

**ePhone\* TELEPHONE SETS**  
**QSQE2500-, QSKE2500- AND QSK2554- TYPE**  
**DESCRIPTION, INSTALLATION, CONNECTIONS**  
**AND MAINTENANCE**



Fig. 1 - QSQE2500- Telephone Set

Fig. 2 - QSKE2554 - Type Telephone Set

CONTENTS	PAGE	CONTENTS	PAGE
1. GENERAL.....	986	4. CONNECTION INFORMATION .....	987
2. DESCRIPTION .....	986	5. MAINTENANCE.....	993
3. INSTALLATION.....	986		

\*ePhone is a trademark of Northern Telecom Limited

## SECTION 502-8211-200

### 1. GENERAL

- 1.01 The ePhone telephone sets are electronic single line desk and wall telephone sets equipped with a \*DIGITONE electronic, integrated network/dial.
- 1.02 The network/dial is an integrated circuit assembly which functions as a pushbutton, multifrequency dial and as a telephone set network.
- 1.03 The ePhone telephone sets can be used interchangeably with any existing non-electronic single line desk and wall telephone sets.
- 1.04 A polarity guard has been incorporated in the design to allow the dial to operate if tip and ring are reversed.
- 1.05 The bottom of these telephone sets are stamped ePhone to make them distinguishable from other non-electronic telephone sets.
- 1.06 These telephone sets are available in various colours. For their corresponding colour code refer to 500-1201-100.
- 1.07 This section covers the description, installation connection and maintenance of these ePhone telephone sets.
- 1.08 **Reason For Reissue:** To update the connection information, and the pictorial view of the QSKE-2554 telephone set.

### 2. DESCRIPTION

- 2.01 The QSQE2500-type telephone set is factory wired for individual service and is equipped with a 4-conductor, flat (TELADAPT\*) plug ended cord.
- 2.02 The QSKE2554-type telephone set is factory wired for ring party service.
- 2.03 The QSKE2500-type telephone sets are factory wired for ring party service and are equipped with spade tip ended cords.

2.04 The QSKE2500, the QSKE2554 and QSQE-2500-type telephone sets are equipped with QDN25-type DIGITONE electronic network/dial refer to Table A for telephone set features.

2.05 The ringer volume control on the single line desk telephone set ePhone is a wheel which protrudes through the base of the telephone set. A large bell and a small bell are stamped on the baseplate parallel to the volume control wheel. The large bell means high volume and the small bell means low volume. By moving the wheel in the direction indicated by the bells the ringer volume can be adjusted.

2.06 The ringer volume control on the single line wall ePhone is a lever which protrudes between the housing and baseplate at the bottom of the telephone set. Moving this lever towards the left increases the ringer volume.

2.07 The ringer can be completely silenced by bending the stop next to the detent on the ringer volume control until it completely clears the rim of the ringer frame. This provides a further position on the volume control which prevents movement of the armature.

### 3. INSTALLATION

3.01 The QSQE2500 DIGITONE telephone set can only be installed where a TELADAPT baseboard or wall jack is available.

3.02 The QSKE2500 DIGITONE telephone set can be used in any location where a termination for a spade-tip-ended cord is available.

3.03 The QSKE2554 is a wall mounted DIGITONE telephone set and can be used wherever a standard wall DIGITONE telephone set is presently used. This telephone is equipped with a terminal strip located under the dial bracket to connect inside wiring.

3.04 The baseplate of the QSKE2554 wall telephone set has several holes to allow greater flexibility in the vertical surface mounting and to minimize the use of backboards. Mounting holes are also provided, in the baseplate, to mount the telephone set to a standard outlet box. For mounting to a TELADAPT jack refer to 500-0101-200.

\*DIGITONE AND TELADAPT are the trademark of Northern Telecom Limited

#### 4. CONNECTIONS

4.01 The connection information for the QSQE2500A and QSQE2500B telephone sets are shown in Table B, Fig. 5 and Fig. 5a.

4.02 The connection information for the QSKE2500A, QSKE2500B, QSKE2554A and QSKE2554B are shown in Table C and Fig. 6 and Fig. 6A.

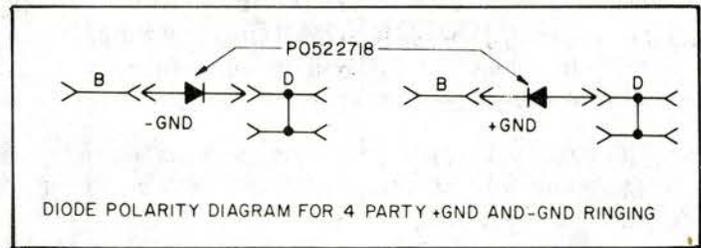
4.03 The QSKE2554-type telephone sets are equipped with a terminal strip which is located between the dial mounting brackets. The mounting wires must be connected to the terminal strip.

4.04 For □ 4-party -GND and +GND service a PO522718 diode kit must be connected as shown in Fig. 3. The diode kit must be ordered separately.

4.05 For "A" lead control connections refer to Fig. 4. When the QSKE2500A is connected for "A" lead control an NE-D4BJ line cord must be used.

