

**J99400R AND J99400S HOUSING ASSEMBLIES**  
**DESCRIPTION**  
**PACKAGED METALLIC FACILITY TERMINAL ASSEMBLIES**

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**1. GENERAL**

**1.01** This section provides a physical description and discusses the basic functions of the J99400R and S Packaged Metallic Facility Terminal Assemblies (PMFTA). Arrangements for providing -48 volts dc power and 20-Hz ringing are also discussed.

**1.02** This section is reissued to specify use of the 328A and 328B power supplies where applicable. The previously specified J99400R, List 2 and List 3 and J99400S, List 2 and List 3 power supplies have been rated manufacture discontinued (MD). Revision arrows are used to emphasize significant changes.

**1.03** The PMFTA is a line of circuit pack mounting assemblies designed for small groups of Metallic Facility Terminal (MFT) plug-ins. The PMFTA can be located at the network interface on a customer's premises or in a central office.

**1.04** The J99400R housing assembly contains a standard 12-slot MFT mounting shelf wired in

the double-module mode so that up to six MFT circuits (transmission unit plus signaling unit) may be accommodated. Optional power and 20-Hz ringing supplies are also available as discussed in paragraph 2.01. The J99400S housing assembly contains a standard 12-slot MFT mounting shelf wired in the single-module mode so that up to 12 MFT circuits may be accommodated. Optional power and 20-Hz ringing supplies for the J99400S assembly are discussed in paragraph 3.01.

**1.05** The following paragraphs provide descriptive information on the J99400R and S housing assemblies. Section 332-610-204 provides installation information for these assemblies.

**2. FUNCTIONAL DESCRIPTION—J99400R**

**2.01** The J99400R assembly consists of a double-module shelf arrangement which will accommodate up to six MFT circuits (12 plug-ins, alternating transmission units and signaling units). The J99400R assembly shown in Fig. 1 is available in combinations of the following list numbers:

J99400R, List 1 — Mounting assembly

J99400R, List 4 — Cover assembly for J99400R, List 1

◆328A — Power Supply (-48 volts dc only)

328B — Power supply/frequency generator (-48 volts dc and 20-Hz ringing)◆

**J99400R, List 1 Mounting Assembly**

**2.02** The J99400R, List 1 mounting assembly is factory wired in a double-module arrangement for up to six MFT circuits. Two 50-pin ribbon type connectors for connecting the A- and B-sides of the

