Western Electric Company, Inc.,
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Appendix 1.
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METHOD OF OPERATION
LINE CIRCUIT
Intercepting - Incoming from Final Multiple-Arranged For Use As Blank Final Line - Special "A" Switchboard - Full Mechanical Power Driven System.

On page 2:

The following requirements should be added for the E648 relay:

CIRCUIT REQUIREMENTS

THE READJUST REQUIREMENTS SHOWN BELOW ARE FOR MAINTENANCE USE ONLY

	OPERATE	NON-OPERATE	RELEASE
E648 (SL) Wdgs. in Parallel Aiding "Y" wiring	Special requirements to meet circuit conditions. Readj...040 amp. Test .090 amp.	Readj. .025 amp. Test .023 amp.	

ENG.--CHMcC-BH.
3/13/23.

CHK'D.--RAP-CWP.

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

Western Electric Co., Incorporated,
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Replacing all previous issues.
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METHOD OF OPERATION
LINE CIRCUIT

Intercepting - Incoming From Final Multiple - Arranged For Use As Blank Final Line - Special "A" Switchboard - Full Mechanical Power Driven System.

GENERAL DESCRIPTION

1. This circuit is used for connecting calls for blank lines with an operator at a special "A" switchboard. In the event of a subscriber dialing a blank number, the final selector connects with this circuit, lighting a lamp at the switchboard. The call is answered by the insertion of the plug of a calling cord in the answering jack, extinguishing the lamp.

2. This circuit may be used to function either with individual or grouped blank lines having one or more intercepting trunk lines associated with the group. At the incoming end it is used with the special A operator's cord circuit whose sleeves are connected to battery through a maximum resistance of 210 ohms.

DETAILED DESCRIPTION

OPERATION

Figure 1 and 2, X Wiring:

3. When a final selector seizes a blank line in the final selector multiple battery through 210 ohms in the sleeve of the final selector circuit is connected to the lead S, break contact of the CO relay, windings of the SL relay in series, to ground, operating the SL relay, which lights the line lamp at the intercepting operator's position. When the plug of an answering cord is inserted in the answering jack, the CO relay operates. The CO relay operated, (a) opens the circuit through the line lamp, extinguishing the lamp, (b) locks through its 500 ohm winding, under control of the SL relay, and (c) closes a circuit through its make contact locking the SL relay.

DISCONNECT

4. When the receiver is replaced on the switchhook at the calling station, this circuit is disconnected at the final selector multiple, releasing the SL relay. The SL relay released, connects battery through 600 ohm resistance, to lead S as a busy condition and opens the circuit through the locking winding of the CO relay. The withdrawal of the plug of the answering cord from the jack releases the CO relay and restores the circuit to normal.

Figure 1 and 2, Y Wiring:

5. With this arrangement the circuit functions in the manner described above except that the (SL) relay is connected in parallel aiding instead of series aiding and battery to the lead g is connected through 2200 ohms instead of 600 ohms.

CIRCUIT REQUIREMENTS

	OPERATE	NON-OPERATE	RELEASE
E647 (CO) 50 ohm winding	Test .070 amp. Readj. .060 amp.		Test .011 amp. Readj. .012 amp.
500 ohm winding	Hold .040 amp.		
E658 (CO) Inner winding	Test .026 amp. Readj. .023 amp.		Test .0038 amp. Readj. .004 amp.
Outer winding	Test .035 amp.		
E648 (SL) Wdgs. in series aiding	Test .033 amp. Readj. .017 amp.	Test .010 amp. Readj. .011 amp.	

ENG.--MGL-JO.
10-27-22.

CHK'D.--RAP.

APPROVED - S. L. SLUYTER, G.M.L.