

KEYPHONES FOR PABXS WITH DC CODE C SIGNALLING

Maintenance

(As this Instruction has been extensively REVISED, individual paragraphs have not been starred.)

1 GENERAL

1.1 This Instruction deals with the maintenance of Telephones SA4252 which have been developed to meet the telephone requirements of PABXS with dc Code C signalling. The instrument is based on the Telephone 746.

1.2 The family of dc Code C instruments is set out below.

TABLE 1

TELEPHONE	DESCRIPTION
SA4252	Basic desk top instrument
1/SA4252	12 wire plan instrument
2/SA4252	Desk. telephone with 4 press-buttons
3/SA4252	Wall mounted telephone
1/SA4259	Pull out under-desk keypad
2/SA4259	Desk top keypad
LST SA4255	DC 'Code C' push button equivalent of LST 4D

These telephones are further described in C3 B3000.

1.3 Telephone SA4252 is manufactured by Plessey (identified by manufacturer's code SPK, or EET) and by GEC (code GEN). Both instruments perform the same function although they differ in outward appearance and Push Button Unit (PBU) construction.

2. PBU FAULTS Early Plessey (SPK, EET) versions of these instruments manufactured before 1974 had suspect micro-switches on the PBU resulting in wrong codes being signalled and therefore wrong numbers being sent. Pending development of a new PBU a modified unit, with one micro-switch replaced by an open springset, was introduced on new instruments in early 1974, and as a replacement Push Button Unit in 1975.

The A Push Button Unit with two open springsets is to be introduced during 1976.

No problems have been experienced with GEC instruments and replacement PBUs are not available for these telephones.

3 DIAGRAMS The diagrams for do Code C telephones connexions as issued and plan arrangements are contained in the SA(L) series as shown in Table 1.

These diagrams are not distributed but are obtainable on requisition from R5/U2.1 Harrogate.

TABLE 2

TELEPHONE NO.	DIAGRAM
SA4252 1/SA4252 2/SA4252 3/SA4252	*SA(L) 4252
Draw and Desk Unit 1/SA4259 2/SA4259 LST SA4255	SA(L) 4259 SA (L) 4255

*This diagram contains plan arrangements with the exception of Plan 2A (5 line Plan 2) which is contained in SA(L) 10052.

Add-on parts and auxiliary units are shown in Dgm N 4700.

For Telephone 746 read SA 4252
 " " 740 " 2/SA4252
 " " 741 " 3/SA4252

4 SPARES

4.1 Normal Stock Spare telephones and a stock of relevant items listed in B2746 may be held as required at the PABX for replacement purposes. Quantities held should be sufficient to meet the estimated requirements of the PABX. In addition the items listed in Table 3 may be held as required.

TABLE 3

ITEM	USE
Push Button Unit 3A (Item Code 373032)	SA 4252 1/SA 4252 2/SA 4252
3B 373033	3/SA 4252
3D 373034	1 and 2/SA 4259
3C	Not stocked
Kit 178A (Item Code 435291)	Button tops
Switch Composite D93313	
Cord Inst 20/104D	Plan 2A
Grey 5000 mm	

NOTE: The Push button Unit and button tops listed above are for use with Plessey instruments only.

4.2 Telephone 1/SA 4252 This instrument has been superseded for new work by Telephone SA 4252 and Plan Set N 625. Telephone 1/SA 4252 is available for maintenance replacement purposes only.

5 MAINTENANCE

5.1 It is essential that the A and B lines are connected to the telephone in accordance with the appropriate diagram. Reversal of the A and B connexions will result in false operation of the push-button unit.

5.2 Where items other than those detailed in B2746 and Table 3 above are found faulty the telephone must be changed.

5.3 Attempts must not be made to repair or adjust faulty push-button units. In particular, the adjustment of the common microswitches or springsets MS1 and MS2 is critical and must not be interfered with.

5.4 Faulty instruments or PBUs with a completed fault label attached indicating the nature of the fault, should be returned for repair via Supplies Department in the normal way.

5.5 Faulty LSTs SA 4255 should be returned for Factory repair using the procedure detailed in A0015.

6 DISMANTLING AND REASSEMBLY

6.1 See B2746 for details of cover removal.

6.2 To remove the push button unit, loosen the screw securing it to the gravity switch gantry and swing the unit in an arc towards the front of the instrument. It may then be lifted out of the slots in the bell gong plate.

