

COIN-BOX INSTALLATIONS WITH PREPAYMENT MECHANISMS
MANUAL (C.B.) SYSTEM

Functional Tests

[Maintenance Routine Instruction (M.R.I.) No. S 206]

*[NOTE:- As this Instruction has been completely revised, individual items have not been "starred"]

1. Scope of Instruction. This Instruction details tests which are necessary to prove that the coin-box mechanism and telephone apparatus are in a satisfactory condition.

2. Application of functional tests. These tests should be applied after cleaning and overhauling of the telephone, coin-box mechanism and wiring [see S 5202 (M.R.I. S 202)]. If the tests reveal a fault, the appropriate test(s) should be applied, after remedial action has been taken, to prove that the defect(s) has been removed. The tests should also be applied after the installation of a circuit has been completed and before it is handed over for service. (For installation purposes, the word "faultsman" should be read as "fitter" in the tables which follow.) Adjustments which may prove necessary as a result of the tests should be made in accordance with the adjustment instructions given in TELES., Call Offices, D 5001.

TABLE 1. TESTS TO BE APPLIED WHEN TESTING FACILITIES WITH A TEST DESK ARE AVAILABLE

Purpose of test	Operations by officer at C.C.B.	Operations by officer at test desk	Conditions if equipment is free of faults
1. Check of six-penny and shilling gong signals (see Note)	Swing out mechanism	-	-
	Insert sixpenny piece	-	Coin strikes gong once
	Insert shilling	-	Coin strikes gong twice
	Press button "A"	-	Coin released from mechanism
2. Check of balance arm	Return mechanism	-	-
	Hold the latch arm clear and, using a "Gauge, Tension, No.1", apply a pressure of 19 gm. to the flattened part of the balance arm where it passes through the front plate		Balance arm does not move
3. Check of calling conditions	Hold the latch arm clear and apply a pressure of 21 gm. in a similar manner		Balance arm moves
	Remove the handset		Call does not mature

TABLE 1 (contd.)

Purpose of test	Operations by officer at C.C.B.	Operations by officer at test desk	Conditions if equipment is free of faults
3. (contd.)	Insert four tokens	-	Spring-sets Nos. 1 and 2 operate; operator answers
	Ask operator for test desk; ask testing officer for co-operation; replace handset and press button "B"	Establish a testing connexion to C.C.B. line	Tokens are refunded
4. Insulation resistance	Co-operate with testing officer	Test insulation of circuit (see L 5106 for permissible insulation limits)	-
5. Transmission	Co-operate with testing officer	Verify by speaking that transmission and reception are satisfactory	-
6. Ringing of magneto bell	Co-operate with testing officer (See TELES., Stations, A 5905 for bell adjustments)	Connect ringing supply to line	Bell rings satisfactorily
7. "Penny" gong signals	Lift receiver and insert four tokens	Listen for "penny" gong signals	Exchange testing officer hears four "penny" gong signals
8. Fraud-preventive devices	Speak into telephone transmitter, receiver and refund chute	Connect reversed C.B. conditions to line and listen for speech	Exchange testing officer does not hear faultsman. Polarized relay ("Relay No. 309A") operated
	Speak to testing officer and confirm that tests were satisfactory	Connect C.B. conditions. Speak to faultsman then reconnect reversed C.B. conditions	
9. Refund of tokens and operation of refund relay ("Relay No. 128B")	Press button "B" and observe operation of refund relay and restoration of polarized relay ("Relay No. 309A")	Allow faultsman time for observations (approx. 10 sec. from the depression of button "B"), then reconnect C.B. conditions	Tokens refunded. "Relay No. 128B" operates and holds until testing officer reconnects C.B. conditions. "Relay No. 309A" releases by operation of "Relay No. 128B"

TABLE 1 (contd.)

