

INSTRUCTIONS FOR INSTALLING THE 151822, 152623 OR 160226
 LINE RELAY MOUNTING ASSEMBLY ON THE MODEL 28 ELECTRICAL
 SERVICE UNIT ALSO INSTRUCTIONS FOR CONVERTING THE 151822
 OR 152623 ASSEMBLY TO A 152623 OR 160226 ASSEMBLY USING THE
 152326 OR 159397 MODIFICATION KIT RESPECTIVELY

*The chart below pertains to Bell System only.

	Teletype Code	Bell System Code
Electrical Service Unit	LESU5	28A
	LESU7	28B

1. GENERAL

*a. The 151822 (for LESU1, LESU2, or LESU5), 152623 (for LESU7) and 160226 (Non-Bell) Line Relay Mounting Assembly provides facilities for mounting a Teletype RY30 (W. E. 255A) Line Relay on the Model 28 Electrical Service Unit. The electrical service unit may be modified to allow either the line relay or the selector magnet to be wired directly to the signal line circuit. When the line relay is used, the contacts of the relay repeat the signals to the selector magnet.

The line relay requires a nominal 120 volt DC source for its bias winding and contact circuits. The output of the 151999 or 152950 Rectifier Assembly is suitable for this purpose when the printer set operates from a 50 or 60 cycle 115 volt AC power source. If the printer set is to be operated from a DC source, such source can be used to energize the relay circuits provided the 152021 or 152624 Capacitor-Resistor Assembly is installed.

*b. The 152326 Modification Kit converts a 151822 Line Relay Mounting Assembly to a 152623 Assembly. The 159397 (Non-Bell) Modification Kit converts a 152623 Assembly to a 160226 Assembly.

c. The 152326 Modification Kit consists of:

2	1038	Screw 6-40 x 9/32 Fil.	1	153464	Terminal Strip Assembly
6	2191	Washer, Lock	1	153475	Cable Assembly
2	7002	Washer, Flat	1	153480	Resistor 6750 ohms
4	77902	Screw 6-40 x 2-1/2 Rd.	1	153481	Resistor 5800 ohms
4	125015	Washer, Flat	1	153482	Relay Mounting Plate
2	152110	Bracket	1	151819	Jumper Assembly (2-1/2"
1	2945WD	Diagram, Wiring			Black)

*Indicates change.

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d. The 159397 Modification Kit consists of:

- 2 160284 Resistor 5500 ohms 1 3444WD Diagram, Wiring
32081RM Wire, Electrical 0.5 ft.
32086RM Wire, Electrical 0.5 ft.

e. The wiring information included with the modification kit supplements the wiring diagram furnished with Model 28 Printer Set.

f. An Electrical Service Unit LESU1 must be equipped with the 152126 auxiliary terminal block as shown in Figure 1. Information for installing the 152126 Auxiliary Terminal Block on an Electrical Service Unit LESU1 may be found in Specification 5693S.

*g. For part numbers referred to and for parts ordering information see Teletype Model 28 Printer Parts Bulletin 1149B.

2. INSTALLATION

a. 151822 Assembly (Figures 1 through 3) for use on the Electrical Service Unit LESU1, LESU2 or LESU5.

(1) Remove the cloth bag, that contains the 152123 Cable and 151818 Jumper which is tied to the line relay mounting assembly.

(2) Remove the 151426 or 151441 Plate adjacent to the line shunt relay at the left side of the electrical service unit. Install the line relay mounting assembly in the position vacated by the 151426 or 151441 Plate with the larger two relay guide post holes toward the rear of the electrical service unit. Secure the assembly in position by tightening the mounting screws.

(3) For Electrical Service Unit LESU1, wire the 152123 Cable in accordance with Figure 1; discard the 151818 Jumper.

(4) For Electrical Service Unit LESU2 or LESU5, wire the 151818 Jumper in accordance with Figure 2; discard the 152123 Cable.

