700-SERIES
INTERFACE FACILITIES
IDENTIFICATION, INSTALLATION, AND MAINTENANCE

1. GENERAL

1.01 This section provides information on the 700A-66-B1-25, 700A-66-P1-50, 700A-R-B1-100, and 700B-66-B1-12 interface jacks.

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

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 equipment for the 700-series jacks are mounted on orange colored modular panels 10-inches high by 8.5-inches wide. The 700A-66-B1-25 and 700B-66-B1-12 are mounted on a 183C6 backboard. The 700A-66-P1-50 and 700A-R-B1-100 use hinged panels. The orange colored panels will indicate the interface field at telephone company installations using color-coded backboards.

2.03 The 700A-66-B1-25, 700A-66-P1-50, and 700A-R-B1-100 jacks provide bridged multiple tip and ring arrangements (RJ21X, RJ22X, RJ23X, and RJ24X in Section 463-400-141). The 700B-66-B1-12 jack provides a series multiple tip and ring arrangement (RJ71C in Section 463-400-150).

2.04 The 700A-66-B1-25 jack (Fig. 1) is used to interface a maximum of 25 pairs of conductors from the Bell System network to customer- or telephone company-provided terminal equipment. The numbering system of the jack designates the output, input, and connect through options, also the design issue and the maximum number of pairs of wires served (Table A). For example, the 700A-66-B1-25 jack would break down as follows:

700 = Design family

A = 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

2.05 The 700A-66-P1-50 jack (Fig. 2) is a special purpose interface which provides a 50-pair 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. 6). 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 dummy protector [Fig. 9]) must be ordered separately as required.

2.06 The 700A-R-B1-100 jack (Fig. 3) 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. 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 corre-

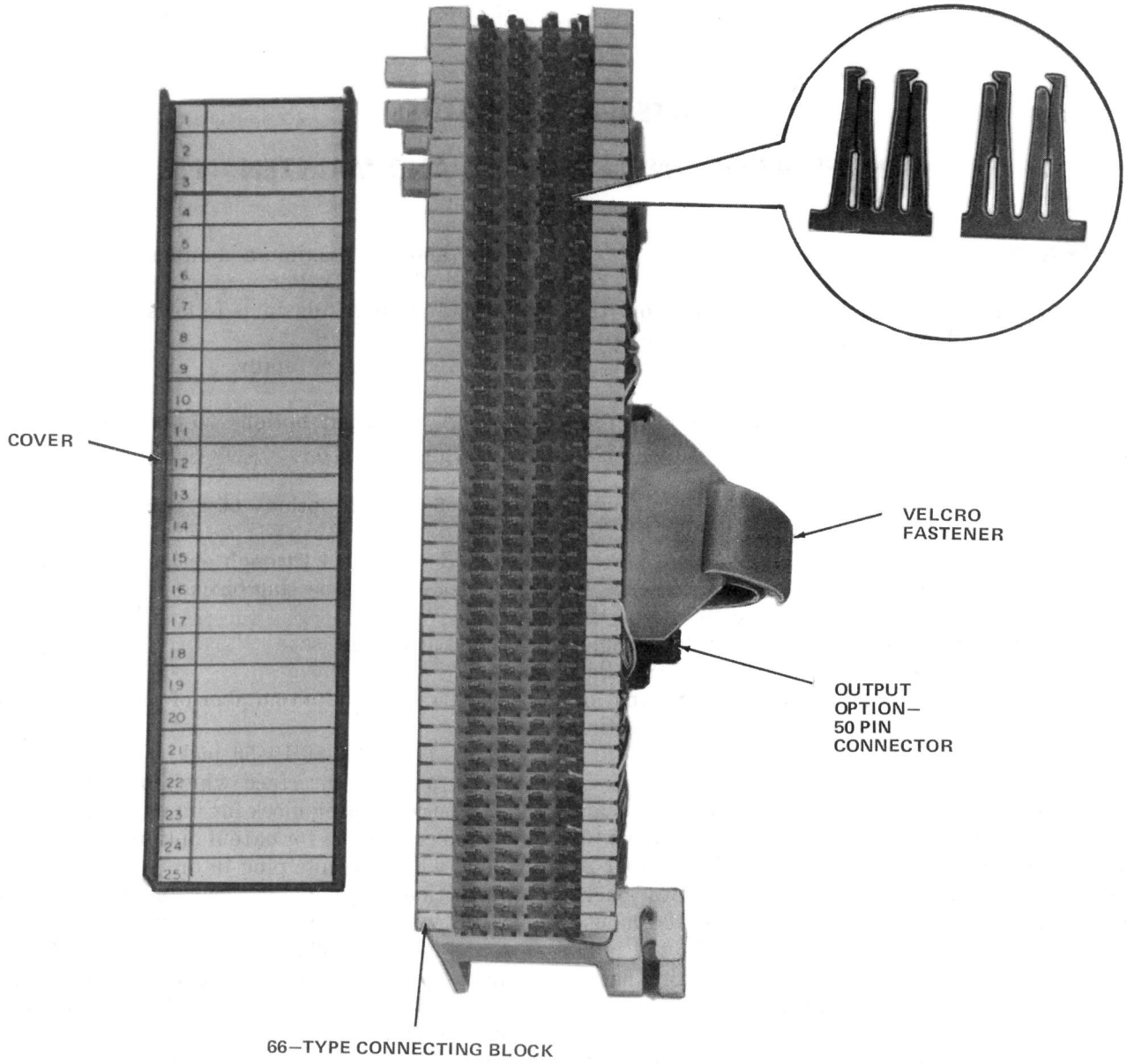


Fig. 1—700A-66-B1-25 Jack

spond with color codings on the jacks and plugs (for wiring, see Fig. 7).

2.07 The 700B-66-B1-12 jack (Fig. 4) is also a special purpose interface (USOC RJ71C). It allows 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. 8). The incoming lines terminate on pairs 1 through 12 of column A on 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 ribbon connector receptacle for connection to customers special purpose series equipment. Cut 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.

