INSTALLATION OF 122A FILTER FOR POWER LEADS OF TELETYPEWRITER SETS

1. GENERAL

1.01 This section furnishes information for the installation of the 122A filter in series with the power-supply leads to the teletypewriter set. The function of this filter is to suppress radio-frequency interference from the teletypewriter set over the power leads into building wiring and thence into radio receivers.

1.02 This section is reissued to: ↰

(a) refer to BSP Section P31.301 for information on the shielding and grounding of the line cord when required.

(b) include instructions and a new wiring diagram for the installation of two 122A filters in parallel.

(c) make minor changes in the text and wiring diagrams. Marginal arrows indicate the changes made. ↲

1.03 The 122A filter is designed to carry a continuous load of 5 amperes. It will safely carry a starting load of 20 amperes for 10 seconds or 10 amperes for 40 seconds.

Note: Filter units in use at present are stamped "110-125 volts, 60 cycles." This stamp should be disregarded as the filter is designed for use on either 25- or 60-cycle ac or dc power.

1.04 Refer to Section P31.301 for grounding the shield of ← the line cord when a shielded cord is required. ←

2. PROCEDURE

2.01 To install the filter, proceed as follows:

(a) Remove the cover of the filter.

(b) Mount the filter as close as practicable to the power outlet box. If the filter is to mount on wood, use two 3/8" No. 6 RH wood screws. If the filter is to mount

on metal, use 10-32 RH machine screws. These are not furnished with the filter unit.

Caution: Use care in driving the mounting screws to avoid injury to the connecting leads inside the filter box.