4.06 The 2500A-type ePhone telephone sets are equipped with three conductors which are for future options. Two of these conductors are dead dressed and one conductor connected to a spare quick connect terminal. (refer to Fig. 5 and 6).

4.07 The 2500B-type ePhone telephones are equipped with three additional quick connect terminals to be used for future options. Refer to Figure 5a and 6a.



□ Fig. 3 - Diode Polarity Diagram

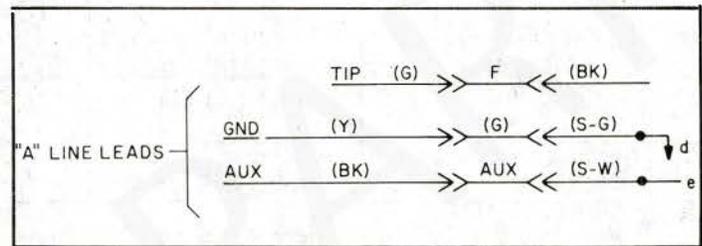


Fig. 4 - "A" Lead Control Wiring Diagram

TABLE A  
FEATURES

	DIAL	MTG. CORD	RINGER	POLARITY GUARD
QSQE2500A	QDN25A	NE-D4QH-87	NE-C4A	X
QSKE2500A □	QDN25A	NE-D3BN*	NE-C4A	X
QSKE2554A □	QDN25A	—	NE-C4A	X
QSQE2500B	QDN25B	NE-D4QH-87	NE-C4A	X
QSKE2500B	QDN25B	NE-D4QM*	NE-C4A	X
QSKE2554B	QDN25B	—	NE-C4A	X

\* Add appropriate colour code.  
X Indicates equipped with.

□ Not required by Bell Canada

**TABLE B**  
**QSQE2500A, QSQE2500B TELEPHONE SETS**  
**CONNECTION INFORMATION**

	LEAD COLOR	BRIDGED PARTY	RING PARTY	TIP PARTY	TIP PARTY ANI	☐ 4 PTY			
						NO GND	± GND	-GND*	+GND*
Inside Wiring or Mounting Cord in set	(R) (G) (Y) (BK)	L2 L1 G AUX	L2 L1 G AUX	L2 L1 G AUX	L1 L2 G AUX	L2 L1 G AUX	L1 L2 G AUX	L2 L1 G AUX	L1 L2 G AUX
Ringer	(BK) (S) (R) (S-R)	L1 K L2 A	G K L2 A	L1 K G A	G B A B	G K L2 A	G B A B	G D A D	G D A D
Line Switch	(S)	L2	L2	L2	K	L2	K	K	K
Network/Dial	(Y)	D	D	D	C1	D	C1	C1	C1
* Requires PO522718 Diode Kit (refer to Fig. 3).									

**TABLE C**  
☐ QSKE2500A, QSKE2500B AND ☐ QSKE2554A, QSKE2554B TELEPHONE SET  
**CONNECTION INFORMATION**

	LEAD COLOR	BRIDGED PARTY	RING PARTY	TIP PARTY	TIP PARTY ANI	☐ 4 PTY			
						NO GND	± GND	-GND*	+GND*
Mounting Cord at Connecting Block in Desk Set	(R) (G) (Y)	R G G	R G Y	G R Y	G R Y	R G Y	G R Y	R G Y	G R Y
Jumper Wires to terminal Strip in Wall Set	(R) (G) (Y)	4 5 5	4 5 6	5 4 6	5 4 6	4 5 6	5 4 6	4 5 6	5 4 6
Ringer	(BK) (S) (R) (S-R)	G K L2 A	G K L2 A	G K L2 A	G B A B	G K L2 A	G B A B	G D A D	G D A D
Line Switch	(S)	L2	L2	L2	K	L2	K	K	K
Network Dial	(Y)	D	D	D	C1	D	C1	C1	C1
* Requires PO522718 Diode Kit (refer to Fig. 3).									

