

## 700-SERIES INTERFACE FACILITIES IDENTIFICATION, INSTALLATION, AND MAINTENANCE

### 1. GENERAL

- 1.01** This section provides information on the 700-series jacks for customer interface.
- 1.02** This section is reissued to:
- (a) Add the 700C-66-B1-4 jack
  - (b) Add coding option B to Table A to denote backboard supplied
  - (c) Change design of ribbon connector on 700B-66-B1-12 jack as shown in Issue 1.

Revision arrows are used to emphasize the more significant changes.

- 1.03** The coding strategy of the jacks (Table A) designates the output, input, and connect-through options, also the design issue, the maximum number of pairs served, and whether a backboard is supplied. The 700C-66-B1-25 jack would break down as follows:

700 = Design family

C = Output option — 50-pin miniature ribbon connector

66 = Input option — 66-type connecting block

B = Connect through option — Bridging clip on 66-type connecting block

1 = Design issue

25 = Maximum number of pairs interfaced

◆(blank space) = Backboard not supplied with jack.◆

### 2. IDENTIFICATION

- 2.01** The 700-series jacks are intended to serve as network interface units as required for the Federal Communications Commission (FCC) Registration Program for interface between the Bell System network and the telephone company or customer-provided terminal facilities (Section 463-400-100).

- 2.02** The 700A-66-B1-25 and 700B-66-B1-12 jacks may be ordered with a 183C6 backboard. (See ordering information and Table A.) The 700A-66-P1-50 and the 700A-R-B1-100 jacks are mounted on orange-colored hinged panels. The orange-colored panels will indicate the interface field at telephone company installations using color-coded backboards.

- 2.03** The ◆700C-66-B1-4◆, 700A-66-B1-25, 700A-66-P1-50, and 700A-R-B1-100 jacks provide bridged multiple tip and ring arrangements (as shown in Section 463-400-141). The 700B-66-B1-12 jack provides a series multiple tip and ring arrangement (as shown in Section 463-400-150).

- 2.04** The ◆700C-66-B1-4◆ jack (Fig. 1) is used to interface a maximum of four pairs of conductors from the Bell System network to customer- or telephone company-provided terminal equipment. (For wiring, see Fig. 6.)

- 2.05** ◆The 700A-66-B1-25 (Fig. 2) and the 700A-66-B1-25B jacks provide a 25-pair interface with one 50-pin miniature ribbon connector mounted on the side of a 66-type connecting block and using bridging clips for connect through option. The 700A-66-B1-25B jack comes with a 183C6 backboard. The 700A-66-B1-25 jack is not provided with a backboard. (For wiring, see Fig. 7.)◆

- 2.06** The 700A-66-P1-50 jack (Fig. 3) is a special purpose interface which provides a 50-pair

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**SECTION 461-604-106**

66-type connecting block for input option, two 50-pin ribbon connectors for output option, and a receptacle panel which accepts plug-in units for sneak current protection. The panel is separated into two fields, A and B, which coincide with the two output connectors A and B (Fig. 8). The block, connectors, and panel are mounted on a hinged faceplate which allows the input cables to be dressed up the back of the panel and fed through an access hole to the connecting block. The plug-in units (79A fuse or 4C12C protector unit [Fig. 11]) must be ordered separately as required.

**2.07** The 700A-R-B1-100 jack (Fig. 4) is a 100-pair interface. It consists of four 50-pin ribbon connector plugs on the back of the panel for input, four 50-pin ribbon connector receptacles on the front for output, and a 100-pair 66-type connecting block for connect-through option using C bridging clips. The hinged faceplate allows the connectorized input cables to be dressed up the back of the panel and connected to the input plugs. The 66-type block is color coded in columns to correspond with color codings on the jacks and plugs. (For wiring, see Fig. 9.)

**2.08** The 700B-66-B1-12 (Fig. 5) and 700B-66-B1-12B jacks are also special purpose interface (USOC RJ71C). They allow customer equipment to be placed in series with terminal equipment for control, intercept, accounting, or measuring purposes. There is a 66-type block for input and output to terminal equipment, and a 50-pin ribbon connector for customer special purpose equipment (Fig. 10). The incoming lines terminate on pairs 1 through 12 of column A on the 66-type block. Pair 13 has no terminals and the outgoing lines to terminating equipment are on pairs 14 through 25 in column A. Column C terminals are connected to the ribbon connector receptacle for connection to the customer's special purpose series equipment. Connect through with C bridging clips must be made between terminals of column B and C in both the input portion (pairs 1 through 12) and the output portion (pairs 14 through 25) of each line to be installed.

**2.09** Order as follows:

NOMENCLATURE	COMCODE
◆ Jack, 700C-66-B1-4	103562039◆
Jack, 700B-66-B1-12	103551818
◆ Jack, 700B-66-B1-12B	103746988◆

NOMENCLATURE	COMCODE
Jack, 700A-66-B1-25	103551776
◆ Jack, 700A-66-B1-25B	103746970◆
Jack, 700A-66-P1-50	103551800
Jack, 700A-R-B1-100	103551735
Fuse, 79A	103551610
Unit, Protector, 4C12C	103290755
Clip, Bridging, C	400807459
Backboard, 183C6	103562021
Cord, P2FL	103105276

**3. INSTALLATION**

**3.01** The 700-type jacks should be installed within 25 feet of the customer- or telephone company-provided equipment with which they are to be used.

**3.02** The 66-type connecting blocks are marked TOP on the top left corner for easy orientation.

**3.03** The 700A-R-B1-100 and 700A-66-P1-50 jacks should always be mounted with the stationary portion on the right side and the 66-type blocks on the left as the craftsman faces the jack. The network lines should be terminated in the sequence specified by the customer without skipping any positions.

**3.04** Provide network lines by connecting cable or wire to input option (ribbon connectors or 66-type block) as appropriate.

**Note:** All terminations on 66-type blocks must be made with 714B or equivalent tool.

**3.05** On the 700C-66-B1-4, 700A-66-B1-25, 700A-R-B1-100, and 700B-66-B1-12 jacks, the connect-through option is applied by placing C bridging clips on terminals of adjacent columns. On 700C-66-B1-4 jack, the C bridging clip is placed between column A and B as necessary. On 700A-66-B1-25 and 700B-66-B1-12 jacks, the C bridging clips (AT-8596) will go between columns B and C

as necessary. On the 700A-R-B1-100, the C bridging clips will go on the adjacent terminals in each of the color-coded columns as necessary.

**Note:** On the 700B-66-B1-12 jack, column B must be connected to column C on both the incoming and outgoing pairs to have continuity. If the plug to the control equipment is not in place, the shorting connector automatically connects the input to the output.

**3.06** The 700A-66-P1-50 jack uses plug-in units for connect-through option. The plug-in unit has an insertion key which ensures proper orientation of the unit. The plug-in units will be installed in the panel to coincide with input pairs as shown in Fig. 8 and as needed for service orders. The 79A fuse is used where sneak current protection is needed and the 4C12C protector unit (dummy) where protection is not needed.

**3.07** Any pair may be sectionalized for testing at the 700-type jacks by removing the appropriate bridging clip, fuse, or protector unit. The 79A fuse and the 4C12C protector unit have test ports on the top which may be accessed with a P2FL cord. For testing on the receptacle panel of the 700A-66-P1-50 jack, place the P2FL cord on the top of either a 79A fuse or a 4C12C protector unit. The fuse or protector unit is then plugged into the receptacle panel in the position of the circuit to be tested, as far as the detent position (long terminals making contact — short terminals not making contact). The circuit may then be tested in either direction by reversing the fuse or protector unit.