Connections for Installation on 14, 15, 20 or 26 Teletypewriters

2.02 Refer to Fig. 1 and connect the filter unit as follows:

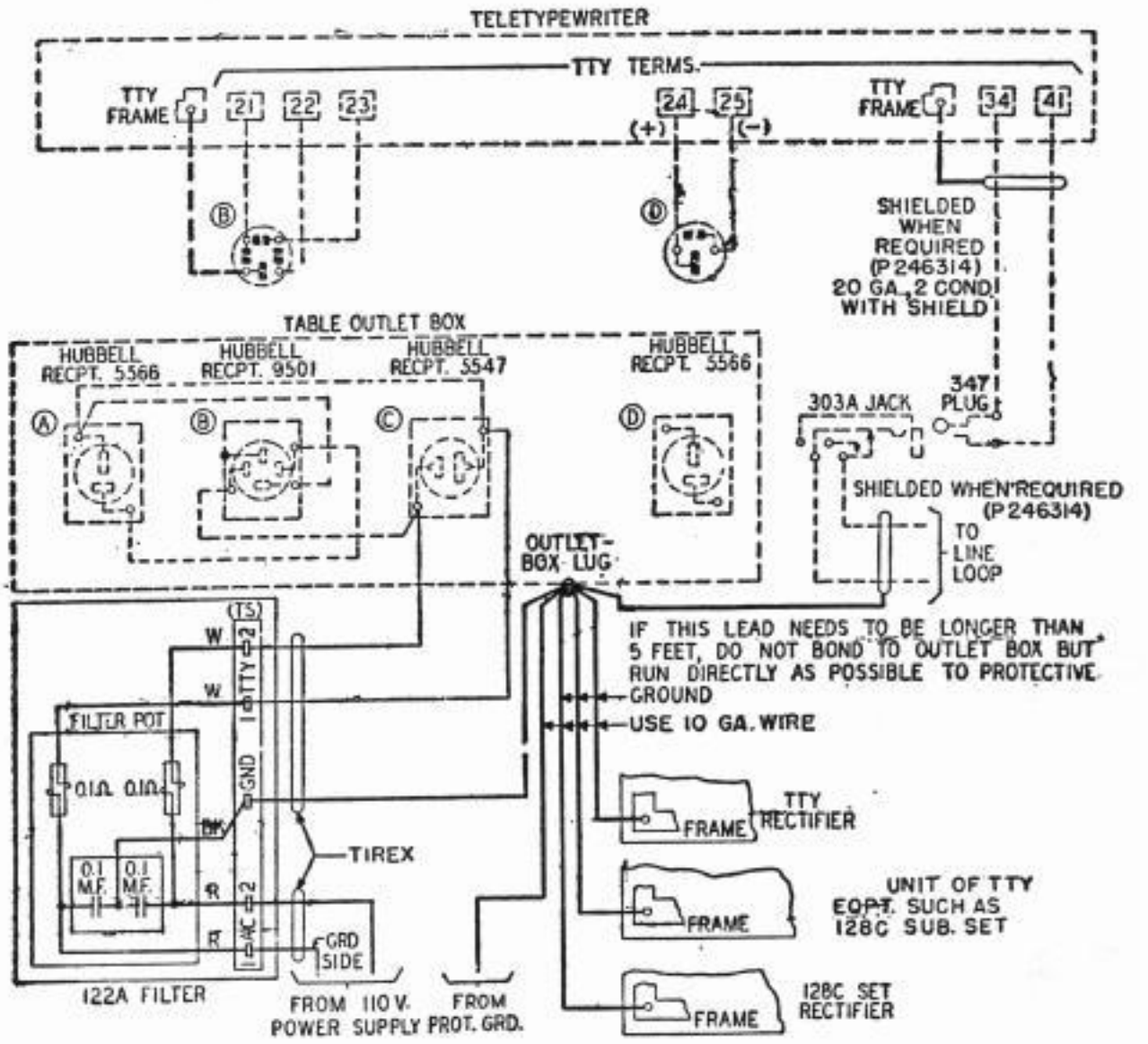


Fig. 1

(1) Using a three-conductor tirex cord, connect the power leads from the teletypewriter outlet box to the filter terminals designated 1-TTY-2 with the filter terminal designated GND connected to the outlet-box lug.

(2) Connect the power-supply source to the filter terminals designated 1-AC-2 with a tirex cord.

(3) Connect the protective ground to the outlet-box lug.

Note: In the usual case, protective ground is likely to be the grounded conduit containing the building power leads. If radio-frequency induction persists, a change of ground connections may be indicated. A water pipe, the steel frame of the building or other ground may be found more effective in a particular installation. If possible, use a ground connection other than that provided for radio receivers.

(4) Bond the rectifier frame and the frames of other auxiliary equipment on the teletypewriter table by means of individual conductors to the outlet-box lug as shown in Fig. 1.

Connections for Installation on 19 Teletypewriter Set

2.03 The continuous load capacity of the 122A filter is adequate for the motors of the transmitter-distributor and the teletypewriter but not for additional load such as the rectifier or motor-generator set (plugged into outlet A), or typing reperforator which is sometimes mounted over the transmitter-distributor (plugged into outlet C).

Rectifier Outlet Not Filtered (Fig. 2)

2.04 If the added load consists only of a rectifier (or motor-generator) outlet A may be wired, as in Fig. 2, so that it is not filtered. Connect the filter unit as follows:

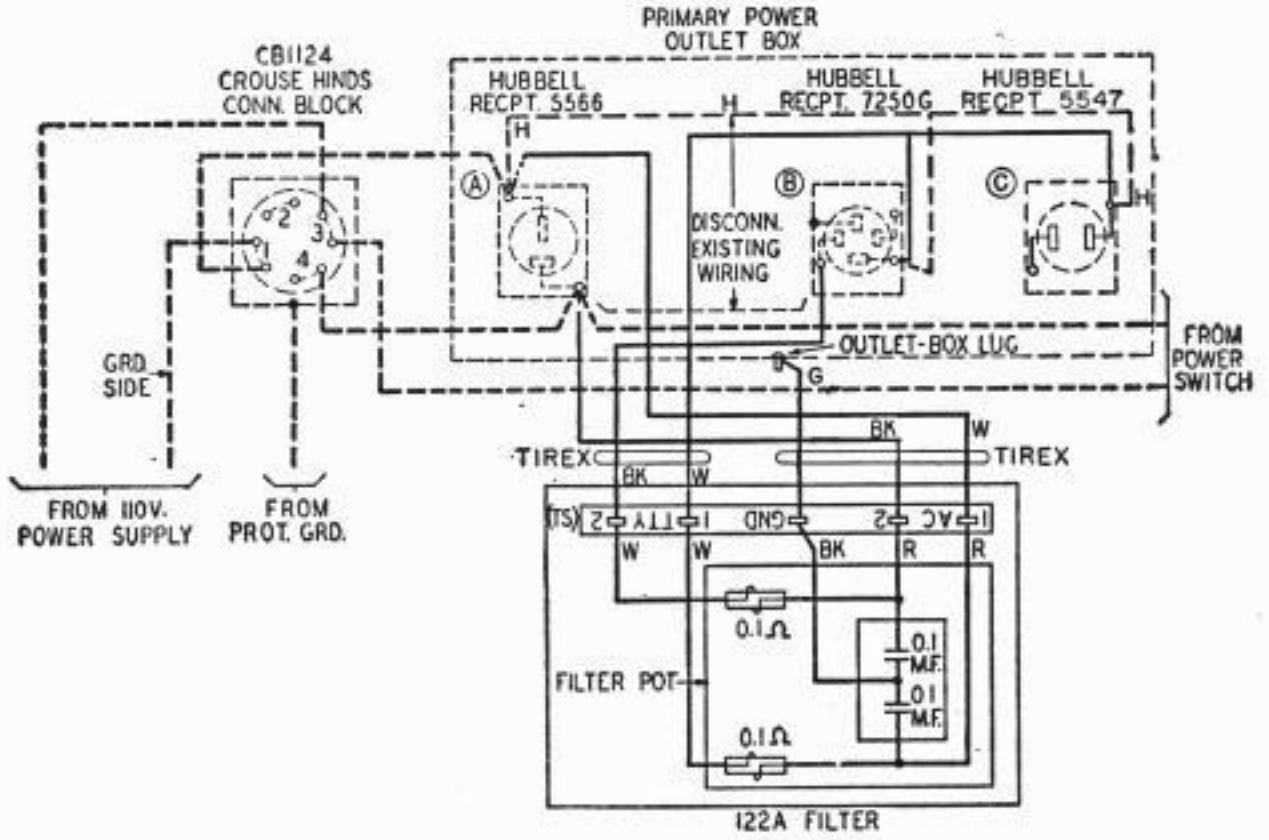


Fig. 2

Note: In order to make the wiring consistent for all three figures, the wiring to the filter in Fig. 2 has been reversed from that shown in Issue 2 so that the grounded side of the power circuit goes to terminal AC-1 of the filter unit.

(1) Disconnect and remove the lead designated H from the upper terminal of the A receptacle and from the B or C receptacle as applicable.

Note: If the power supply is 50- or 60-cycle ac, or dc, the H lead goes first to the B receptacle and then to the C receptacle. With 25-cycle power, the H lead goes first to the C receptacle from which connection to the B receptacle is made through a resistance not shown in Fig. 2.

(2) Disconnect and remove the lead between the lower terminal of the A and B receptacles.

(3) Using a three-conductor tirex, make the following connections:

(a) Connect the white lead from the upper terminal of the A receptacle to terminal AC-1 of the filter unit.

(b) Connect the black lead from the lower terminal of the A receptacle to terminal AC-2 of the filter unit.

(c) Connect the green lead from the outlet-box lug to terminal GND of the filter unit.

(4) Using a tirex pair, make the following connections:

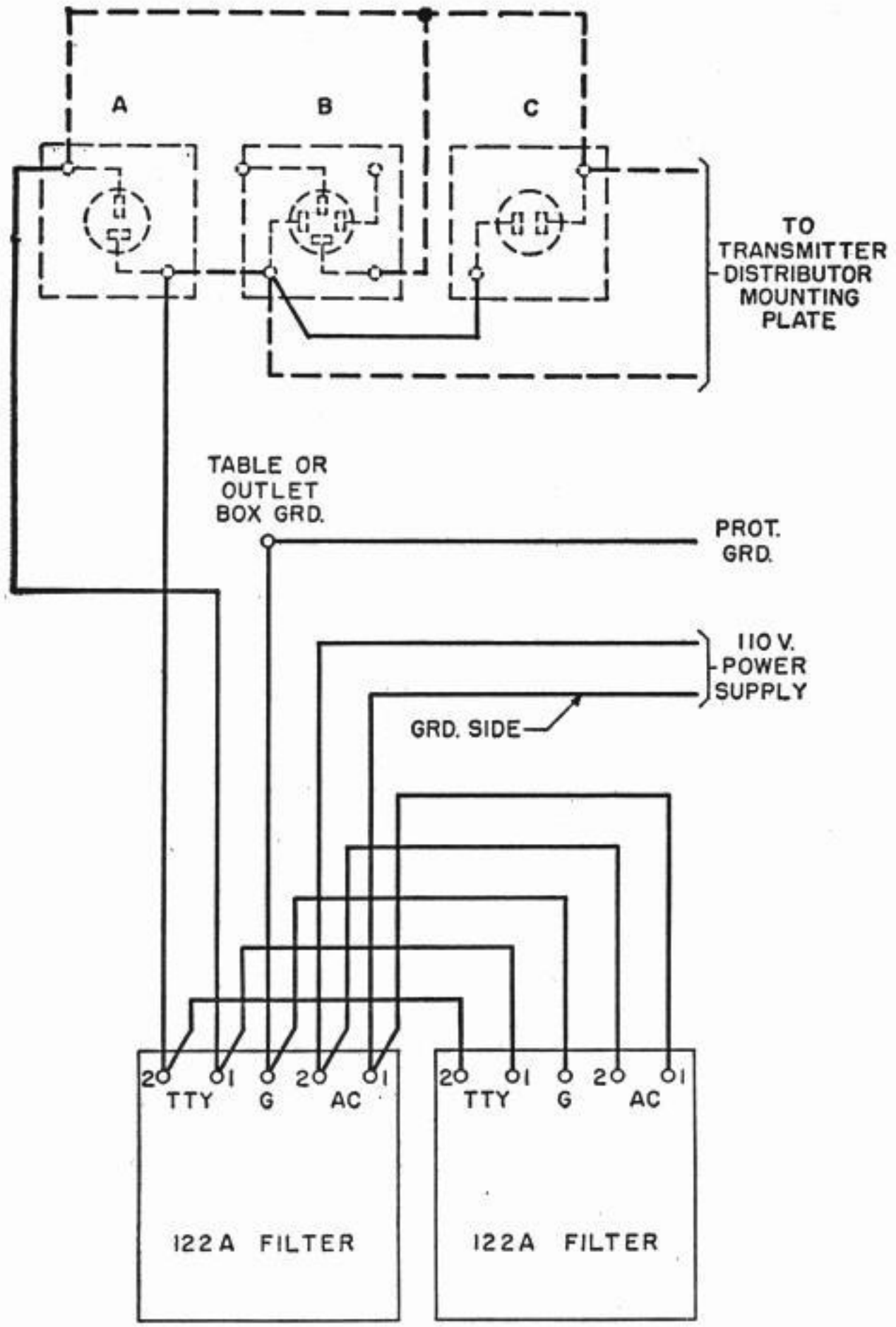
(a) Connect terminal TTY-1 of the filter unit to the terminal of the B or C receptacle from which the H wire was removed.

(b) Connect terminal TTY-2 of the filter unit to the left-hand terminal of the B receptacle.

All Outlets Filtered with Two Filters in Parallel (Fig. 3)

2.05 If the filtering of all three outlets A, B, and C is desired, two filters in parallel will be required, wired as shown in Fig. 3.

Note: When two 122A filters are used on a 19A table, locate one 6" from the left panel (as viewed from the rear) with the bottom edge of the filter casing 6" above the top edge of the rectifier shelf. Locate the second filter parallel and to the right of the first with 1/2" space between.



Two 122A Filters for Receptacles A, B and C

Fig. 3