

BELL SYSTEM PRACTICES
Teletypewriter and Manual
Telegraph Station and P.B.X.
Installation and Maintenance

SECTION P31.326
Issue 1, January, 1942
AT&T Co Provisional

INSTALLATION OF RADIO FREQUENCY INDUCTION SUPPRESSION FILTER FOR TABULATOR TRANSMITTER DISTRIBUTOR CONTROL CONTACTS

1. GENERAL

1.01 This section covers the installation of an 80A filter for the suppression of radio frequency induction from the tabulator transmitter distributor control contacts on No. 19 teletypewriter sets using the 84925M and the 89992M tabulator transmitter distributor control.

1.02 This section is issued on a provisional rating until a standard filter with suitable mounting bracket is available for this purpose.

1.03 The following material is required:

- 1—80A Filter
- 2—10-32 1-1/4" FHB Machine Screws
- 1—74670M Condenser Mounting Strap
- 2—Soldering lugs for No. 4 Screw
- 1—Soldering lug for No. 10 Screw
- 2 Feet—No. 18 Stranded Single Conductor 1/32" Rubber Insulation with Copper Braid Shield Wire
- 5 Feet—No. 18 Deltabeston Wire

2. PROCEDURE

2.01 Remove the two wires connected to the distributor start control contacts of the send-receive break mechanism and strip these two wires from the taped cable form for a distance of one inch below the surface of the base casting, marking one lead so as to identify later which contact it was on.

2.02 Retape the form containing the remaining leads to the send-receive break mechanism contacts.

2.03 Before mounting the 80A filter remove the screw and nut holding the closed end condenser mounting lugs on the filter bracket and place a No. 4 soldering lug between

the mounting lug of the 312A condenser and the filter bracket. Replace the mounting screw and nut and solder a 3" length of No. 18 Deltabeston wire to the soldering lug.

