

REGISTRATION INTERFACE

BRIDGED SINGLE LINE

TIP AND RING ARRANGEMENTS

RJ11C, RJ11W, RJ12C, RJ12W, RJ13C, AND RJ13W

1. GENERAL

1.01 This section provides information on the standard wiring arrangements to be provided under the Federal Communication Commission's (FCC) registration program for registered ancillary, data, and protective circuitry of the type associated with ancillary and data customer-provided equipment (CPE).

Note: Customer-provided data equipment connected to the network via the jacks in this section must have a fixed signal power level under -9 dBm. See Section 590-101-103 for connection of other data devices.

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

1.03 The arrangements in this section provide a termination of a single line in a modular jack. A bridged connection of the tip and ring is always furnished to the CPE on contacts 4 and 3, respectively. In addition, where required in a key telephone system (KTS), A and A1 leads are also furnished. The CPE must terminate in a modular plug for compatibility. Where A and A1 are not furnished, contacts 2 and 5 are reserved for telephone company use. Disposition of these leads should be per local instructions.

Note: Circuit incompatibility may occur involving the spare leads if a change of service is installed, ie, a line with "A" lead control installed originally would not be compatible with subsequent installation of 2-line service. Whenever service is altered at an installation involving registration Uniform Service Order Codes (USOCs), check that all appearances are properly wired.

1.04 Unless otherwise specifically required by a particular wiring arrangement, access to the required leads can be at any access point. If installed in a large key system with color-keyed backboards, the auxiliary (yellow) field should be used; otherwise, access at satellite closets, distribution boxes, connecting blocks, etc.

1.05 The manufacturer of ancillary CPE intended for use on a key system has the option of designing equipment to be compatible with connections to the tip and ring, either ahead of or behind the KTS line circuit. Certain electrical characteristics of the tip and ring (such as voltages during the ringing cycle and voltages during the holding period) are different, depending on the type of key system. Thus, for example, it is conceivable that a registered answering set would require an RJ12C for COM KEY* systems (tip and ring ahead of the line circuit) or an RJ13C for 1A1-type systems (tip and ring behind the line circuit). Further, it is also possible that a different manufacturer of an answering set would require just the opposite.

*Trademark

1.06 Select the appropriate (compatible) interface USOC, using a knowledge of the type of Key Telephone System (1A, 1A1, 1A2, or COM KEY) and the selection information provided on the service order; then wire the interface according to the wiring diagram for that specific USOC.

1.07 When necessary to access leads in COM KEY installations, wire as follows:

- (a) COM KEY 416—Tip and ring ahead of the line circuit can be obtained only at the 91A connecting block for the primary station. A and A1 will require use of a KS-19252 adapter

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in the cabling loop. A short length of connector cable must be plugged into the adapter and the raw end terminated on a 66-type connecting block. The required leads are then accessed on the connecting block. Where T, R, A, and A1 are required behind the line circuit, the KS-19252 adapter and short connector cable are again used, but all leads are accessed on the 66-type connecting block. Refer to Section 518-450-105 for information on COM KEY 416.

(b) COM KEY 718—Tip and ring ahead of the line circuit can be obtained at the incoming CO/PBX line terminations on block 3 using 183B2 adapters. If T, R, A, or A1 are required behind the line circuit, they can be accessed per line at any of the line appearances of the station terminations on blocks 3, 4, or 5. Again use 183B2 adapters. For information on COM KEY 718, refer to Section 518-450-100.

(c) COM KEY 1434—Tip and ring ahead of the line circuit can be accessed at the incoming line terminations on block 7 using 183B2 adapters. T and R behind the line circuit and A and A1 for a particular line can be accessed at any of the line appearances of the station terminations on blocks 6 through 15 using 183B2 adapters. For information on COM KEY 1434, refer to Section 518-450-102.

