PREEMPTION TONE DETECTOR (AUTOVON) CUSTOMER-PROVIDED PBX OR STATION IDENTIFICATION, CONNECTIONS, MAINTENANCE

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1. GENERAL

1.01 The preemption tone detector (SD-1C289-01) will accept the 440/620 Hz AUTOVON preemption tone, and convert this tone to a contact closure. The contact closure transmits a ground to the 4-wire CO line circuit (SD-69543-01), to enable the preempt and precedence circuit (see Fig. 1).

1.02 The preempt and precedence circuit, when activated, generates the 120 IPM flashing line lamp and 1650 ms on - 350 ms off external ringing signal until the station goes on-hook.

1.03 A secure voice customer-provided PBX or station mode has no visual or audible indication when it has been preempted, unless the user is monitoring the line and hears the 440/620 Hz tone.

2. IDENTIFICATION

2.01 ***The J99342A preemption tone detector unit*** is a tray assembly arranged for 23-inch bay mounting at customer-provided PBXs or stations. The shelf is wired and equipped with seven plug-in units.

2.02 Each plug-in unit consists of a printed circuit board arranged to plug into 906B connectors mounted at the rear of the shelf.

2.03 The shelf unit occupies 6 inches of vertical mounting space, and measures 9-1/2 inches front to back. The front cover plate, with a compressible cushion on its back side, locks in all seven plug-in boards. The 298A terminal strip, mounted at the rear of the shelf, provides for connections to other circuits.

2.04 ***Power Supply:*** The preemption tone detector is designed to operate from −48 volt battery. A plate mounted at the rear of the shelf contains a voltage dropping resistor and a pair of 12-volt zener diodes providing a stable −12 volts as well as −24 volts for all the active filters.

3. CONNECTIONS

3.01 Mount the J99342A unit as near as possible to the 4-wire CO line circuit. Two conductor shielded wires are required to bridge the detector to the T & R of the AUTOVON trunk as per Fig. 2. Two conductor non shielded paired wires are required to extend the D1 and D1A leads.

3.02 The ZG option will be contained in the next issue of SD-69543-01. This option is required to bring the C lead out to TS(B) 13.

4. MAINTENANCE

4.01 A standard Volt-Ohmmeter (KS-14510) or equivalent and a complete set of spare circuit packs are required to maintain the preemption tone detector.

Follow standard procedures for taking the AUTOVON secure voice station circuit out of service. When the proper clearance on the line has been received, proceed as follows.

Position VOM selector switch to 60 VDC. On 298A terminal strip on J99342A unit:

- Place negative meter lead on terminal 4 and positive lead on terminal 1

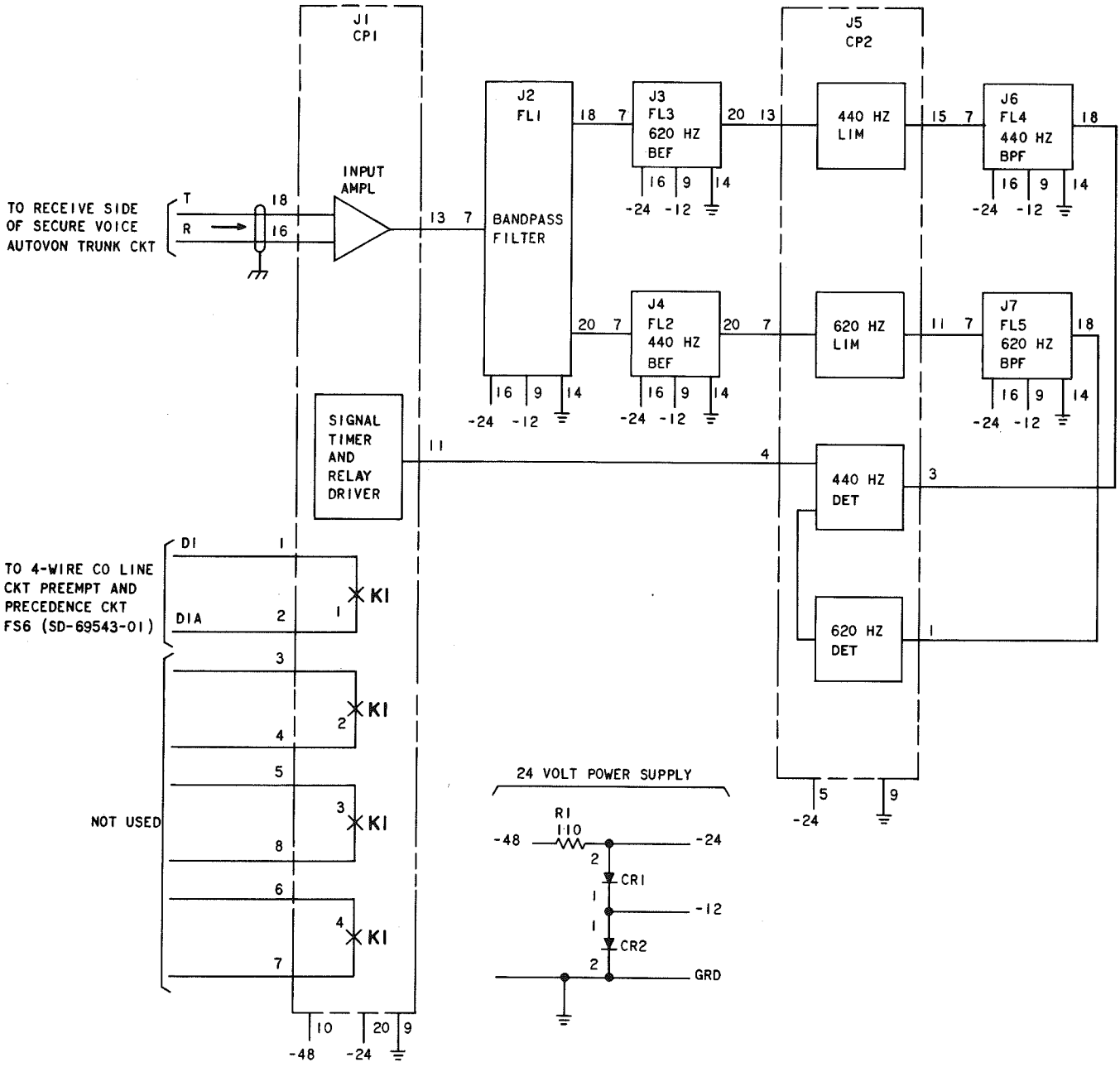

Fig. 1—Block Diagram of the AUTOVON Preemption Tone Detector

- Meter should indicate approximately 48VDC
- Remove meter lead from terminal 1 and place lead on terminal 12
- Meter should indicate approximately 48 VDC
- Remove meter leads from terminals 4 and 12
- Place positive meter lead to frame ground and negative lead to terminal 11
- Meter should indicate approximately 24VDC
- Request the serving AUTOVON office to send constant 440/620 Hz preemption tone
- When tone has been received, the meter should indicate approximately 0 VDC

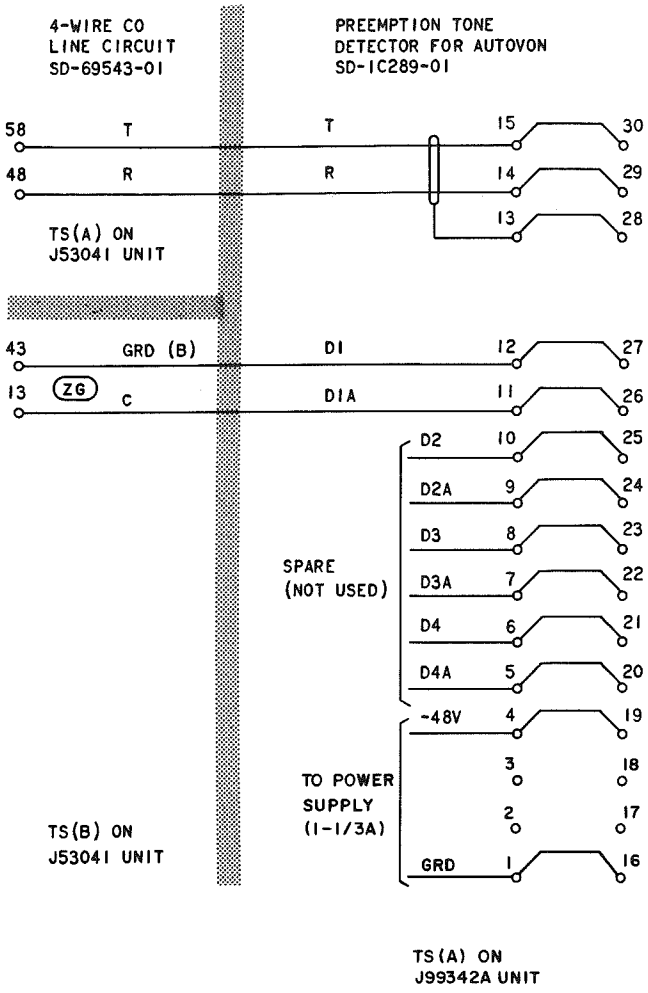

Fig. 2—Connections Required for Adding the Preemption Tone Detector

Note: If 0 VDC is observed at this point the detector is functioning properly.

- If meter retains a reading of approximately 24 VDC proceed as follows:

- Remove negative meter lead from terminal 11
- Place negative meter lead on terminal 18
- Meter should indicate approximately 24 VDC
- Remove negative meter lead from terminal 18 and place on terminal 17
- Meter should indicate approximately 12 VDC
- Remove negative meter lead from terminal 17 and place on terminal 11
- Meter indicates approximately 24 VDC

Disconnect power before removing each circuit pack and restore power only after each circuit pack has been replaced. Observe meter each time to determine defective circuit pack.

- Substitute each circuit pack, one at a time until 0 VDC is indicated on the VOM
- Tag defective circuit pack and return as per local instructions
- Remove all meter leads and replace cover on J99342A unit.

4.02 Notify the serving AUTOVON office that tests have been completed and request that the preemption tone be removed.

4.03 Follow standard procedures for placing the equipment back in service.