**3.08** The 700C-66-B1-4, 700A-66-B1-25, 700A-R-B1-100, and 700B-66-B1-12 jacks should be labeled by writing the USOC number, customer's name, and jack and plug number on the front of the protective cover as appropriate and the identity of each binding post pair on the inside of the cover (Fig. 12, 13, and 14). The protective cover should be kept in place on all blocks not being serviced to prevent accidental service interruptions.

**3.09** The jack number printed on the face of the protective cover should also be printed on the moulded plastic of the 66-type block to facilitate correct replacement of protective covers.

**3.10** The output option ribbon connectors serve as the access jack to which the terminating or

control equipment (as in the 700B-66-B1-12 jack) compatible plug is installed. The plug is held in place by a fabric strap attached to the ribbon connectors.

#### 4. MAINTENANCE

**4.01** Maintenance of the 700-type jacks is limited to as follows:

- Checks of cross-connections
- Continuity testing between terminals and connectors
- Realignment and cleaning of terminals
- Replacement of bridging clips or plug-in units
- Replacement of cover.

**4.02** Bent, misaligned, or obviously deformed terminals may be corrected by using long-nose pliers. The bent beam should be moved until it aligns with its mate or with other terminals of the same column. Care should be taken not to move beams or terminals in a direction which could spring or open the contact surfaces between the two beams.

**4.03** Terminals which have been damaged or sprung, resulting in an obvious gap between the two contact surfaces, should not be used. There is no prescribed method for correcting this condition; therefore, an assigned circuit must be wired to spare terminals or the connecting block replaced. In either case, the customer may have to be consulted to coordinate the change.

**4.04** Field replacement of terminals or KS connectors in connecting blocks is impractical. Connecting blocks which are damaged and cannot be repaired will have to be replaced.

**4.05** Remove small pieces of insulation and wire-ends remaining at base of terminals with an insulated tool. The 724A tool is designed to remove conductors from 66-type connecting blocks and serves to extract bits of insulation and wire-ends while reducing the possibility of disturbing or degrading adjacent wire connections.

**Note:** Never use pliers to squeeze terminal beams together in an attempt to improve

terminal contact or tension. This destroys the terminal for future use.

4.06 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 proper Maintenance of Service Charge Billing can be initi-

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

▶TABLE A◀

CODING STRATEGY OF 700-TYPE JACKS

BASIC DESIGN FAMILY	OUTPUT JACK OPTION	INPUT CONNECTOR OPTION	CONNECT THROUGH OPTION	DESIGN ISSUE	NUMBERS OF PAIRS INTERFACED	BACKBOARD
700	A = 50-pin miniature ribbon connector(s) <i>or</i>	66 = 66-type connecting block <i>or</i>	B = bridging clip on 66-type connecting block <i>or</i>	1 <i>or</i> 2 <i>or</i> etc	4 <i>or</i> 12 <i>or</i> 25 <i>or</i> 50 <i>or</i> 100	B
	B = 50-pin miniature ribbon shorting connector <i>or</i>	R = 50-pin miniature ribbon plug(s) <i>or</i>	P = plug-in units on receptacle panel			
	C = 8-pin modular jack	110 = 110-type connecting block				

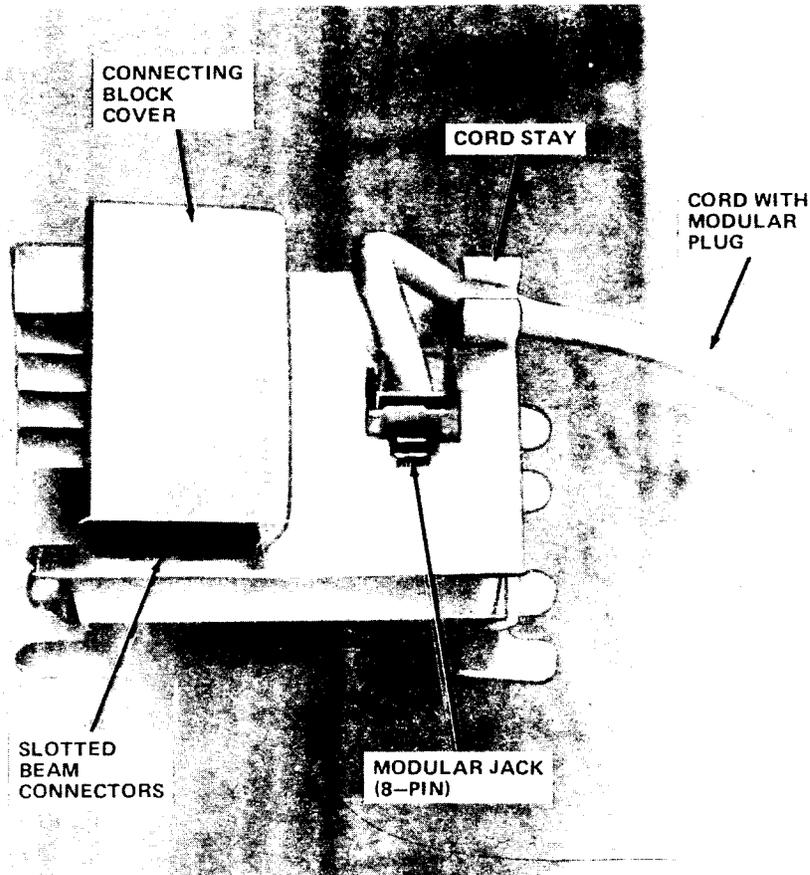
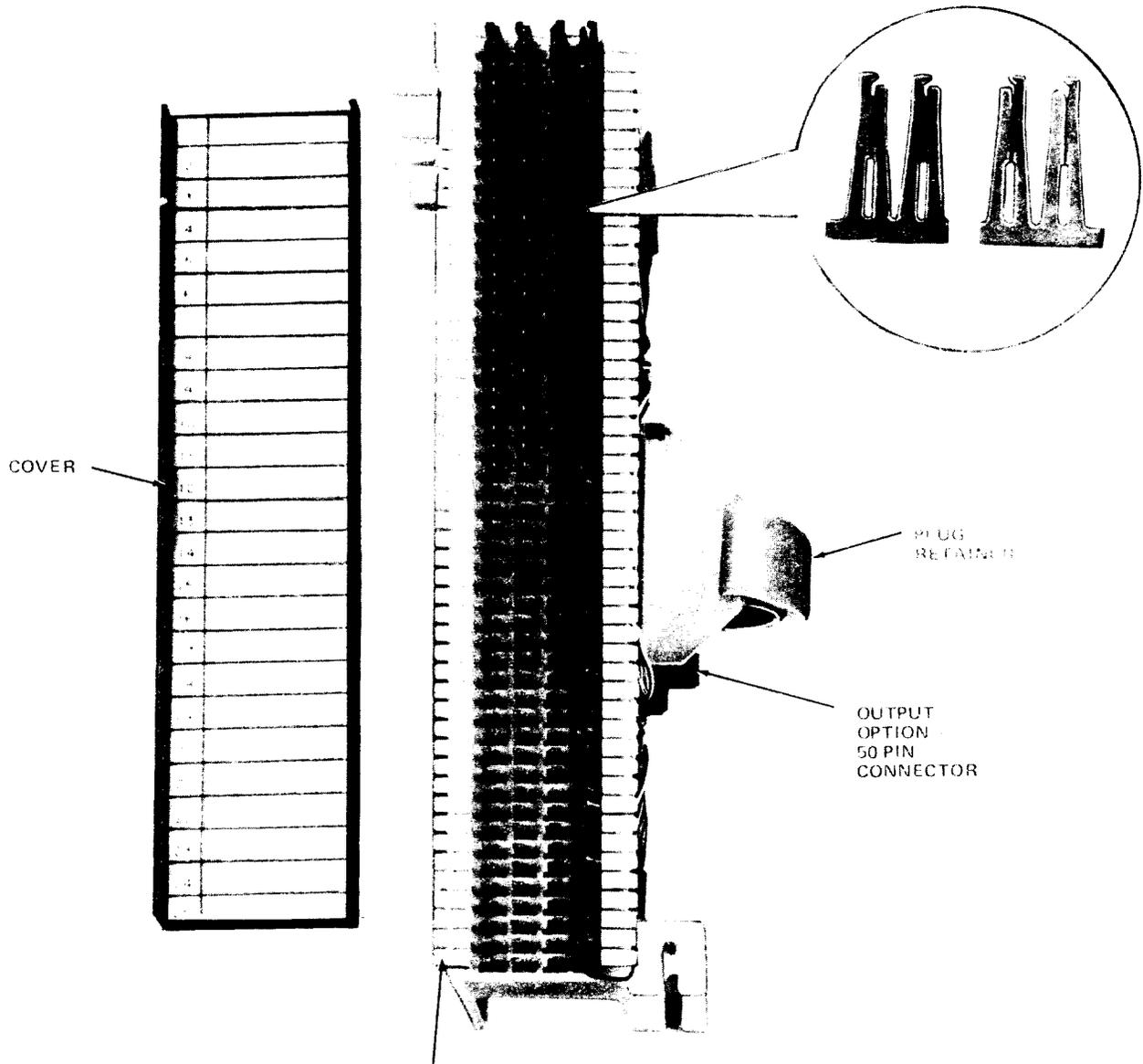


