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Automatic Electric *Handbook*
700–0 or 700–X

AUTOMATIC ELECTRIC

Northlake, Illinois, U. S. A.

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HAND TEST TELEPHONE

DESCRIPTION

The hand test telephone designed for station installers, inspectors, and repairmen (L–965–A2) has 2 test clips which can be snapped onto line wires, terminal screws, a ground connection (such as a cable-terminal box), etc.

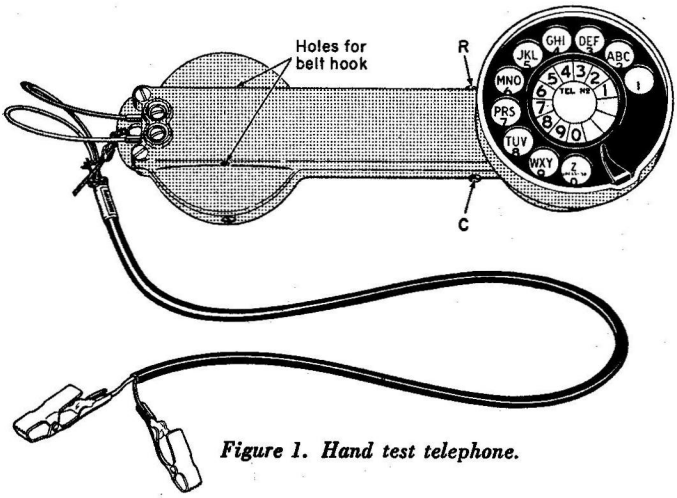

Figure 1. Hand test telephone.

As designed for central-office switchmen (L–965–A0), it has a test plug to be insterted into Strowger-switch test jacks, etc.

The circuit of both models is the same.

CIRCUIT

To make the most intelligent use of your hand test telephone, you'll want to be familiar with its circuit:

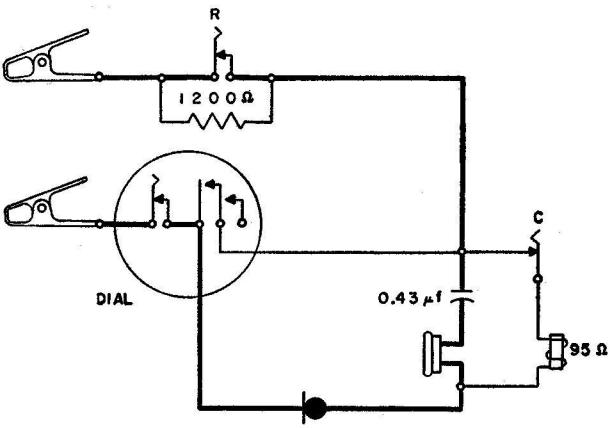

Figure 2. Hand-test-telephone circuit.

As shown by figure 2 heavy lines, hand test telephone L-965 is essentially a common-battery series telephone with a dial. While the 95Ω inductor carries the transmitter current, the 0.43 μf capacitor prevents d.c. overpolarizing or demagnetizing the receiver.

BUTTON *C* LEAVES ONLY CAPACITOR CIRCUIT

Assuming you are holding the hand test telephone in your left hand, with your thumb press button *C*. This opens the inductor circuit, so the only working parts remaining in the circuit are the receiver . . . and the 0.43 μf *capacitor* to block d.c.

You do this just before connecting the test clips to a working line, so you can "monitor" (=listen) whether the line may already be in use by the subscriber . . . and if it is, then you've not interfered with the subscriber's dialing, nor made any "clicks" to disturb him, and you can withdraw quietly to wait until the line is idle.

Also you use button *C* like a hookswitch . . . pressing it momentarily to release central-office dial equipment between successive calls.

