

## NONCODED CONNECTORS—KS-20867 THROUGH KS-21271

### DESCRIPTION

#### 1. GENERAL

**1.01** This section lists and illustrates noncoded connectors within the part or type number range of KS-20867 through KS-21271, used for the maintenance and operation of equipment in central offices.

**1.02** The information provided in this section was previously shown in Section 032-300-101, Issue

5. Other changes and/or additions are as follows:

(1) To add the following connectors: KS-20867, L1 and L2; KS-20868, L5 through L8; KS-20938, L1 and L2; KS-21048, L2 through L6; KS-21103, L1 through L8; KS-21152, L2; and KS-21271, L1 through L18.

(2) To rate the KS-20868, L3 and L4 connectors Mfr Disc.

#### 2. DESCRIPTION OF CONNECTORS

**2.01 KS-20867, L1 and L2:** The KS-20867, L1 and L2 (Fig. 1) are polarized, multicontact, female connectors, consisting of a rectangular block of insulating material, equipped with fork-type contacts. The wiring end of each terminal is arranged for one solderless wrap connection of 24-gauge wire. These connectors are used in repeater plug-in units in T2 line connectors.

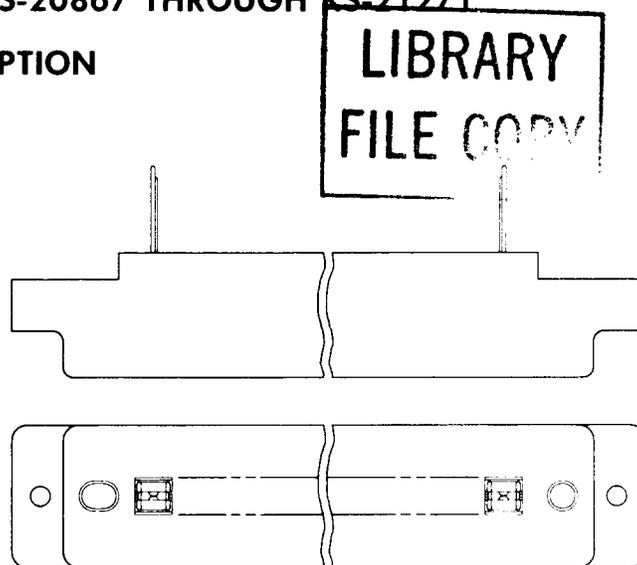


Fig. 1—KS-20867, L1 or L2 Connector

(a) **KS-20867, L1:** The KS-20867, L1 connector has 20 pretensioned terminals in a single row. This connector mates with the KS-20868, L5 and L6 connectors.

(b) **KS-20867, L2:** The KS-20867, L2 connector has 17 pretensioned terminals in a single row, with terminal positions 3, 6, and 18 not equipped with terminals. This connector mates with the KS-20868, L7 and L8 connectors.

**2.02 KS-20868-Type:** The KS-20868, L1 through L8 (Fig. 2) are polarized, multicontact, male connectors consisting of a rectan-

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gular block of insulating material and gold-plated terminals. The wiring ends of the terminals on the KS-20868-type connectors are arranged for two solderless, wire-wrap connections of 24-gauge wire. The KS-20868, L1 through L4 connectors have been rated Mfr Disc. The KS-20868-type connectors are used in repeater plug-in units in T2 line connectors. For more information, see Table A.

**2.03 KS-20938, L1 and L2:** The KS-20938, L1 and L2 (Fig. 3) are male connectors, consisting of a metal shell, molded insulators, and gold-plated pin contacts; they are arranged to accommodate KS-20939, L1 coaxial contacts. The fixed pin contacts may be arranged to filter electromagnetic interference from the power leads. These connectors will mate with KS-19771, L24 connectors, which are equipped with two KS-19820, L5 contacts. These connectors are restricted for use to the 76- and 77-type oscillators in the L5 Carrier System.