☐ Not required by Bell Canada

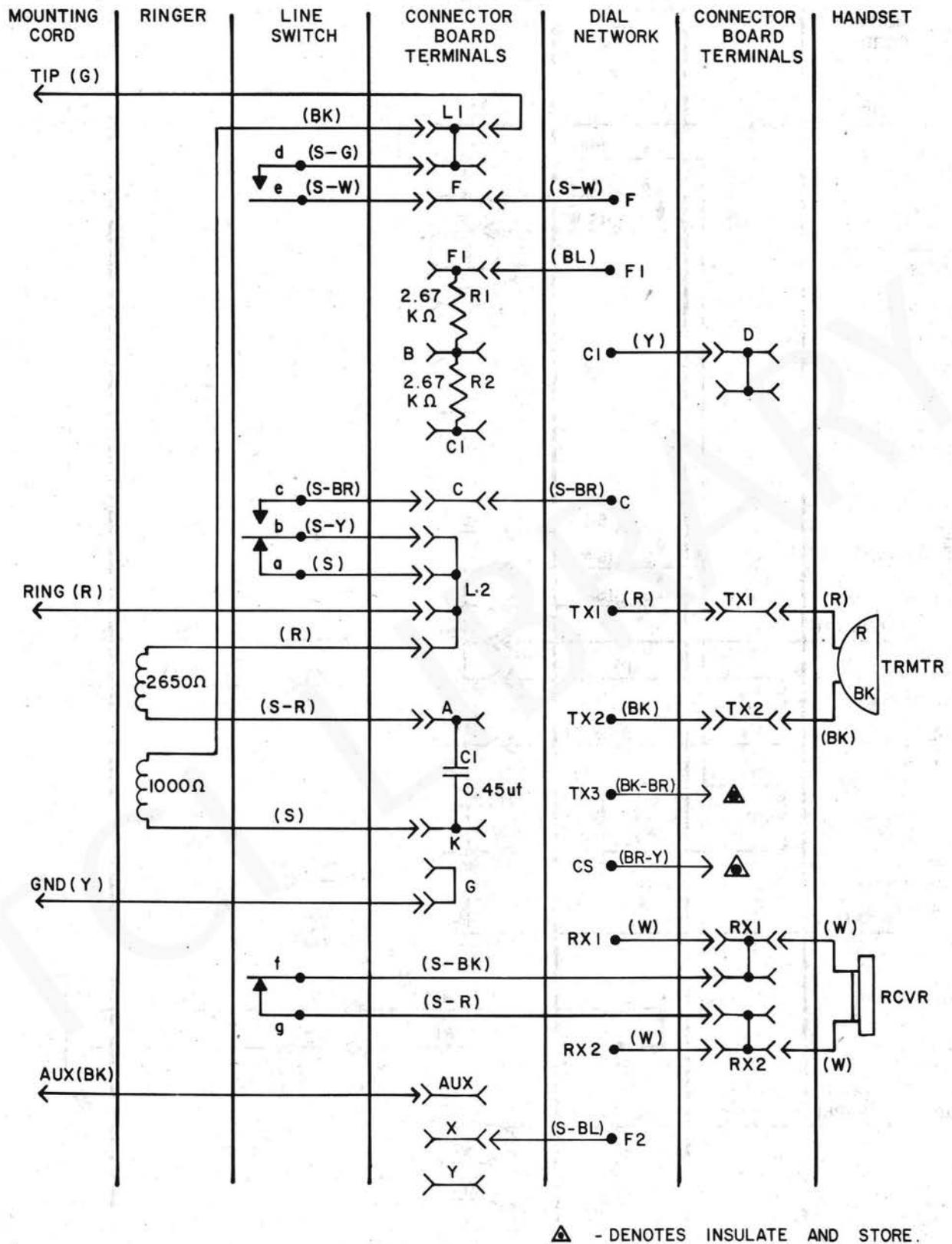


Fig. 5- Wiring Diagram for QSKE2500A Telephone Set

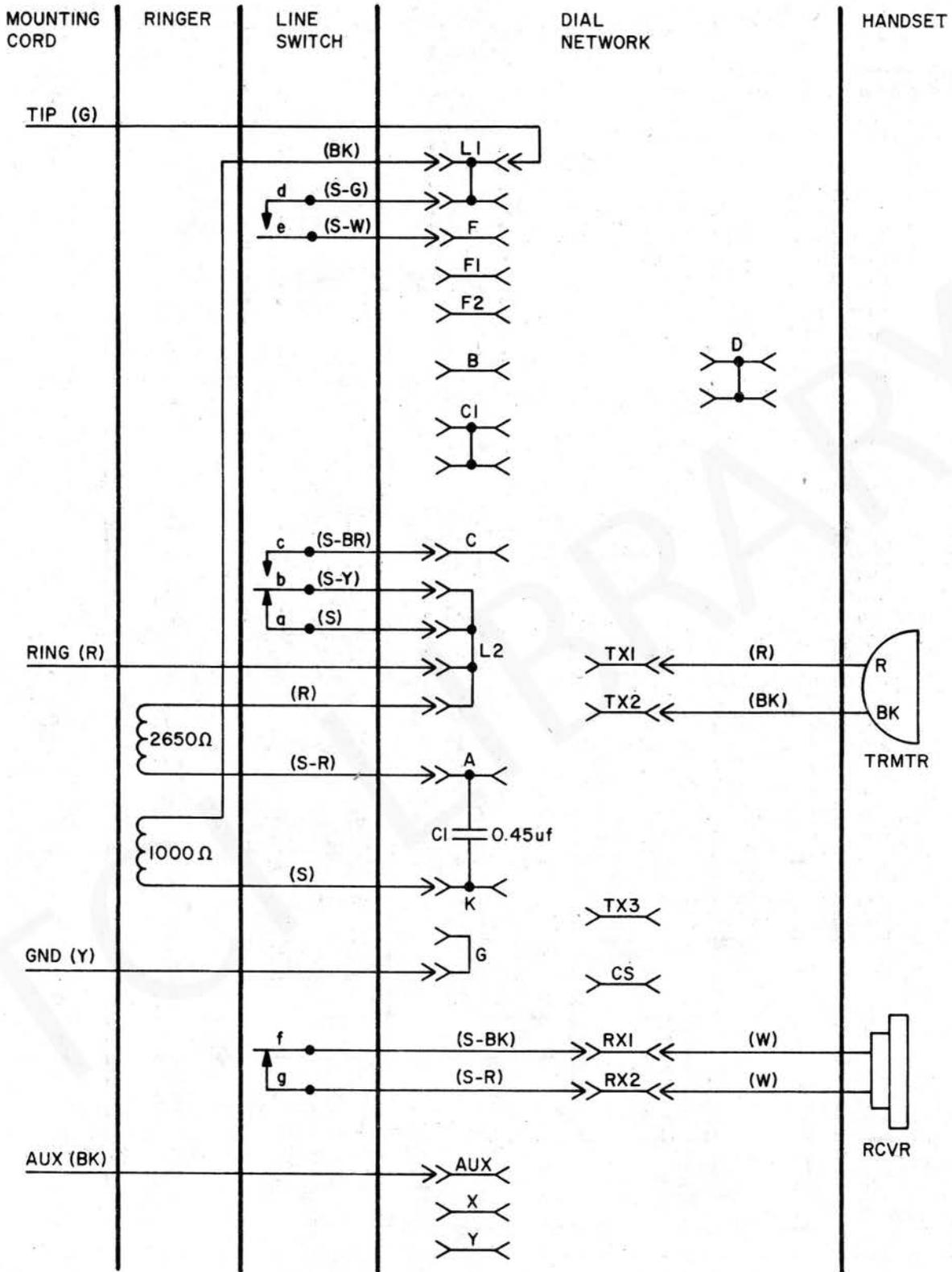


Fig. 5A - Wiring Diagram for QSQE2500B Telephone Set

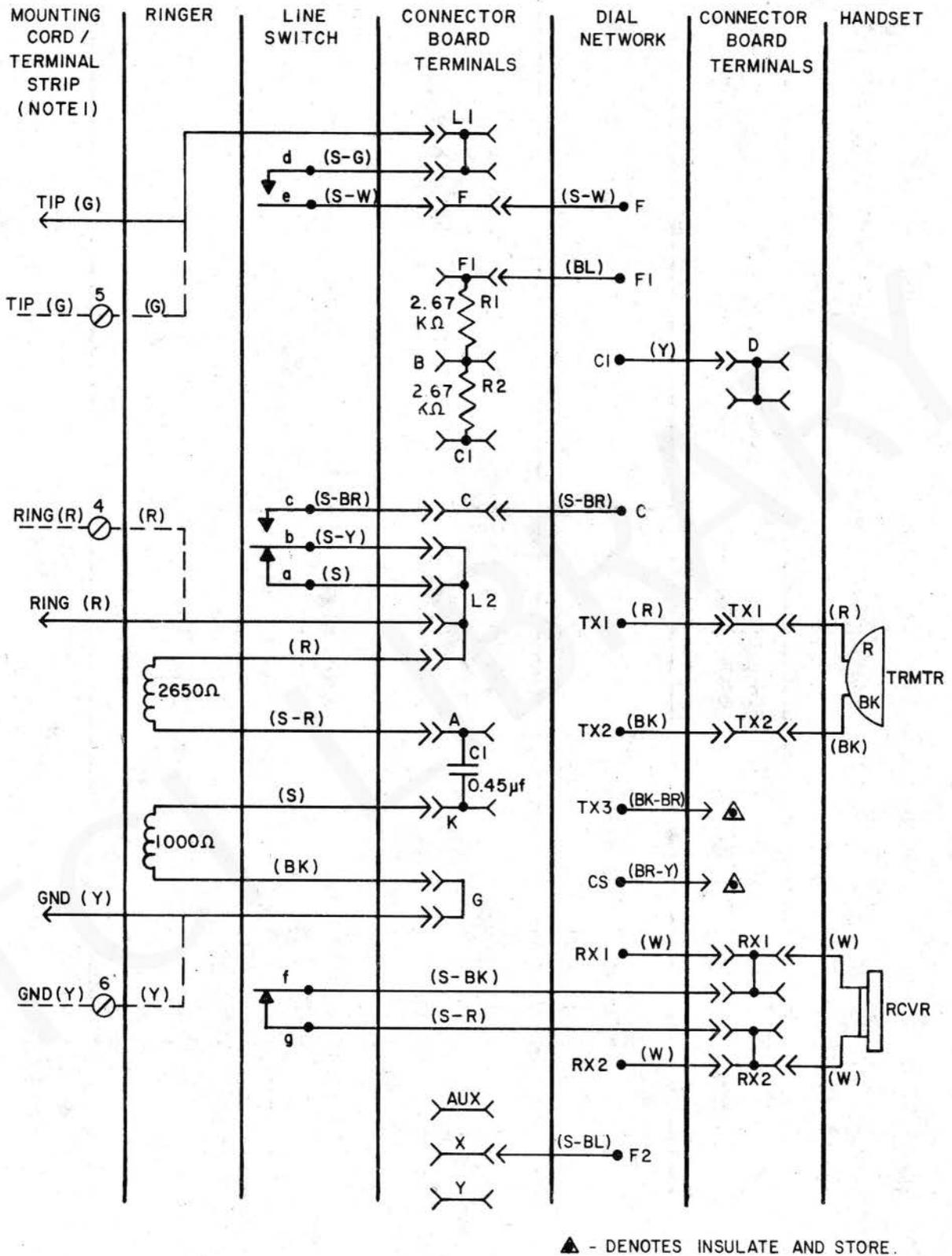
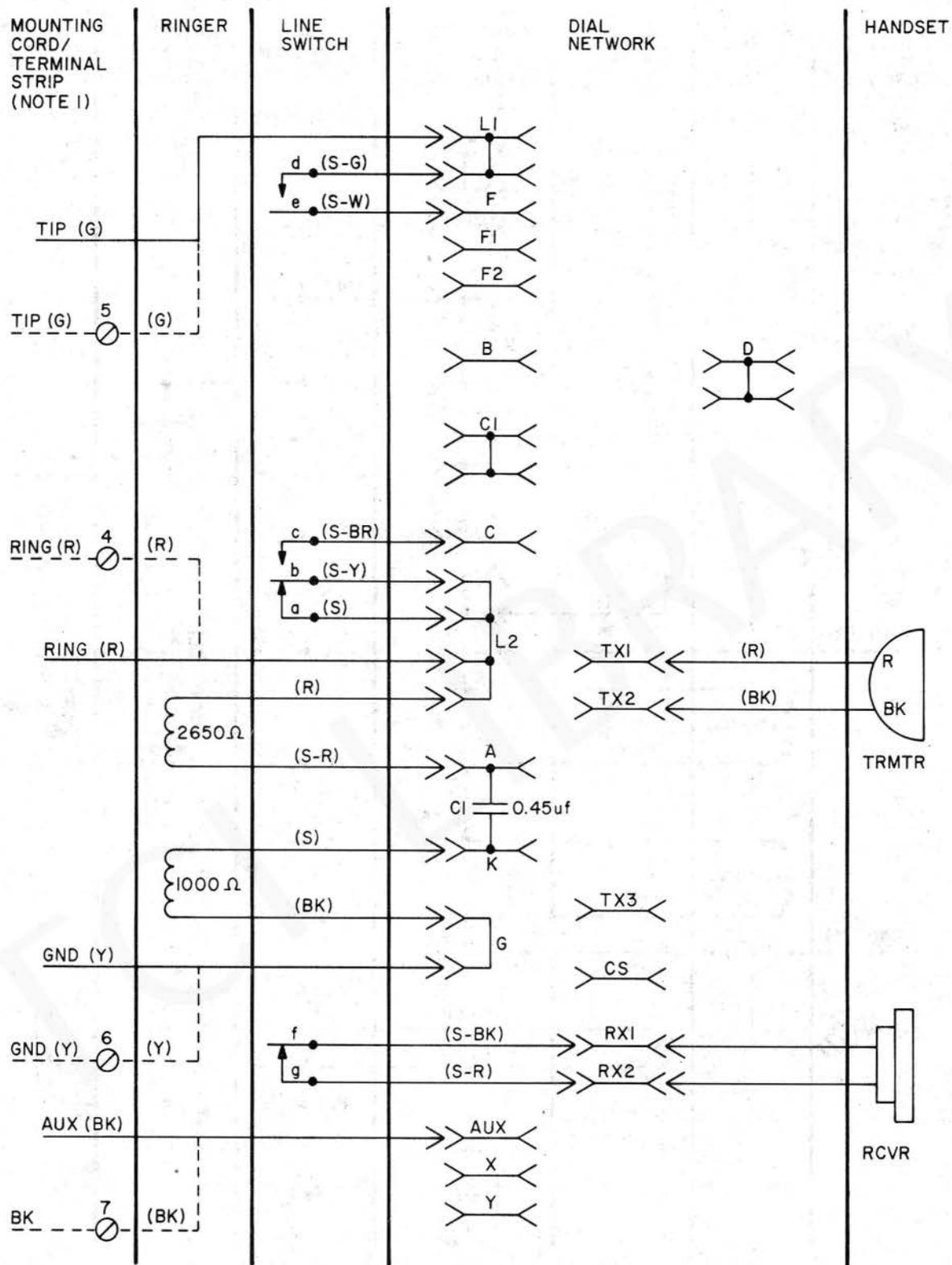


Fig. 6 - Wiring Diagram for QSKE2500A and QSKE2554A Telephone Set

Not required by Bell Canada



NOTES: 1. THE DOTTED LINES INDICATE WIRING DIFFERENCES FOR QSKE2554BX TEL. SET.

Fig. 6A - Wiring Diagram for QSKEE2500B and QSKE2554B Telephone Set.

**5. MAINTENANCE**

5.01 Field maintenance of the ePhone telephone sets referred to in this practice should be limited to cleaning and adjusting the line switch contacts and replacing items shown in Table D.

5.02 For access to the inside of the telephone set the housings of the telephone sets must be removed. The desk set housing can be removed by loosening the two captive screws located in the base of the telephone set, one screw at the front and one screw at the rear.

