cir T/W 30" as authority.

DETAIL

5. (a) Uncouple feeder from variometer.
(b) Remove variometer from mounting and fit waterproof cover.
(c) Replace variometer and reconnect feeders.

END

WIRELESS SET NO 19

MODIFICATION INSTRUCTIONS No. 13

SUMMARY

1. This modification covers the addition of a shielded lead to reduce feed-back and loss of drive in the PA circuit.
2. *Items affected:*
Wireless Sets No. 19 Mk II Cdn.
3. *Action required:* by second to fourth echelon RCOC workshops.
4. *Stores required:*
Screened lead 4-in per equip.

To be obtained locally.

DETAIL

5. All sets will be examined to ascertain if the lead from the cap of V2A to condenser C10A is shielded or unshielded.
6. If the lead is unshielded, proceed as follows:
 - (a) Remove set from case and V1A and V2A from set.
 - (b) Unsolder grid lead of V2A from condenser C10A located within gang assembly. Unsolder grid clip from this lead.
 - (c) Prepare a 4-in length of screened lead by removing 1-in of braid and $\frac{3}{4}$ -in of insulation at either end. Solder original grid clip to one end of conductor and $1\frac{1}{4}$ -in of bonding wire to the braiding at the opposite end.
 - (d) Solder free end of conductor to terminal of condenser C10A from which old lead was removed, and bonding wire to earthing tag under rear fixing screw of condensers C10A/C35A supporting shelf.
7. Replace valves and re-align RF circuits. Check overall performance.

END

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MODIFICATION INSTRUCTION NO. 14

SUMMARY.

1. This modification covers the change of an incorrect resistance in certain sets.
2. *Items affected:*
Wireless Set No. 19 Mk II (UK)—
Resistances, R6G.
3. *Action required by:*
RCOC or RC Sigs personnel concerned.
4. *Stores required:*
Resistors, 47000 ohm (R6G) 1 per equip.
5. *Stores removed:*
Resistors, 1 megohm (R6G) 1 per equip.

DETAIL

6. Sets in the serial number range 20013 to 20112 should be examined. If, when switching from "B receive" to "B send", a high pitched whistle is audible in the phones, which gradually fades away after approximately 30 secs duration, resistor R6G is the wrong value, and should be replaced by a 47000 ohm resistor.

(T/W6)

END

MODIFICATION INSTRUCTION NO. 15

SUMMARY

1. This modification covers the replacement of suspected coils.
2. *Items affected:*
Wireless Sets No. 19 Mk II (UK) Serials 12577 to 12660 inclusive—
Coils L4 and L6.
3. *Action required by:*
RCOC personnel concerned.
4. *Stores required:*
Coils, drive, tuning, No. 2 range I (ZA 10178/1) 1 per equip.
Coils, drive, tuning, No. 2 range II (ZA 10178/2) 1 per equip.
The above stores will be demanded from COO, Donnington quoting WO, DME Mod Circ T/W 14 and giving serial number of sets involved.

DETAIL

5. Certain sets within the serial No. range 12577 to 12660 have been fitted with coils which are liable to excessive permeability/temperature change. This will be shown by a variation in the drive on "send" as the set warms up.
6. In suspected sets the cores of L4 and L6 will be examined and replaced if of the solid type. The sender will be re-aligned and operation checked.

END

MODIFICATION INSTRUCTION NO. 16

SUMMARY

1. This modification covers the changing of reversed microphone connections.
2. *Items affected:*
Control units of early Pye manufacture.
3. *Action required by:*
RCOC or RC Sigs personnel concerned.
4. *Stores required:* NIL.

DETAIL

5. With the headset plug removed from the control box, check with an Avometer that point No. 5 on the 8 pin socket is connected to Earth (Control box case). Check that point No. 4 is above Earth.
6. If these are interchanged, rewire correctly.

END

(T/W 48)

MODIFICATION INSTRUCTION NO. 17

SUMMARY

1. This modification covers a change in the mounting plate of the condenser in order to allow for the mounting of an RF gain control.
2. *Items affected:*
Wireless Set No. 19 Mk II and III (UK)—
Condenser and drive No. 2 mounting plate.
3. *Action required by:*
RCOC personnel concerned.
4. *Stores required:* NIL.

DETAIL

5. Future mounting plates which are provided for spares will incorporate this modification. Existing supplies will only be suitable for use with Mk II unless modified as below. When fitting these early types to Mk III sets, modify as follows:—

- (a) View the plate from the back of the set;
- (b) Scribe a line $1\frac{1}{4}$ -in long from the upper edge and $9/16$ -in from the left hand edge of the top left hand corner;
- (c) Scribe a line from the bottom of the $1\frac{1}{4}$ -in line parallel with the upper edge to meet the left hand edge;
- (d) With a hacksaw cut along these two lines, thus removing a rectangle of metal ($1\frac{1}{2}$ -in x $9/16$ -in).

END

WIRELESS SET NO. 19 MK III CDN

MODIFICATION INSTRUCTION NO. 18

SUMMARY

1. This modification covers the drilling of a hole in the chassis to permit the adjustment of different types of BFO coils. While these coils are electrically interchangeable, the Northern Electric type coil is adjusted from the bottom of the chassis, whereas the other two types are adjusted through an additional hole in the top of the chassis.

2. *Items affected:*

Wireless Sets No. 19 Cdn prior to Serial No. C 52538 of Northern Electric manufacture.

3. *Action required:* by RCEME personnel concerned.

4. *Stores required:* NIL

DETAIL

5. Remove valves V2B, V1A and V2A.

6. (a) Loosen the set screw holding the flexible shaft on the FLICK ADJUST.

(b) Remove the "C" washer on the FLICK ADJUST shaft.

(c) Remove this shaft by pulling on the FLICK ADJUST knob.

7. Remove the BFO coil.

8. Drill a 3/8-in dia hole through the chassis midway between the present BFO mounting holes.

9. Elongate the mounting holes if necessary.

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10. Replace the BFO coil.

11. Replace the FLICK ADJUST shaft "C" washer.

12. Replace valves V2B, V1A and V2A.

13. Check circuit alignment of the BFO and re-align the set if necessary.

END