554A-TYPE CHANNEL SERVICE UNIT
INSTALLATION, CONNECTIONS, MAINTENANCE, AND TESTS
CIRCUIT SWITCHED DIGITAL CAPABILITY

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1. GENERAL

1.01 This section contains instructions for installing and connecting a 554A-type channel service unit (CSU). Maintenance and test methods are also included. Installation methods for the associated customer provided equipment (CPE) are not included.

1.02 Whenever this section is reissued, the reason(s) for reissue will be given in this paragraph.

1.03 The 554A-type CSU is designed to be operated in an ambient temperature range from +40°F to +120°F, with a relative humidity of less than 95 percent.

1.04 The power unit, which is contained inside the CSU, supplies operating voltages to the circuitry in the CSU. An input of 105 to 129 Vac at a frequency of 57 to 63 Hz is required by the CSU. It also requires approximately 5 watts of ac power. Each CSU is supplied with a 7-foot, 3-conductor Switchcraft P2720 power cord for connection to a customer provided ac outlet which should not be under control of a switch. The power cord is connected to the CSU via a 3-prong International Electrotechnical Commission (IEC) jack.

2. OPTION INSTALLATIONS

A. General

2.01 The 554A-type CSU (Fig. 1) is provided with a signal-to-ground option. Specify on the service order or circuit layout record card (CLRC) if this option is to be installed or removed.

B. Option Installation Procedures

2.02 The CSU cover must be removed in order to gain access to the signal-to-ground option. Remove the cover of the CSU by depressing the top of the cover, rotating it outward. Remove the two mounting screws on the case, and slide the assembly out of the case.

2.03 The option plug is shown in Fig. 2. There are two possible positions. The plug is shown with the signal-to-ground option selected. The alternate position is used to store the plug.

2.04 To replace the cover, hook the tabs on one side of the cover into the base pan and snap the cover into position.

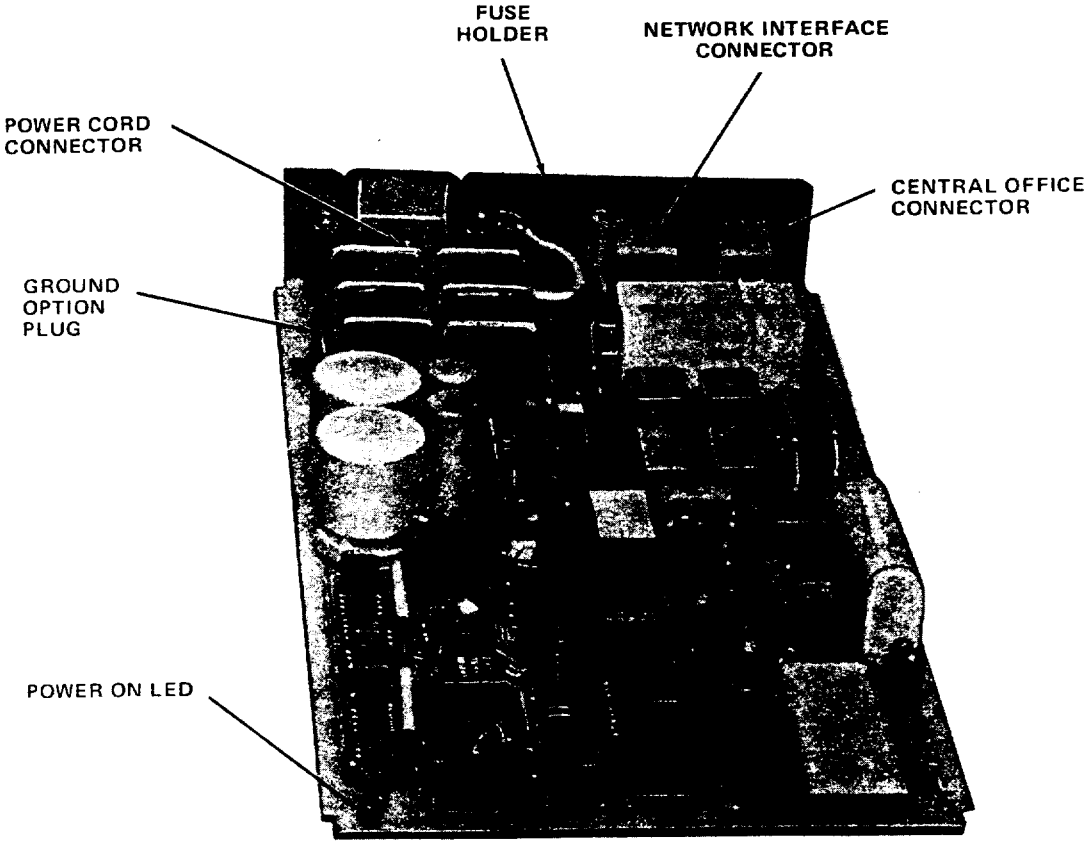

Fig. 1—554A-Type CSU—Cover Removed

3. INSTALLATION AND CONNECTION PROCEDURES

3.01 The 554A-type CSU is intended for desk-top, stand-alone mounting in accordance with local procedures. The CSU should be installed within 50 feet of the CPE. The CSU should not be installed closer than 1 foot from the CPE to avoid stray fields radiated from electromechanical equipment.

3.02 The CSU must be located within 7 feet of a customer provided ac outlet that should not be under control of a switch. The power cord supplied with the CSU requires an ac outlet which accepts a plug with two parallel blades and a round grounding pin.

