

INSTRUCTIONS
FOR INSTALLING AND WIRING
THE 105402 SET OF PARTS ON
SIGNAL CORPS TG-7-B AND TG-37-B PRINTERS

The 105402 set of parts provides the parts necessary to convert a Signal Corps TG-7-B or a TG-37-B printer wired for operation without a line relay* (WD-2159 or WD-2217) to a unit with provision for the use of a line relay including a relay contact radio induction suppressor and a polar-neutral key. It consists of the following parts:

*WD-2159 without power leads filter. WD-2217 with power leads filter.

1	105486	Relay Mounting (Assembly) - with filter
1	6745	Screw
1	2669	Lock Washer
2	8539	Screw
2	2191	Lock Washer
1	87894	Condenser - 1/4 mf.
2	74682	Screw
2	87851	Bushing
1	74670	Strap
1	105443	Polar-Neutral Key (Assembly)
2	6746	Screw
2	2191	Lock Washer

Installation

1. Secure the relay mounting assembly to the left rear corner of the base by means of the 6745 and 8539 screws and 2191 and 2669 lock washers furnished with the assembly.
2. Connect the terminals of the relay mounting unit cable to the relay terminal block, located under the line relay mounting assembly, as shown in Figure 1. Connect the yellow lead coming from terminal 51 (see WD-2159 or WD-2217) to the rear terminal of the 8000 ohm resistor in the line relay biasing circuit (marked "A"), and connect the white lead coming from terminal 56 to terminal 2 on the line relay mounting block.
3. Remove the tape from the green wire coming from the relay mounting terminal 3, and connect to terminal 61.
4. On the relay mounting terminal block (see WD-2159 or WD-2217), move the yellow wire from terminal 61 to 62; move the white wire from terminal 66 to 65.
5. Secure the 87894 spark suppression condenser (1/4 mf.) furnished, to the inner side of the left side wall of the base, by means of the 74682 screws, 87851 bushings, and 74670 strap furnished. The

condenser should be installed so that its terminals are toward the front of the base. Remove the tape from the ends of the orange and green leads, which terminate at the spark suppression condenser mounting, and connect these leads to the terminals of the condenser just installed.

6. Using the two 6746 screws and 2191 lock washers furnished, secure the 105443 polar-neutral key assembly to the keyboard, utilizing the two tapped holes located to the left of the transmitting contacts. Attach the cable leads which are soldered to contact springs 2 and 3 on the key, to slip connectors 51 and 56 on the keyboard, respectively. (See wiring diagram WD-2159 or WD-2217 for number designations of keyboard slip connectors.)
7. Apply a source of 115 volts D.C. to terminals 24 and 25 of the printer base; positive to 24, negative to 25.

NOTE: If the printer set is to be used in conjunction with a U. S. Government standard Teletype metal table, it will be necessary to use a three-wire cord (Teletype part No. 95050 or equivalent) for this purpose, since the table is provided with a three-way receptacle for 115 volts D.C. With the metal table it will also be necessary to use a four-wire motor power cord (Teletype part No. 95052 or equivalent). See Figure 2-A and WD-2159 for connections without power leads filter and Figure 2-B and WD-2217 for connections with power leads filter.

8. For a .060 ampere signaling, insert a Teletype RY-28 (W.E. 215-H) or a Teletype RY-30 (W.E. 255-A) relay in the line relay mounting block on the printer base. The resistance of the RY-28 relay is 85 ohms per winding, and the resistance of the RY-30 is 136 ohms per winding.
9. If the printer is to be used on a .020 ampere signaling circuit, it will be necessary to move the yellow wire, connected to the 2000-600 ohm resistor, from terminal (A) of the 8000 ohm resistor to terminal (B) of the 8000 ohm resistor. (See Figure 3.) This introduces 8000 ohms additional in the line relay biasing circuit, and reduces the biasing current to approximately .010 ampere. The Teletype RY-30 relay may be used for either .020 or .060 ampere signal line operation. The RY-28 relay is restricted to .060 ampere signal line operation.