Fig. 1—♦700C-66-B1-4 Jack♦



66-TYPE CONNECTING BLOCK

Fig. 2—700A-66-B1-25 Jack

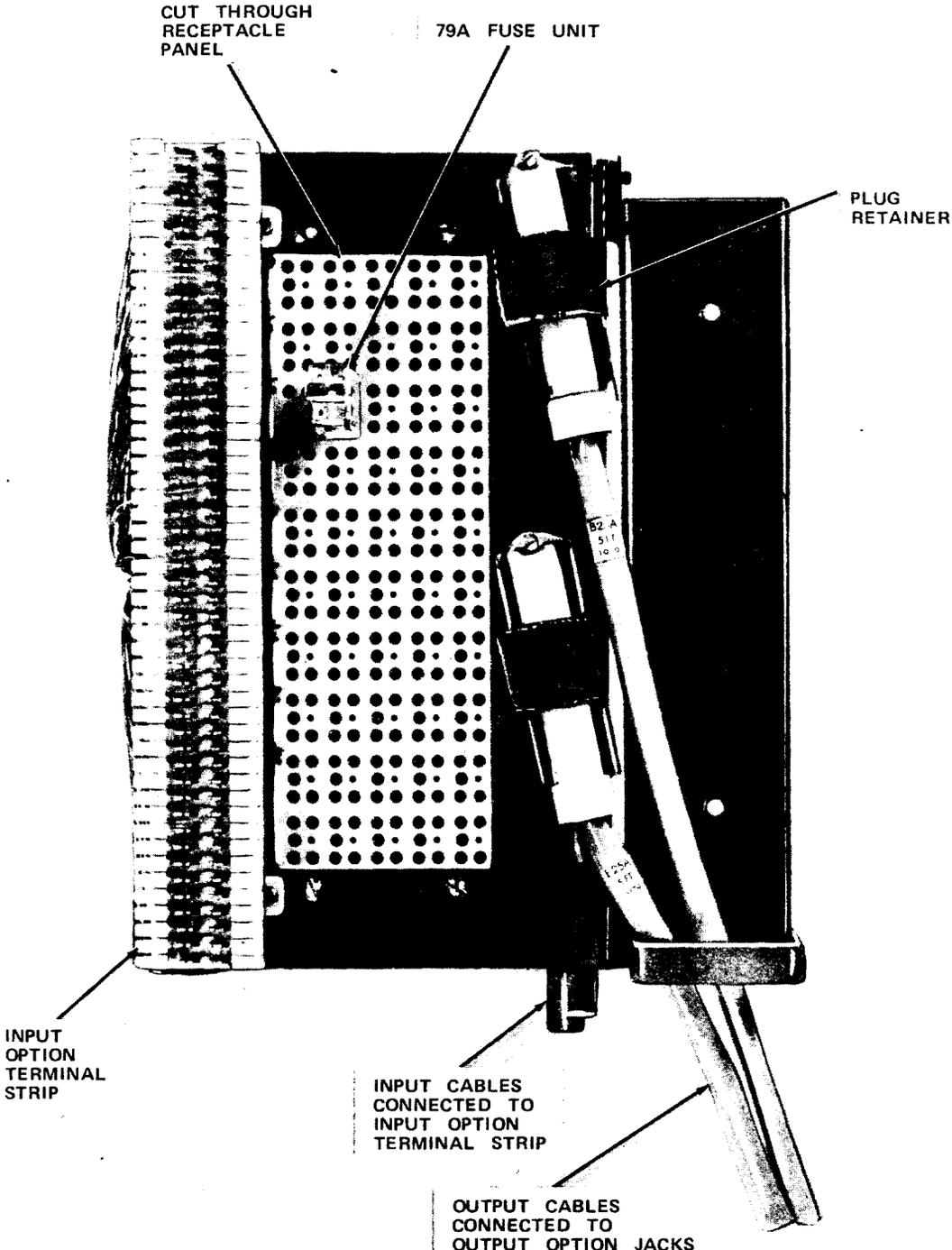


Fig. 3—700A-66-P1-50 Jack

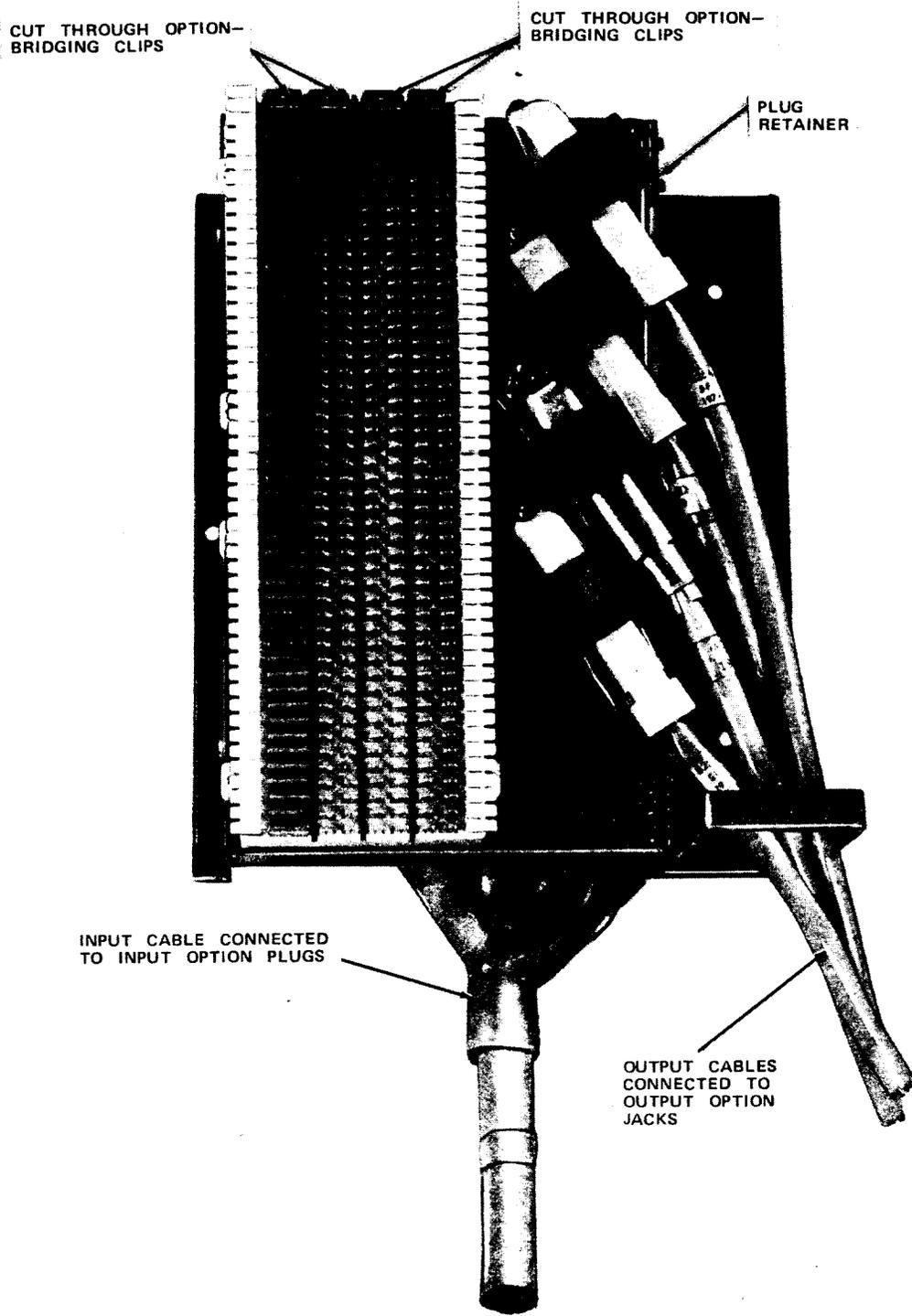


Fig. 4—700A-R-B1-100 Jack