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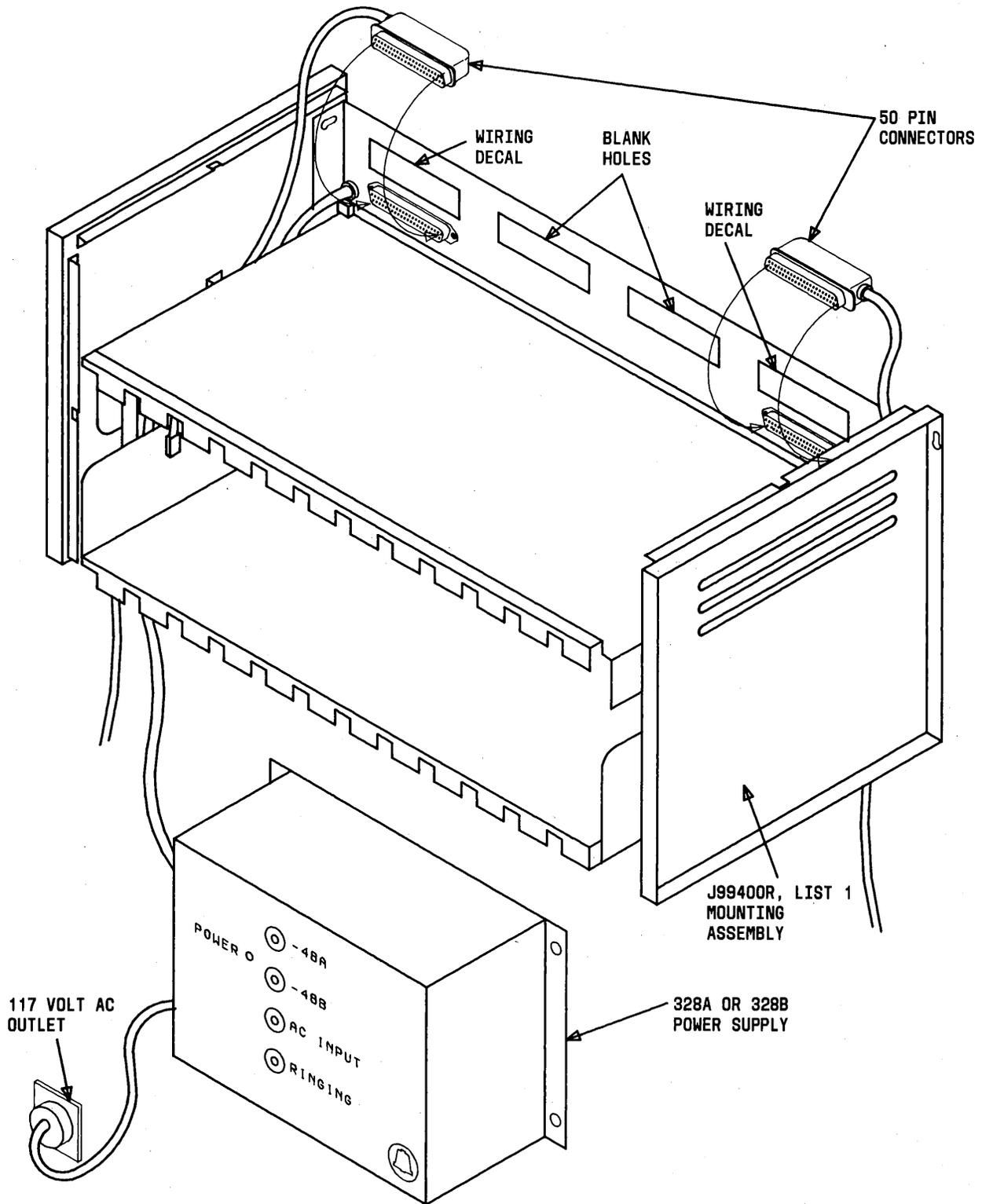


Fig. 1—J99400R Housing Assembly—Double-Module Arrangement for Six MFT Circuits

MFT equipment to the A-side and B-side facilities, respectively, are located above the mounting shelf at the rear of the assembly. The lead plan for these connectors are shown on labels located adjacent to the connectors.

**2.03** The J99400R, List 1 mounting assembly includes hardware for mounting on wooden wall surfaces. The List 1 assembly may also be floor or table mounted. When floor or table mounted, the J99400R, List 1 assembly may be stacked two assemblies high (ie, on another J99400R, List 1 or on a J99400S, List 1). The List 1 mounting assembly also includes a plug-ended power cable. One end of the power cable has a plug for connecting to either a 328A or 328B power supply. The other end of the cable is connected to terminal strip TB1 located on the back of the connector mounting bracket.

#### J99400R, List 4 Cover Assembly

**2.04** The J99400R, List 4 cover assembly consists of two parts: a 1-piece front and top cover and a

rear cover. The cover assembly is made of aluminum alloy and held in position by quarter-turn retainers as shown in Fig. 2. The combined front and top cover has a finish of walnut woodgrained laminated vinyl for an attractive appearance. The bottom of J99400R, List 1 mounting assembly is left open for convenient cable routing.

