

[A.C.I. 2031 of 1942]

**AMPLIFIER, R.F., No. 2  
MODIFICATIONS  
MODIFICATION INSTRUCTION No. 1**

(Amplifier, R.F., No. 2, Mk. I)

**SUMMARY**

This instruction covers the conversion of Amplifier, R.F., No. 2, Mk. I to Amplifier, R.F., No. 2, Mk. II.

**Item affected :**

Amplifier, R.F., No. 2, Mk. I (ZA.10395)

**Action required** by R.E.M.E. personnel concerned.

**Stores required :**

<i>Cat. No.</i>	<i>Description</i>	<i>No. off per equipment</i>
ZA.20732/1	Amplifier, R.F., No. 2, Mk. I; fan modification kit.	1

Units in U.K. will demand the above stores from the Commandant, C.O.D., Donnington. Authority for demand (to be quoted on all indents), T/W.114. These stores will be issued to overseas theatres without demand.

**DETAIL**

1. Amplifier, R.F., No. 2, Mk. I is not capable of continuous operation on send due to overheating. Existing amplifiers of this type will therefore be converted to conform with Mk. II design, which possesses a cooling fan fitted to the rotary transformer. The detailed instructions for fitting cooling fan are included in the modification kit.

2. For all accounting purposes this modification will be known as T/W.114.

END

Issue 1, 10 Apr. 1944

Page 1

**Distribution—Code No. 3**

## AMPLIFIER, R.F., NO. 2

### MODIFICATION INSTRUCTION NO. 2

(Amplifier, R.F., No. 2, Mks. I and II)

**SUMMARY**

1. This instruction covers the modifications necessary when replacing condensers Y24A (C6A-D) by condensers Y24B, as used in the Amplifier, R.F., No. 2, Mk. II.

**2. Items affected :**

Condenser Y24A (ZA 16704)

3. **Action required by R.E.M.E. personnel concerned.**  
Priority 'B'.

**4. Stores required :**

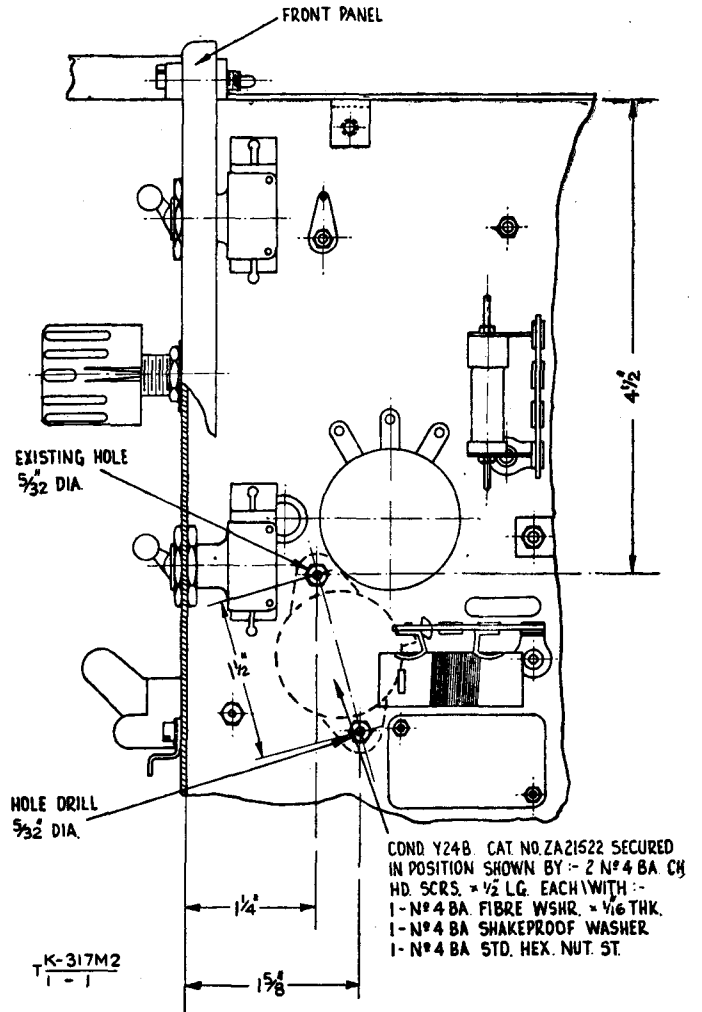
Cat. No.	Description	No. off per equipment
ZA 21522	Condenser Y24B	1

The above stores will be issued as normal maintenance spares.

**DETAIL**

5. (a) Condenser Y24B has been fitted to Amplifier, R.F., No. 2, Mk. II, as the previous type of condenser (condenser Y24A) was not capable of withstanding the high R.F. voltage and temperatures encountered. Consequently it has been decided to provide the new type of condenser for the maintenance of Amplifier, R.F., No. 2, Mks. I and II. The following modifications will be necessary when replacing condenser Y24A by condenser Y24B.
  - (b) C6A-D is located on top of the chassis immediately behind the set-flick mechanism.
  - (c) Remove condensers Y24A (four condensers complete with bracket).
  - (d) Remove the input coil, L1A, to avoid damaging it in the subsequent drilling operation.
  - (e) Drill one hole  $\frac{5}{32}$  in. dia. (22 drill) as shown in Fig. 1.
  - (f) Mount the new condenser and connect up (normally the horizontal condenser tag is connected to the chassis end of the P.A. coil and the vertical one to the top end).
  - (g) Replace L1A.
  - (h) Test the amplifier.