To operate printer set with mounting for line relay installed on printer base, but using Signal Corps BE-77 line unit instead of relay on printer base.

1. Remove the line relay from its mounting on the printer base.
2. On the line relay mounting terminal block (see WD-2159 or WD-2217) move the yellow wire from terminal 62 to 61, move the white wire from terminal 65 to 66, and remove and tape the green wire of the line relay mounting cable which is connected to 61. (The other end of this green wire is connected to terminal 3 of the line relay

mounting block.)

- When a line relay is not used on the printer base, 115 volt D.C. power is not required on printer base terminals 24 and 25.

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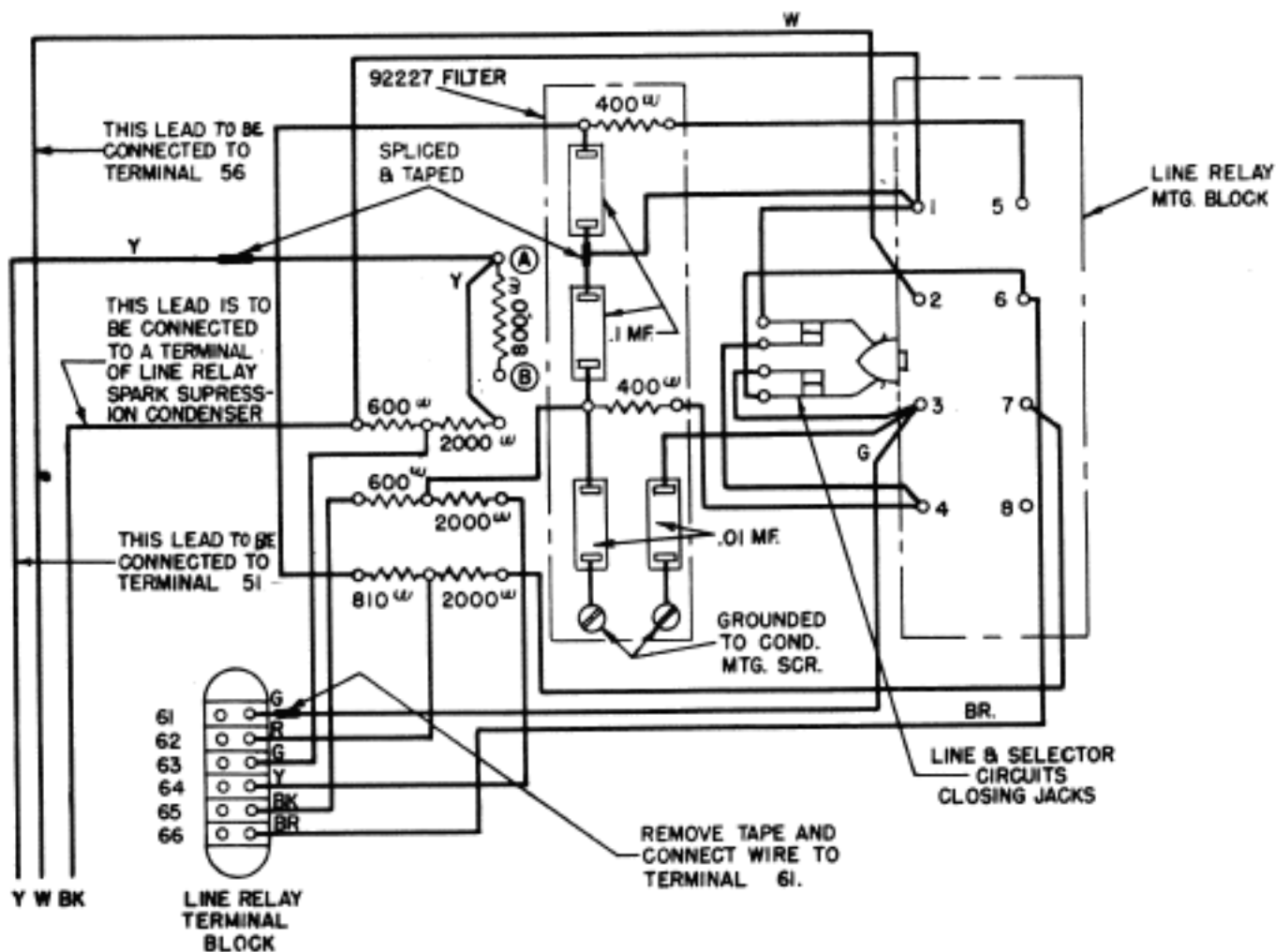