TABLE A

CODING STRATEGY OF 700-TYPE JACKS

BASIC DESIGN FAMILY	OUTPUT JACK OPTION	INPUT CONNECTOR OPTION	CONNECT THROUGH OPTION	DESIGN ISSUE	NUMBER OF PAIRS INTERFACED
700	A = 50-pin miniature ribbon connector(s) *or* B = 50-pin miniature ribbon shorting connector	66 = 66-type connecting block *or* R = 50-pin miniature ribbon plug(s)	B = bridging clip on 66-type connecting block *or* P = plug-in units on receptacle panel	1 *or* 2 *or* etc	25 *or* 50 *or* 100

2.08 Order as follows:

NOMENCLATURE	COMCODE
Jack, 700A-66-B1-25	103551776
Jack, 700A-66-P1-50	103551800
Jack, 700A-R-B1-100	103551735
Jack, 700B-66-B1-12	103551818
Fuse, 79A	103551610
Protector, 4C12C	—
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 Mount 700A-66-B1-25 and 700B-66-B1-12 jacks on a 183C6 backboard. The 66-type terminals 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 craftsperson 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 700A-66-B1-25, 700A-R-B1-100, and 700B-66-B1-12 jacks, the cut-through option is applied by placing C bridging clips on terminals of adjacent columns. 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 700B-66-B1-12 connecting block, column B must be cut through to column C on both the incoming and outgoing pairs to have continuity. In addition, if the plug to the control equipment is not in place, the bridging adapter supplied with the jack must be installed.

3.06 The 700A-66-P1-50 jack uses plug-in units for cut-through option. The plug-in unit has a key way to aid proper insertion into the panel and prevent improper insertion. The plug-in units will be installed in the panel to coincide with input pairs as shown on Fig. 6 and as needed for service orders. The 79A fuse is used where sneak current protection is needed and the 4C12C protector (dummy) where protection is not needed.