#### 328A Power Supply

**2.05** The 328A power supply which will accept commercial 117 volt ac input and will supply two -48 volt dc outputs (-48A and -48B). The 328A power supply has a 1.75 ampere circuit breaker on the 117 volt ac input and 1.75 ampere circuit breakers on each of the -48 volt dc outputs. The location of these circuit breakers and the POWER ON indicator is shown in Fig. 1. If a circuit breaker should trip, the center button will extend. The circuit breakers are reset by pushing this center button. If 20-Hz ringing is required, use of the 328B power supply/frequency generator or other external ringing source is recommended.

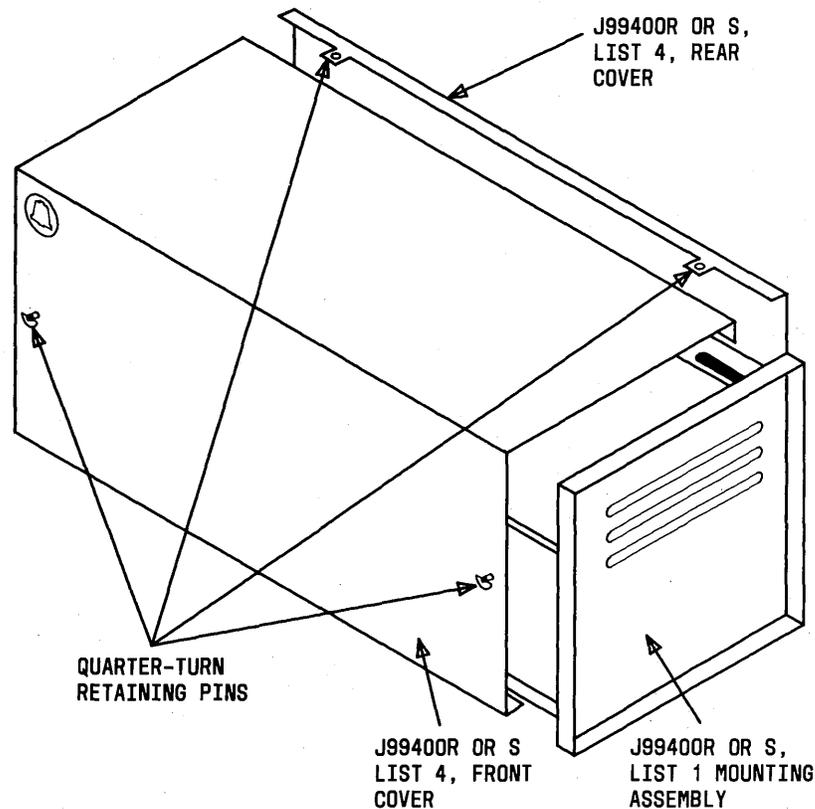


Fig. 2—J99400R and S, List 4 Cover Assembly

**2.06** The 328A power supply must be wall mounted. The hardware for mounting on a wooden wall surface is included with the 328A power supply. The 328A also provides a power cord 9 feet and 6 inches long. One end of the power cord plugs into a receptacle on the side of the power supply while the other end plugs into a standard three-prong commercial ac outlet.

### 328B Power Supply/Frequency Generator

**2.07** The 328B power supply/frequency generator which will accept commercial 117 volt ac input and will supply two -48 volt dc outputs (-48A and -48B) and a 20-Hz ringing signal. The 328B power supply/frequency generator has a 1.75 ampere circuit breaker on the 117 volt ac input, a 1.75 ampere circuit breaker on each of the -48 volts dc outputs, and a 1.0 ampere circuit breaker on the 20-Hz ringing output. The location of these circuit breakers and the POWER ON indicator is shown in Fig. 1. If a circuit breaker should trip, the center button will extend. The circuit breakers are reset by pushing this center button.

**2.08** The 328B power supply/frequency generator must be wall mounted. The hardware for mounting on a wooden wall surface is included with the 328B power supply/frequency generator. The 328B also provides a power cord 9 feet and 6 inches long. One end of the power cord plugs into a receptacle on the side of the power supply/frequency generator while the other end plugs into a standard three-prong commercial ac outlet.

