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METHOD OF OPERATION TELEPHONE CIRCUIT

Without Loud Speaking Circuit - Arranged For Transfer Key - Local Test Desk - Full Mechanical Power Driven System.

GENERAL DESCRIPTION

1. This telephone circuit is used to provide means of communication between trunk lines, loud speaking circuit, primary and secondary test circuits, and a local test desk. The circuit is provided with a dial for originating calls on lines associated with line switches or line finders. The circuit is also provided with a means for tripping machine ringing current on incoming calls without causing objectionable clicks in the telephone receiver.

DETAILED DESCRIPTION

2. On incoming calls to the local test desk through either a mechanical or manual trunk, machine ringing current applied over the trunk operates TP relay in series with the 54-A retardation coil. The TP relay operated, operates the TP-1 relay. The TP-1 relay operated, closes a circuit from battery on its armature, winding the TP-2 relay, to ground on the armature of the TP relay, operating the TP-2 relay. The TP-2 relay operated locks to ground on the armature of the TP relay. The TP-1 relay is made slow to release in order to hold the operating circuit of the TP-2 relay until its locking circuit is completed. The slow release feature of the TP-1 relay insures the operation of the tripping relay in the associated trunk before the tip and ring are closed through to the telephone set, by the operation of the T relay. The release of the TP-1 relay closes a circuit through the make contact of the TP-2 relay, winding of the T relay to ground on the armature of the TP relay operating the T relay. The T relay operated, connects the tip and ring terminals of the trunk, to the telephone set. When the T and R terminals of this circuit are released by the final selector, on calls originating in a full mechanical office, or, when the plug of the calling cord is removed from the jack associated with this circuit on calls from a manual office, the TP relay releases. The TP relay released, in turn releases the TP-2 and T relays, restoring the circuit to normal.

3. When this circuit is used with either the primary and secondary testing circuits, or with a test line, ground is supplied over either the F or S leads operating the M relay. The M relay operated, disconnects the operator's receiver from the 478 ohm winding of the 24 type induction coil and connects it through the make contacts of the M relay to the 23 ohm winding of the 27-F repeating coil. When ground is removed from the F or S lead, the M relay releases, restoring the circuit to normal.

4. On outgoing full mechanical calls, the D relay operates during the dialing period through the off-normal contacts of the 2-D dial. The D relay operated, short circuits the tip and ring leads thus preventing clicks in the receiver from the dialing impulses.

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CIRCUIT REQUIREMENTS

OPERATE

NON-OFERATE

RELEASE

Test .0016 amp. Readj. .0025 amp.

B75 (TP)	Test .0057 amp. Readj005 amp.	
E34	Test .030 amp.	Test .015 amp.
(T,M)	Readj020 amp.	Readj016 amp.
E 214	Test .028 amp.	Test .009 amp.
(TP-2)	Readj015 amp.	Readj010 amp.
E221 (TP-1)	Test .016 amp. Readj015 amp.	j.
E671	Test .059 amp.	Test .011 amp.
(D)	Readj017 amp.	Readj012 amp.

Test .0020 amp. Readj. .0022 amp.

ENG.-TML-JO. 5/8/22.

CHK D. -- RAP-CWP.

AFFROVED - C. L. SLUYTER, G.M. L.