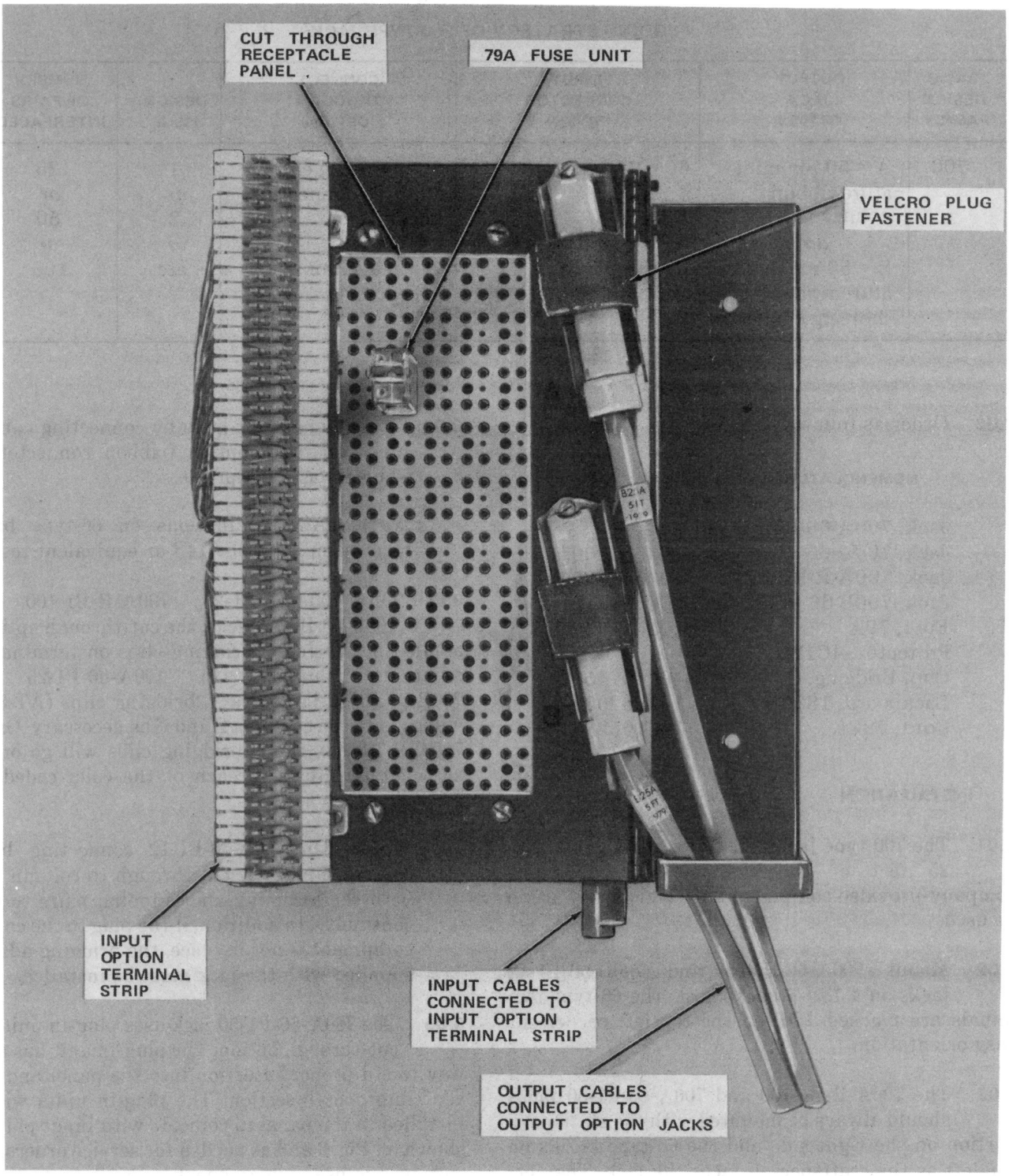


Fig. 2—700A-66-P1-50 Jack

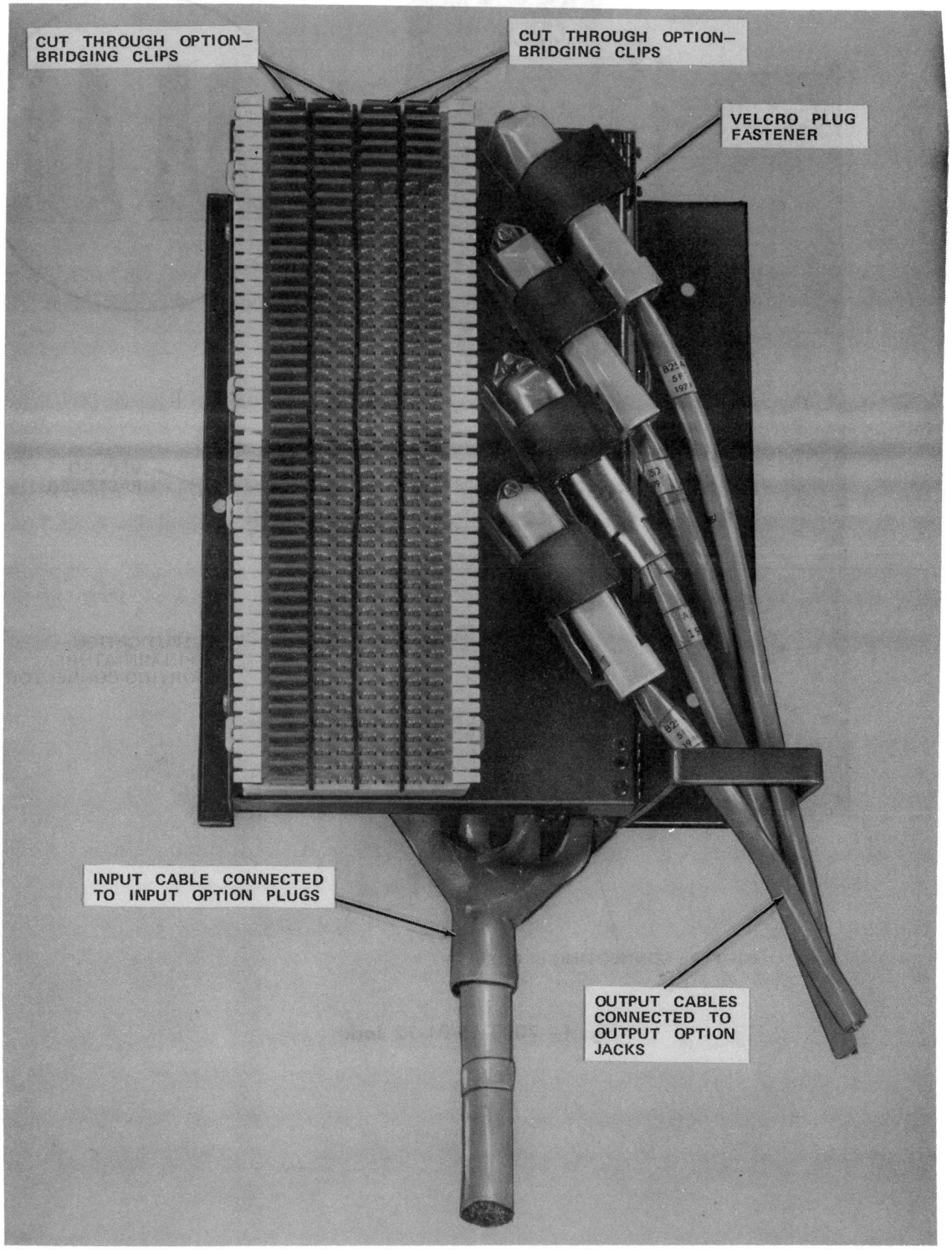


Fig. 3—700A-R-B1-100 Jack

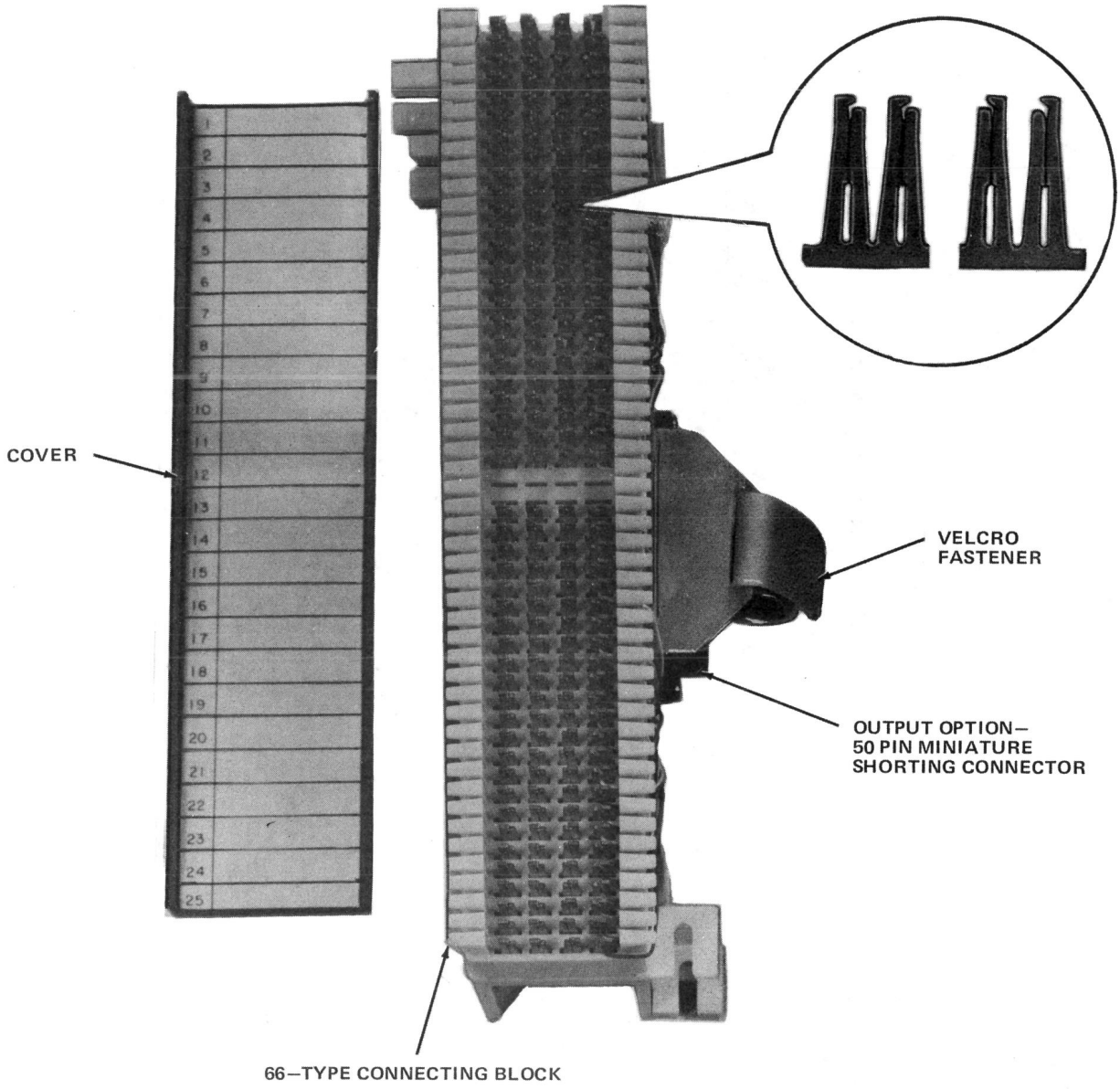


Fig. 4—700B-66-B1-12 Jack

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

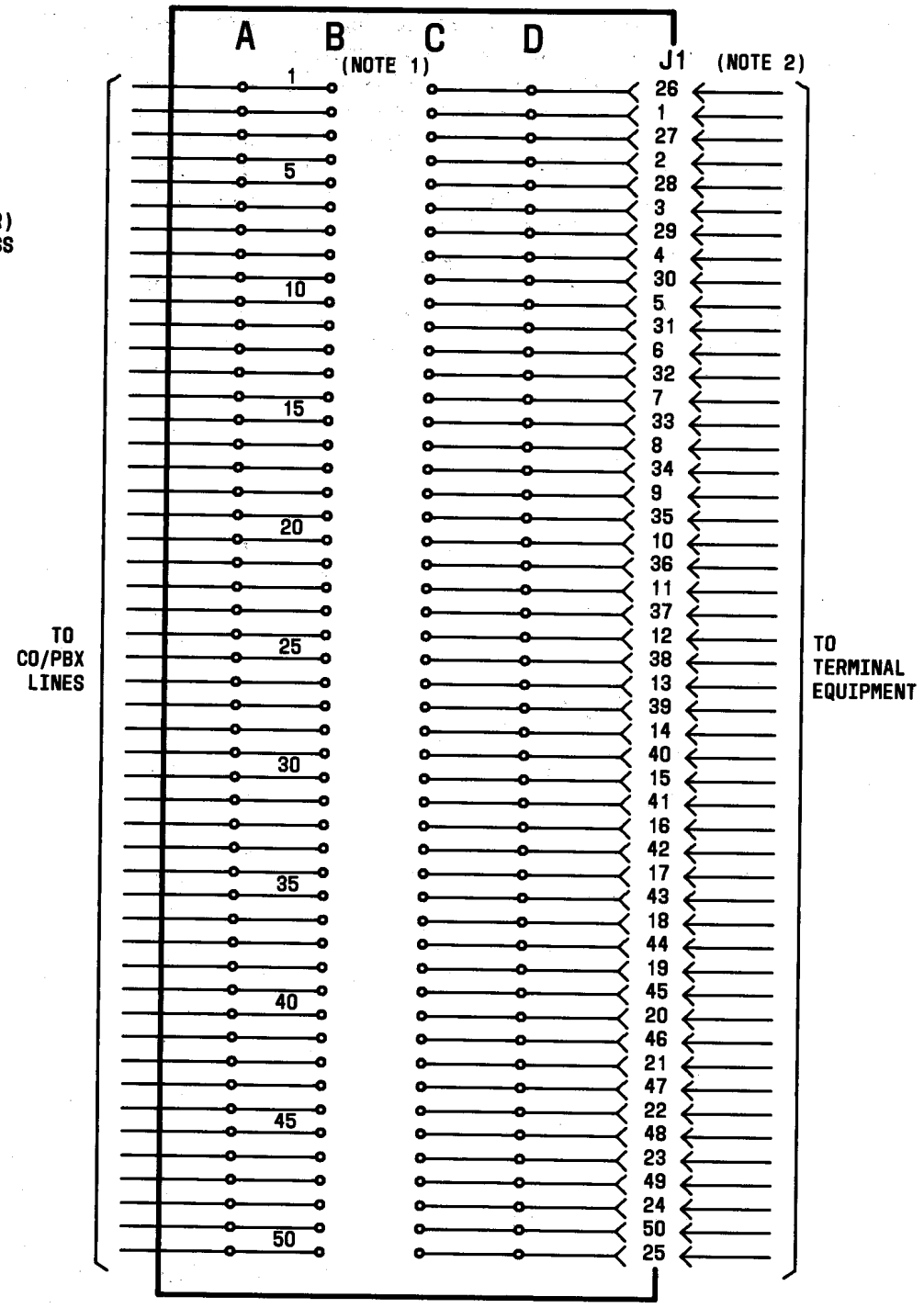


Fig. 5—Wiring of 700A-66-B1-25 Jack

3.07 Any pair may be sectionalized for testing at the 700-type jacks by removing the appropriate bridging clip, fuse, or protector. The 79A fuse and the 4C12C protector 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. The fuse or protector 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.

3.08 The 700A-66-B1-25, 700A-R-B1-100, and 700B-66-B1-12 jacks should be labeled by writing the USOC number, customers 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. 10, 11, and 12). 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 Velcro fasteners attached to the ribbon connectors.

4. MAINTENANCE

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

- 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 sizable 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 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.