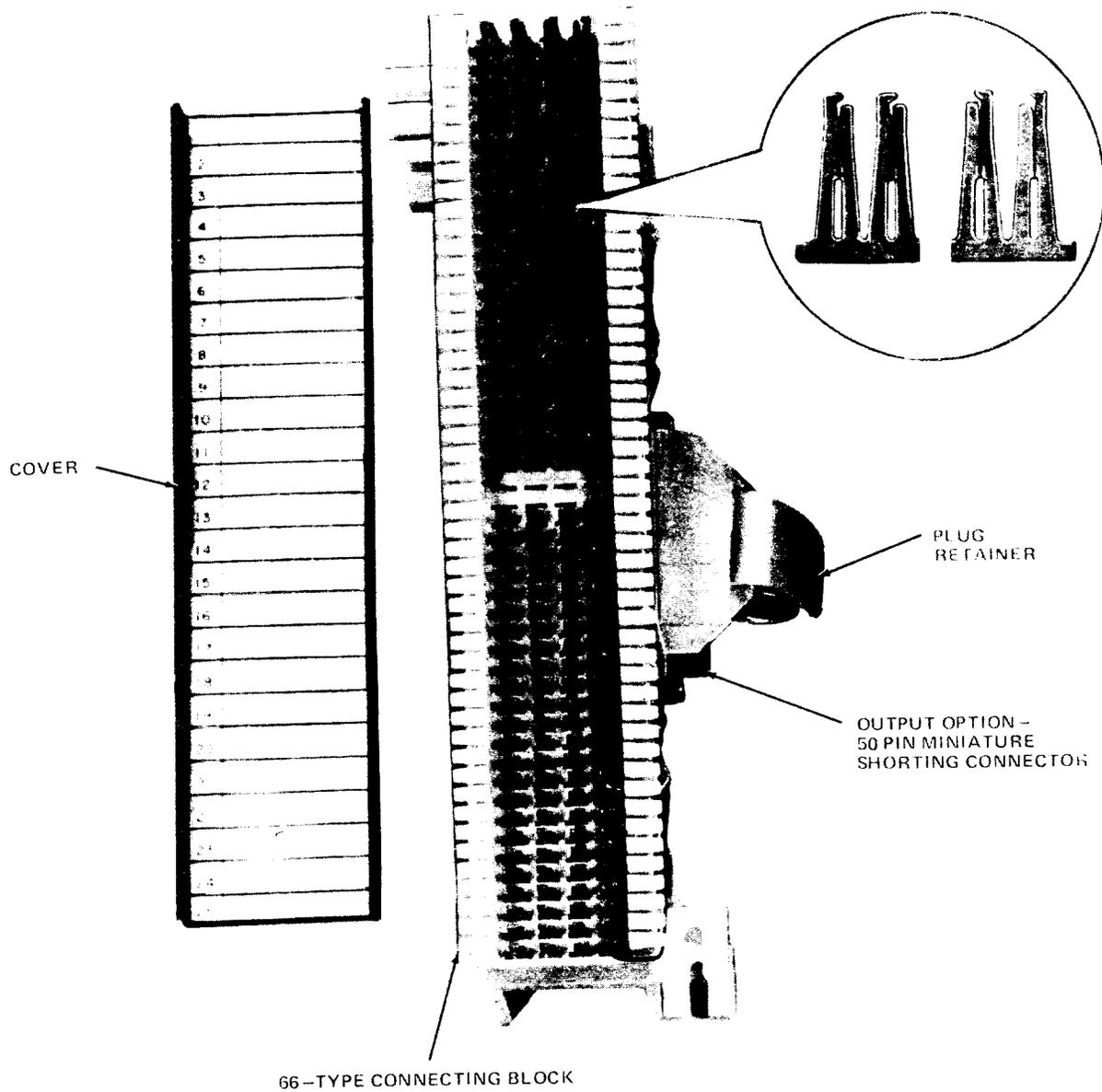
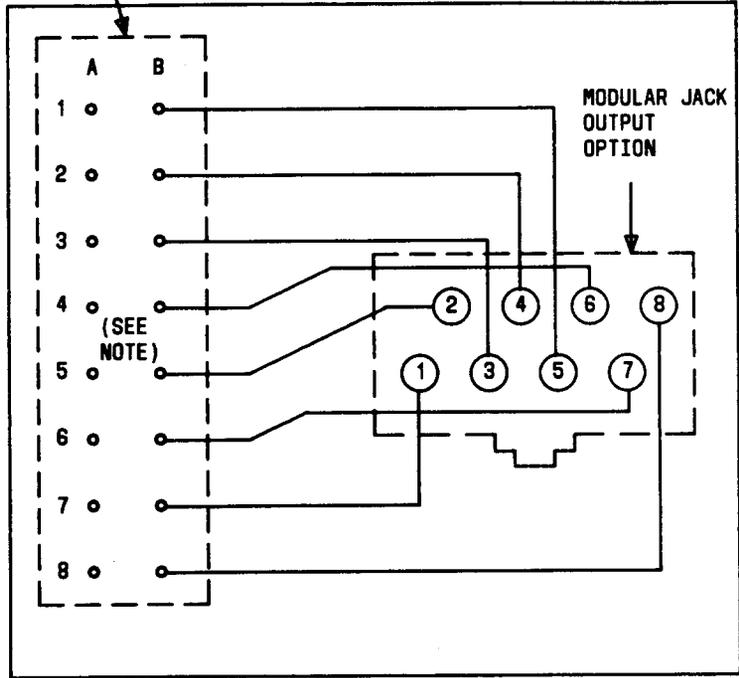


Fig. 5—700B-66-B1-12 Jack

66-TYPE BLOCK  
INPUT OPTION



NOTE:  
CUT-THROUGH OPTION - CONNECT COLUMNS  
A AND B WITH C BRIDGING CLIPS, AS REQUIRED.