TABLE A

KS-20868 LIST NO.	MOUNTING PANEL THICKNESS (INCH)	TERMINALS	MATES WITH KS-20867 LIST NO.	REPLACES KS-20768 LIST NO.
5	0.062	20	1	1 and 3
6	0.187	20	1	1 and 3
7	0.062	17	2	2 and 4
8	0.187	17	2	2 and 4

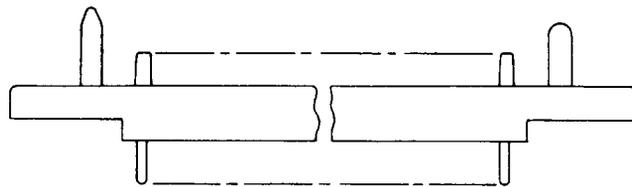


Fig. 2—KS-20868-Type Connector

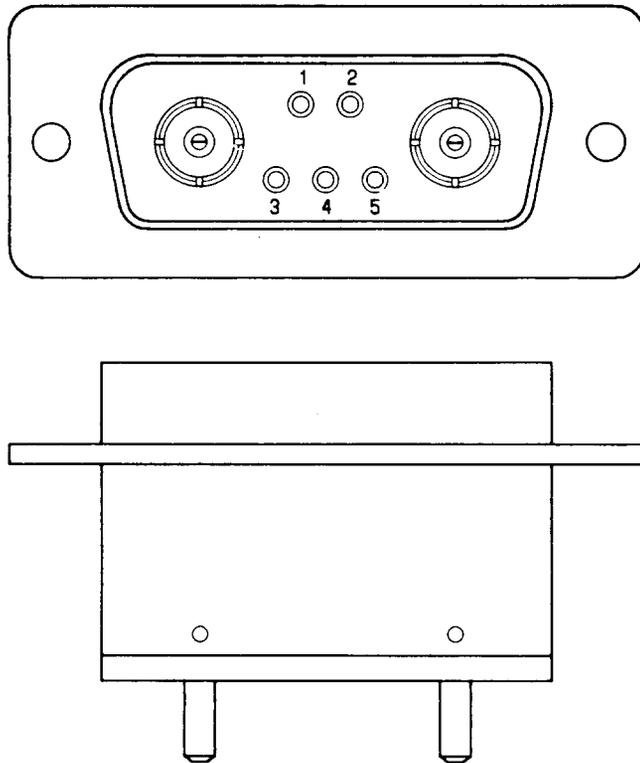


Fig. 3—KS-20938, L1 or L2 Connector

(a) **KS-20938, L1:** The KS-20938, L1 connector has 5 pin contacts, 2 of which are filters and cavities for two KS-20939, L1 coaxial contacts.

(b) **KS-20938, L2:** The KS-20938, L2 connector has 5 pin contacts, 4 of which are filters.

**2.04 KS-21048-Type:** The KS-21048, L2 and L3 (Fig. 4), L4 and L5 (Fig. 5), and L6 (Fig. 6) multicontact, panel mounted connectors are molded, plastic insulators containing replaceable, gold-plated, pin contacts (designated L1). They mate with the KS-21049 plugs. The KS-21048, L2 through L5 have 32 contacts. The KS-21048, L2 and L4 are white in color, and the KS-21048, L3 and L5 are blue in color. The KS-21048, L6 has 40 contacts and is white in color.

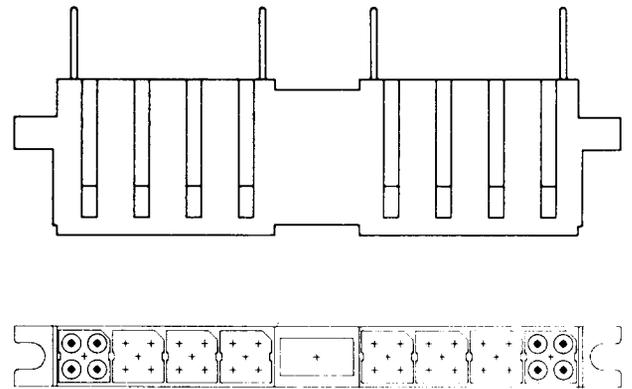


Fig. 4—KS-21048, L2 or L3 Connector

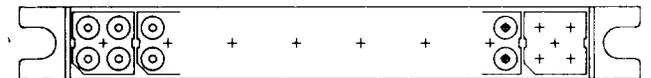
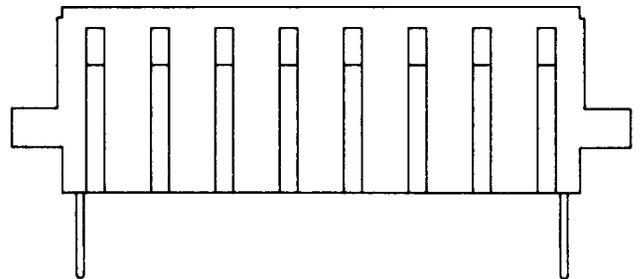


Fig. 5—KS-21048, L4 or L5 Connector



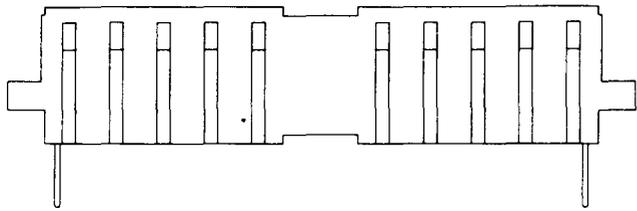


Fig. 6—KS-21048, L6 Connector

to the associated KS-21132 plug. For more information, see Table C.