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

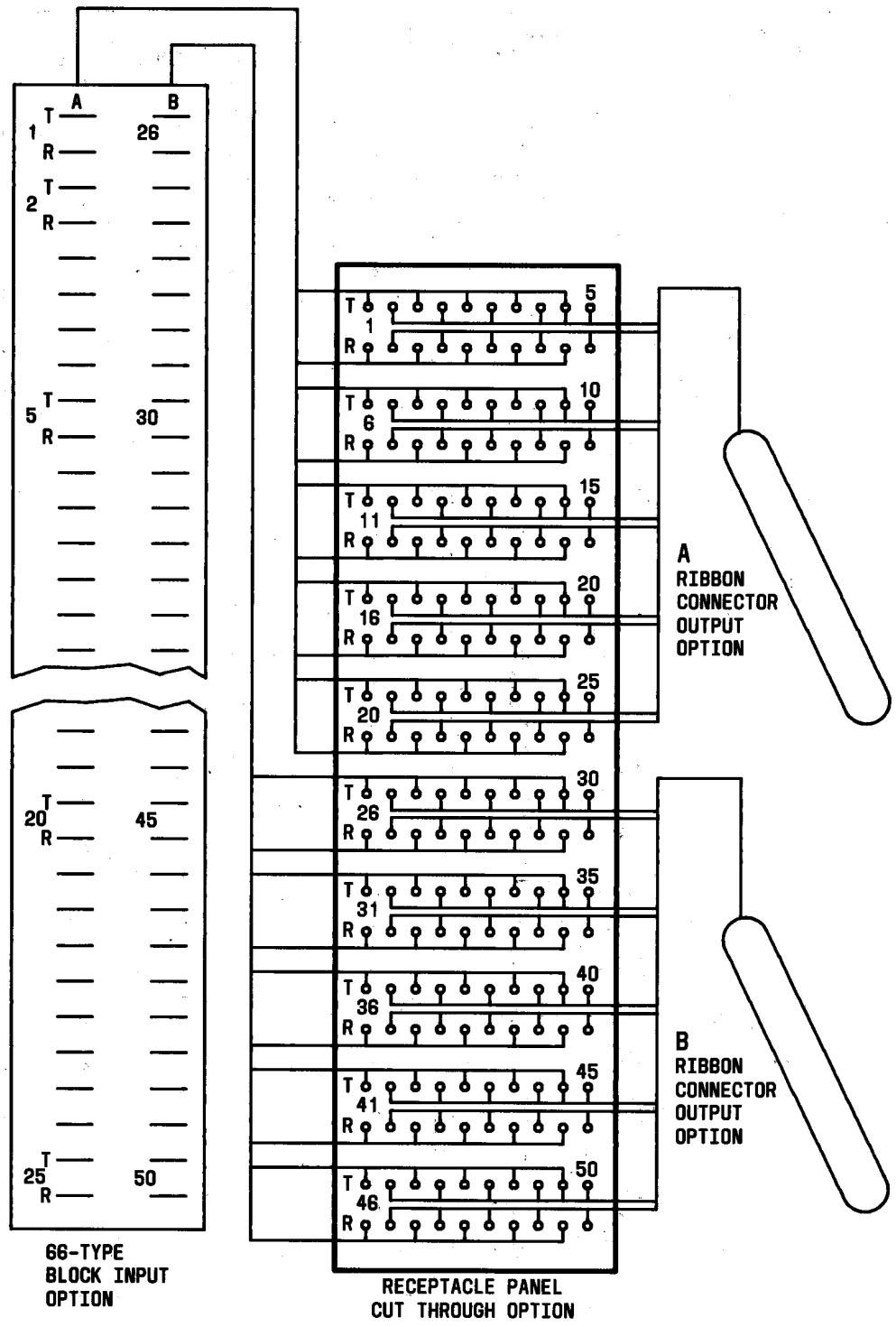


Fig. 6—Wiring of 700A-66-P1-50 Jack

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

