COMMON SYSTEMS SIGNALING ONE WAY RECEIVING CIRCUIT ONE WAY SENDING CIRCUIT ALARM CIRCUITS & JACK CIRCUITS FOR CIVIL AIR RAID WARNING SYSTEM

1. PURPOSE OF CIRCUIT

1.1 This circuit is designed to provide auxiliary units which are required at repeater offices in civil air raid warning networks.

2. WORKING LIMITS

2.1 The maximum conductor loop for proper operation of the (R) and (R1) relays in Fig. 1 is 1500 ohms.

2.2 The maximum external resistance for the proper operation of the (S) relay in Fig. 2 is 2100 ohms.

2.3 The maximum external resistance for the proper operation of the (AL1) relay in Fig. 3 is 25 ohms.

3. FUNCTIONS

3.1 Signals received from a control point on the "T" and "R" leads of Fig. 1 are retransmitted to the other units of the system over the "S" and "S1" leads.

3.2 A lamp is provided to indicate when signals are originated at the control point connected to Fig. 1.

3.3 Provision is made by means of Fig. 2 to retransmit signals received on the main network to a code sending equipment located in another central office.

3.4 An alarm circuit is provided in Fig. 3 to indicate failure of a line or repeater in the main network.

3.5 Jacks are provided in Figs. 4 and 5 for terminating the line and local sides of repeater and one way sending circuits.

4. CONNECTING CIRCUITS

When this drawing is listed on a key sheet the connecting information thereon is to be followed.

4.1 Two Way Repeater Circuit - Balanced Loop SD-95681-01.

4.2 Two Way Repeater Circuit - Open and Closed Loop SD-95682-01.

4.3 Dial Pulse Receiving and Code Distributing Circuit SD-95678-01.

4.4 Application Schematic SD-95684-01.

4.5 Repeat Coil Circuit - SD-96452-01.

4.6 Type C Composite Set Circuit SD-56166-01.

4.7 V3 Application Schematic SD-95144-01.

DESCRIPTION OF OPERATION

5. ONE WAY RECEIVING CIRCUIT (FIG. 1)

5.1 The (R) and (R1) relays in Fig. 1 are controlled by dial pulses received over a loop from a control point. The (R) relay retransmits the pulses to operate the repeaters one way sending circuits and dial pulse receiving circuits connected together at the repeater point where the one way receiving circuit is located. The (R1) relay operates the (A) relay which locks up and closes the circuit through the (ALM) lamp. The (A) relay remains locked up until released by the operation of the (CA) key.

5.2 The current in the loop between the control point and the repeater office is adjusted to 24 milliamperes by means of strapping on the (A), (B), and (C) resistances.

6. ONE WAY SENDING CIRCUIT (FIG. 2)

6.1 Signals received in a repeater office from a control point operate the (S) relay which retransmits the signals over a loop to code sending equipment located in another central office.

6.2 The current in the loop between the central offices is adjusted by means of strapping on the (A), (D) and (E) resistances to approximately 24 milliamperes.

6.3 Strap the (C) resistance the same as the (A) resistance.

7. ALARM CIRCUIT (FIG. 3)

When a ground is applied to the "F" lead of Fig. 3 by a repeater circuit the (AL1) relay operates and applies ground to the leads of the office alarm system. Operation of the (AL1) relay also causes the (AL2) relay to operate and lock up until released by the operation of the (CA) key. Operation of the (AL2) relay causes the (ALM) lamp to light until the (AL2) relay is released by the operation of the (CA) key.

8. LINE JACK CIRCUIT (FIG. 4) AND LOOP JACK CIRCUIT (FIG. 5)

The line jack circuit consisting of a line jack (L) and an equipment jack (EQ1) and the loop jack circuit consisting of a loop jack (LP) and an equipment jack (EQ2) are associated with each repeater and one way sending unit. These jacks permit patching a spare repeater into the system when a unit fails.

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