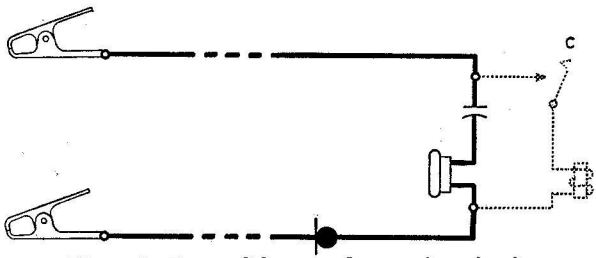

Figure 3. Button C leaves only capacitor circuit.

BUTTON *R* SIMULATES LONG LOOP

Assuming you are holding the hand test telephone in your left hand, use your index finger to press button *R*. This adds 1200Ω *resistor* to the dialing and talking circuit.

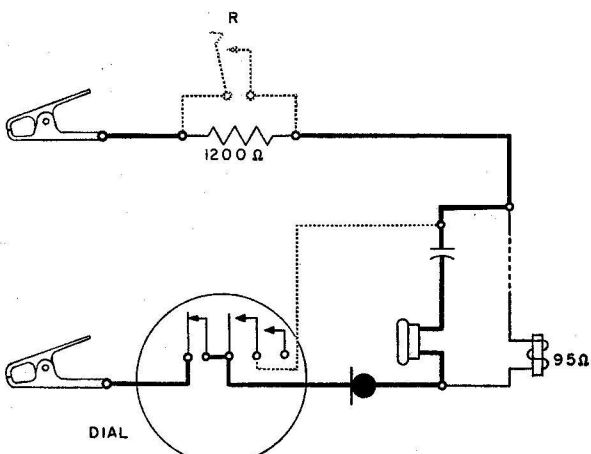

Figure 4. Button R *cuts in 1200Ω to simulate long loop.*

This is of little use to a station installer or repairman, but in the central-office model (L–965–A0) is used to simulate a long (high-resistance) subscriber loop for quick checks of Strowger-switch pulsing relays, stepping magnets, etc.

LINE-POLARITY TESTS

At divided-ringing party-line stations, at paystations, and at most subscriber-station installations in a Strowger-Automatic-Toll-Ticketing exchange, a station installer or repairman may often wish to identify the polarities of the line wires.

When in doubt, snap one clip of your hand test telephone onto a ground (such as a cable-terminal box grounded thru the cable sheath [figure 5] or a ground wire you yourself installed and can identify [figure 6]), and touch the other clip to first one line terminal or wire and then to the other. You will hear a louder click (followed sometimes by dial tone) when you touch the −line ("ring").

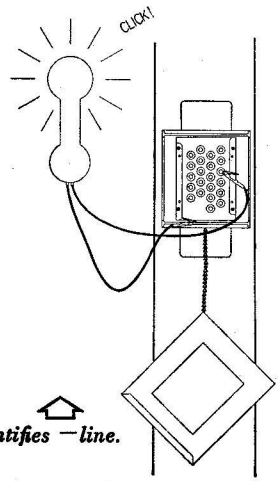

Figure 5. Click identifies −line.

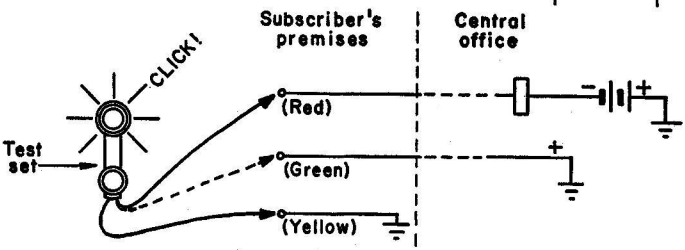

Figure 6. Click identifies −line.

ORDERING INFORMATION

Hand test telephone, complete as shown in figure 1.....L–965–A2
Hand test telephone, complete with plug for Strowger-switch test jack L–965–A0
Cord with 2 test clips as shown in figure 1.....D–542320–A
Cord and test plug for L–965–A0.....D–543044–A
Belt hook (see figure 7)....D–62117–A

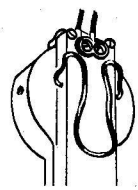

Figure 7. "Belt hook" (optional accessory) behind transmitter.

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