Fig. 6—Wiring of 700C-66-B1-4 Jack

**NOTES:**

1. CROSS-CONNECT COLUMNS B AND C WITH C BRIDGING CLIP AS REQUIRED
2. J1 (KS16672-L3 CONNECTOR) IS TERMINAL EQUIP. ACCESS POINT

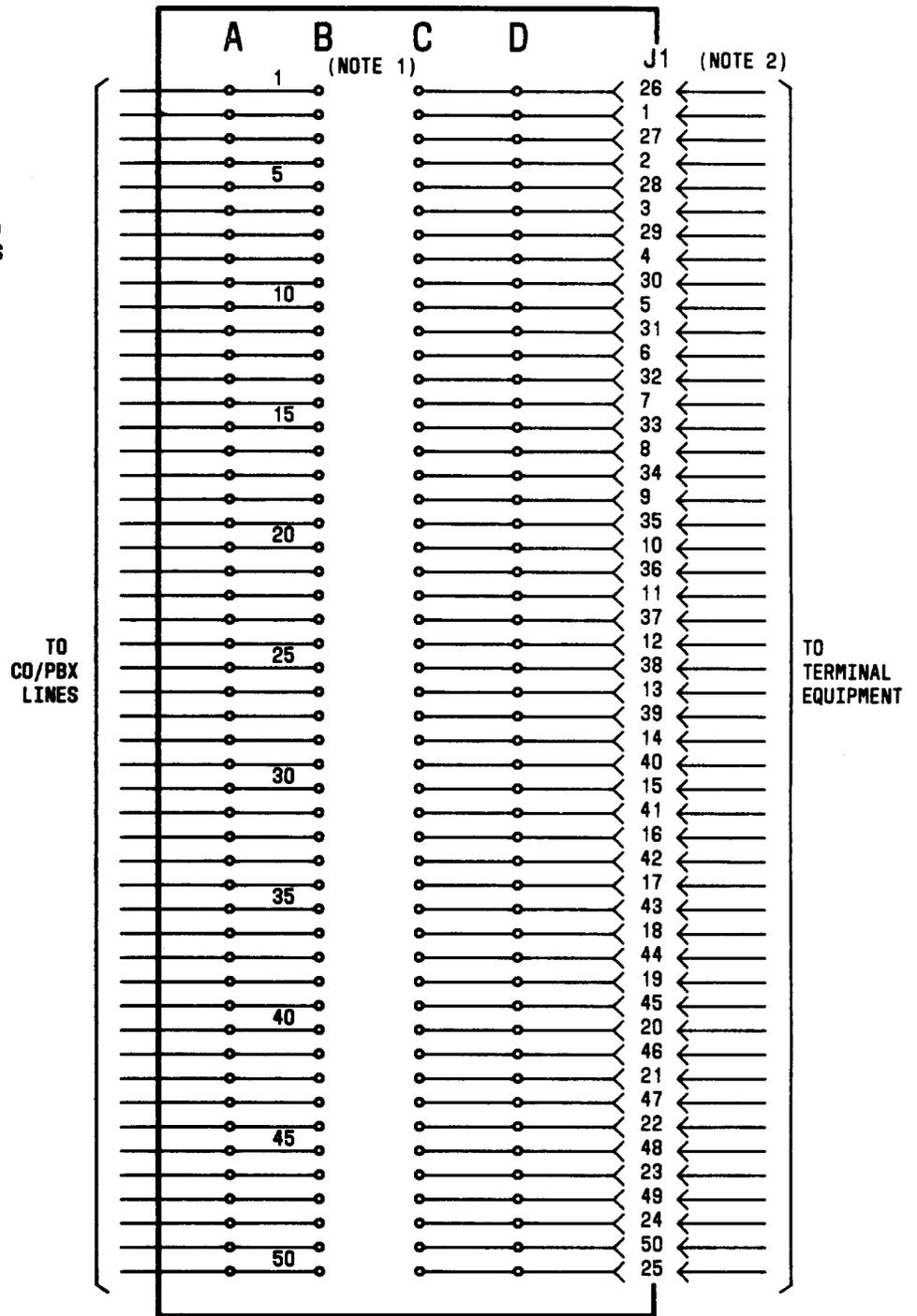


Fig. 7—Wiring of 700A-66-B1-25 Jack

CONNECTING BLOCK AND RECEPTACLE PANEL PAIRS		MIN. RIBBON CONN. TERM. EACH GROUP	CABLE PAIR COLOR EACH GROUP
A	B		
1	26	26	W-BL
		1	BL-W
2	27	27	W-O
		2	O-W
3	28	28	W-G
		3	G-W
4	29	29	W-BR
		4	BR-W
5	30	30	W-S
		5	S-W
6	31	31	R-BL
		6	BL-R
7	32	32	R-O
		7	O-R
8	33	33	R-G
		8	G-R
9	34	34	R-BR
		9	BR-R
10	35	35	R-S
		10	S-R
11	36	36	BK-BL
		11	BL-BK
12	37	37	BK-O
		12	O-BK
13	38	38	BK-G
		13	G-BK
14	39	39	BK-BR
		14	BR-BK
15	40	40	BK-S
		15	S-BK
16	41	41	Y-BL
		16	BL-Y
17	42	42	Y-O
		17	O-Y
18	43	43	Y-G
		18	G-Y
19	44	44	Y-BR
		19	BR-Y
20	45	45	Y-S
		20	S-Y
21	46	46	V-BL
		21	BL-V
22	47	47	V-O
		22	O-V
23	48	48	V-G
		23	G-V
24	49	49	V-BR
		24	BR-V
25	50	50	V-S
		25	S-V

