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METHOD OF OPERATION
HOWLER CIRCUIT
With Graduated Howler Key - For Use With Test Circuit - LOCAL TEST DESK #12.

GENERAL DESCRIPTION:

1. This circuit is used with the key equipment of a #12 local test desk testing cord circuit. It is used for connecting a graduated howler tone to a line under test for attracting the attention of a subscriber, in case of failure to replace the receiver on the switchhook after a connection.

2. When the trouble on a line is due to a receiver off the switchhook, the howler key in the testing cord circuit is operated connecting a howler tone to the line. The tone varies from minimum to maximum intensity once in every five seconds. When the receiver is replaced on the switchhook, the tone is automatically removed from the line and the supervisory lamp in the testing cord circuit lights. The test man then restores the howler key, to normal and removes the plug of the testing cord from the line jack, extinguishing the lamp. Provision is made for starting the howler tone at minimum intensity under all circumstances.

DETAILED DESCRIPTION:

OPERATION:

3. When the howler key in the testing cord circuit is operated a circuit is closed from ground on the movable arm and through the normal contact of the graduated howler key make contact of a relay in the testing cord circuit (which is under control of the supervisory relay in the testing cord circuit), make contact of the howler key in the testing cord circuit, to battery through the winding of the E226 relay, which operates. The E226 relay operated, locks under control of the howler key in the testing cord circuit, prepares a circuit to operate the E3 relay, should the receiver be replaced on the switchhook at the sub-station, and closes a circuit from interrupted battery break contact of the E3 relay, make contact of the E3 relay, make contact of the E226 relay primary winding of the 49-A repeating coil. The graduated howler key is then operated, causing the arm to revolve, thereby connecting a tone to the line. The tone gradually increases to maximum intensity, returning abruptly to its original values at the completion of each revolution. The arm revolves three times for each operation of the key, each revolution taking five seconds.

4. When the receiver at the sub-station is replaced on the switchhook, the release of the supervisory relay in the testing cord circuit, releases another relay in that circuit which closes a circuit from ground on the armature and make contact of the E226 relay, break contact of the relay in the testing cord circuit, another make contact of the E226 relay to battery through the winding of the E3 relay which operates. The E3 relay operated, locks under control of both the howler key in the testing cord circuit and the E226 relay, and disconnects interrupter battery from the primary winding of the 49-A repeating coil. This prevents the howler tone from again being applied to the line except after the howler key has been restored to normal and

re-operated, should the receiver again be removed from the switchhook. Under this condition the E226 and E3 relays release and the E226 does not re-operate until the graduated howler key reaches normal, thus making it certain that the howler tone will start at minimum power.

CIRCUIT REQUIREMENTS

	OPERATE	NON-OPERATE	RELEASE
E3	Test .024 amp. Readj. .010 amp.	Test .0066 amp. Readj. .007 amp.	
E226	Test .027 amp. Readj. .015 amp.		Test .0028 amp. Readj. .003 amp.

ENG.--WHL-VL.
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CHK'D.--ASP.

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