7 TESTING The push-button unit may be tested using the Tester described in para 8 or by using a meter multi-range set on the ohms scale connected between T8 and T15 for the A leg conditions and T19 and T15 for the B leg conditions. The depression of a button presents to the A and B lines the do condition shown in Fig 1. On 1/SA 4252 Telephones the Exchange button must be operated before testing.

NOTE: The instrument must be disconnected from the line before testing the push button unit. The earth connexion must also be removed.

When checking the do conditions with a meter the diodes associated with the PBU may be reverse biased (depending on the polarity of the meter leads) and it thus will be necessary to reverse the meter leads to check that some diodes are not faulty.

8 PBU TESTER Fig 2 shows the circuit diagram of a tester which is suitable for testing the PBU. If considered advantageous, the tester should be constructed locally from the following stores:

- 4 - Valves Electronic, CV8805 (D1-D4)
- 4 - Lamps No. 41E (LP1-LP4)
- 4 - Batteries, Dry No. 11
- 1 - Key No. 68 (KCO)

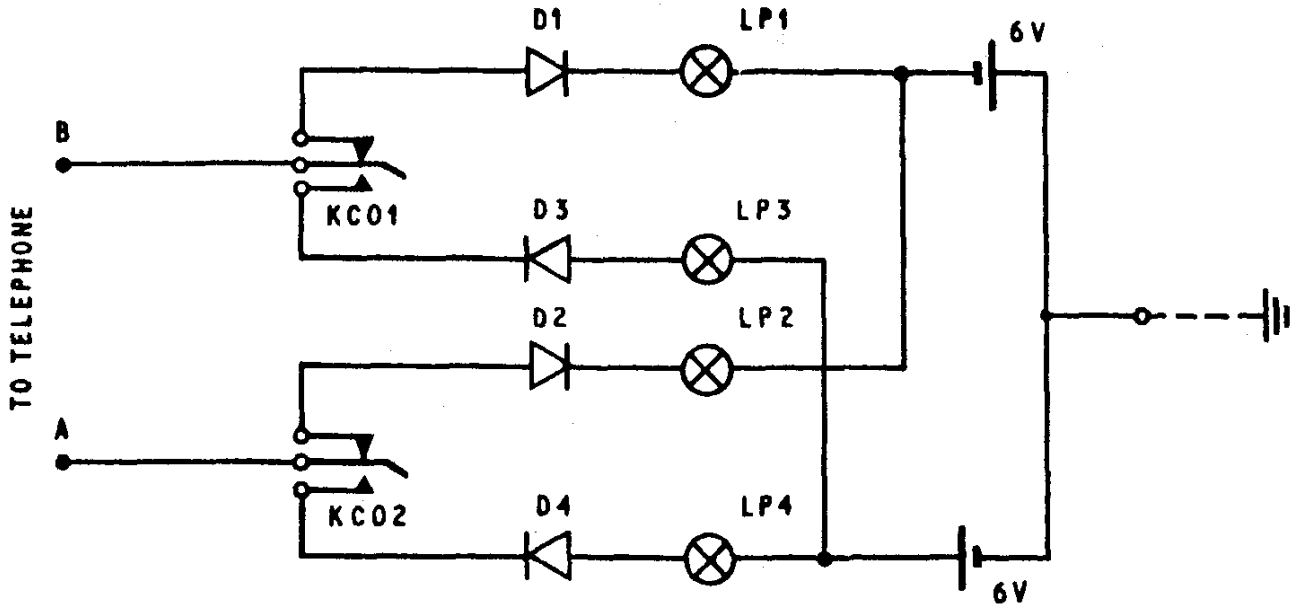
Fig 1 follows

KEY	D.C. LEG	
	B LEG	A LEG
1		DIS
2	DIS	
3		
4		DIS
5		
6		
7		
8	DIS	
9		
0		
*		
#		

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FIG 1 DC CONDITIOND FOR EACH PRESS BUTTON

Fig 2 follows



WITH BUTTON No.....DEPRESSED	WITH KEY KCO NORMAL LP..... GLOWS	WITH KEY KCO OPERATED LP..... GLOWS
1	1	-
2	2	-
3	1 AND 2	-
4	1 3	3
5	2	3
6	1 AND 2	3
7	1	4
8	2	4
9	1 AND 2	4
0	2	3 AND 4
*	1	3 AND 4
#	1 AND 2	3 AND 4

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FIG 2 TESTER FOR DC CODE 'C' KEYPHONES

Sv 5.3.2

END