## 3. FUNCTIONAL DESCRIPTION—J99400S

**3.01** The J99400S assembly consists of a single-module shelf arrangement which will accommodate up to 12 MFT circuits (transmission units, loop signaling extenders, combined function units, maintenance termination units, or impedance compensators). The J99400S assembly shown in Fig. 3 is available in combinations of the following list numbers:

J99400S, List 1 — Mounting assembly

J99400S, List 4 — Cover assembly for J99400S,  
List 1

328A — Power supply (-48 volts dc only)

328B — Power supply/frequency generator (-48 volts dc and 20-Hz ringing).

### J99400S, List 1 Mounting Assembly

**3.02** The J99400S, List 1 mounting assembly contains an MFT mounting shelf wired in a single-module arrangement for up to 12 MFT circuits. Four 50-pin ribbon type connectors for connecting A- and B-sides of the MFT equipment to the A-side and B-side facilities, respectively, are located above the mounting shelf at the rear of the assembly. The lead plan for these connectors are shown on labels located adjacent to the connectors.

**3.03** The J99400S, List 1 mounting assembly includes hardware for mounting on wooden wall surfaces. The List 1 assembly may also be floor or table mounted. When floor or table mounted, the J99400S, List 1 assembly may be stacked two assemblies high (ie, on another J99400S, List 1 or on a J99400R, List 1). The List 1 mounting assembly also includes a plug-ended power cable. One end of the power cable has a plug for connecting to either a 328A or 328B power supply. The other end of the cable is connected to terminal strip TB1 located on the back of the connector mounting bracket.

### J99400S, List 4 Cover Assembly

**3.04** The J99400S, List 4 cover assembly consists of two parts: a 1-piece front and top cover and a rear cover. The cover assembly is made of aluminum alloy and held in position by two quarter-turn retainers as shown in Fig. 2. The combined front and top cover has a finish of walnut woodgrained laminated vinyl. The bottom of the J99400S, List 1 mounting assembly is left open for convenient cable routing.

### 328A Power Supply

**3.05** The 328A power supply will accept commercial 117 volt ac input and will supply two -48 volt dc outputs (-48A and -48B). The 328A power supply has a 1.75 ampere circuit breaker on the 117 volt ac input and 1.75 ampere circuit breakers on each of the -48 volt dc outputs. The location of these circuit breakers and the POWER ON indicator is shown in Fig. 3. If a circuit breaker should trip, the center button will extend. The circuit breakers are reset by pushing this center button. If 20-Hz ringing is required, use of the 328B power supply/frequency