(5) For Electrical Service Units LESU1 or LESU2, when installing in a cabinet (LAC200** through 203**), remove the orange wire from Terminal 5 and the yellow wire from Terminal 6 of the cabinet terminal block. Tape the open ends separately. (The cabinet terminals are numbered one to 30 from left to right.)

(6) For Electrical Service Unit (LESU5, remove the two red straps which connect Terminals 4 and 6, and 3 and 7 of the selector magnet terminal block.

(7) The line relay mounting assembly as shipped is wired for operation on .060 amperes. For .020 ampere operation, move the A-86-BR wire from its present position on the 8,000 ohm resistor to the open terminal on the same resistor. Figure 3 shows the wiring for the line relay mounting assembly.

b. 152623 Assembly for use on the Electrical Service Unit LESU7 (Bell System 28B) and 160226 Assembly (Figures 4 through 6).

(1) Remove all black jumpers from terminal block "A" on the Electrical Service Unit. Retain two black jumpers and connect those remaining in parallel as shown in Figure 4.

(2) Connect one of the 151819 Jumpers to the terminals on the line relay mounting terminal block (Figure 5) with the loop toward the filter.

(a) For 0.060 ampere neutral signal line operation, connect the jumpers between Terminals 1 and 2.

(b) For 0.020 ampere neutral signal line operation, connect the jumpers between Terminals 3 and 4.

(c) For 0.005 ampere (spacing) and 0.025 ampere (marking) signal line operation, connect the strap between Terminals 2 and 3. Line current limiting resistors must be supplied and connected at the cabinet terminal block by the customer.

(d) For polar operation, no jumper connection is required. Retain the jumper with both lugs under the same terminal screw.

(3) Remove the blank plate assembly adjacent to the line shunt relay at the left side of the electrical service unit and in its place install the line relay mounting assembly so the two larger relay guide post holes are toward the rear of the electrical service unit.

(4) Tighten the mounting screws so that the 151427 Clamp Plates secure the assembly in position.

(5) Route and connect the 153475 or 160227 Cable as shown in Wiring Diagram 2945WD or 3444WD respectively.

(6) Connect the remaining jumper removed and retained from Terminal Block A between Terminals 20 and 21 on the cabinet terminal block. This connection may not be necessary on some installations. Refer to the applicable circuit diagrams for various accessory combinations.

(7) Tighten all loose terminals screws in the electrical service unit and cabinet.

(8) Wiring Diagram 2945WD or 3444WD shows the actual wiring of the 152623 Line Relay Mounting Assembly or 160226 Assembly respectively.

c. 152326 Modification Kit (Figures 4 through 6) for converting 151822 to 152623.

(1) Remove and retain the two 8543 Screws and 2191 Lock Washers used in mounting the 152109 Filter Unit to the 152110 Brackets on the 151822 Assembly.

(2) Remove all wiring from the assembly.

(3) Remove the following socket and mounting parts:

4	1248	Screws	4	7002	Flat Washers
4	3598	Nuts	1	6827	Connection Block
4	2191	Lock Washers	2	152124	Spacers

(4) Install the parts removed in the preceding paragraph to the 153482 Plate. Mount the connection block so Terminals 4 and 8 are closest to the larger relay post guide holes.

(5) Remove the two 8543 Screws and 2191 Lock Washers used to mount the two 152110 Brackets to the 152108 Relay Plate.

(6) Mount the two 152110 Brackets to the 153482 Plate using the two 8543 Screws and 2191 Lock Washers removed in the preceding paragraph.

(7) Mount the 153464 Terminal Block Assembly to the 152110 Brackets using the two 1038 Screws, 2191 Lock Washers, and 7002 Flat Washers furnished with the modification kit (Figure 5).

(8) Remove all resistors from their mounting brackets. Retain one 74614 Resistor (2,600 ohms), one 74821 Resistor (2,810 ohms), and all of the 75750 Bakelite Washers.

(9) Mount the two resistors retained in Paragraph h. and the two resistors furnished with the modification kit to the 152110 Brackets using the four 77902 Screws, 2191 Lock Washers, and 125015 Flat Washers furnished with the modification kit. Use eight 75750 Bakelite Washers retained in Paragraph h. Mount the resistors as shown in the parts bulletin.

