52-TYPE HEAD TELEPHONE SETS

VISUAL INSPECTIONS AND ELECTRICAL TESTS

1. GENERAL

1.01 This section describes the method of making visual inspections and electrical tests of 52-type head telephone sets.

1.02 This section is reissued to add the information for the identification of the terminal block shells, to revise the information for the apparatus required for Test E, to add verification information for Tests A and C, to revise Test B to cover the stop bar and Test D to cover the foam rubber pad and the movement of the yoke pin in the cradle, to revise Tests E and F to cover the switch, and to specify the verification item "Frying sound should not be heard" opposite the action item "Listen in receiver."

1.03 The tests covered are:

A. Cord and Plug: The following features are checked. (1) Cord. (2) Stay cord. (3) Stay hook. (4) Cord tip (flexible tubing). (5) Wrist loop (stay cord sleeving). (6) Cord fastener. (7) Connecting block. (8) Switch. (9) Plug.

B. Transmitter Arm Assembly: The following features are checked. (1) Transmitter arm. (2) Transmitter case. (3) Transmitter cap. (4) Polyethylene disc. (5) Contact spring. (6) Terminal block.

C. Receiver Holder: The following features are checked. (1) Receiver case. (2) Receiver cap. (3) Contact springs. (4) Stay cord clamping screw. (5) Cord terminal screws.

D. Headband: The following features are checked. (1) Headband. (2) Headband pad. (3) Yoke.

E. Electrical Tests Using Operator Telephone Circuit: The following features are checked. (1) Continuity. (2) Transmission.

F. Electrical Tests Using Test Set: The following features are checked. (1) Continuity. (2) Transmission.

1.04 See Section A504.004 for piece-part data, replacement procedures, and minor repairs.

1.05 Head telephone sets should be carried by some part other than the transmitter or transmitter arm. Exercise care not to scratch the thermoplastic parts.

1.06 Do not touch or press on the moisture-resistant membrane of the transmitter unit.

1.07 Before making electrical tests on the head telephone set, defective parts which affect transmission should be replaced as covered in Section A504.004.

1.08 Spare head telephone sets should be substituted for sets which are reported as being in trouble several times during a period of 30 days, and on which the tests and inspections covered herein have disclosed no defects. These sets should be referred to the supervisor for disposition.

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1.09 Arrangements should be made locally between the Plant and Traffic Departments to have sets available for inspection as required. A record of the sets received and inspected should be maintained in order to insure the inspection of all sets within the required period.

1.10 Head telephone sets are usually identified by number. Where this practice is followed, any set received by the Plant Department which does not have a number should be returned to the Traffic Department or supervisor in charge to have a number assigned. After the number is assigned, the sets should be identified in accordance with local practices.

2. APPARATUS

Test E

2.01 Testing cord, 1 foot 8 inches long, equipped with one No. 2 test clip per AT-6928, and one KS-6780 connecting clip with one No. 108 cord tip (W1U cord) (for short-circuiting the capacitor in the receiver circuit of an operator telephone circuit where battery and ground are across the receiver).

Test F

2.02 Patching cord test set per SD-90430-01, SD-21502-01, SD-21338-01, SD-95665-01, ES-239451, or equivalent testing equipment made up locally as shown in Fig. 1.

Note: If none of this testing equipment is available, use two W1U or equivalent cords, or three No. 6 dry cells connected in series or other suitable battery supply.

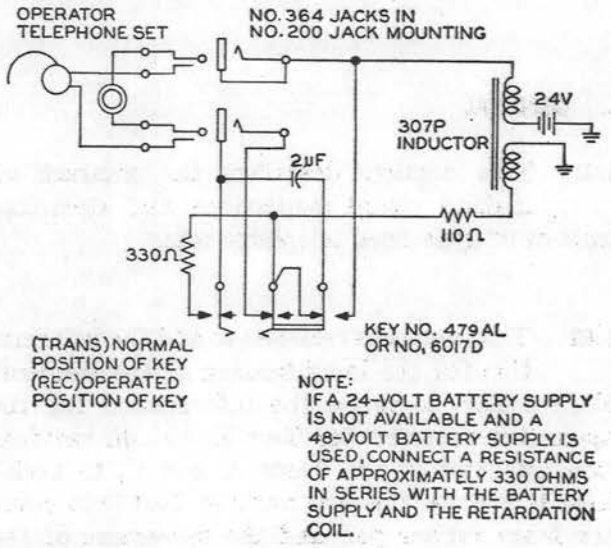

Fig. 1 — Testing Circuit for Use Where Patching Cord Test Set Is Not Available

3. METHOD

STEP	ACTION	VERIFICATION
	A. Cord and Plug	
1	Inspect cord.	Not frayed, knotted, or soiled. Tie cord or stay cord not broken or missing, but securely fastened to the receiver case. Spring portion of supervisor cord not defective.
2	Inspect wrist loop (stay cord sleeving).	Not frayed, worn, or broken.
3	Inspect cord fastener (leather strap).	Not missing, torn, worn, or otherwise defective.
4	Inspect cord tip (flexible insulating tubing used with 298-type plug).	Not missing, torn, worn, or otherwise defective.
5	Inspect stay hook (used with 298-type plug).	Not missing, broken, distorted, or insecurely attached.