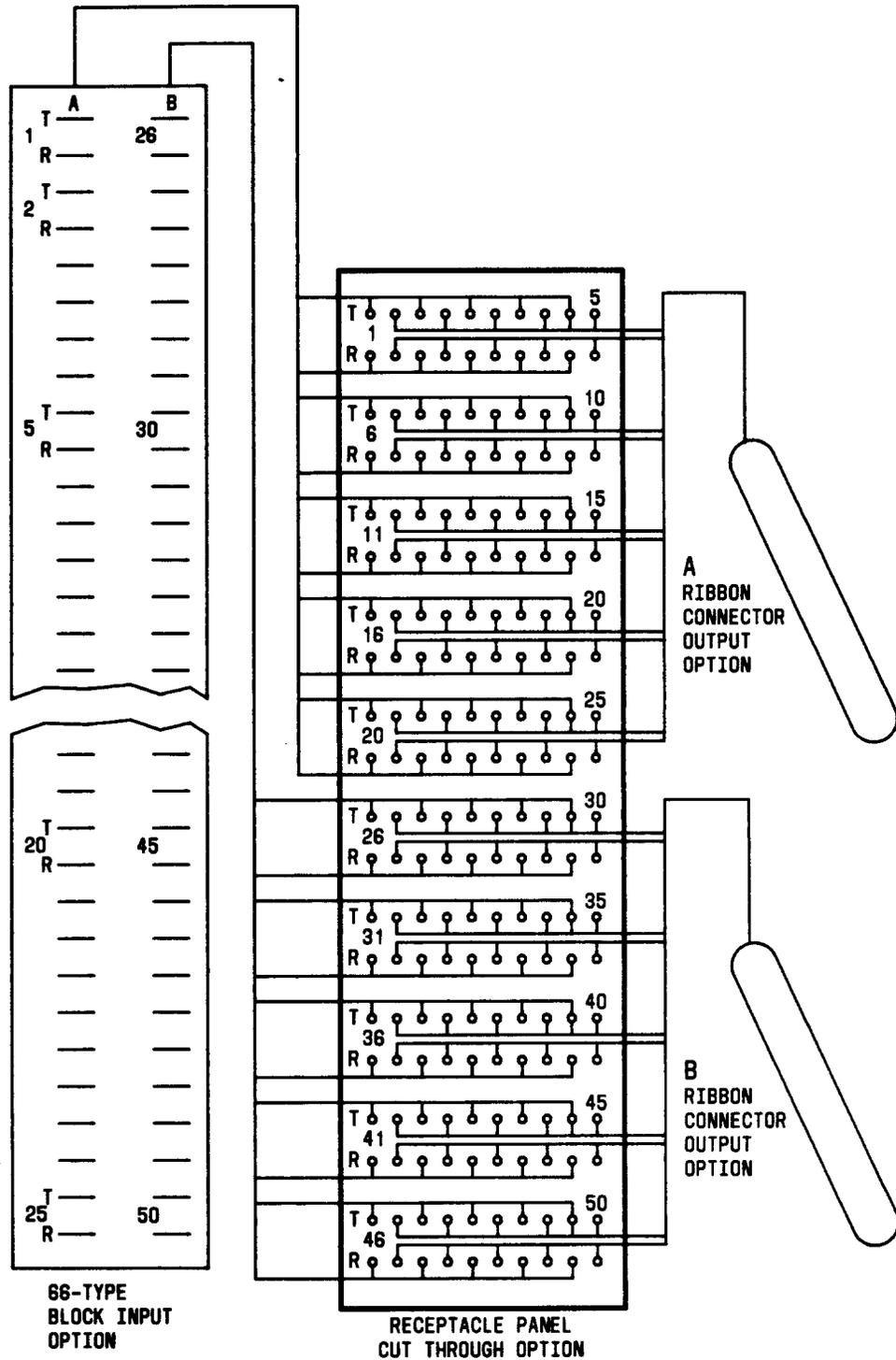


Fig. 8—Wiring of 700A-66-P1-50 Jack

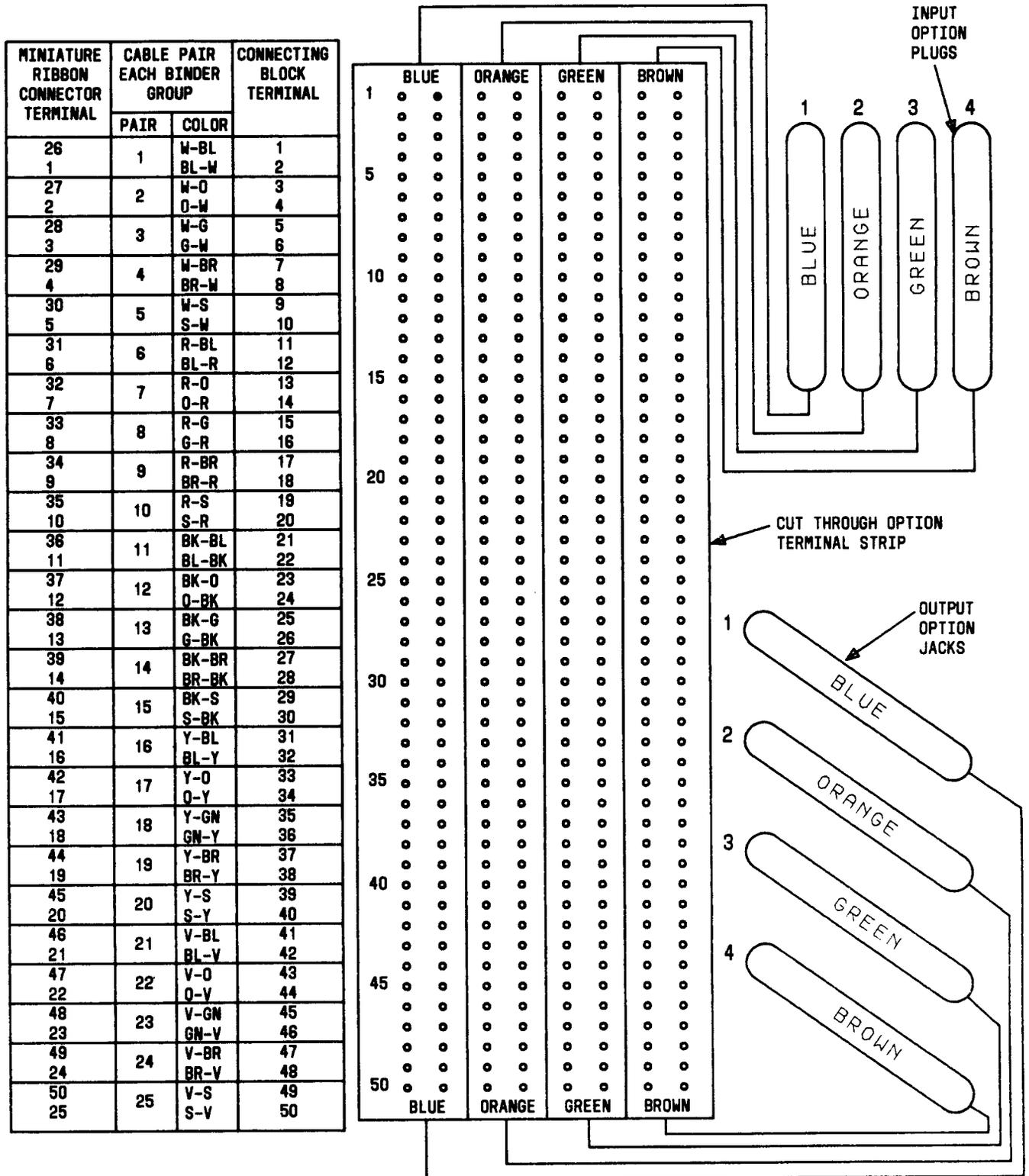
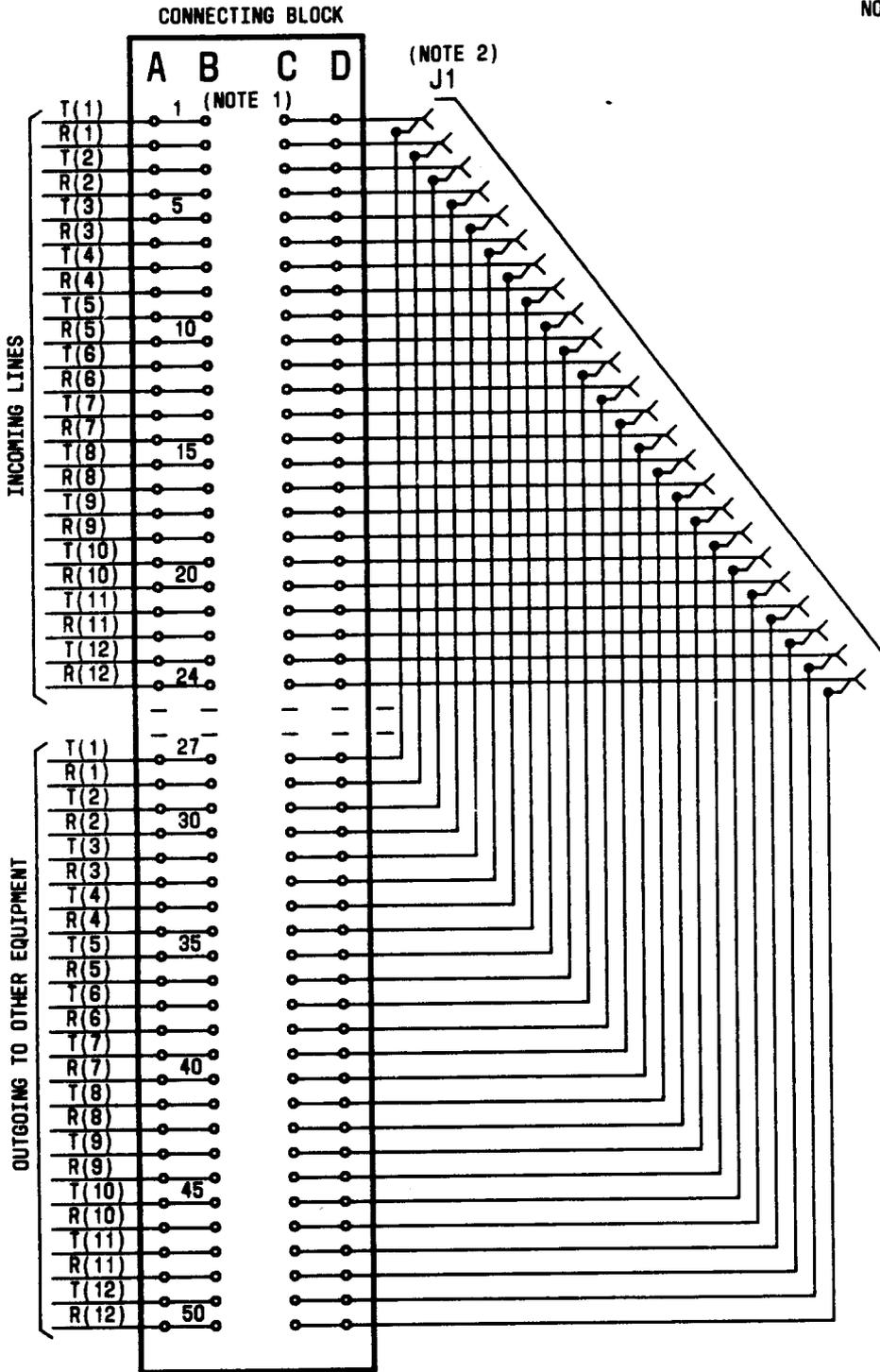