(10) Transfer the two 151427 Clamp Plates, 1179 Screws, 2191 Lock Washers, 7002 Flat Washers, and 90789 Flat Washers from the 152108 Relay Plate to the 153482 Relay Plate.

(11) Install the 153475 Cable Assembly as follows:

(a) Solder the 152109 Electrical Noise Suppressor Connections.

(b) Bend the 153475 Cable Assembly as shown in Wiring Diagram 2945WD.

(c) Dismount, then solder the following resistors and blocks:

74614 Resistor (600 and 2,000 ohms)

74821 Resistor (810 and 2,000 ohms)

6827 Relay Connection Block

153464 Terminal Block Assembly

NOTE

At this point tie the 153475 Cable to the 6827 Connection Block as shown in Wiring Diagram 2945WD.

153480 Resistor (4,000 and 2,750 ohms)

153481 Resistor (4,000 and 1,800 ohms)

(d) After soldering, assemble the following parts to the 153482 Mounting Plate:

6827 Connection Block

74614 and 74821 Resistors

153464 Terminal Block Assembly

Tie 153475 Cable to the 152110 Mounting Bracket

153480 and 153481 Resistors

(12) Mount the 152109 Filter on the new 152110 Brackets using the two 8543 Screws and 2191 Lock Washers removed in Paragraph 2. c. (1).

*(13) Follow procedure in Paragraph 2. b.

d. 159397 Modification Kit, install as shown in Figure 7.

(1) Remove the 77902 Screws, 2191 Lock Washers, 125015 Flat Washers, and 75750 Insulating Washers that mount the 74614 Resistor (2,600 ohms) and 74821 Resistor (2,810 ohms). Discard resistors and replace with 160284 Resistors.

(2) Solder the orange lead to the No. 4 Pin on the relay receptacle and the No. 6 Terminal on the terminal block.

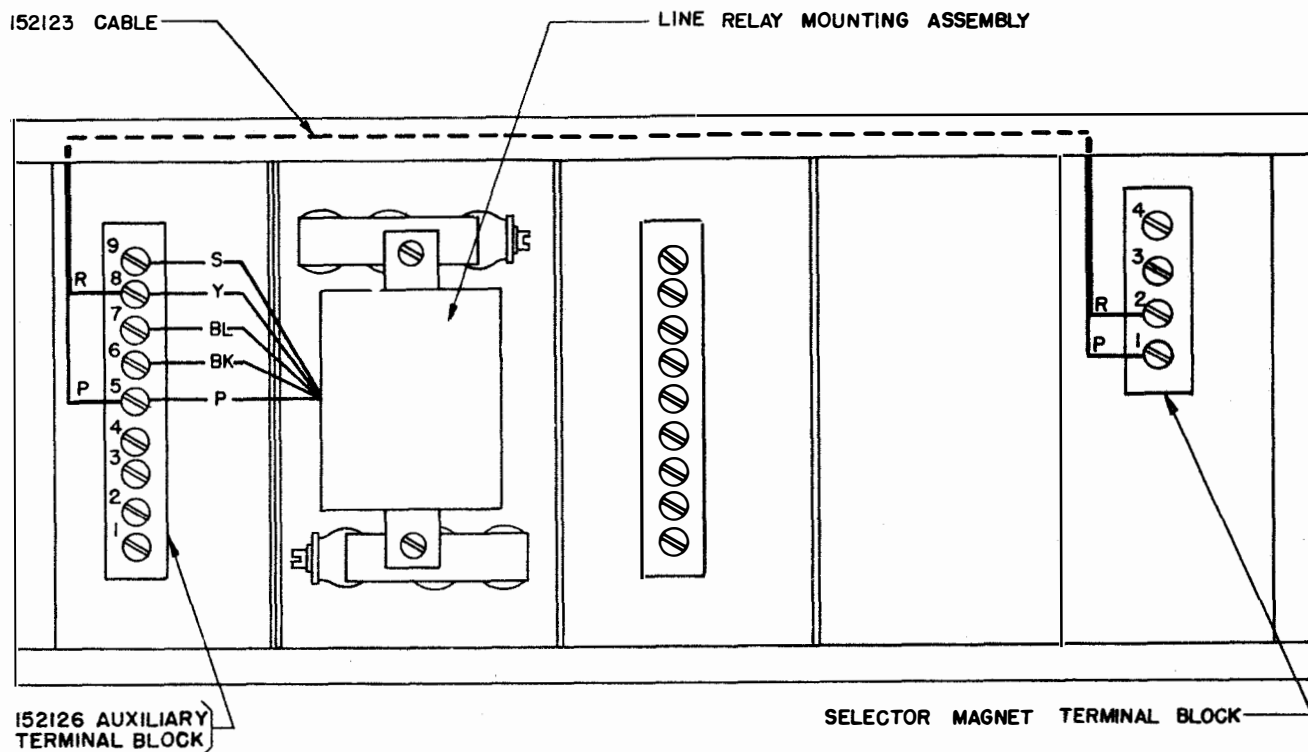
(3) Solder the yellow lead to the No. 5 Terminal on the terminal board. See Wiring Diagram 3444WD.

