

## CHAPTER 6-1

## HANDSET MICROPHONE 5965-99-223-0527

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## DESCRIPTION

1 This equipment is a 'Lustraphone' handset Type VC52/HMT/GP/300. It is intended to provide telephone handset facilities in areas where the ambient noise level is too high to allow use of conventional handsets. It is fitted with a noise-cancelling microphone 5965-99-952-2228 and high sensitivity earphone 5965-99-940-2368. The handset comes complete with a 4-core spiral cable terminated with a plug Type 671, 5935-99-946-6652 to allow connection to the communication system. Item numbers in the following paragraphs refer to Fig 1.

**Microphone assembly**

2 One end of handset handle (36) provides a housing for microphone insert (23). The insert is mounted inside a preformed rubber packing (24) and fitted into adaptor (26). The adaptor is sealed inside handset (36) by rubber seal (25) and clamped into position by screw-on cap (22). Two 8BA threaded terminals are screwed into the rear of the microphone insert (23) via grommets (27) and two apertures in adaptor (26). The two 8BA terminals provide connections for the microphone output leads.

3 The microphone insert (23) is connected across the primary of matching transformer (28). The transformer ensures an output impedance of 300 ohms into the line with the microphone operative. The leaf spring mic on/off switch (6) (Fig 1 inset) is operated by a push bar and is connected in series with the secondary winding of transformer (28). A 330 ohm resistor (21) is connected from the switch (ON position) to one side of transformer (28) secondary to maintain the line load impedance when the microphone is inoperative.

4 Matching transformer (28) and mic on/off switch (6) are fitted between the insert housings in handset handle (36). The microphone switch assembly supports the matching transformer and is secured into position by screw (8a) and nut (8b).

### **Earphone assembly**

5 The end of the handset handle (36) remote from the microphone, houses receiver insert (4) which is secured in the housing by rubber seal (5) and screw-on cap (2). Two 8BA threaded terminals at the rear of the insert provide the telephone cable connections.

### **Mic/Tel cable connector**

6 The microphone and receiver insert circuit connections are combined to form the four cored mic/tel cable (35). The cable is terminated by a jackplug Type AM 671 (29, 30 and 31) for connection to the external circuit via handset handle (36) and connector assembly (32, 33 and 34).

### **OPERATION**

7 The handset is used similarly to a conventional telephone handset, but care should be taken to keep the microphone close to the lips. The microphone on/off switch must be pressed while speaking.

### **SERVICING**

8 Test Set 10S/6625-99-529-8399 may be used for a simple serviceability test. For details of test methods, refer to AP117L-0403-1.

### **Microphone element replacement**

9 To replace microphone element (23) proceed as follows:

9.1 Unscrew cap (22) and carefully pull away adaptor (26) from the insert housing of handset handle (36).

9.2 Unscrew the two 8BA screws from the rear of the insert and remove the microphone cable connections.

9.3 Withdraw insert (23) and rubber packing (24) from adaptor (26) and remove packing (24) from the insert. Reverse the above procedure when fitting a new microphone insert.

### **Earphone element replacement**

10 To replace earphone element (4) proceed as follows:

10.1 Unscrew cap (2) and carefully pull out the insert (4) from the housing of handset handle (36).

10.2 Remove the telephone cable connections from rear of the insert. To fit new receiver insert (4) reverse the above procedure.

### **Mic/Tel cable assembly replacement**

11 To replace mic/tel cable (35) proceed as follows:

11.1 Remove microphone element (Para 9).

11.2 Unscrew the four coloured terminal screws located in the microphone housing.

11.3 Remove the four connector terminals.

11.4 Unscrew cable gland packing nut (33) and withdraw mic/tel cable (35) through cable nipple (32). To fit new mic/tel cable (35) reverse the procedure.

**Microphone ON/OFF switch replacement**

12 To replace mic on/off switch (6) proceed as follows:

12.1 Unscrew and remove screw (8a) and nut (8b).

12.2 Carefully withdraw switch assembly (6) from handset handle (36) to the extent of the switch connecting cables.

12.3 Unsolder switch cables and remove switch cover (9) to expose load resistor (21) if required. To fit new switch assembly (6) proceed in reverse order.

**NOTE**

To replace individual components of switch assembly reference should be made to the exploded view, Fig 1.

**Matching transformer replacement**

13 To replace transformer (28) proceed as follows:

13.1 Remove the microphone element (Para 9) and microphone on/off switch (6) (Para 12).

13.2 Transformer (28) situated inside the handset handle (36) between the two inset housings is now accessible. Unsolder the microphone cable connections at the transformer. To fit new transformer, reverse the procedure.