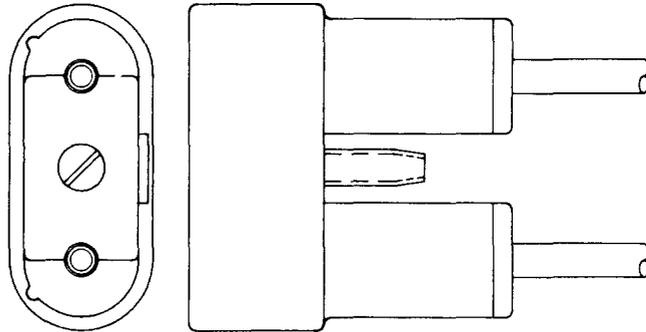


Fig. 7—KS-21103, L1, L2, L3, or L4 Connector

**2.05 KS-21103-Type:** The KS-21103, L1 through L8, dual-conductor, mating plugs and receptacles are self latching power connectors designed for crimp termination to KS-13385 stranded wire (10- or 12-gauge). The plastic housing is mounted on the common systems electronic switching frames by machine screws. Polarization prevents noncorresponding list numbers from mating.

TABLE B

KS-21103 LIST NO.	VOLTAGE
1	+140
2	+24
3	-24
4	-48

(a) **KS-21103, L1 Through L4:** These connectors (Fig. 7) are used with the voltages as shown in Table B, and are used in the No. 4 Electronic Switching Systems (ESS).

(b) **KS-21103, L5 Through L8:** These connectors (Fig. 8) mate with KS-21103, L1 through L4, respectively.

**2.06 KS-21133-Type:** The KS-21133, L1, L2, and L3 connectors are multicontact, miniature ribbon receptacles for panel mounting or termination of jacketed cable by means of 45° cable entry hoods. These connectors contain two spring locks for locking

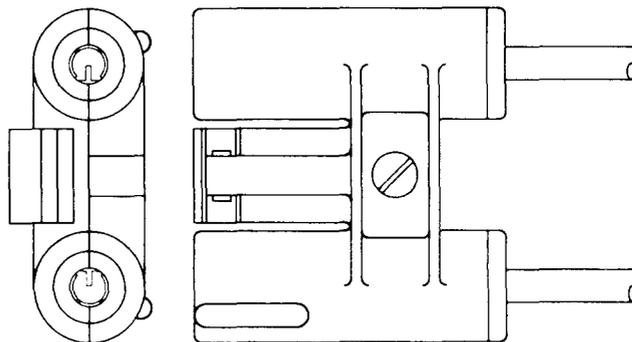


Fig. 8—KS-21103, L5, L6, L7, or L8 Connector

TABLE C

KS-21133 LIST NO.	FIG. NO.	NO. OF TERMINALS	MATES WITH KS-21132 LIST NO.
1	9	64	1
2	10	64	2
3 (Solderless Type)	10	64	2