*(4) Follow procedure in Paragraph 2. b.

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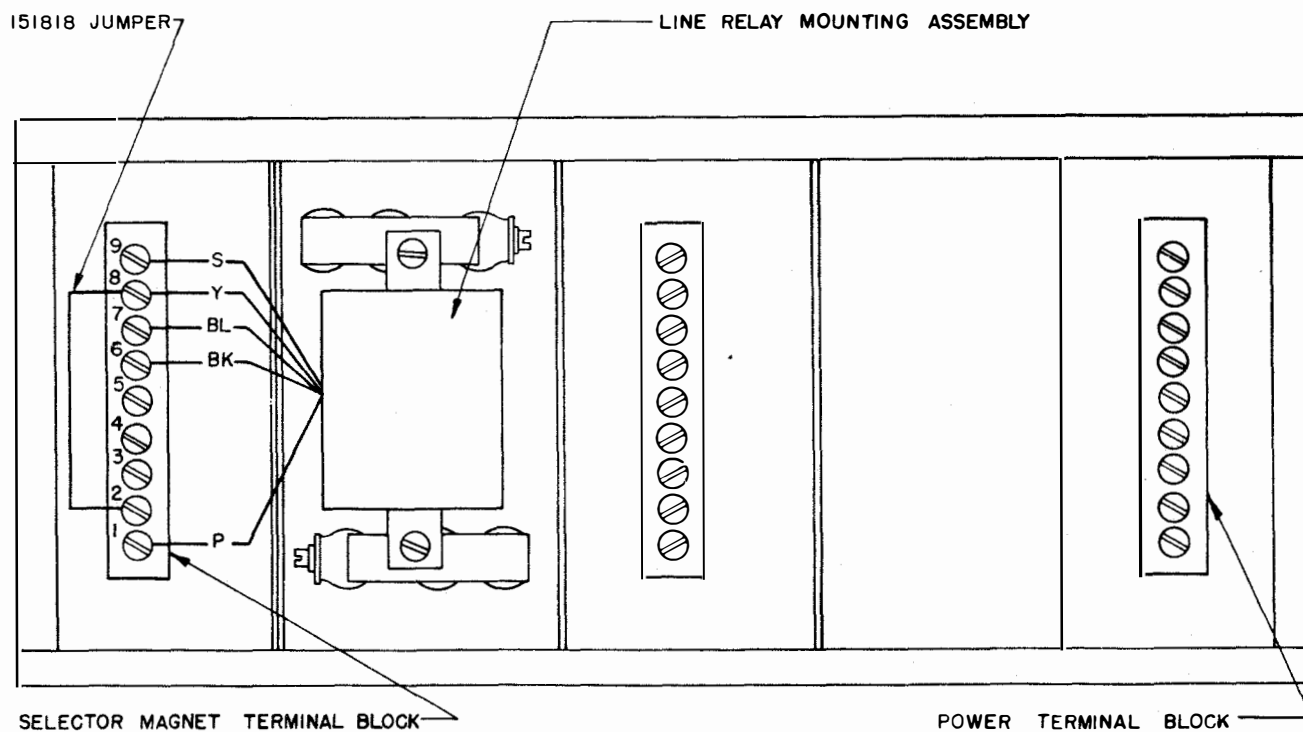