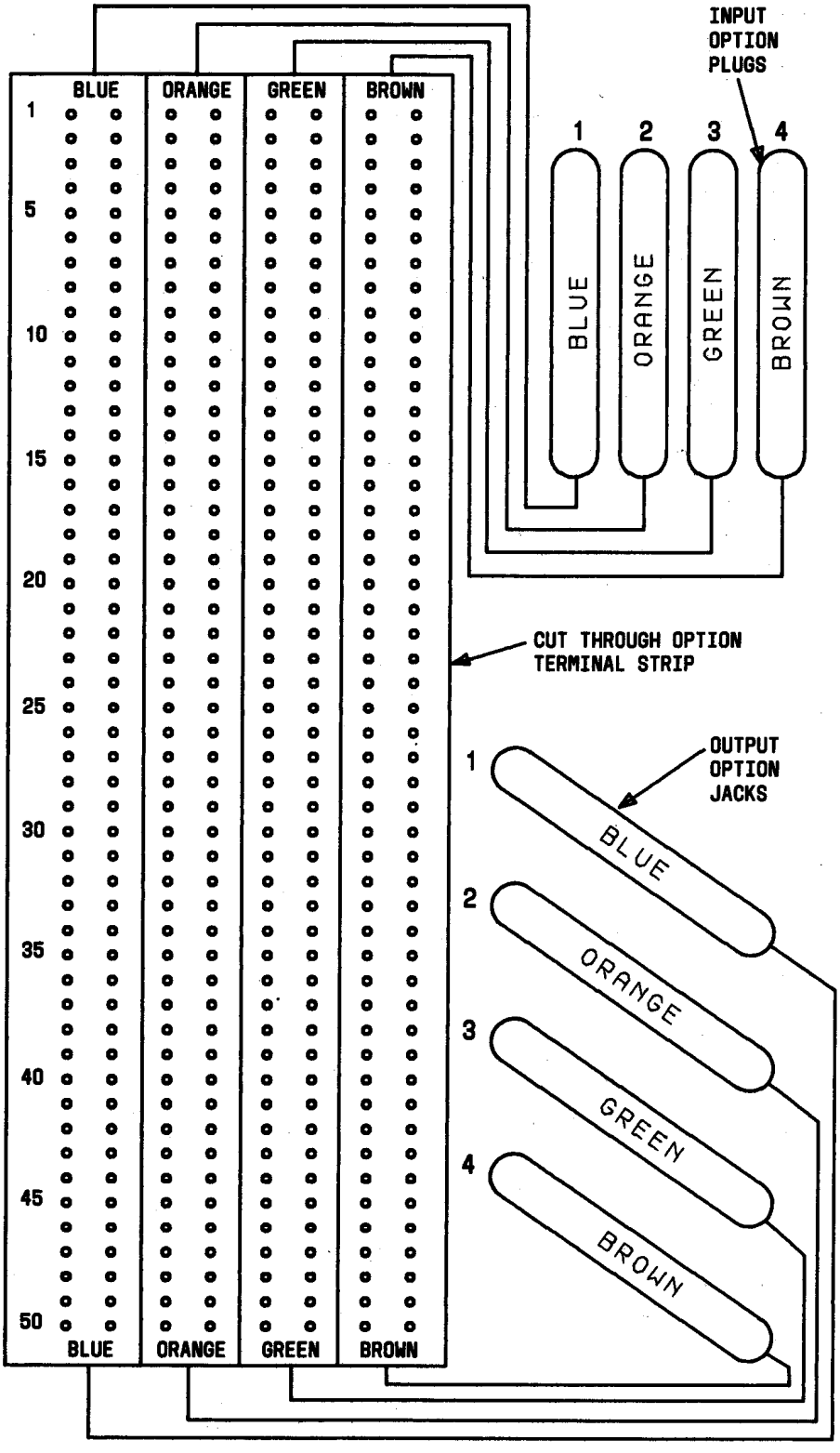


Fig. 7—Wiring of 700A-R-B1-100 Jack

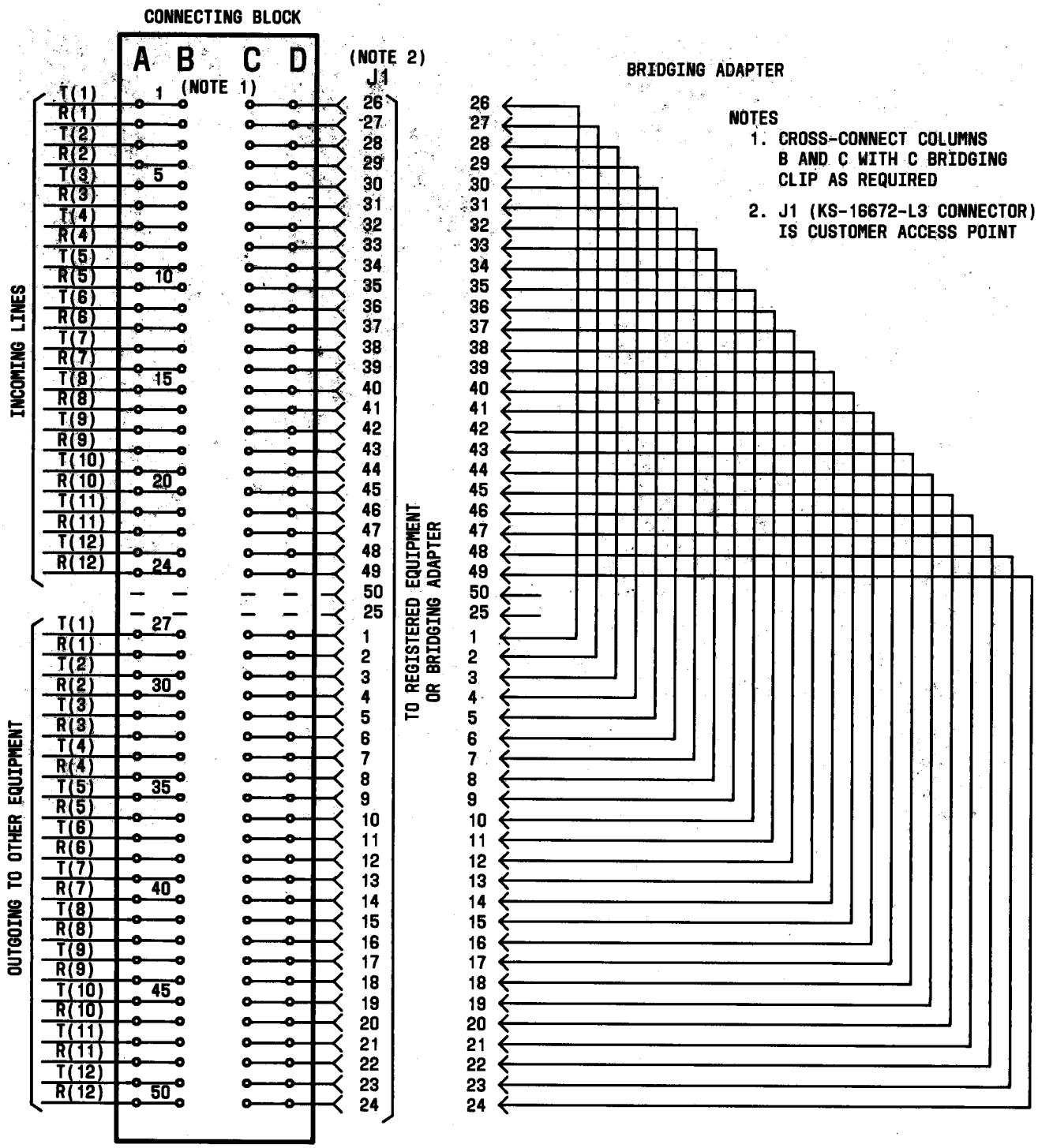


Fig. 8—Wiring of 700B-66-B1-12 Jack