(d) COM KEY 2152—Because of insufficient clearance between the connecting blocks and the closed gate, 183B2 adapters cannot be used on the connecting units of COM KEY 2152. To access T and R ahead of the line circuit, route the incoming CO/PBX line to an external 66-type connecting block, then to block 3 of the 100A1 or 101A1 connecting unit. The 66-type connecting block is then used to provide a multiple of the line. To access T and R behind the line circuit, use an idle station code termination which must be sacrificed for system use. If no idle station terminations are available, use any station code by running a jumper cable to external 66-type connecting blocks and transferring the station cable to these blocks. The blocks are then used to provide the line appearance multiple. For information on COM KEY 2152, refer to Section 518-450-110.

1.08 These arrangements use a standard modular type connecting block (Fig. 1, 2, and 3) as the interface with the CPE as follows:

- For surface-mounted installations (RJ11C, RJ12C, RJ13C)—use 625A, 625C, 625S*, or 625T* connecting block.
- For flush-mounted installations (RJ11C, RJ12C, RJ13C)—use 625B or 625F connecting block.
- For wall-mounted telephone set installations (RJ11W, RJ12W, RJ13W)—use 630A connecting block.

*The 625S and 625T connecting blocks have spring-loaded covers which protect the contacts from contamination. Not available until the 3rd quarter of 1976.

2. DESCRIPTION

2.01 USOC RJ11C: Provides a bridged connection of the tip and ring only of a single line to the CPE (Fig. 4). Used where customer requires a surface- or flush-mounted installation. Requires installation of a 625-type connecting block at location of connection to CPE. Connection to tip and ring can be at any convenient access point.

2.02 USOC RJ11W: Same as RJ11C but installed at wall-mounted installations using 630A connecting block (Fig. 4).

2.03 USOC RJ12C: Provides a bridged connection of a single tip and ring with A lead control (Fig. 5). Tip and ring are bridged **ahead** of the line circuit because the registered equipment requires CO/PBX ringing. A and A1 are obtained behind the line circuit. T, R, A, and A1 are supplied to the CPE at a surface- or flush-mounted installation using a 625-type connecting block. Connection to the required leads must be made at the KTS multiple for proper access. Typically used for connecting ancillary equipment requiring A lead control where the CPE is not compatible with tip and ring behind the line circuit.

2.04 USOC RJ12W: Same as RJ12C except requires installation of a 630A connecting block for wall-mounted installations (Fig. 5).

2.05 USOC RJ13C: Provides a bridged connection of the tip and ring *behind* the KTS line circuit with A lead control to the CPE (Fig. 6). Connection to the leads is made anywhere access to T, R, A, and A1 leads can be obtained, such as the KTS, distribution field, connecting blocks, etc. Uses a 625-type connecting block for surface- or flush-mounted installations. Primarily used for connecting ancillary devices with A lead control where the registered CPE is located near the key set.

2.06 USOC RJ13W: Same as RJ13C except installed at wall-mounted installations using a 630A connecting block (Fig. 6).

3. MAINTENANCE

3.01 Maintenance of the wiring arrangements covered in this section is limited to:

- Verification of the telephone company wiring and equipment
- Assurance that the required leads are supplied in the interface used for CPE connection.

No attempt should be made to test, modify, or repair customer-owned and maintained equipment.

3.02 When in the judgment of repair personnel the trouble is located in or caused by the CPE, the Repair Service Bureau should be notified so that proper Maintenance of Service Charge Billing can be initiated as required and as outlined in the following:

- Section 660-101-312—Maintenance of Service Charge on Services With Customer-Provided Equipment (CPE)
- Section 660-101-318—Tariff and Registration Violation Notice Procedures.