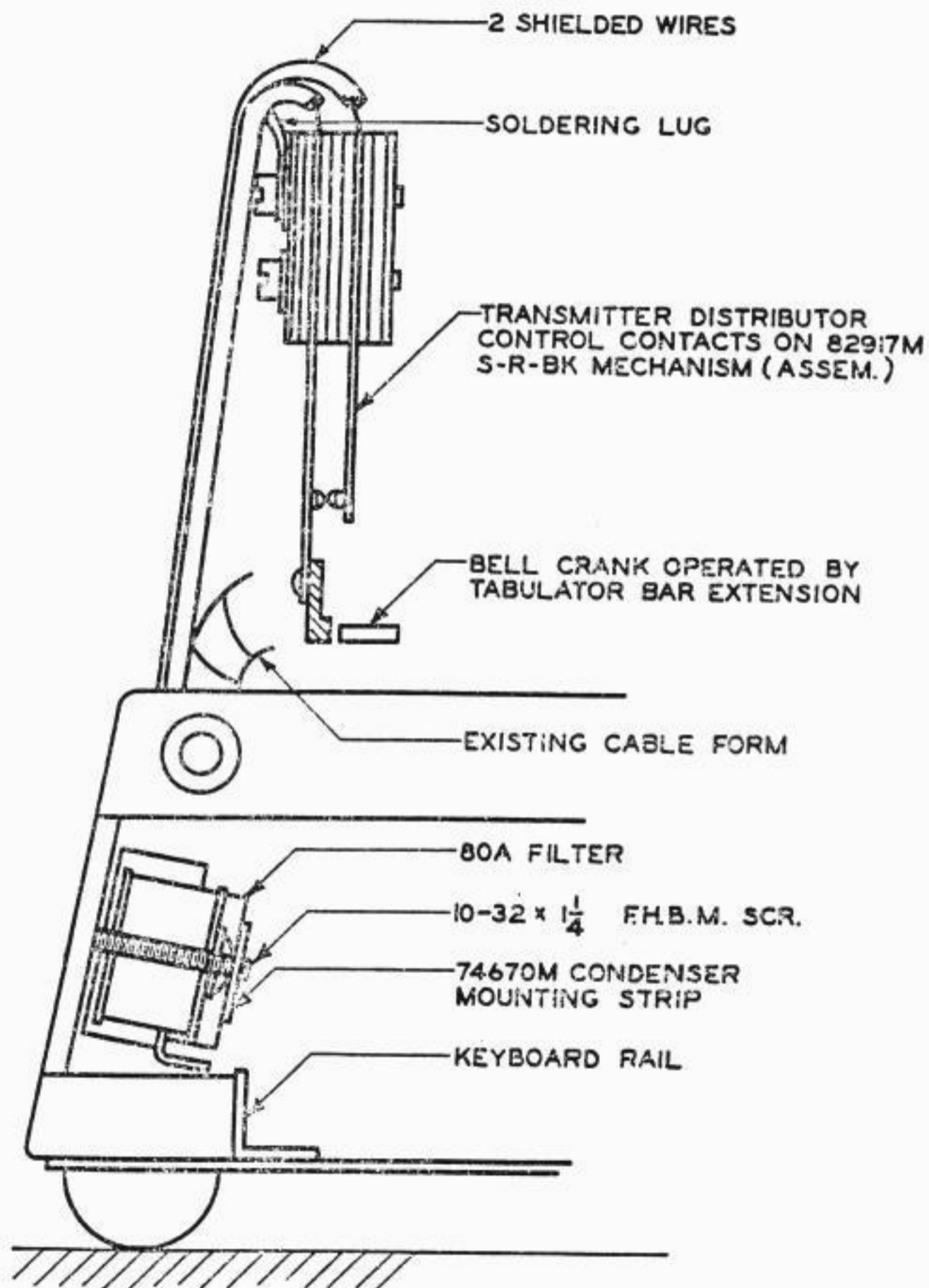


Fig. 1

3.04 Mount the 80A filter with the coil toward the front as shown in Fig. 1, proceeding as follows:

- (1) Remove the 74817M line relay spark protection condenser assembly.
- (2) Using the two 1-1/4" 10-32 FHB machine screws and the 74670M condenser mounting strap, clamp the 80A filter to the inner side of the base casting in the space formerly occupied by the 74817M line relay spark protection condenser.
- (3) Draw up on the machine screws securely but not with sufficient pressure to crush the filter condensers.