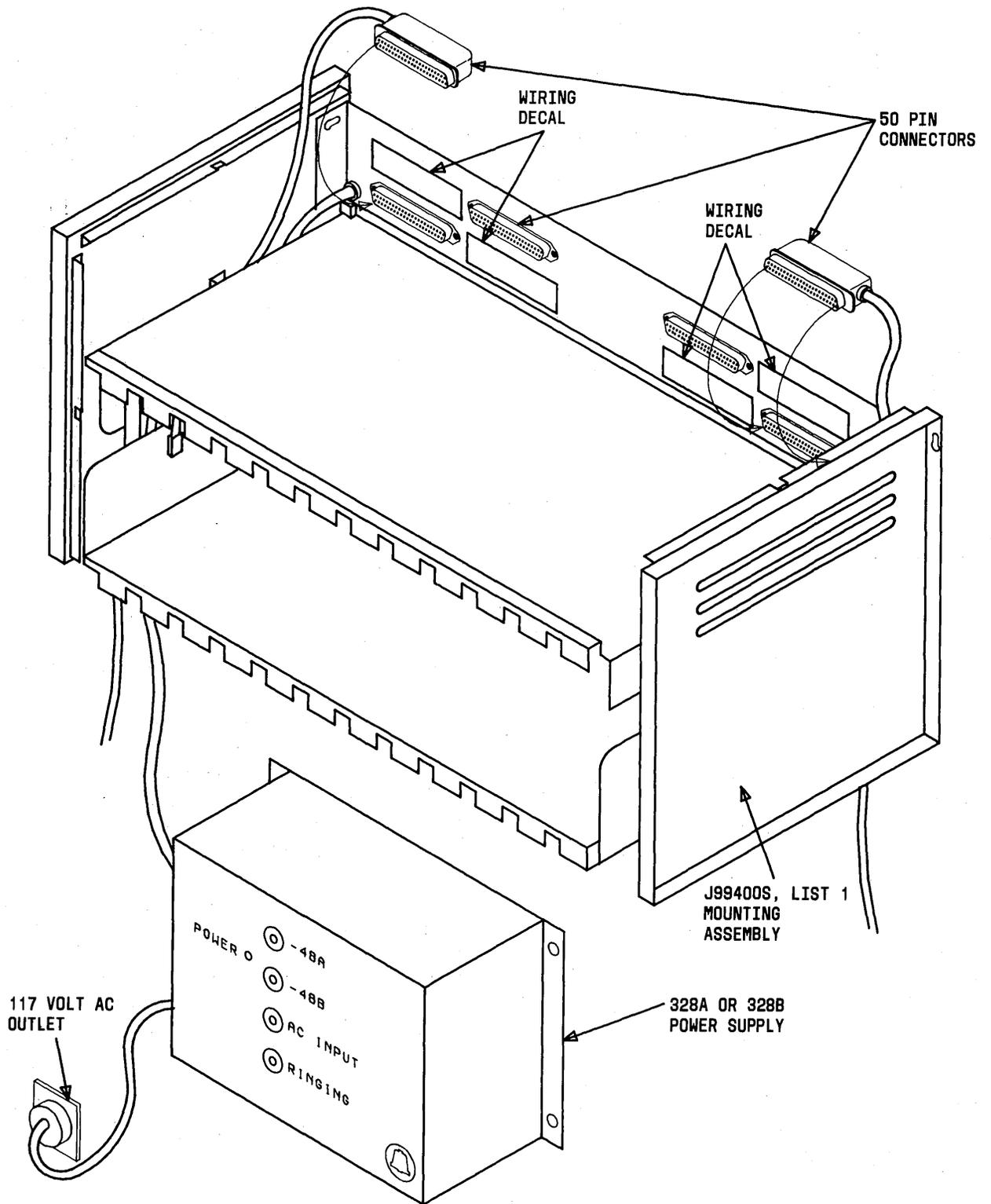


Fig. 3—J99400S Housing Assembly—Single-Module Arrangement for 12 MFT Circuits

generator or other external ringing source is recommended.

**3.06** The 328A power supply must be wall mounted. The hardware for mounting the power supply on a wooden wall surface is included with the 328A power supply. The 328A also provides a power cord 9 feet and 6 inches long. One end of the power cord plugs into a receptacle on the side of the power supply while the other end plugs into a standard 3-prong commercial ac outlet.

#### **328B Power Supply/Frequency Generator**

**3.07** The 328B power supply/frequency generator will accept commercial 117 volt ac input and will supply two -48 volt dc outputs (-48A and -48B) and a 20-Hz ringing signal. The 328B power supply/frequency generator has a 1.75 ampere circuit breaker on the 117 volt ac input, a 1.75 ampere circuit breaker on each of the -48 volts dc outputs, and a 1.0 ampere circuit breaker on the 20-Hz ringing output. The location of these circuit breakers and the POWER ON indicator is shown in Fig. 3. If a circuit breaker should trip, the center button will extend. The circuit breakers are reset by pushing this center button.