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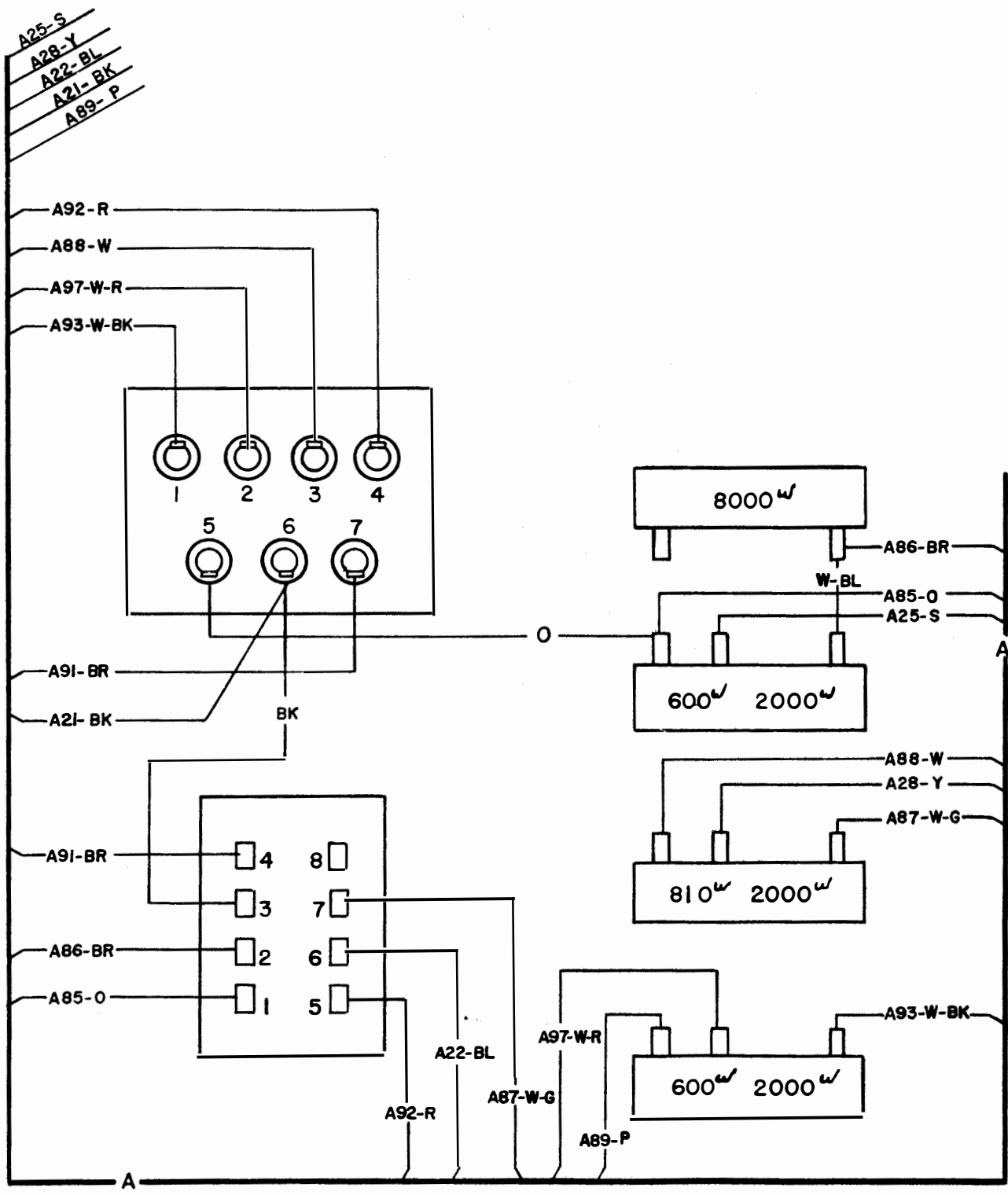
(BOTTOM VIEW OF ELECTRICAL SERVICE UNIT LESU1)