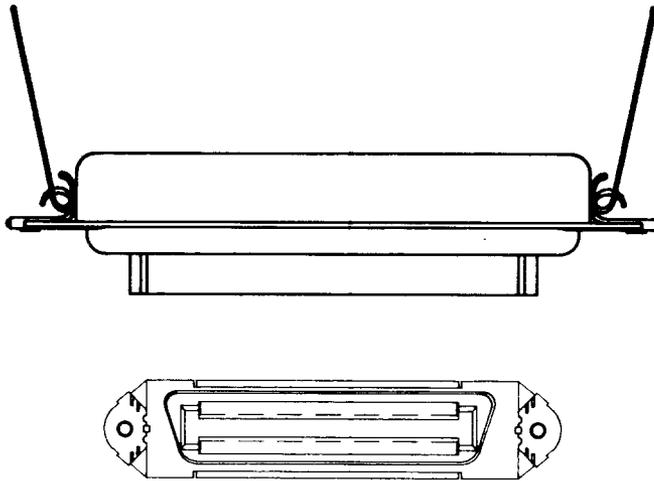


Fig. 9—KS-21133, L1 Connector

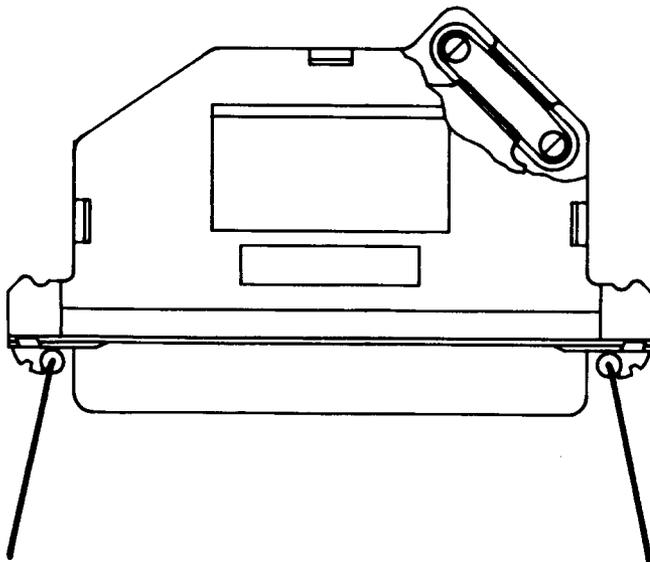


Fig. 10—KS-21133, L2 or L3 Connector

2.07 **KS-21149-Type:** The KS-21149, L1 through L5 connectors are multicontact receptacles, each consisting of gold-plated ribbon contacts assembled in a block of insulating material and are polarized and keyed to insure proper mating with the KS-16671, L16, or KS-16689, L11, plug. (The KS-16671 receptacle is for use in the No. 4A speakerphone.) For more information, see Table D.

TABLE D

KS-21149 LIST NO.	FIG. NO.	NO. OF TERMINALS	PRIMARY USE
1	11	8	D8S-87 Cord
2	12	14	M2FG Cord
3	13	20	D20N-87 Cord
4	14	14	Option Plug
5	14	14	Option Plug

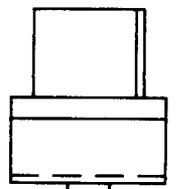
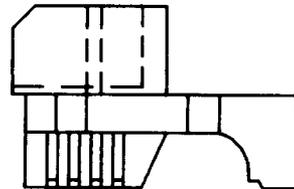
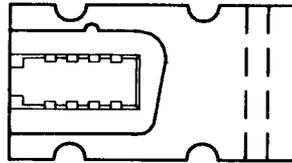


Fig. 11—KS-21149, L1 Connector

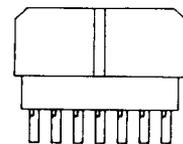
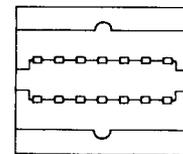