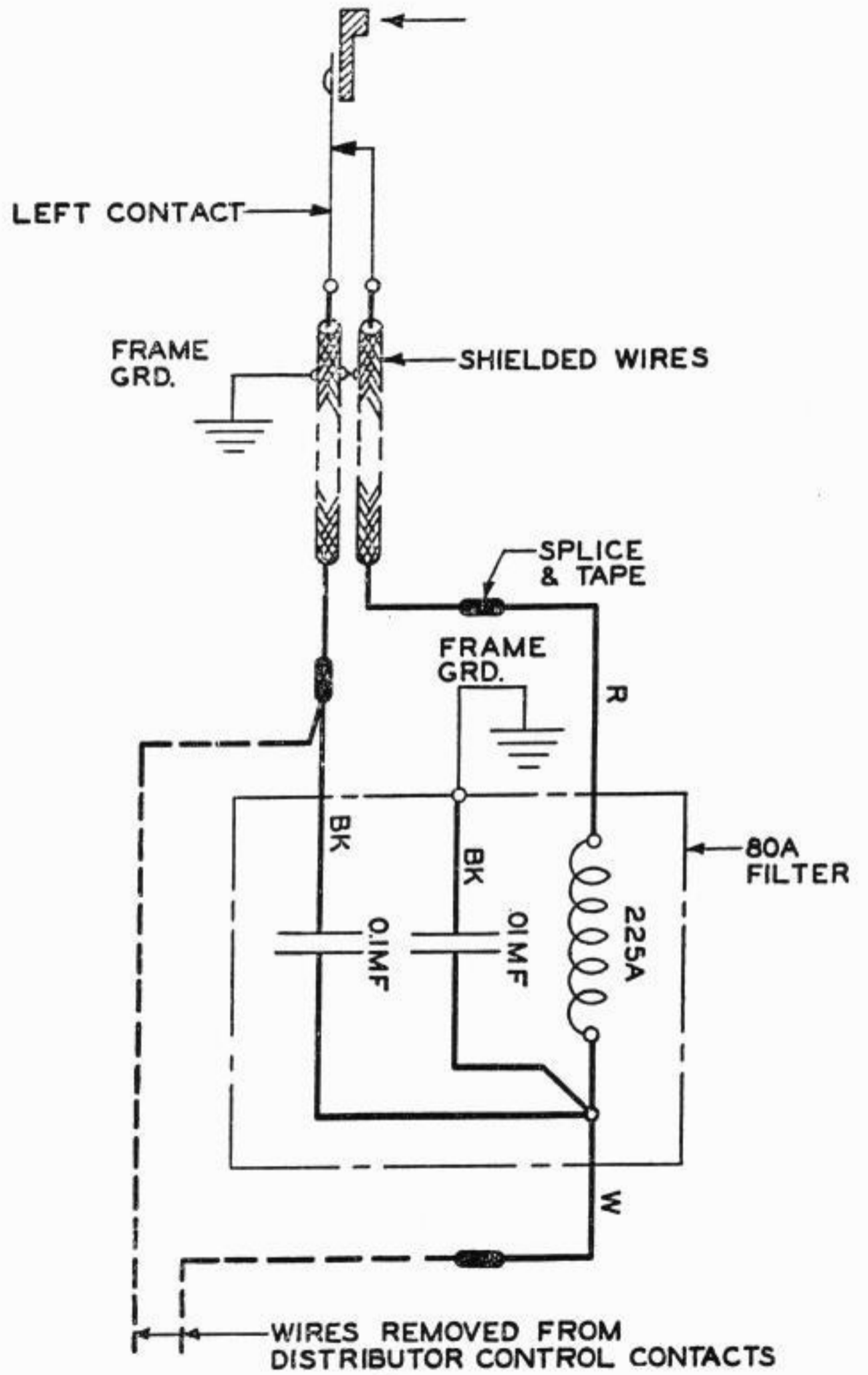


Fig. 2

2.05 Referring to the wiring diagram shown on Fig. 2 and to the arrangement of wiring shown on Fig. 1, connect the 80A filter as follows:

- (1) Connect the white lead of the 80A filter to the wire removed from the left-hand contact of the send-receive break mechanism, cutting both wires as required to eliminate excess length.
- (2) Cut the red lead from the 80A filter to a length of 1" and splice, solder and tape to a shielded lead making sure that the copper braid is skinned back from the spliced connection about one-quarter inch.
- (3) Run the shielded lead through the base and connect it to the left-hand contact of the distributor start control contacts of the send-receive-break mechanism, taking care in this case also that the copper braid is skinned back from the connecting point about one-quarter inch.
- (4) Connect a shielded lead to the right-hand contact of the distributor start control contacts.
- (5) Run this lead through the hole in the base casting and connect it to the black lead of the 80A filter which connects to the 312A condenser, shortening the condenser lead to about 1".
- (6) Before soldering and taping the connection made in (5) join this point to the lead in the cable form which formerly connected to the right-hand contact of the distributor start control contact. Solder and tape these leads and form them so as to avoid interference when the keyboard perforator is put in place.
- (7) Remove the left front 6810M screw and lockwasher which mounts the 74053M slip connection mounting plate (assem) and put the No. 10 soldering lug under the lockwasher and the 6810M screw.
- (8) Connect the wire from the rear of the filter bracket to the lug under the 6810M screw making the connection as short and direct as practicable.
- (9) Mount a soldering lug under the upper screw which holds the distributor start control contacts pile-up.
- (10) Solder the shields of both leads to the lug mounted in (8).
- (11) Check the connections with Fig. 2 and form the wiring as indicated in Fig. 1.

2.06 Remount and reconnect the line relay spark protection condenser as follows:

- (1) Remove the leads from the condenser of the 74817M spark protection assembly which was dismantled from the base casting. Mount the assembly on the right inside the base casting in the space normally reserved for the noise-killer condenser with the condenser terminals toward the front.
- (2) Using the No. 18 deltabeston wire extend the leads at the left of the base which were removed from the condenser to the terminals of this condenser in its new position, sewing or taping the leads to the cable and securing it under the cable clamps.
- (3) See that all wiring is in position to be free from interference when the keyboard perforator is put in place