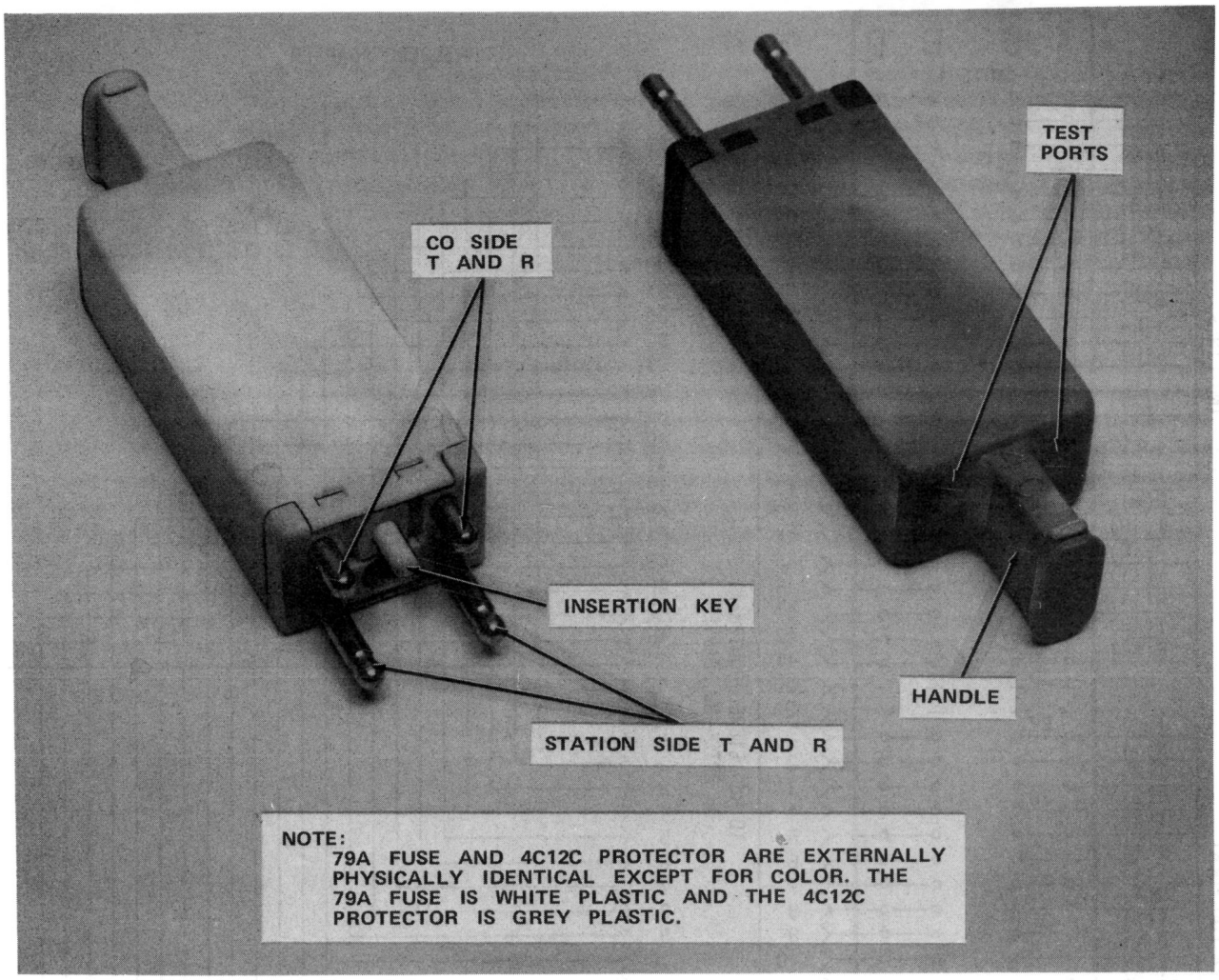


Fig. 9—Plug-In Units for 700A-66-P1-50 Jack

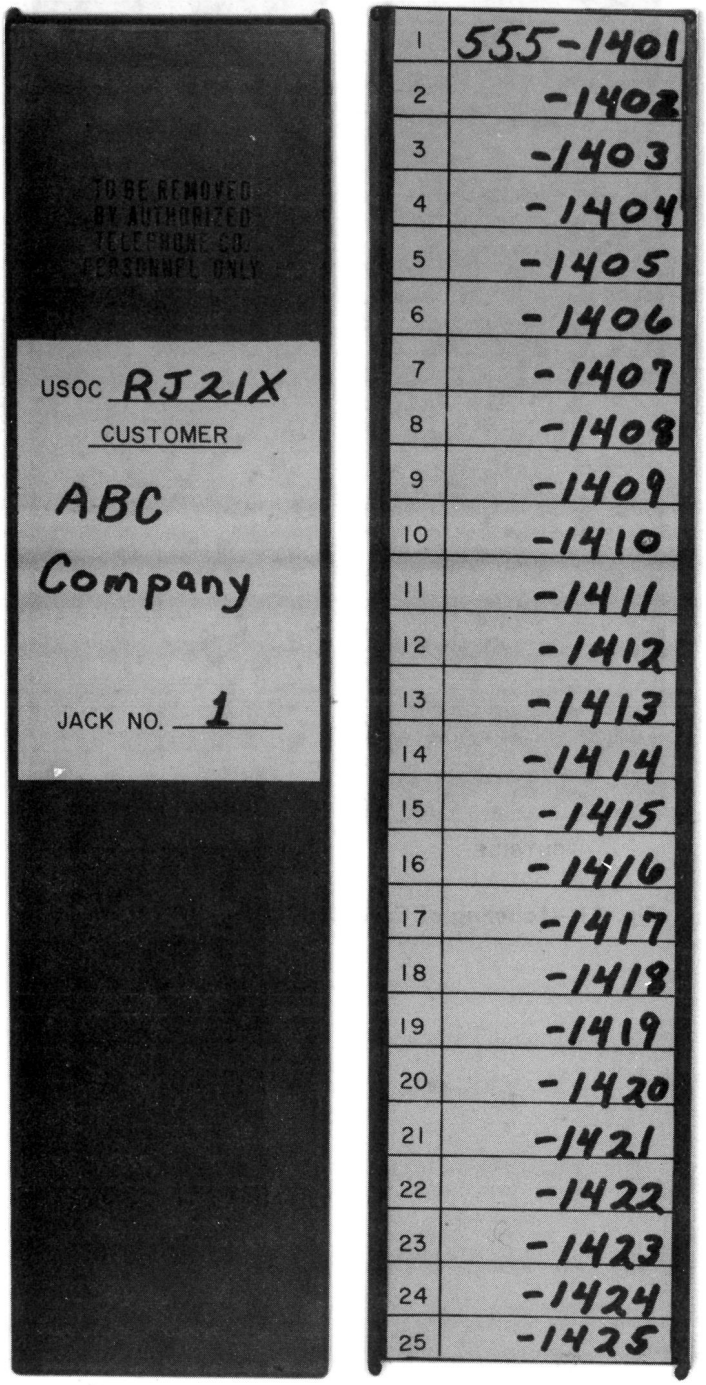
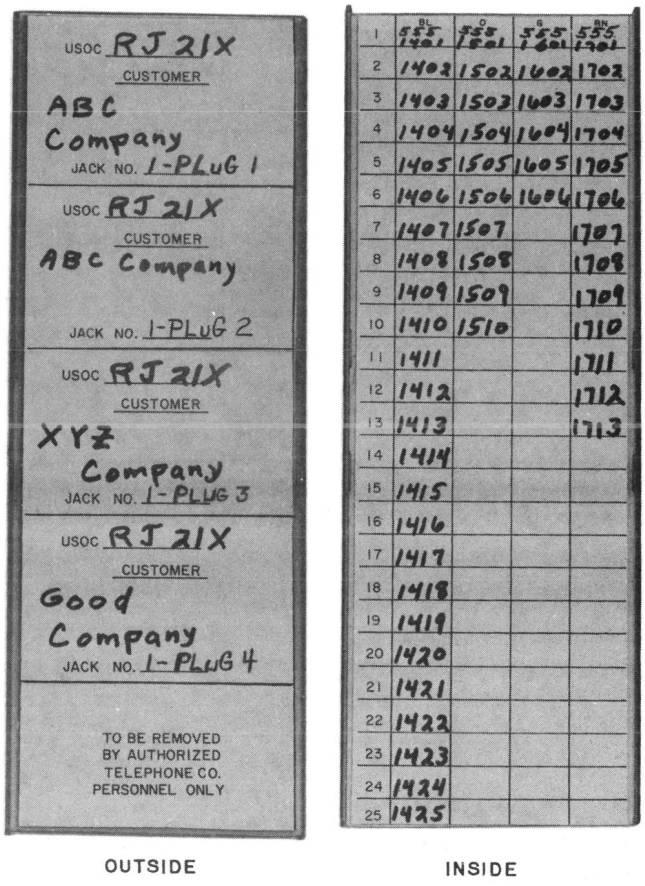