**3.08** The 328B power supply/frequency generator must be wall mounted. The hardware for mounting on a wooden wall surface is included with the 328B power supply. The 328B also provides a power cord nine feet and six inches long. One end of the power cord plugs into a receptacle on the side of the power supply/frequency generator while the other end plugs into a standard three-prong commercial ac outlet.

### **4. APPLICATION AND CONNECTIONS**

#### **A. J99400R Housing Assembly**

**4.01** The J99400R housing assembly is used in applications where up to six circuits require transmission and/or signaling enhancement. This equipment can be located at the network interface on the customer premises or in the central office.

**4.02** The 12 plug-in slots in this PMFTA housing are wired in a double-module arrangement. This allows an MFT transmission unit and a compatible signaling unit to be inserted into each circuit connected to interface connectors J13 and J14. Any MFT

passive transmission unit or repeater can be used in the transmission unit slots of the mounting assembly with or without a signaling unit in the companion signaling unit slot. Any MFT combined function unit, maintenance termination unit, or impedance compensator can be used in the transmission unit slots with the signaling unit slot left empty.

**4.03** Cabling to the J99400R housing is routed up through the bottom of the housing to the 50-pin ribbon type connectors at the upper rear of the housing as shown in Fig. 1. Typically, cabling from the network interface is routed to the A-side connector (J13) and connected according to circuit function as indicated on the decal adjacent to the connector. The cabling to the central office is typically connected to the B-side connector (J14). Connections to the power and ringing supplies are made by plugging the power cable into the appropriate power supply. Additional installation instructions are given in Section 332-610-204.

#### **B. J99400S Housing Assembly**

**4.04** The J99400S housing assembly is used in applications where up to 12 circuits require transmission and/or signaling enhancement. This equipment can be located at the network interface at the customer premises or in the central office.

**4.05** The 12 plug-in slots in this PMFTA housing are wired in a single-module arrangement. Any MFT passive transmission unit, repeater, maintenance termination unit, or impedance compensator can be used in the slots of the mounting assembly. Compatible MFT combined function units may also be used. The only type of signaling units which can be used in single-module mounting shelves are the loop signaling extenders.

**4.06** Cabling to the J99400S housing is routed up through the bottom of the housing to the 50-pin ribbon type connectors at the upper rear of the housing as shown in Fig. 3. Typically, cabling from the network interface is routed to the A-side connectors (J13 and J14) and connected according to circuit function as indicated on the decal adjacent to the respective connector. The cabling to the central office is typically connected to the B-side connectors (J15 and J16) as indicated on the decal adjacent to the connectors. Additional installation instructions are given in Section 332-610-204.

## 5. J99400TA TEST EXTENDER ASSEMBLY

**5.01** The J99400TA test extender assembly (SD-7C094) has been designed for use with the J99400 family of housings but can be used on any MFT shelf. This test extender provides for full extension of a powered MFT module outside the housing. This permits complete access to adjustments on the MFT module under test as well as adjustments on the test extender itself. The J99400TA test extender is illustrated in Fig. 4. A functional schematic decal for the test extender jack field and switches is mounted on the wiring side of the printed wiring board as an aid to the user.

**5.02** The procedure for using the test extender is to insert the MFT module under test into the mounting rails and slide it forward until the MFT module connector mates with connector J1 on the test extender. The test extender is then inserted into the appropriate mounting slot and pushed forward until it mates with the MFT mounting shelf connector.

Additional information on the use of the J99400TA test extender is provided in Section 332-610-204.