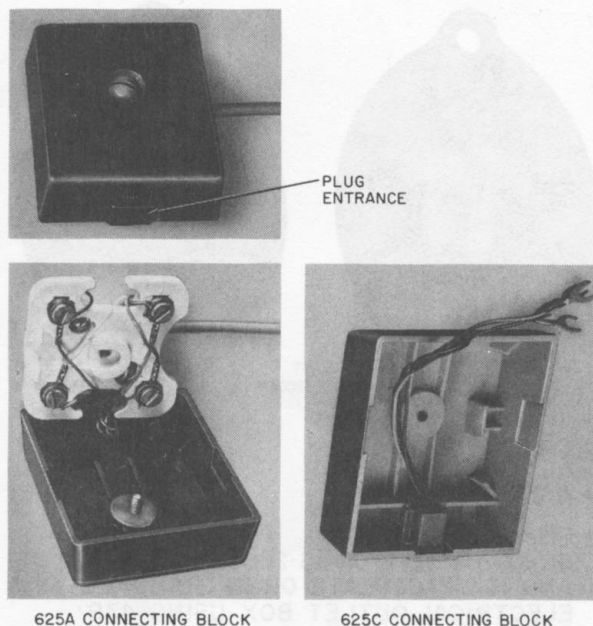
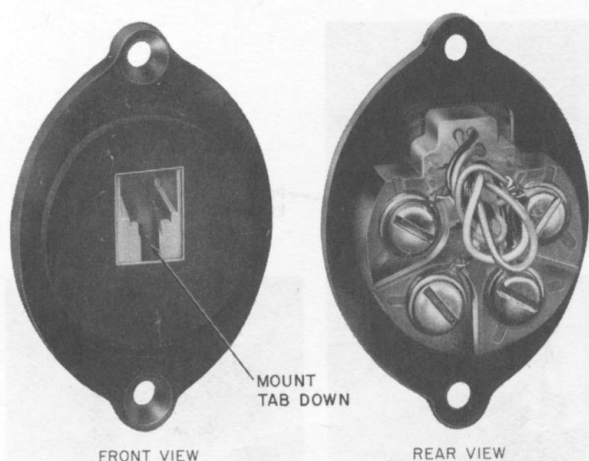


Fig. 1—625A and 625C Connecting Block



- 4 CONTACTS
- FLUSH MOUNTED:
USING 63-TYPE OR KS-20502, L2 BRACKET
AND I6A FACEPLATE OR IN STANDARD
ELECTRICAL OUTLET BOX USING 43B
BRACKET OR IN WOODWORK USING
1-1/4 INCH HOLE
- MATES WITH D4BU MOUNTING CORD PLUG
- MOUNTING SCREWS SUPPLIED
- FOR NEW INSTALLATIONS OR MODULAR
REPLACEMENT OF 548-TYPE JACKS

Fig. 2—625F Connecting Block

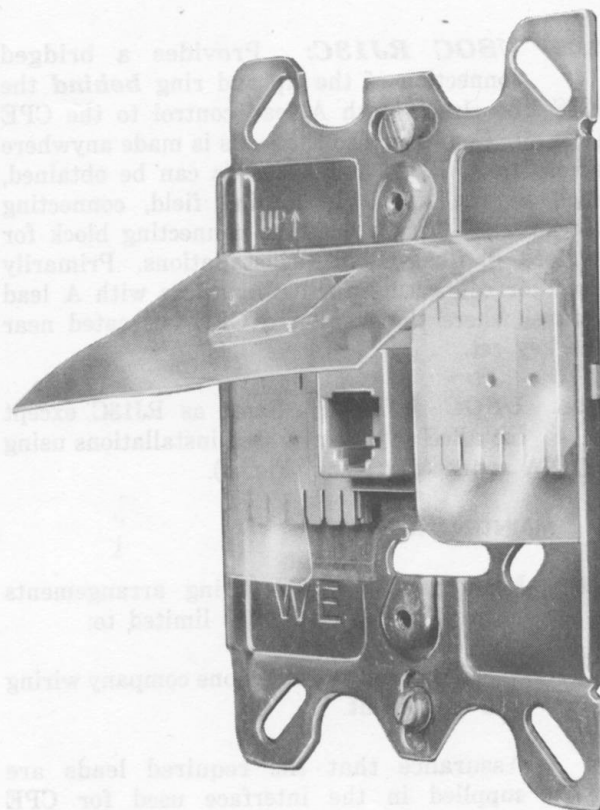


Fig. 3—630A4 Connecting Block (Without Mounting Plate)