Fig. 12—KS-21149, L2 Connector

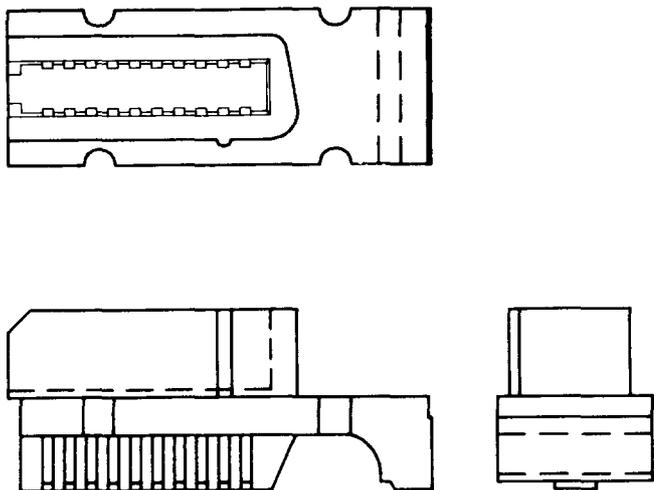


Fig. 13—KS-21149, L3 Connector

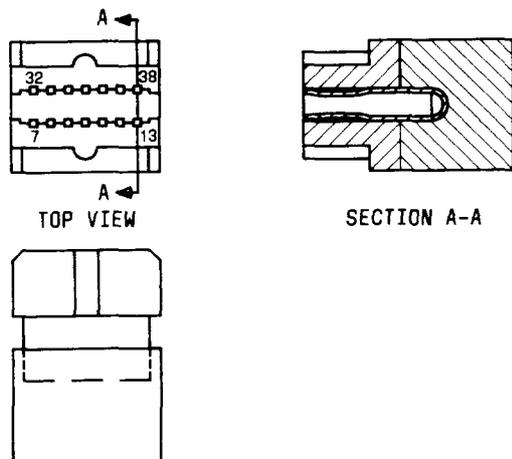


Fig. 14—KS-21149, L4 or L5 Connector

**2.08 KS-21152, L2:** The KS-21152, L2 (Fig. 15) is a 9-terminal connector which consists of a thermoplastic molded-block, having 6 gold-plated socket contacts and 1 shorting contact which opens when an equalizer is inserted into the connector. Two connectors are required for each equalizer. The contacts are designed to be terminated on printed wiring boards. This connector is used with the 950A equalizer in Common Systems.

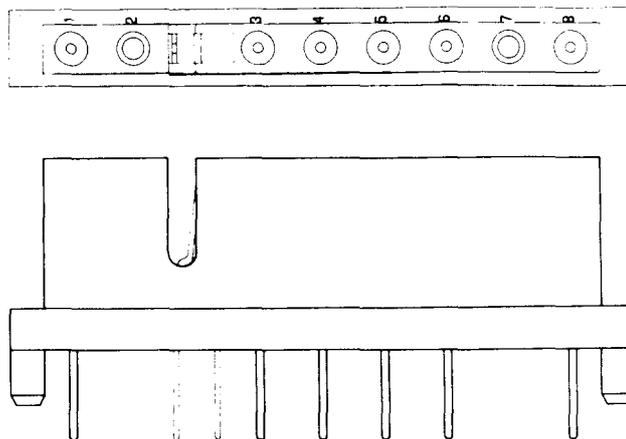


Fig. 15—KS-21152, L2 Connector

**2.09 KS-21169, L1 Through L5:** These connectors are miniature 50-ohm, coaxial, snap-on connectors (with male pin center contacts), intended for mating with KS-21170 plugs and KS-21171 adapters. These connectors will also mate with KS-19182, KS-19183, KS-19184, KS-19186, and KS-20126 plugs and KS-19899 adapters.

(a) **KS-21169, L1:** The KS-21169, L1, connector (Fig. 16) is a moisture-sealed, bulk-head mounting connector used in transmission networks.

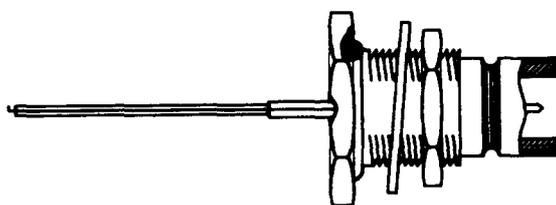


Fig. 16—KS-21169, L1 Connector

(b) **KS-21169, L2:** This is a cable jack (Fig. 17) designed for solderless shield connection to the RG-174/U-type coaxial cable.

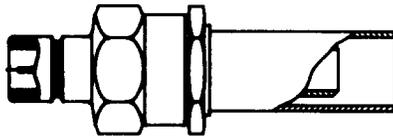


Fig. 17—KS-21169, L2 Connector

(c) **KS-21169, L3:** The KS-21169, L3 connector is a right angle, bulk-head mounting jack (Fig. 18).

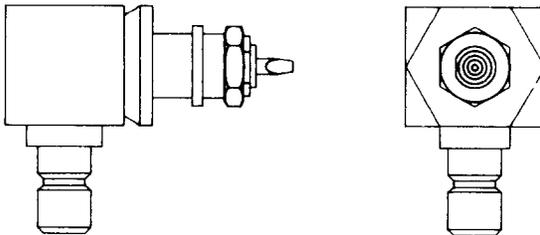


Fig. 18—KS-21169, L3, L4, or L5 Connector

(d) **KS-21169, L4:** The KS-21169, L4 connector is a right angle bend connector (Fig. 18).

(e) **KS-21169, L5:** The KS-21169, L5 connector is a right angle, bulk-head mounting jack (Fig. 18).