Purpose of test	Operations by officer at C.C.B.	Operations by officer at test desk	Conditions if equipment is free of faults
10. 7-sec. clear	Press button "B"	Test disconnexion of B-wire	B-wire disconnected for approx. 7 sec.
11. Calling conditions	Lift handset, operate coin-slot crank-arm and balance arm by hand	Test for earth on A- and B-wires, then speak to faultsman	Exchange testing officer tests approx. balanced earth on A- and B-wires
12. Telephone transmitter S/C.	Attempt to speak to testing officer	Connect reversed C.B. conditions and listen for speech	Exchange testing officer does not hear faultsman
13. Removal of S/C. from telephoner transmitter by depression of button "A"	Press button "A", restore balance arm, and speak to testing officer	Speak to faultsman	Speaking conditions re-established
14. "Emergency Call" facility (if provided)	Lift handset and hold emergency button depressed for short period	Test for earth B-wire (50Ω + half loop resistance of line)	Exchange testing officer observes earth B-wire of correct resistance

NOTE:- The coin-gong transmitter, the "penny" chute, and the "penny" gong are proved by test 7. The "shilling" and "sixpenny" chutes and gong-signals are tested with the mechanism withdrawn to avoid the risk of coins being deposited in the cash box.

TABLE 2. TESTS TO BE APPLIED WHEN TESTING FACILITIES WITH A TEST DESK ARE

NOT AVAILABLE

Purpose of test	Operations by officer at C.C.B.	Conditions if equipment is free of faults
1. Insulation (see Note 1)	-	-
2. Check of sixpenny and shilling gong signals (see Note 2)	Swing out mechanism	-
	Insert sixpenny piece	Coin strikes gong once
	Insert shilling	Coin strikes gong twice
	Press button "A"	Coins released from mechanism
	Return mechanism	-
3. Check of balance arm	Hold the latch arm clear and, using a "Gauge, Tension, No.1", apply a pressure of 19 gm. to the flattened part of the balance arm, where it passes through the front plate	Balance arm does not move

TABLE 2 (contd.)

Purpose of test	Operations by officer at C.C.B.	Conditions if equipment is free of faults
3. (contd.)	Hold the latch arm clear and apply a pressure of 21 gm. in a similar manner	Balance arm moves
4. Check of calling conditions	Remove the handset	Call does not mature
	Insert four tokens	Spring-sets Nos. 1 and 2 operate; operator answers
	Ask operator for co-operation; press button "B"	Tokens are refunded
5. Transmission	Verify that transmission and reception are satisfactory	-
6. "Penny" gong signals	Ask operator to listen for "penny" gong signals, and insert four tokens	Operator hears four "penny" gong signals
7. Fraud-preventive devices	Ask operator to connect M.C.B. calling cord to HOLD jack and to withdraw calling cord approx. 10 sec. after clearing signal received on answering cord. Ask operator to verify non-receipt of speech until the calling cord is withdrawn (Note 3)	-
	Speak into telephone transmitter, receiver, and refund chute	Operator does not hear faultsman until withdrawal of calling cord. Polarized relay ("Relay No. 309A") operated
8. Clearing conditions	Press button "B" and attempt to speak to operator when spring-set No. 3 is normal. Verify that tests were satisfactory, when operator withdraws calling cord and speaking conditions are re-established	Tokens refunded. Operator receives clearing signal. Refund relay ("Relay No. 128B") operates. Polarized relay ("Relay No. 309A") releases
9. Telephone transmitter S/C.	Operate coin-slot crank-arm by hand. Ask operator to re-connect M.C.B. calling cord to HOLD jack and to verify non-receipt of speech until button "A" depressed	-
	Attempt to speak to operator	Operator does not hear faultsman

TABLE 2 (contd.)

Purpose of test	Operations by officer at C.C.B.	Conditions if equipment is free of faults
10. Removal of S/C. from telephone transmitter by depression of button "A"	Press button "A" and speak to operator	Speaking conditions re-established
11. Ringing of magneto bell	Ask operator to ring on line and replace handset (see TELES., Stations, A 5905 for bell adjustments)	Bell rings satisfactorily
12. "Emergency Call" facility (if provided)	Lift handset and depress emergency calling button	Operator answers

NOTE 1. An insulation test should be made before the visit to the call office (see L 5106 for permissible insulation limits).

NOTE 2. The coin-gong transmitter, the "penny" chute, and the "penny" gong are proved by test 6. The "shilling" and "sixpenny" chutes and gong signals are tested with the mechanism withdrawn to avoid coins being deposited in the cash-box.

NOTE 3. Operator must use M.C.B. cord circuit.

References:- L 5106, S 5202
(Tp2/4) TELEPHONES, Call Offices, D 5001
" Stations, A 5905

Instruction Cancelled:- TELES., Call Offices, D 5010

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