5.03 To remove the wall mounted telephone set housing:

- (1) Press inward on the housing below the dial.
- (2) Insert a screwdriver in the handset cord opening and push the housing catch upward.
- (3) Lift the lower end of the housing away from the base until the upper end disengages from the fastener.

5.04 To replace the housings on both the desk and wall mounted telephone sets reverse the procedures outlined in 5.02 and 5.04.

5.05 For fault location guide refer to Chart 1.

**TABLE D  
FIELD REPLACEMENT COMPONENTS**

ITEM	DESCRIPTION	Q	Q	Q	Q	Q	Q
		S	S	S	S	S	S
		E	E	E	E	E	E
		2	2	2	2	2	2
		5	5	5	5	5	5
		0	0	0	0	5	5
		0	0	0	0	4	4
		A	B	A	B	A	B
				☐		☐	
NE-C4A	Ringer	X	X	X	X	X	X
NE-D3BN*	Cord			X			
NE-D4QH-87	Cord	X	X				
NE-D4QM-87	Cord				X		
NE-H4CJ*	Handset Cord	X	X	X	X	X	X
QDN25A	Network/Dial	X		X		X	
QDN25B	Network/Dial		X		X		X
QUAG1B	Transmitter Unit	X	X	X	X	X	X
	Note 1						
QUAG2A	Transmitter Unit	X	X	X	X	X	X
	Note 2						
NE-G3QP **	Handset	X	X	X	X	X	X
NE-G3QT **	Handset	X	X	X	X	X	X
PO575840	Internconnect Board Assembly	X		X		X	
QUU1D	Receiver Unit	X	X	X	X	X	X
	Note 3						

**Note:**

1. QUAG1B Transmitter unit to be used only with NE-G3QP handset and cup assembly PO20A473.
2. QUAG2A Transmitter unit to be used only with NE-G3QT handset and PO585121 transmitter cup assembly.
3. The QUU1E receiver unit may be substituted for the QUU1D receiver unit in hard of hearing application. If the above receivers are not available in repair stock, the QUU1D may be replaced by a QUU1A and the QUU1E may be replaced by the QUU1C.

\*\* Add the appropriate colour code.