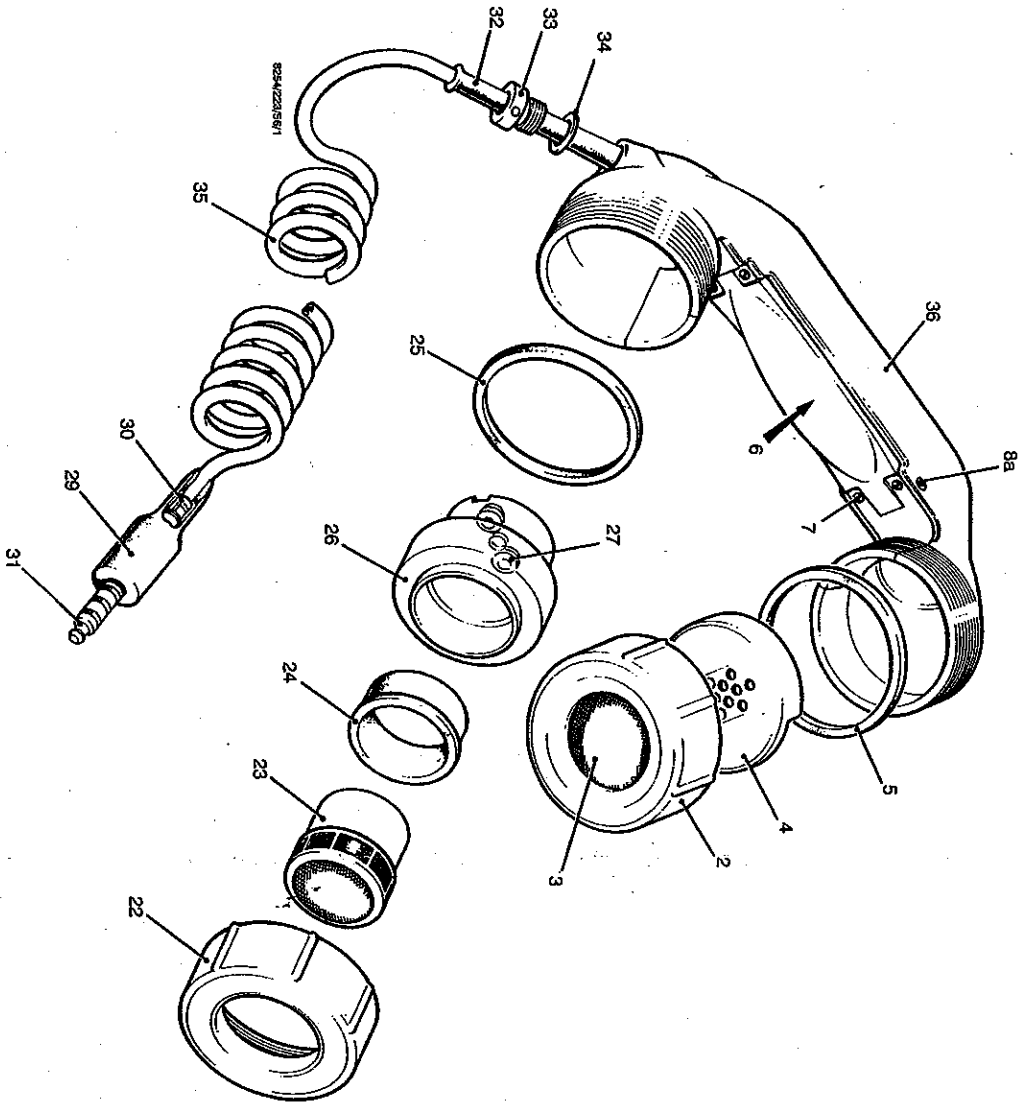
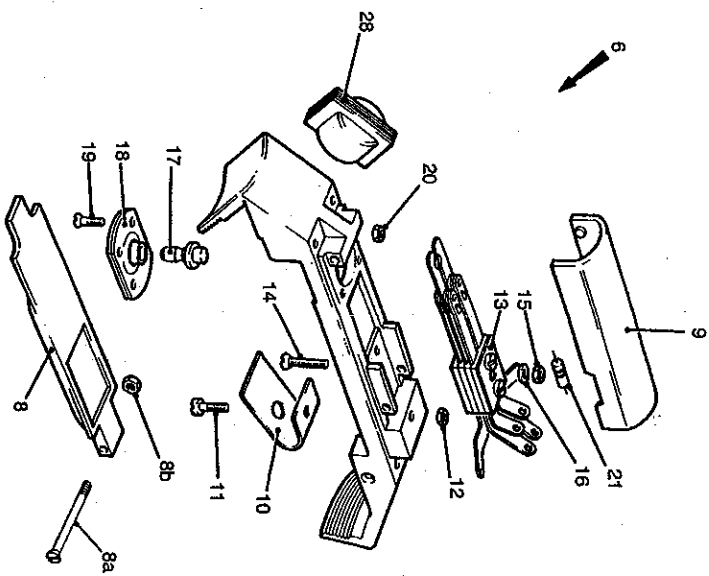


