Western Electric Co., Incorporated,
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New York.

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METHOD OF OPERATION
TELEPHONE CIRCUIT
Repair Clerk's Desk #1 - Full Mechanical Power Driven System.

GENERAL DESCRIPTION

1. This circuit is used with trunk lines to the trouble and chief switchman's desk, to the district and final multiples, to the commercial office, and to machine switching "A" operator's positions.

2. When answering an incoming call, the trunk key (not shown) is operated to the talking position, tripping the machine ringing current and automatically connecting the operator's telephone set to the calling line.

3. This circuit is provided with a flashing key, a key for ringing, and a dial for making outgoing calls.

DETAILED DESCRIPTION

4. When the trunk key at the repair clerk's desk (not shown) is operated to the talking position on an incoming call through a final selector, ringing current is disconnected by the operation of a relay in the associated trunk circuit. Direct current from the repeating coil in the district or incoming circuit, operates the TP relay. The TP relay operated, connects ground on its armature to the winding of the TP-1 relay, which operates. The TP-1 relay is made slow in releasing to insure a sufficient time interval for the operation of the TP-2 relay on incoming or outgoing calls. The TP-1 relay operated, closes a circuit from battery on its armature and make contact, winding of the TP-2 relay, to ground on the armature and make contact of the TP-1 relay, operating the TP-2 relay. The TP-2 relay operated, locks to battery through its armature and make contact under control of the TP relay, and disconnects battery from the winding of the TP-1 relay, which releases. The TP-1 relay released, closes a circuit from battery on its armature and break contact, make contact of the TP-2 relay, winding of the T relay, to ground on the armature and make contact of the TP relay operating the T relay. The T relay operated, connects the tip and ring of the trunk through to the telephone set.

5. When the receiver is replaced on the switchhook, the talking key restored to normal or the plug of the cord withdrawn from the jack at the incoming end, the TP relay releases. The TP relay released, in turn releases the T, and TP-2 relays. The T relay released, disconnects the operator's telephone set from the tip and ring of the trunk.

6. To make an outgoing call the trunk key is operated to the talking position and the dial is operated, closing a circuit from ground contact of the FLASH key, normally opened contact of the dial to battery through the winding of the D relay which operates and remains operated during the dialing period for each digit. The D relay operated, disconnects the windings of the 54-A retardation coil and places a short circuit across the tip and ring of the line during the dial closures. When the dial is returned to its normal position, the D relay releases. The D relay released, the TP, TP-1, TP-2, and T relays operate as previously described, connecting the operator's telephone set to the tip and ring of

the line.

7. When the ringing key is operated, the operator's telephone set is disconnected from the line and ringing current is connected to the called line. When the flashing key is operated, the bridge formed by the winding of the TP relay and windings of the 54-A retardation coil is disconnected from the tip and ring of the line, thus causing the supervisory lamp to flash at the calling operator's position.

CIRCUIT REQUIREMENTS

	OPERATE	NON-OPERATE	RELEASE
B75 (TP)	Test .0074 amp. Readj. .005 amp.		Test .0013 amp. Readj. .0025 amp.
E34 (T)	Test .030 amp. Readj. .020 amp.	Test .015 amp. Readj. .016 amp.	
E214 (TP-2)	Test .028 amp. Readj. .025 amp.	Test .0095 amp. Readj. .010 amp.	
E221 (TP-1)	Test .016 amp. Readj. .015 amp.		Test .0020 amp. Readj. .0022 amp.
E671 (D)	Test .039 amp. Readj. .017 amp.	Test .011 amp. Readj. .012 amp.	

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4/22/22.