## 6. REFERENCES

**6.01** The following references provide additional information on the J99400R and S housing assemblies.

SECTION	TITLE
332-910-204	J99400R and S Housing Assemblies, Description
332-910-100	J99343 MFT, General Description
332-910-180	MFT, General Applications
DRAWING	SUBJECT
SD-7C093-01	PMFTA, Schematic Drawing
SD-7C094-01	J99400TA, Test Extender

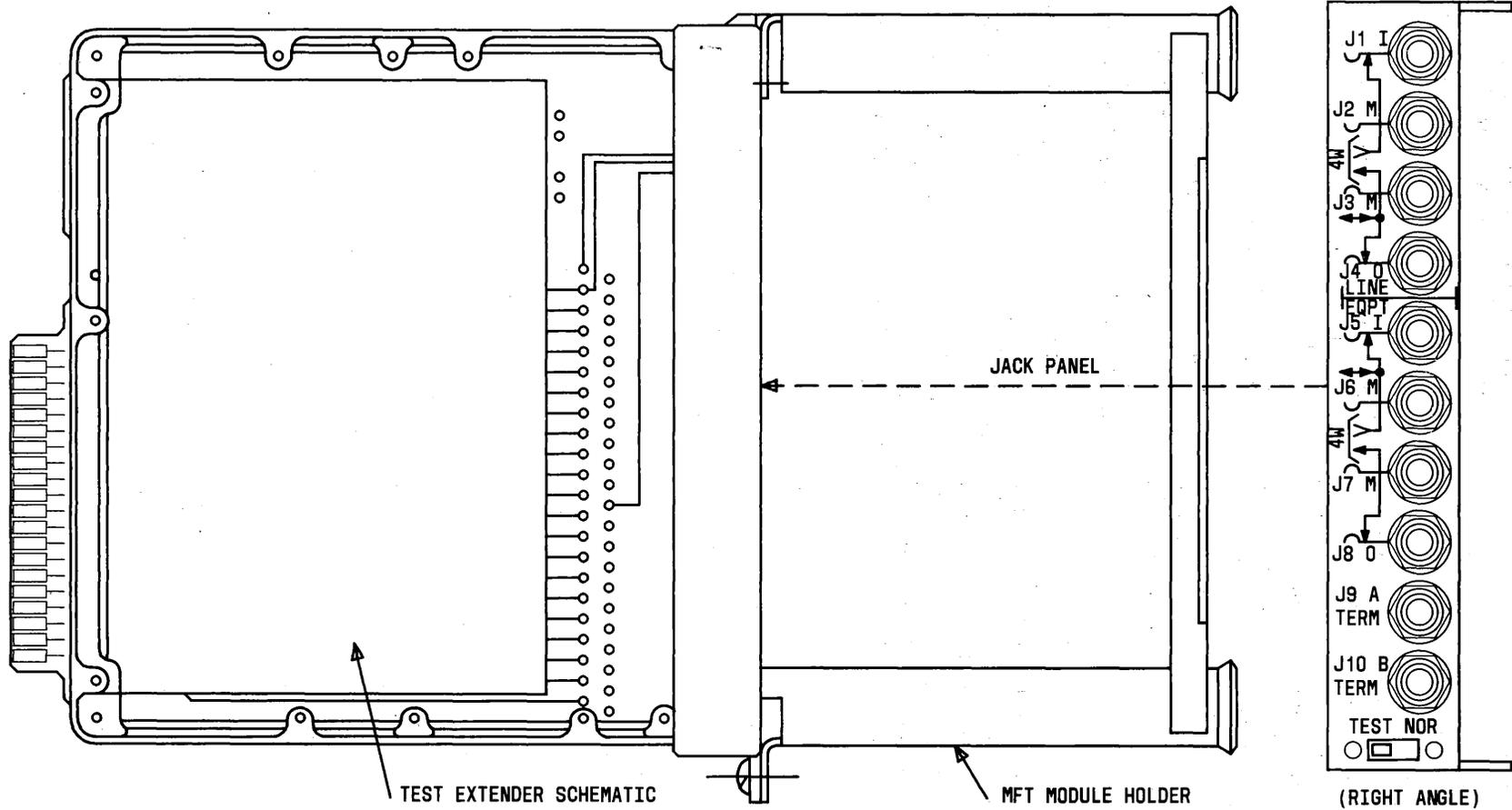


Fig. 4—J99400TA Test Extender