FIGURE 1



(BOTTOM VIEW OF
ELECTRICAL SERVICE UNITS LESU 2 OR 5)

FIGURE 2



ACTUAL WIRING DIAGRAM FOR THE 151822
LINE RELAY MOUNTING ASSEMBLY

FIGURE 3

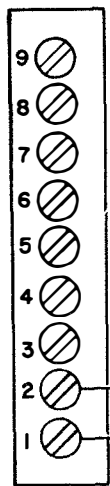


FIGURE 4

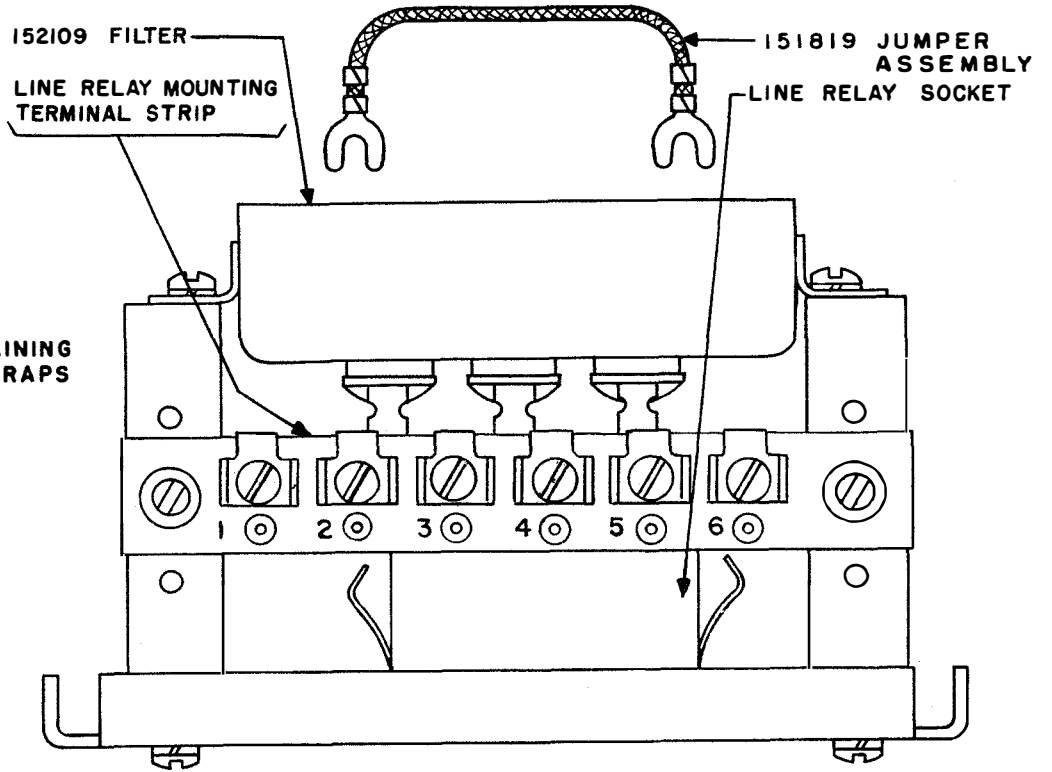
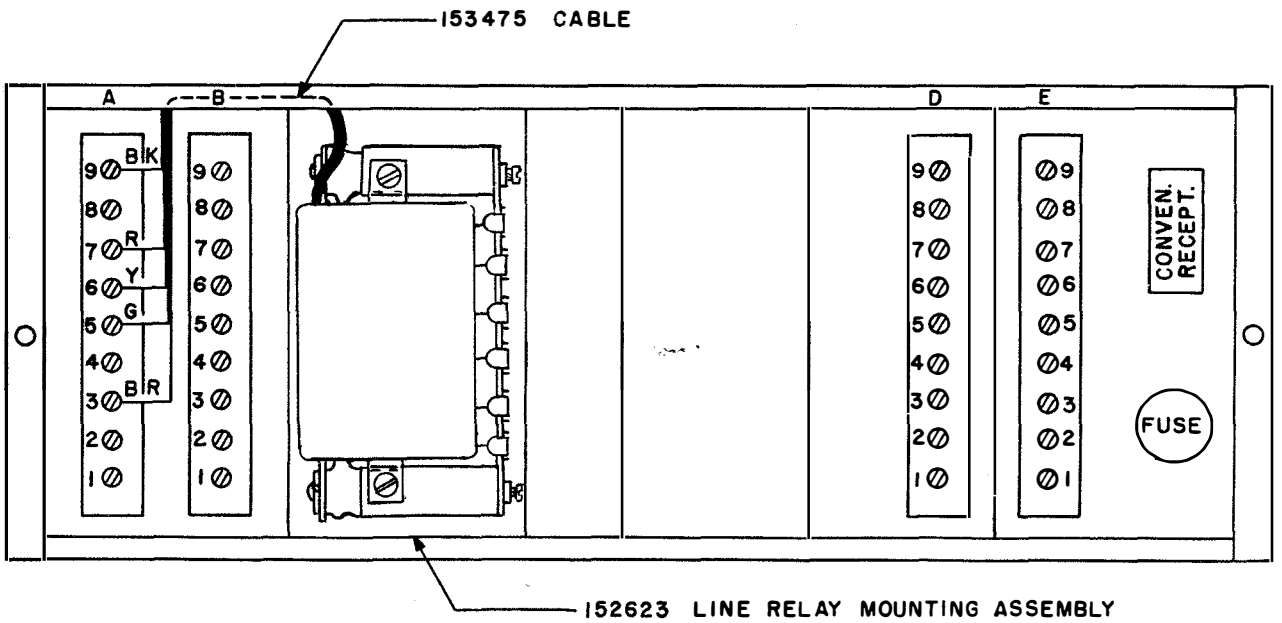