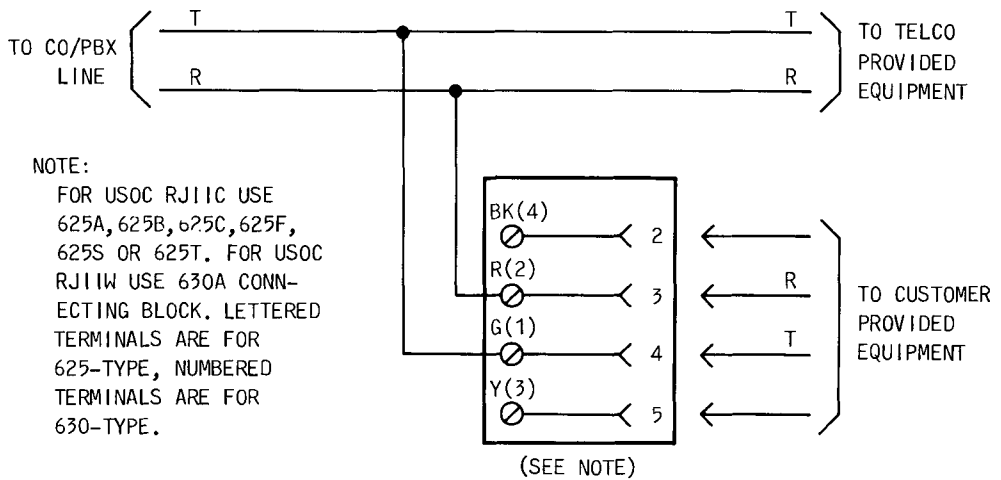


Fig. 4—Connections for USOC RJ11C and RJ11W—Bridged Tip and Ring

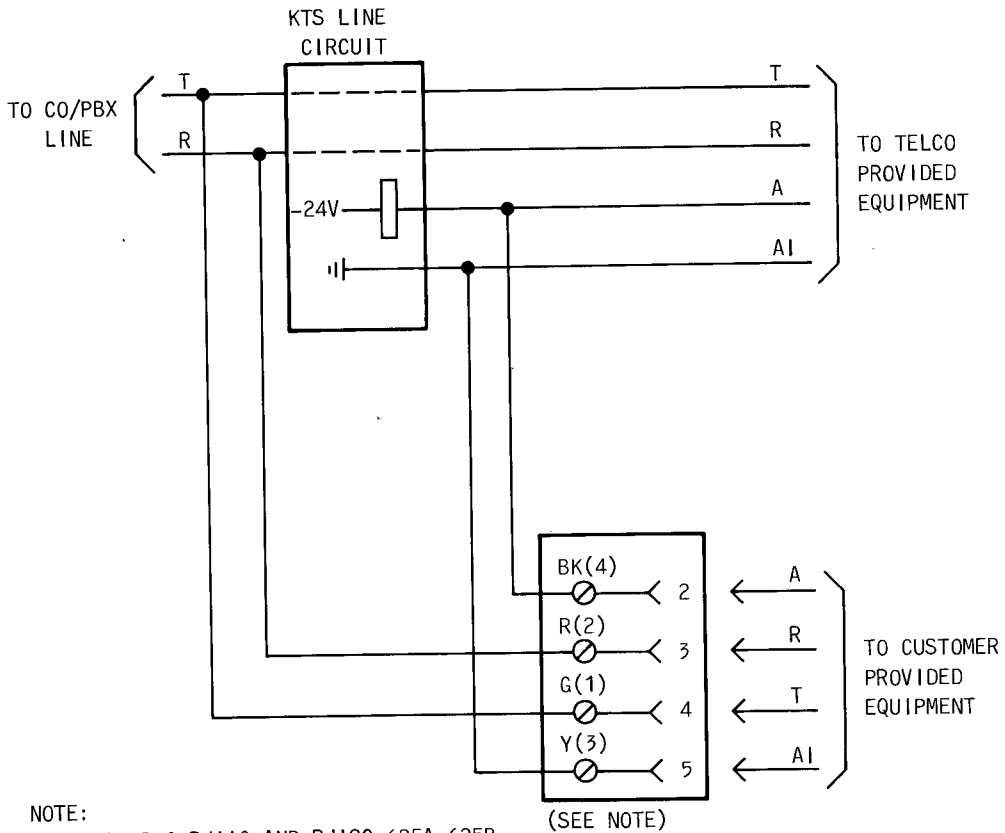


Fig. 5—Connections for USOC RJ12C and RJ12W—Bridged