**2.10 KS-21244, L1 Through L6:** The KS-21244-type (Fig. 19) are polarized, female connectors, each consisting of a molded block of insulating material equipped with pretension contacts arranged for solderless-wrapped connections. For more information, see Table E.

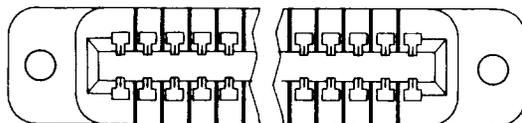


Fig. 19—KS-21244-Type Connector

TABLE E

KS-21244 LIST NO	NO. OF CONTACTS
1	36
2	36
3	36
4	Polarizing Key Only
5	36
6	56

**2.11 KS-21271, L1 Through L18:** The KS-21271-type (Fig. 20) are female, edge board connectors designed to be mounted on metal plates by press fitting them into punched hole patterns. The wiring ends of the connectors are arranged for solderless, wire-wrapped connections. The connectors may be ordered separately or as part of a panel. Some connectors have normally open, non-shorting contacts, and some have normally closed, shorting contacts. For more information, see Table F.

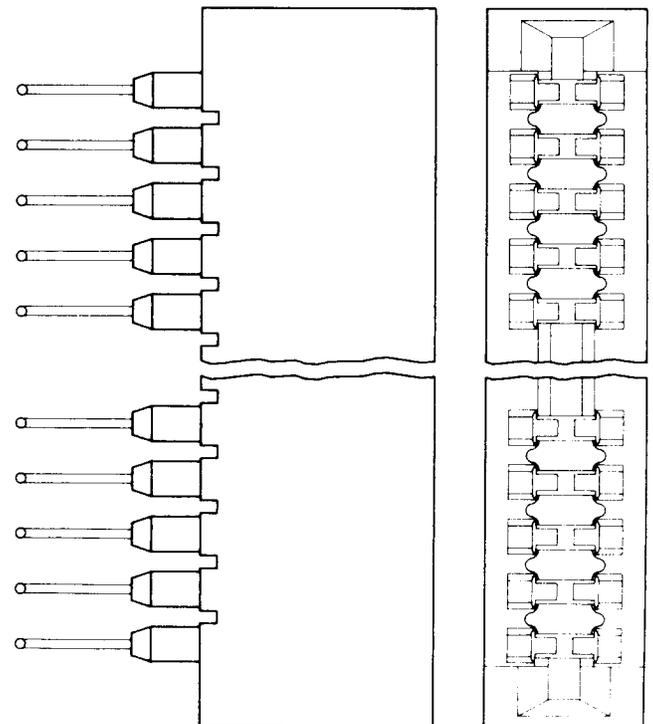


Fig. 20—KS-21271-Type Connector

TABLE F

KS-21271 LIST NO.	NO. OF TERMINALS	USE	SHORTING CONTACT POSITION	NON-SHORTING CONTACT POSITION
1	30	M13 Digital Multiplex	None	16-30, 46-60
2	60	M13 Digital Multiplex	None	All
3	90	M13 Digital Multiplex	None	All
4	50	209A Data Set	None	All
5	90	M13 Digital Multiplex	31,32,33,76, 77,78	All Except 31,32,33 76,77,78
6	90	M13 Digital Multiplex	7,11,34,44,52, 56,79,89	All Except 7,11,34 44,52,56,79,89
7	90	M13 Digital Multiplex	1-16, 46-61	17-45, 62-90
8	60	M13 Digital Multiplex	10, 20, 40, 50	All Except 10, 20, 40, 50
9	100	NPL Project	None	All
10	60	M13 Digital Multiplex	None	All
11	90	M13 Digital Multiplex	None	All
12	54	D4 Channel Bank	None	All
13	54	D4 Channel Bank	18,22,45,49	All Except 18,22,45,49
14	54	D4 Channel Bank	None	All*
15†	32	Transaction System	2,3,5,6,8,9,11,12,14, 15,17,18,20,21,23,24,27, 28,30,31,33,34,36,37,39, 40,42,43,45,46,48,49	None
16	100	Echo Suppressor Terminal	12-44, 62-94	1-11, 51-61, 45-50, 95-100
17	54	LT-1	11,12,15,16,38,39, 42, 43	All Except 11,12,15, 16,38,39,42,43
18	50	LT-1	None	All

\* Non shorting contact positions are equipped with welded contacts.

† Keys are inserted between the 3-4, 6-7, 9-10, 12-13, 15-16, 18-19, 21-22, and 24-25 terminals.