Fig. 9—Wiring of 700A-R-B1-100 Jack



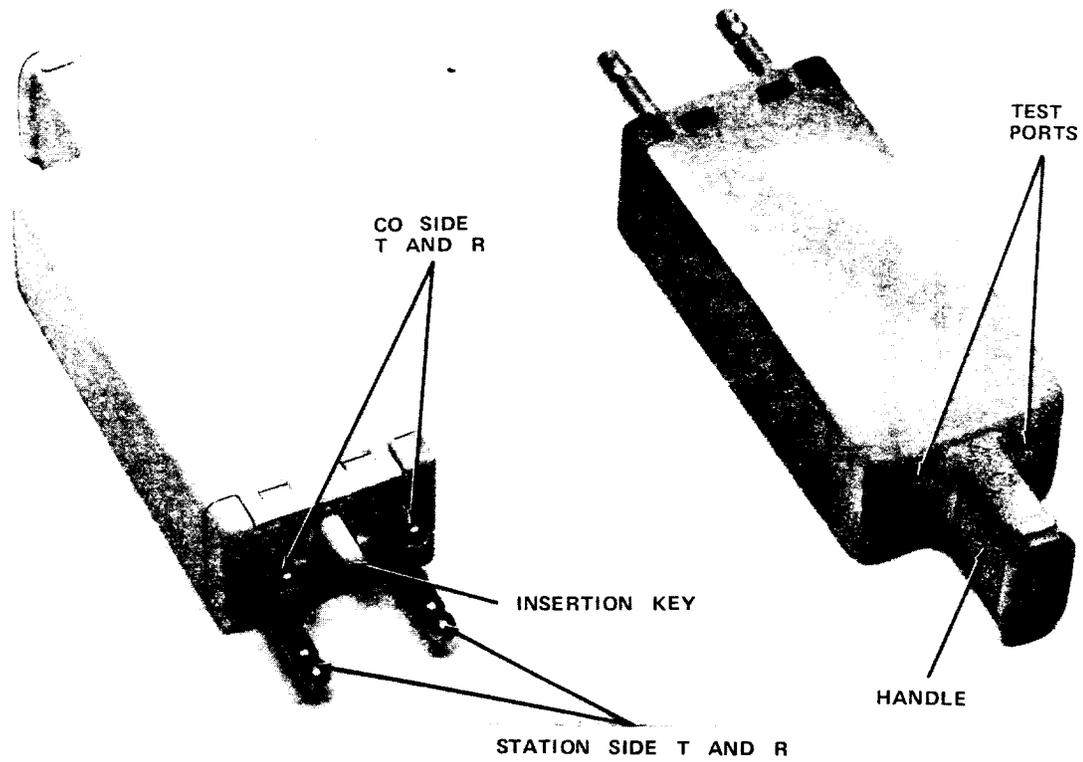
NOTES

1. CROSS-CONNECT COLUMNS B AND C WITH C BRIDGING CLIP AS REQUIRED.
2. J1 (KS-22708, LIST 1 CONNECTOR) IS CUSTOMER ACCESS POINT. IT HAS AUTOMATIC SHORTING CONTACTS WHEN PLUG IS REMOVED.

KS-22708, LIST 1 CONNECTOR

LINE	J1 CONTACT	
	INPUT	OUTPUT
T1	26	1
R1	27	2
T2	28	3
R2	29	4
T3	30	5
R3	31	6
T4	32	7
R4	33	8
T5	34	9
R5	35	10
T6	36	11
R6	37	12
T7	38	13
R7	39	14
T8	40	15
R8	41	16
T9	42	17
R9	43	18
T10	44	19
R10	45	20
T11	46	21
R11	47	22
T12	48	23
R12	49	24
SPARE	50	25

Fig. 10—Wiring of 700B-66-B1-12 Jack



NOTE:  
79A FUSE AND 4C12C PROTECTOR ARE EXTERNALLY  
PHYSICALLY IDENTICAL EXCEPT FOR COLOR. THE  
79A FUSE IS WHITE PLASTIC AND THE 4C12C  
PROTECTOR IS GREY PLASTIC.

