

PANEL SYSTEM
"A" SWITCHBOARD NO. 13C AND 15C
AUDIBLE RINGING SIGNAL, VACANT CODE TONE
DIAL TONE AND LINE BUSY TONE CIRCUITS
ARRANGED TO MULTIPLE BETWEEN SWITCHBOARDS
WHERE SLEEVES IN THE SPECIAL SERVICE TRUNKS
HAVE 34 AND 350 OHM RESISTANCE

1. PURPOSE OF CIRCUIT

- 1.1 This instruction circuit is used at a panel "A" switchboard, the O.G.T. of which appears in both #13C and #15C switchboards. Various tones may be connected to a subscriber's line for a check of the tone or for instruction purposes.

2. WORKING LIMITS

- 2.1 None.

3. FUNCTIONS

- 3.1 Connects dial tone to subscriber's line.
3.2 Connects line busy tone to subscriber's line.
3.3 Connects ringing induction to subscriber's line.
3.4 Connects vacant code tone to a subscriber's line.

4. CONNECTING CIRCUITS

- 4.1 Intercepting cords which are used with special service trunks having 34 ohm and 350 ohm sleeves.
4.2 Special service cord circuits which are used with special service trunks having 34 ohm and 350 ohm sleeves.
4.3 Special service and intercepting cord circuits which are used with special service trunks having 34 ohm and 350 ohm sleeves.
4.4 Miscellaneous tone and interrupter circuit.
4.5 Miscellaneous circuit for final selector frame.

4.6 Miscellaneous circuit for miscellaneous interrupter frame.

DESCRIPTION OF OPERATION

5. DIAL TONE (FIG. 1)

When the calling plug of a special service or intercepting cord is inserted in the O.G.T. multiple jack of the #15C switchboard, the (SL) relay operates from battery on the sleeve of the cord circuit. Operation of the (SL) relay places dial tone on the "P" winding of the (T) repeating coil. This tone induced into the "S" winding of the repeating coil, flows through the repeating coil in the cord circuit and over the answering end of the cord circuit to the calling subscriber. The (SL) relay also opens the operating path of the (SL1) relay and places a busy test on the sleeve of the O.G.T. at the #13C switchboard. If the calling plug of the cord circuit of the #13C switchboard is inserted in the O.G.T. jack, the (SL1) relay operates, places a tone on the "T" and "R" leads, opens the operating path for the (SL) relay and places a busy condition on the sleeve of the O.G.T. of the #15C switchboard. When the plug of the calling cord is withdrawn from the jack, the (SL) or (SL1) relay releases and the circuit is restored to normal.

6. LINE BUSY TONE (FIG. 2)

When the calling plug of a special service or intercepting cord is inserted in the O.G.T. multiple jack of the #15C switchboard, the (SL) relay operates and connects interrupted ground to the (T) relay, which operates and releases under control of the interrupter, thereby connecting interrupted tone through the ring of the jack and cord to the repeating coil in the cord circuit through the answering cord over the trunk to the subscriber's station. Operation of the (SL) relay also opens the operating path of the (SL1) relay and places a busy condition on the sleeve of the O.G.T. jack at the #13C switchboard. When the plug of the calling cord is inserted in the O.G.T. jack at the #13C switchboard, the (SL1) relay operates to send an interrupted tone to the subscriber, as described for the (SL) relay, cut off the (SL) relay and place a busy condition on the sleeve of the O.G.T. at the #15C switchboard. When the plug of the calling cord is withdrawn from the jack, the (SL) or (SL1) relay releases, restoring the circuit to normal.

7. RINGING INDUCTION (FIG. 3)

When the calling plug of a special service or intercepting cord is inserted in the O.G.T. multiple jack of the #15C switchboard, relay (SL) operates. Operation of relay (SL) connects machine ringing current to the ring of the jack

through the (R) relay and the (R) condenser. This tone is induced through the repeating coil of the cord circuit to the subscriber's line, over the trunk to which the answering cord is connected. Operation of the (SL) relay also opens the operating path for the (SL1) relay and places a busy condition on the sleeve of the O.G.T. jack at the #13C switchboard. When the calling cord at the #13C switchboard is inserted in the O.G.T. jack, the (SL1) relay operates, sends ringing induction back to the subscriber as described for the (SL) relay, opens the operating path for the (SL) relay and places a busy condition on the sleeve of the O.G.T. jack at the #15C switchboard. When the plug of the calling cord is withdrawn from the jack, the (SL) or (SL1) relay releases and the circuit is restored to normal.

8. VACANT CODE TONE (FIG. 4)

When the calling plug of a special service or intercepting cord is inserted in the O.G.T. multiple jack of the #15C switchboard, relay (SL) operates from battery on the sleeve of the cord circuit. Operation of relay (SL) connects interrupted tone through the "P" winding of repeating coil (T). This tone is repeated thru the (T) coil to the tip and ring of the O.G.T. trunk and is connected through the operators cord to the subscriber. Operation of the (SL) relay also opens the operating path of the (SL1) relay and places a busy condition on the sleeve of the O.G.T. jack at the #13C switchboard. When the plug of the calling cord at the #13C switchboard is inserted in the O.G.T. jack, the (SL1) relay operates, places tone on the tip and ring leads as described for operation of the (SL) relay, opens the operating path of the (SL) relay and places a busy condition on the sleeve of the O.G.T. jack at the #15C switchboard. When the plug of the calling cord is withdrawn from the jack, the (SL) or (SL1) relay releases and the circuit is restored to normal.

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