3.03 An 8-pin modular connector is provided by the CSU for connection to the CPE.

3.04 To minimize inductive interference to data signals on the local loop, the local loop cable should not be installed within 6 inches of the customer interface cable. If this condition cannot be met, it will be necessary to run the line to the local loop with type SK (shielded) wire as far as it is carried (within 6 inches of the interface cable). Ground the shield at one end only, preferably at the distribution terminal, to prevent a potential difference between the ends of the cable shield.

3.05 To install a CSU, proceed as follows:

(1) Place the CSU on a flat surface.

(2) Run the necessary length of telephone company provided, 2-conductor drop wire to interconnect the CSU with the cable distribution terminals.

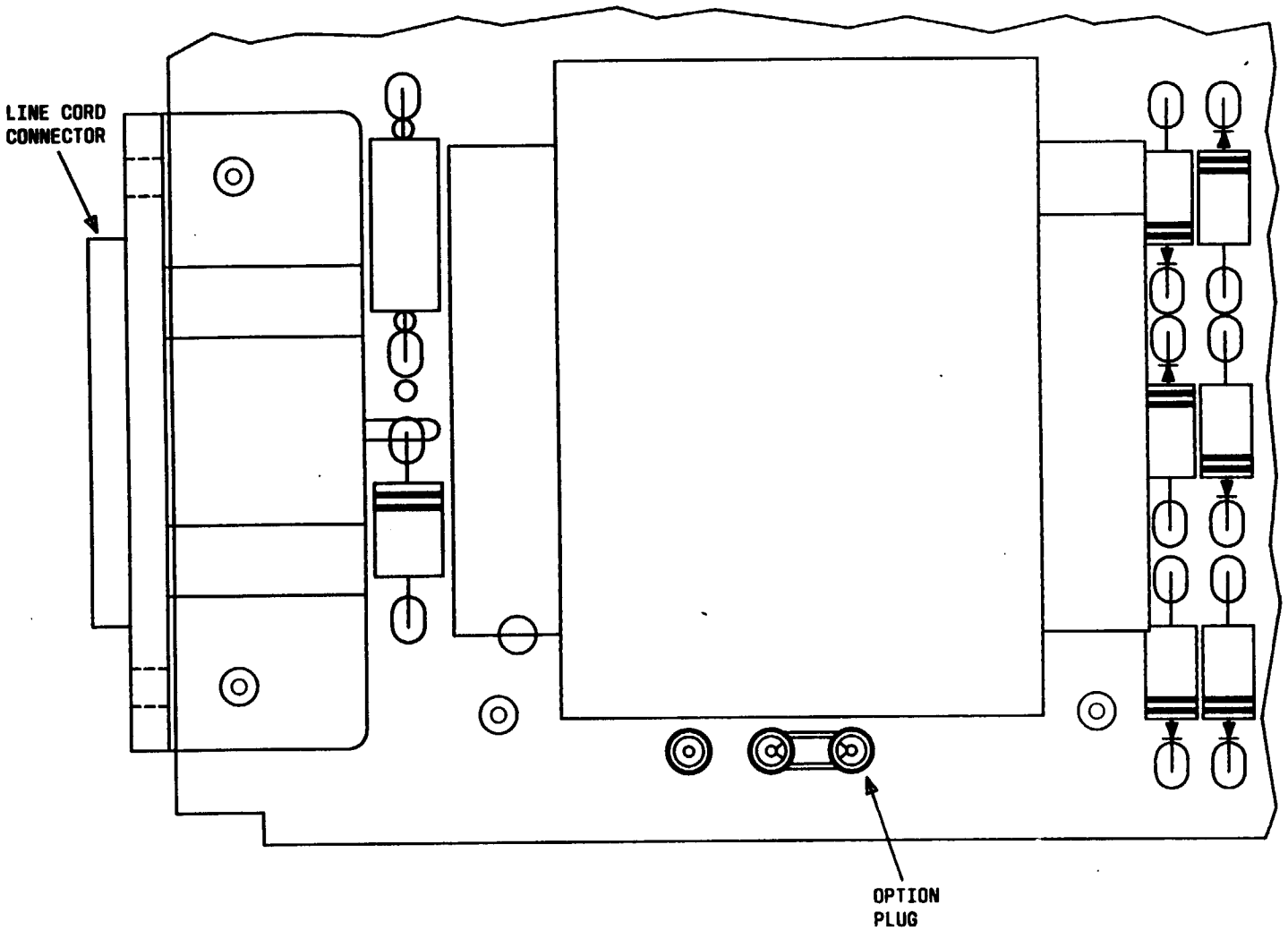

Fig. 2—554A-Type CSU Component Layout Showing Ground Plug Location

4. MAINTENANCE

4.01 The maintenance plan for circuit switched digital capability (CSDC) will utilize the central testing capabilities of a Special Service Center (SSC) and the maintenance circuit tests. The maintenance circuit provides the ability to measure voice frequency and digital transmission parameters.

4.02 Digital circuit order and trouble tests are mechanized and designed to be initiated and controlled by one person. Routine tests are mechanized and designed to be initiated and controlled automatically. No 2-person tests should be necessary for digital circuit order, trouble sectionalization, or routine tests. Test controls and results displays are provided to the SSC for access lines and to the Switching Control Center (SCC) for trunks. It is particularly important that trouble test capabilities be sufficient to identify the work force responsible for equipment repair.

5. TEST REQUIREMENTS

5.01 There are no tests that can be performed from the customer premises. All tests are performed from the Serving Test Center (STC) using the Maintenance Circuit (MC) tests.