Fig. 10—Labeling of Cover for 700A-66-B1-25 Jack



	BL	O	G	BR
1	555 1401	555 1501	555 1601	555 1701
2	1402	1502	1602	1702
3	1403	1503	1603	1703
4	1404	1504	1604	1704
5	1405	1505	1605	1705
6	1406	1506	1606	1706
7	1407	1507		1707
8	1408	1508		1708
9	1409	1509		1709
10	1410	1510		1710
11	1411			1711
12	1412			1712
13	1413			1713
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25	1425			

Fig. 11—Labeling of Cover for 700A-R-B1-100 Jack

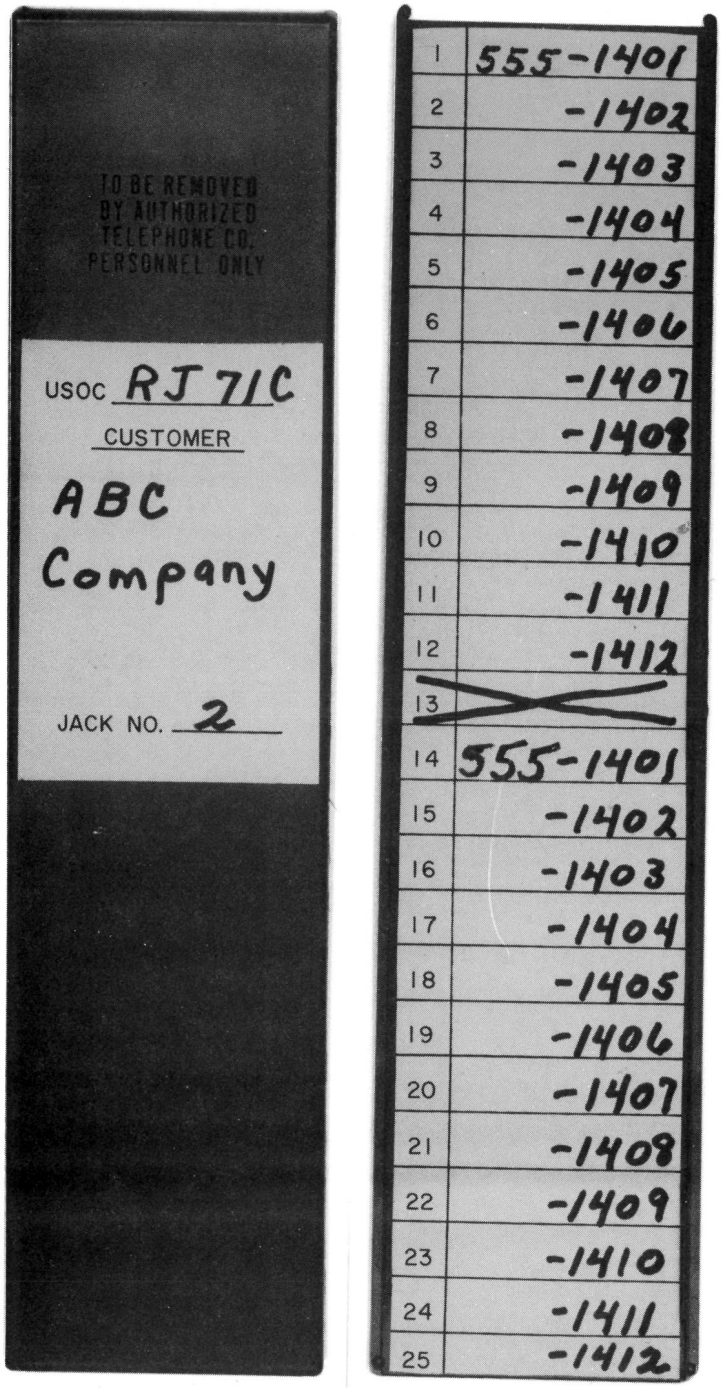

Fig. 12—Labeling of Cover for 700B-66-B1-12 Jack