6. For all accounting purposes this modification will be known as—T/W/BG/1.



**Fig. 1—Amplifier, R.F., No. 2, fitting of ceramic condenser Y24B**

Encl. 2 to 57/Mtce./776

END

AMPLIFIER, R.F., NO. 2, MKS. I AND II

Note. This replaces and cancels Tels. K 317 Mod. Inst. No. 2, Issue 1.

Information

1. Tels. K 317 Mod. Inst. No. 2, Issue 1 covered replacement of Condensers Y24A by Y24B in circuit reference position C6.

Action

2. Tels. K 317 Mod. Inst. No. 2, Issue 1 is hereby cancelled.

3. Equipments already modified will not be restored to their previous condition, but no other equipments will be modified.

4. If stores have already been received they will be returned to the nearest Ordnance depot holding similar stores and used for maintenance purposes.

5. For all accounting purposes this modification will be known as - T/W/BG/1.

D.M.E. Encl. No. 2 to 57/Maint./776.

END

Issue 2, 20 Jun. 1945

Distribution - Class 870. Code No. 3

Page 2

AMPLIFIER, R.F., NO. 2

(Aerial tuning inductance No. 17)

Note: This replaces and cancels Tels. K 317 Mod. Inst. No. 3, Issue 3. This issue is identical with Issue 2.

SUMMARY

1. The wire on the present aerial tuning inductance becomes sufficiently dirty to produce an intermittent contact with the contact wheel. New sets are being fitted with a contact wiper, and existing sets will be modified accordingly.

Time required to perform modification - 2 man-hours.

2. Items affected:

Aerial tuning inductance, No. 17 (ZA 15372)

3. Action required by R.E.M.E. personnel concerned at the request of the unit holding the equipment. Priority 'B'.

4. Stores required:

Cat. No.	Description	No. off per equipment
(1) ZA 22272	Springs, clamping, No. 2	2
(2) ZA 21201	Wiper, contact No. 1	1
(3) CA 1879	W.D. Grease No. 0	as required

Units in the U.K. and overseas theatres will demand items (1) and (2) from the Commandant, C.O.D., Donnington.

Item (3) will be obtained from R.A.S.C. stores through the normal channels.

Authority for demand (to be quoted on all indents) - T/W 140.

5. Stores returned: Nil.

DETAIL

6. Examine the equipment concerned and if the Aerial tuning inductance No. 17 does not possess a contact wiper, proceed as follows:-

7. Rotate the AERIAL TUNING INDUCTANCE knob until the contact wheel is brought to the stop nearest the front panel, and lock the knob with the locking device.

8. The spindle carrying the contact wheel is held at each end by flat springs, and these have to be reinforced. To do this proceed as follows:-

- (a) Remove the securing screws from one spring at a time, and between it and the insulated tie-bar, holding the ends of the complete assembly together, insert the new strengthening spring (Spring, clamping, No. 2, ZA 22272). One of these will be needed for each of the two springs concerned.
- (b) When replacing the securing screws, engage, for the time being, the first threads only, leaving the pressure on the contact wheel as slack as possible.

9. Insert the contact wiper (Wiper, contact, No. 1, ZA 21201) under the contact wheel, so that the wheel is located in the central slot in the contact wiper, and the wheel boss rides in the radiused form in the middle of the wiper. Ensure that supporting springs at either end of the spindle are not strained. Again see that the wheel is engaged with correct turn - the one from which it was originally removed and that the ends of the contact wiper also make contact with this same turn.
10. Tighten the screws at each end of the tie-bar, thus applying the necessary tension to the wheel and the wiper.
11. Unlock the AERIAL TUNING INDUCTANCE knob, lubricate the wheel boss with a little anti-freeze grease (W.D. Grease 0) and run the wheel up and down the coil a few times.
12. Record completion of modification on modification recording card (if fitted) against number - T/W 140.

END

R E S T R I C T E D

ELECTRICAL AND MECHANICAL  
ENGINEERING REGULATIONS

TELECOMMUNICATIONS  
K 317 Mod Inst No. 4

Table 1 - Comparison of schematic reference numbers

Old	New	Old	New	Old	New	Old	New	Old	New
01	04	None	09	RLA/1	RLD/1	R3D	R13	R11A	R15
02	06	None	07	RLB/2	RLC/2	R3E	None	R12A	RV4
03	05	None	012	RLC/1	RLB/1	R3F	None	R12B	RV2
05A	08	L1A	L2	RLD/1	RLA/1	R3G	None	R13A	R3
05B	015	L2A	L6			R3H	None	None	R9
06A	014	L2B	L3	V1A	V1	R4A	R6	None	R4
07A	016	L4A	L5	V1B	V1	R4B	R11	W1A	MR5
08A	017	L5A	L4	V1C	None	R4C	None	W1B	MR1
09A	013	L8A	L1	V1D	None	R4D	None	W2A	MR3
09B	03	L9A	TR2			R5A	R14	W3A	MR4
010A	010	L9B	TR1	R1A	RV3	R6A	R5	W3B	MR2
011A	018	S1A	SWA	R2A	RV1	R7A	R1		
011B	02	S1B	SWC	R3A	R7	R8A	R16	F1A	FS1
011C	01	S2A	SWB	R3B	R8	R9A	R2		
012A	011	S6A	SWD	R3C	R12	R10A	R10	P1A	LP1

57/Maint/4889

END