STEP	ACTION	VERIFICATION
→ 6	Inspect connecting block.	Not damaged or defective. Terminal screws not loose or missing.
7	Inspect KS-8010 switch.	Switch grips cord securely. Not defective.
8	Inspect plug.	Not bent or dirty. Parts not loose, missing, or defective.
9	Gauge plug in accordance with Section A203.007.	Not worn beyond allowable limit.
	B. Transmitter Arm Assembly	
1	Remove transmitter cap.	
2	Remove transmitter unit.	
3	Inspect transmitter case.	Not dirty, broken, or cracked. Threads not damaged. Case friction tight on arm. (Weld lines not to be confused with cracks.)
4	Inspect transmitter cap.	Not dirty, broken, cracked, or chipped. Threads not damaged.
5	Inspect polyethylene disc.	Not missing, dirty, torn, or defective.
6	Inspect collar (when arm assembly is equipped with collar).	Collar clamping screws not loose or missing.
7	Inspect contact springs.	Not damaged, defective, or loosely mounted.
→ 8	Inspect stop bar.	Clamping screw not loose. Stop bar and screw free of burrs.
9	Inspect bushing and cap assembly at free end of transmitter arm not equipped with stop bar.	Not loose or missing.
10	Inspect transmitter arm terminal block.	Terminal block screws not loose or missing. Heads of screws covered with insulating material if old-type terminal block (about size of U. S. 5-cent coin) is provided.
11	Place transmitter unit in case.	
12	Place polyethylene disc in cap.	
13	Place cap on transmitter case.	

STEP	ACTION	VERIFICATION
	C. Receiver Holder	
1	Remove receiver cap.	
2	Remove receiver unit.	
3	Inspect receiver case.	Case not dirty, broken, cracked, or chipped. Threads not damaged. Stay cord clamping screw and cord terminal screw not loose or missing. Contact springs not loose, defective, or missing.
4	Inspect receiver cap.	Cap not dirty, broken, cracked, or chipped. Threads not damaged.
→ 5	Inspect receiver holder clamp.	Not broken or cracked. Clamp mounting screw not loose.
6	Check friction of transmitter arm in receiver holder.	Friction sufficient to hold arm in any position.
7	Remount receiver unit.	HC1 and HC2 units mounted so that receiver terminals are in position nearer ends of contact springs. HC3 and HC4 units mounted so that code marking on unit is on opposite side of case from binding posts.
8	Remount cap.	
	D. Headband	
1	Inspect yoke.	Yoke holds receiver snugly. Yoke pin securely attached to yoke.
2	Inspect headband pad.	Not broken, torn, badly worn, or dirty. Fastener of foam rubber pad capable of being fastened together and both parts of the fastener attached securely to respective parts of pad.
3	Inspect headband.	Headband wires not distorted, nicked, or badly worn. Headband wires friction tight in cradle.
→ 4	Check movement of yoke pin in cradle.	Yoke pin does not bind in cradle, friction sufficient to hold receiver holder, and associated transmitter arm, and transmitter in adjusted position.
	E. Electrical Tests Using Operator Telephone Circuit	
1	Insert telephone set plug in jack of operator telephone circuit.	

STEP	ACTION	VERIFICATION
2	Operate talking key of idle cord circuit.	
3	Hold transmitter in normal position.	
→ 4	Operate KS-8010 switch, when provided, to ON position.	
→ 5	Listen in receiver.	No frying sound heard.
6	Talk into and blow against transmitter.	Side tone heard. Transmitter not dead.
→ 7	Short-circuit capacitor of receiver circuit when required. (See 2.01.)	
8	Shake and gently pull and twist cord.	No click or scraping heard. Receiver not dead.
9	Tap plug.	No click heard.
10	Disconnect short circuit from capacitor. (See Step 7.)	
11	Restore talking key to normal.	
12	Remove telephone set plug from jack of operator telephone circuit.	

F. Electrical Tests Using Test Set

1	Insert telephone set plug in jack of test set.	
2	Operate key to TRANS.	
→ 3	Operate KS-8010 switch, when provided, to ON position.	
→ 4	Listen in receiver.	No frying sound heard.
5	Shake and gently pull and twist cord.	No click or scraping sound heard. Receiver not dead.
6	Talk into and blow against transmitter.	Side tone heard. Transmitter not dead.
7	Tap plug.	No click heard.
8	Operate key to REC.	
9	Ground transmitter arm.	
10	Rotate transmitter case from one extreme position to other several times.	No click heard.
11	Remove telephone set plug from jack of test set.	