PANEL SYSTEM
DIAL PULSE RECORDING CIRCUIT
FOR USE IN CONNECTION WITH
SERVICE OBSERVING SET NO. 6
FOR OBSERVING ON PBX ORIGINATING TRAFFIC
IN PANEL OFFICES

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Notes 101A and 102 did not specify battery distributing fuse panel in battery fusing note.

All other headings, No Change.

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FSI
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the (SL) relay (1) closes the filament circuit of the (V1), (V2) and (V3) vacuum tubes, (2) closes the biasing winding of the (PL) relay which is the "P" winding, and (3) connects ground to the armature of the (PL) relay.

6. PULSING CIRCUIT

The pulsing circuit consists essentially of the (V1), (V2) and (V3) vacuum tubes and the polarized differential wound relay (PL), and are shown on the dial recorder circuit. The (V1) is the operating tube and its grid is connected through the 100,000 ohm resistance (SB) and the normal contacts of the (OP) and (NO) keys to the ring of the line over the lead to the ring of the (DSO) jack, through a patching cord to the ring of the line under observation. The (V2) and (V3) vacuum tubes are balancing tubes and are operated with a fixed grid biasing battery (EC2) and (EC3). The primary and secondary windings of relay (PL) are poled oppositely and have an equal number of turns. Since the (PL) relay does not have a biasing spring, the primary winding has enough current flowing through it to hold the (PL) relay on its back contact.

7. OPERATION RECORDING OF PULSES

When the line is opened the leads 5 and 6 are closed by the release of the (PL) relay in the "Recording Circuit." This causes the operation of the (PL1) relay and the pen register which causes a dash to be made on the pen register tape. The operation of the (PL1) relay causes the (PL2) relay to operate, the (PL2) relay operates the (PL3) relay and the (PL3) relay operates the (PL4) relay, which locks to the (PL) relay in the recording circuit. When the line is closed the (PL) relay in the recording circuit operates and opens leads 5 and 6. This releases the pen register. The chain of (PL2), (PL3) and (PL4) relays is sufficiently slow in operation so that the (PL4) relay will not be operated on dial pulses. The restoring of the subscriber's receiver to the switchhook has the same effect as the opening of the dial contact, that is, the (PL) relay releases and operates the pen register and the (PL1) relay. However, since no reoperation of the (PL) relay takes place under this condition, the (PL1), (PL2), (PL3) and (PL4) relays function thus causing a long dash to be recorded on the pen register tape to indicate the disconnection. The (PL4) relay will remain locked up until the (PL) relay is re-operated on a new call or the connection to the (DSO) jack is taken down.

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