Fig 1 Handset Microphone 5965-99-223-0527



MICROPHONE ON/OFF SWITCH 5965-99-112-4414



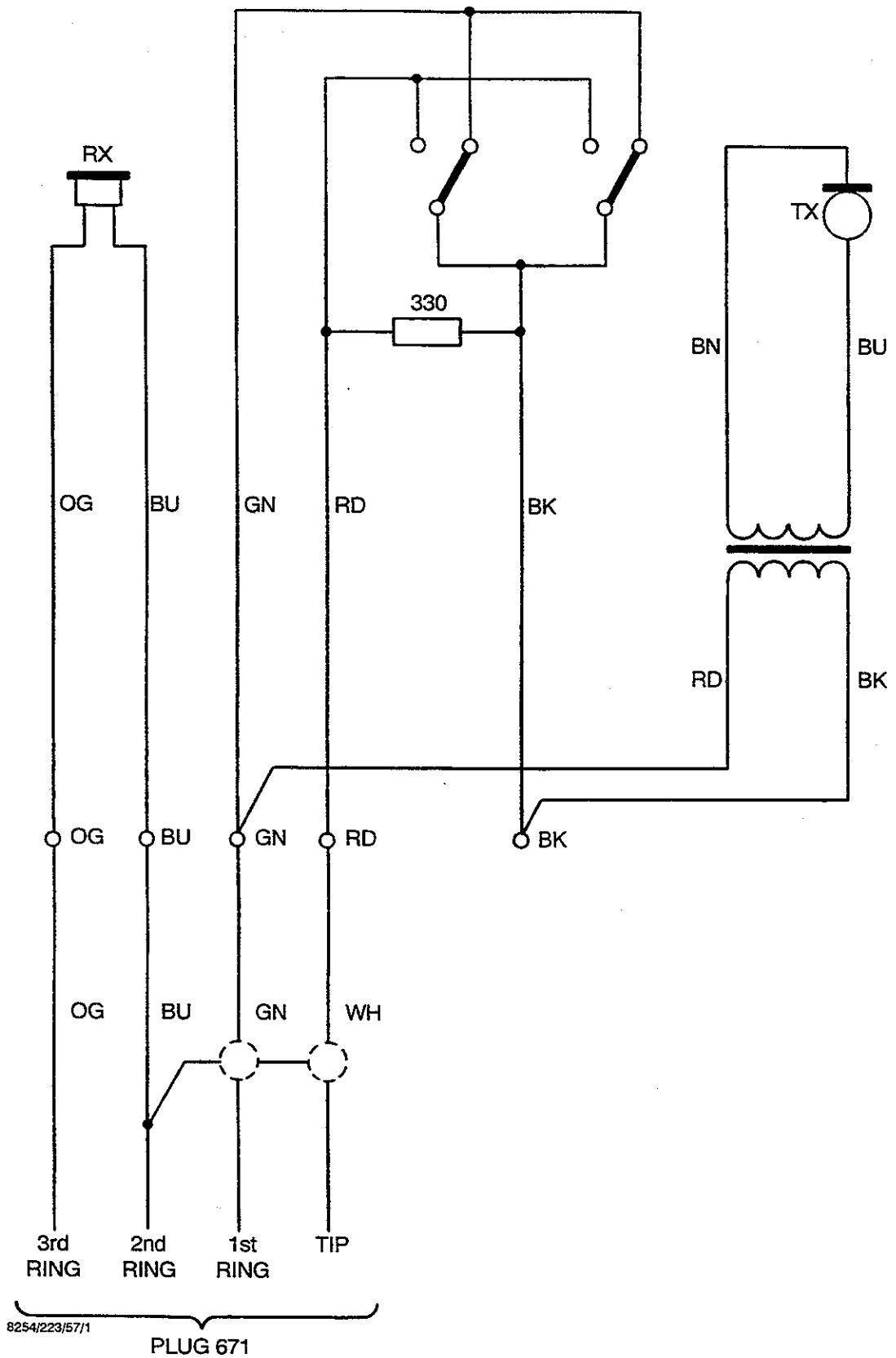


Fig 2 Handset Microphone 5965-99-23-0527 : circuit diagram