Fig. 11—Plug-In Units for 700A-66-P1-50

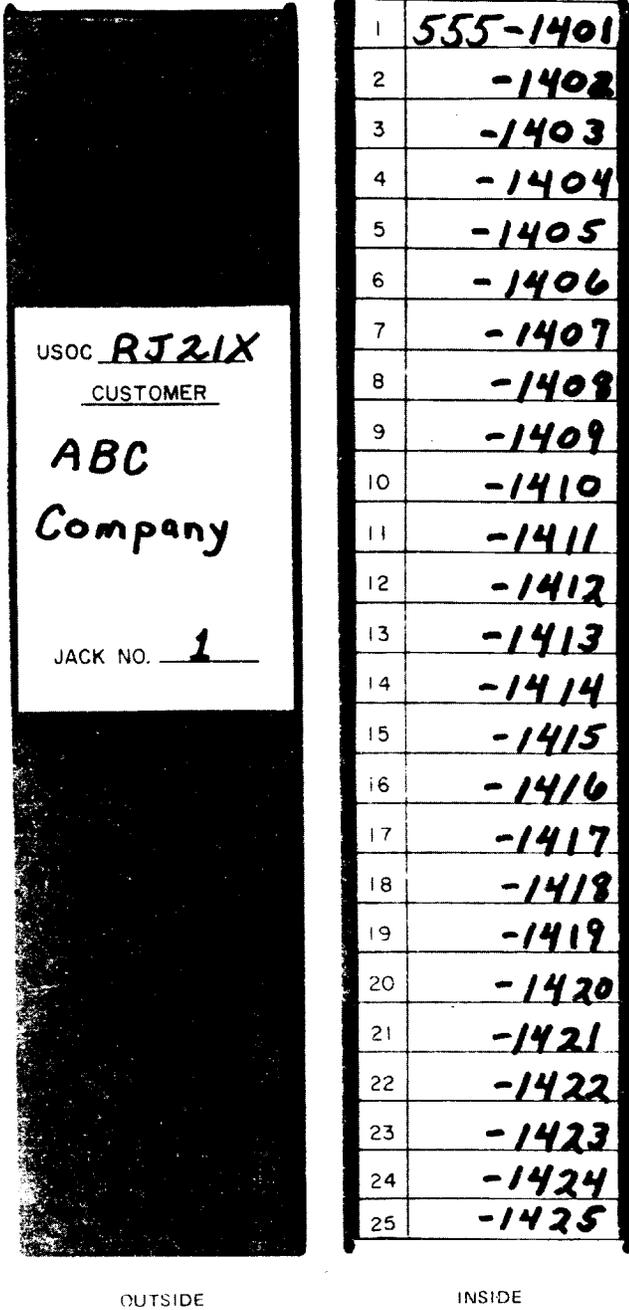


Fig. 12—Labeling of Cover for 700A-66-B1-25 Jack

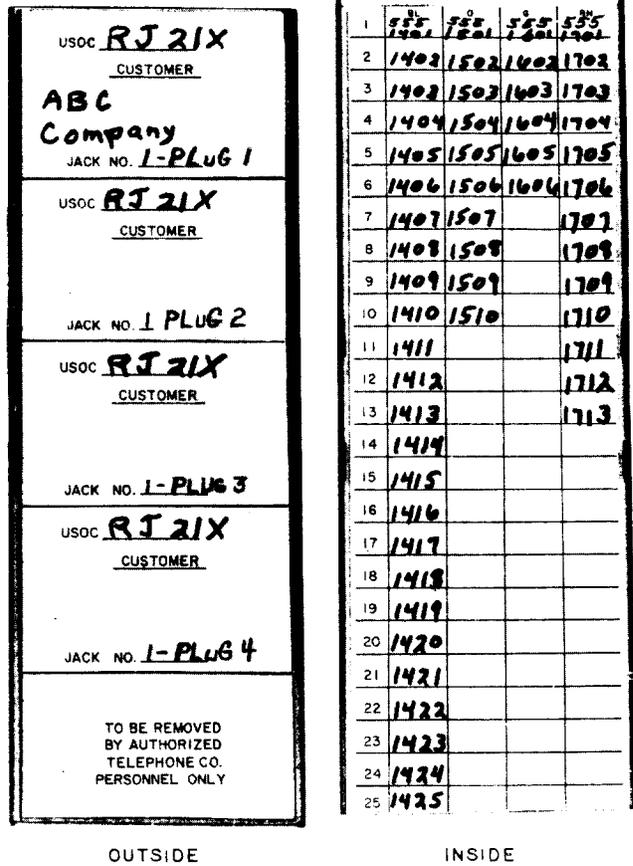


Fig. 13—Labeling of Cover for 700A-R-B1-100 Jack

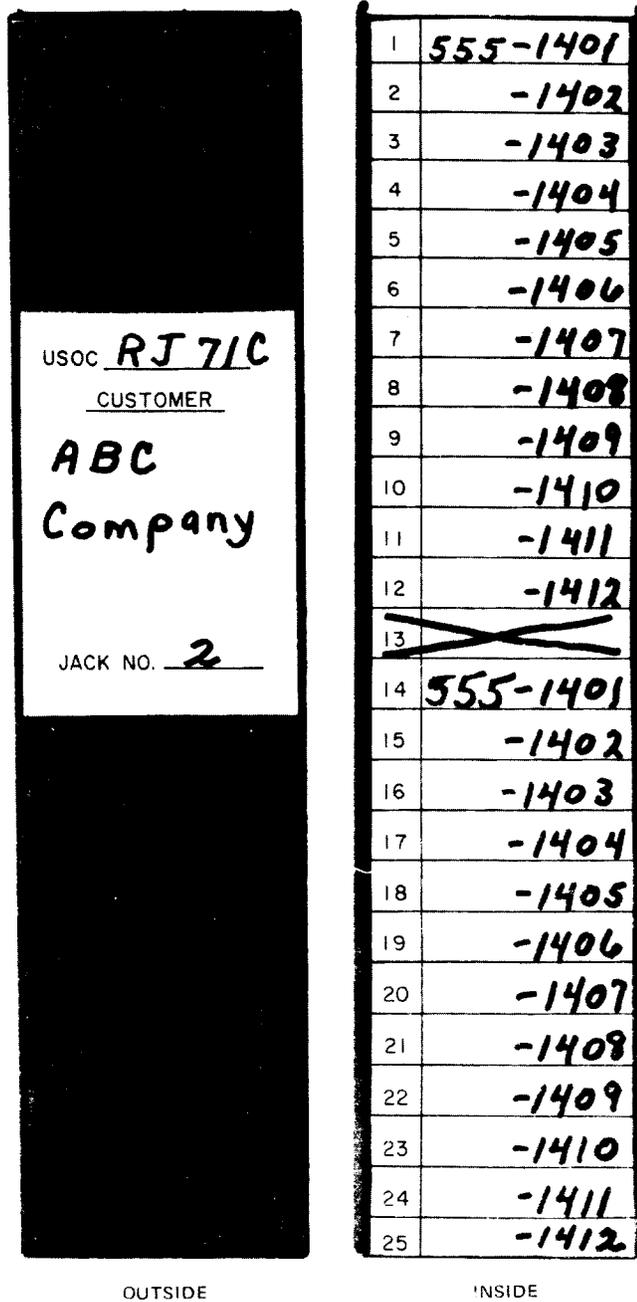


Fig. 14—Labeling of Cover for 700B-66-B1-12 Jack