Tip and Ring Ahead of Line Circuit With A Lead Control

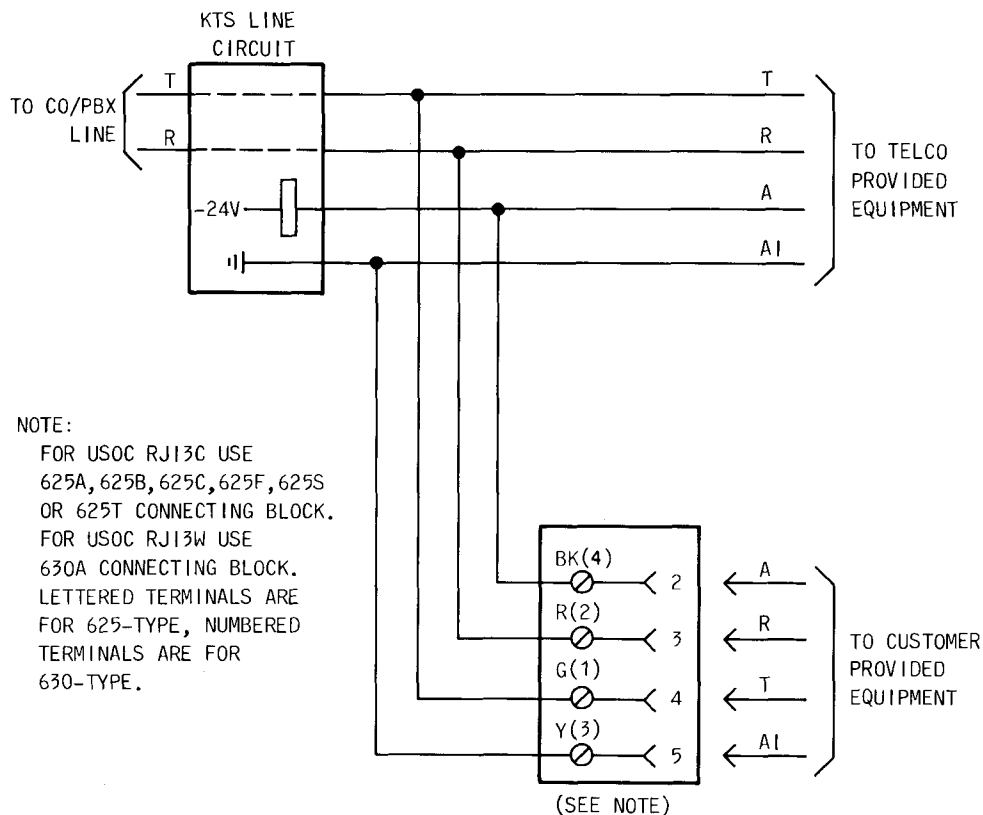


Fig. 6—Connections for USOC RJ13C and RJ13W—Bridged Tip and Ring Behind Line Circuit With A Lead Control