FIGURE 5



BOTTOM VIEW

FIGURE 6

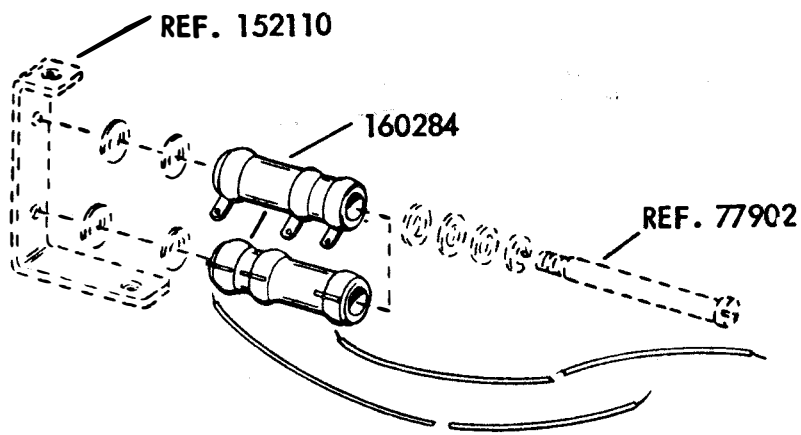


FIGURE 7 159397 MODIFICATION KIT TO PROVIDE
A LINE RELAY CONVERSION

ADDENDUM TO SPECIFICATION 5664S, ISSUE 9, DATED
NOVEMBER, 1960 COVERING KIT 152326 OR 159397

1. Make the following changes:
 - a. On Page 1, Paragraph 1.c. - Change 1038 Screw to 154335 Screw.
 - b. On Page 2, Paragraph 2.c.(7) - Change 1038 Screws to 154335 Screws.

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