FIGURE 1

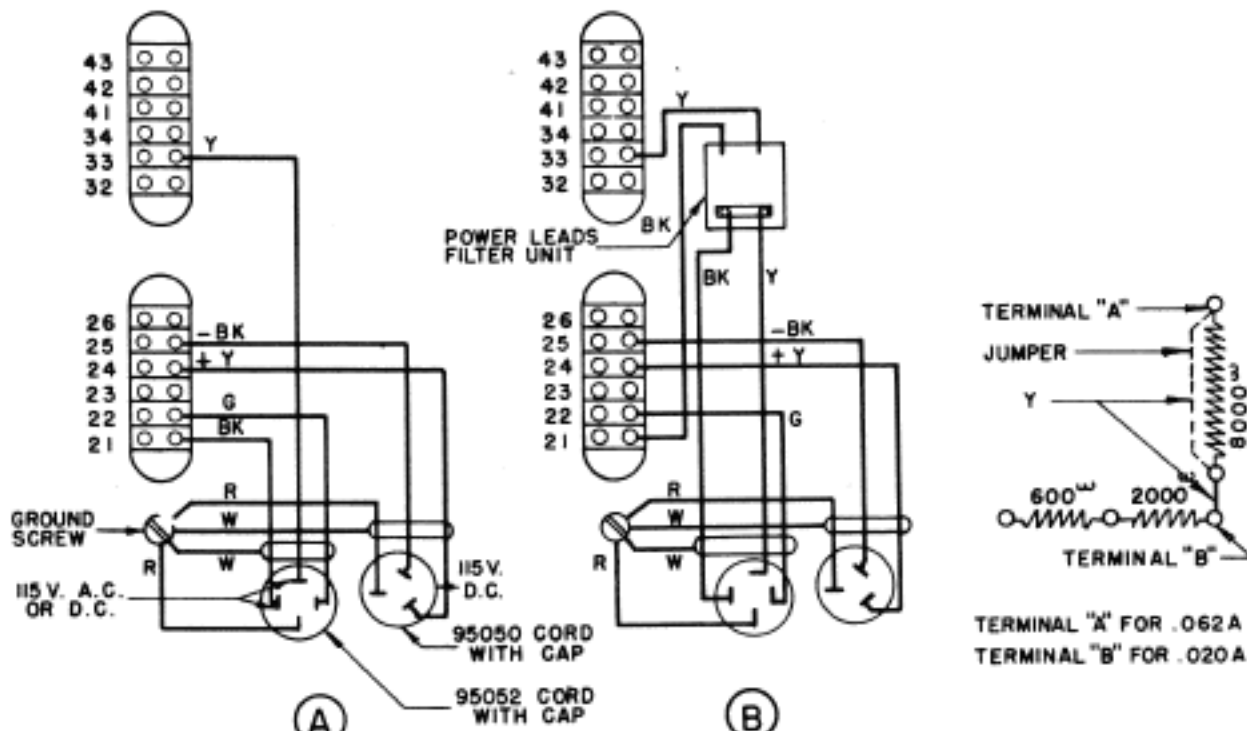


FIGURE 2.

FIGURE 3.