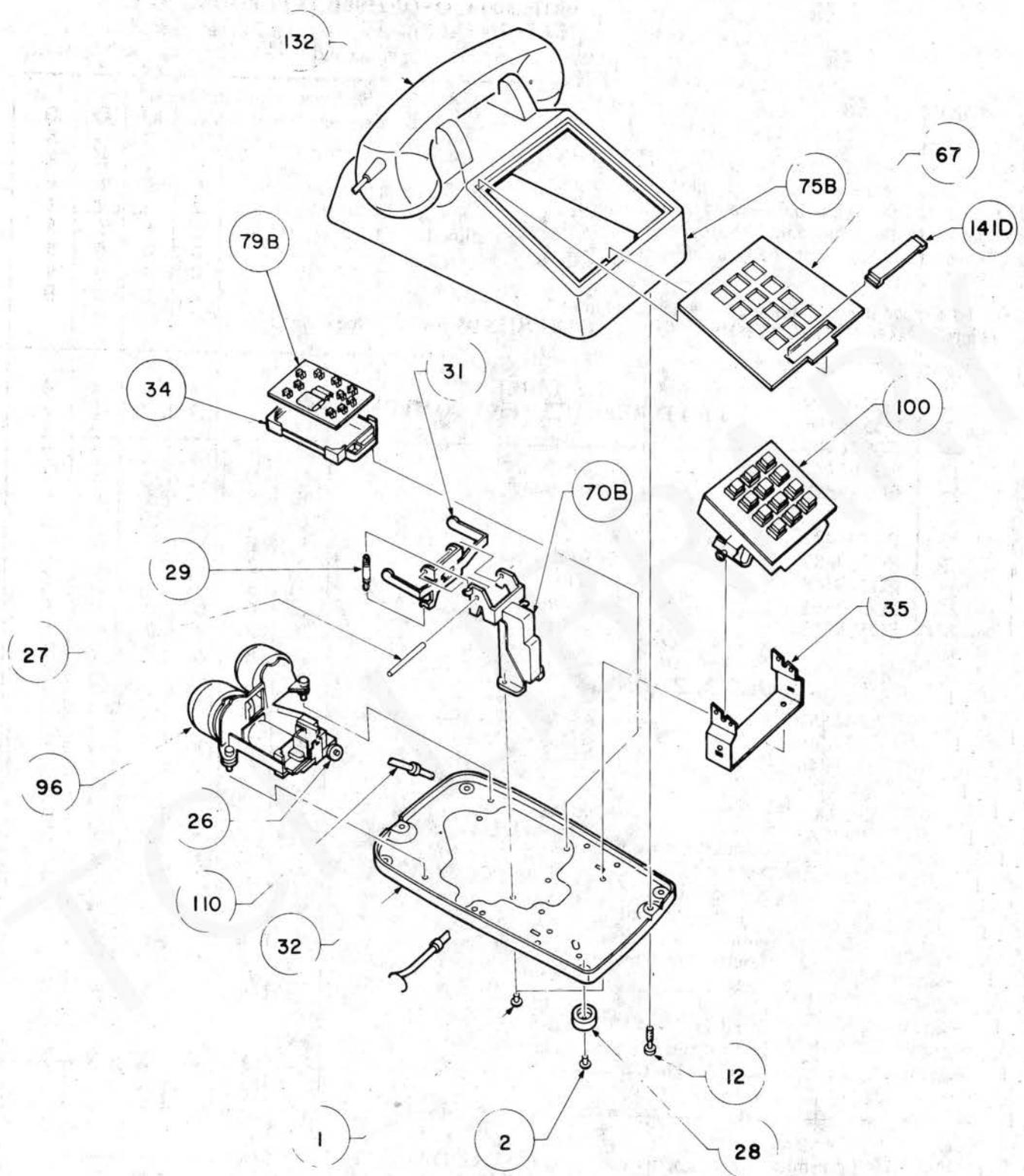


Fig. 7 - Exploded View of QSKE2500 and QSQE2500-Type Telephone Sets.

**TABLE E**  
**QSKE2500A, QSKE2500B AND QSQE2500A, QSQE2500B TELEPHONE SETS**  
**IDENTIFICATION OF PARTS**

ITEM	IDENTIFICATION	DESCRIPTION	Q	Q	Q	Q
			S	S	S	S
			E	E	E	E
			2	2	2	2
			5	5	5	5
			0	0	0	0
			0	0	0	0
			A	B	A	B
1	PO240399	Rivet	4	4	4	4
2	PO595426	Rivet	2	2	2	2
5	PO97L403	Insulator	2	2	2	2
12	PO467742	Screw	2	2	2	2
26	PO339688	Grommet	1	1	1	1
28	PO595427	Foot	4	4	4	4
29	PO339687	Coil Spring	1	1	1	1
31	PO349548	Arm	1	1	1	1
32	PO339695	Baseplate	1	1	1	1
34	PO556313	Adaptor	1		1	
35	PO896355	Bracket	1	1	1	1
67	PO897200*	Faceplate	1	1	1	1
70B	PO340651	Switch Assembly	1	1	1	1
75B	PO83A300*	Housing Assembly	1	1	1	1
79B	PO575840	Interconnect Board Assembly	1		1	
96	NE-C4A	Ringer	1	1	1	1
100	QDN25A QDN25B	Network/Dial Assembly	1		1	
110	NE-D3BN** NE-D4QH-87	Mounting Cord Mounting Cord		1	1	1
141D	NE-D4QM-87 PO896083	Mounting Cord Card Holder Parts Group	1	1	1	1

\* Replace the last two digits with appropriate color code.  
\*\* Add appropriate colour code.

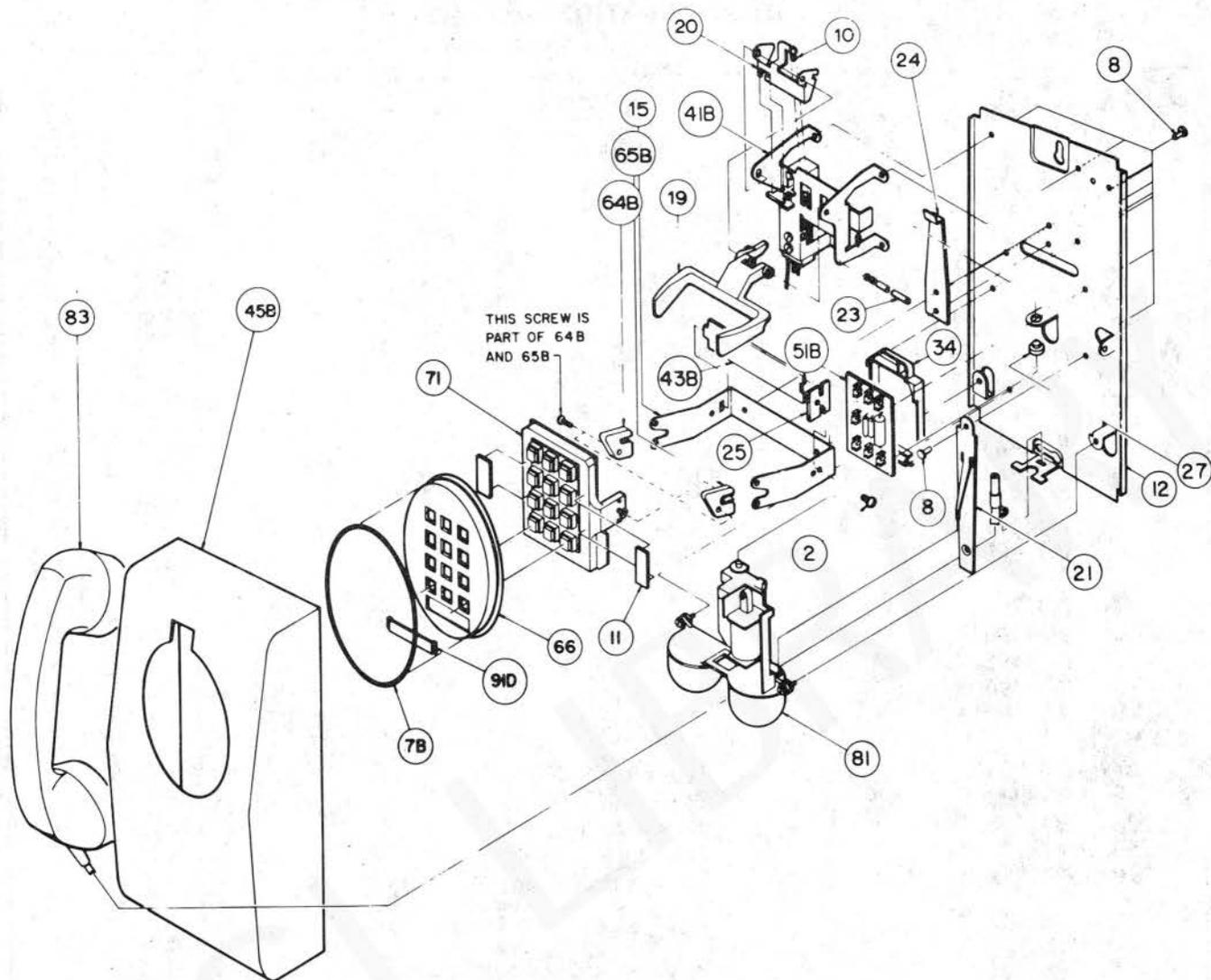


Fig. 8 - Exploded View of QSK2554A and QSKE2554B-Type Telephone Sets

**TABLE F**  
**QSKE2554A AND QSKE2554B TELEPHONE SETS**  
**IDENTIFICATION OF PARTS**

ITEM	IDENTIFICATION	DESCRIPTION	Q S K E 2 5 5 4 A	Q S K E 2 5 5 4 B
2	PO97M828	Screw	1	1
4B	PO96C215	Lead Assembly (R)	1	1
5B	PO899203	Lead Assembly (G)	1	1
6B	PO96C418	Lead Assembly (Y)	1	1
7B	PO347300	Ring Assembly (Note 1)	1	1
	PO17A422	Ring Assembly (Note 2)	1	1
8	PO240399	Rivet	8	8
10	PO339687	Coil Spring	1	1
11	PO547913	Tape	2	2
12	PO20A209	Baseplate	1	1
15	PO19B961	Bracket	1	1
17	PO12E433	Hook	1	1
20	PO17A685	Arm	1	1
21	PO19B795	Arm	1	1
23	PO13A935	Shaft	1	1
24	PO17A655	Spring	1	1
25	PO338888	Retainer	1	1
27	PO339688	Grommet	1	1
34	PO556313	Adaptor	1	1
41B	PO20A205	Switch Assembly	1	1
43B	PO338886	Terminal Strip Assembly	1	1
45B	PO80F400*	Housing Assembly	1	1
51B	PO575840	Interconnect Board Assembly	1	1
64B	PO522788	Adaptor Assembly (Left)	1	1
65B	PO522789	Adaptor Assembly (Right)	1	1
66	PO894300*	Adaptor Plate	1	1
71	QDN25A	Network/Dial	1	1
	QDN25B	Network/Dial		1
81	NE-C4A	Ringer	1	1
83	NE-G3QP**	Handset	1	1
	NE-G3QT**	Handset		1
91D	PO896082	Card Holder Group	1	1

**Notes:**

1. This ring assembly is used on black sets only.
  2. This ring assembly is used on coloured sets only.
- \* Replace last two digits with the appropriate colour code.
- \*\* Add the appropriate colour code.

**CHART 1  
FAULT-LOCATION GUIDE**

INDICATION	PROBABLE CAUSE	CORRECTIVE MEASURE
Bell does not ring.	Ringer disconnected or wired incorrectly.	Connect according to appropriate wiring information.
	Volume control lever in cutoff position.	Move control lever and advise customer of cutoff position.
	Open winding.	Replace ringer.
	Metal particles in armature gap.	Remove with adhesive tape.
	Open ringing capacitor.	Replace interconnect board assembly, or replace set.
Cannot trip ring.	Open handset cord.	Replace handset cord.
	Defective network or open wiring.	Replace network/dial, or replace set.
	Contacts on line switch do not close.	Clean or adjust line contacts.
No dial tone.	Open mounting or handset cord.	Replace cord.
	Defective receiver	Replace receiver unit.
	Open network.	Replace network/dial, or replace set.
	Line switch contacts not functioning properly.	Clean or adjust line switch contacts.
Cannot break dial tone.	Defective network.	Replace network/dial, or replace set.
Cannot hear.	Open handset cord.	Replace handset cord.
	Open network.	Replace network/dial, or replace set.
	Line switch contacts do not open.	Checkline switch cover for interference.
Cannot be heard.	Open handset cord.	Replace handset cord.
	Defective transmitter unit.	Replace transmitter unit.
	Defective network.	Replace network/dial, or replace set.