

INSTRUCTIONS FOR INSTALLING THE 195647 MODIFICATION KIT TO CONVERT MODEL 33 AND MODEL 35 SWITCHED- NETWORK SETS FOR 20 MA OR 60 MA DC OPERATION

1. GENERAL

a. The 195647 Modification Kit permits the Model 33 and Model 35 Switched-Network ASR-KSR-RO and Model 35 ROTR Sets to be used in 20 or 60 ma DC operation. Shunting the signal line current limiting resistors is the only permanent modification necessary for use in a 20 ma DC operation. In addition, operation in a 60 ma DC signalling operation is possible by changing the input components on the selector magnet driver cards. This kit is applicable to Model 33 Switched-Network Sets coded 33A1-A4, 33B1-B4, 33C1-C4; and Model 35 Switched-Network Sets coded 35A through 35M and 35AK.

b. The set will operate on a 40-130 volt DC, 20 or 60 ma signal line. For the Model 35 ASR Set, local line signal power is required to be furnished at the station. This power supply can have a different voltage output than the signal line but must not be grounded. See Note 1 on Page 4 for operating instructions.

c. For wiring information see Wiring Diagram 5997WD and Note 2 on Page 4.

d. The 195647 Modification Kit consists of:

2	154166	Suppressor, Arc	3	182797	Resistor 135 ohm 1/2W
1	177564	Circuit Card, Strapping	1	195646	Connector Assembly

e. For Model 33 parts ordering information see Teletype Bulletin 1184B and for Model 35 parts ordering information see Teletype Bulletin 1187B.

2. INSTALLATION (Figures 1 and 2)

a. Cabinet Cover Removal

(1) Model 33 Sets

(a) Remove the screws holding the bezel and place the bezel aside. Remove nameplate, platen knob and volume control knob.

(b) Remove the mounting screws holding the cover to the pedestal, lift the cover straight up and place aside.

(2) Model 35 Sets

(a) On older cabinets remove the bezel by removing the two screws at each end of the bezel. With the new style cabinet only the back mounting screw need be removed.

(b) Remove the cabinet cover that is not hinged to the pedestal (old design) by first opening the upper cover and disconnect the copylight plug. Close the upper cover, grasp the bottom edge of the cover and lift straight up. Place cover aside.

(c) For the hinged cover unfasten the lower cover lock screws in each front corner. Open the upper cover and disconnect the copylight plug after which lower the cover to its detent position. Push on the lower cover latch (under right front corner of upper cover) and lift the front of the lower cover using the grips provided. Raise the lower cover to its vertical lock position.

b. 20 MA DC Signal line

(1) Connect the 195646 Connector Assembly to the mating 50 pin connectors on the call control unit. (These call control unit connectors are normally used to link the Data Set with the teletypewriter.)

(2) (Model 35 ASR-KSR only) Replace the 177563 Signal Regenerator Circuit Card, if present, located on the left end of the electrical service unit with the 177564 Strapping Card. The beveled edge of the card should face the rear of the set. If the set has the old style connector, remove the tab from the 177564 Card if present.

(3) Replace with a strap or strap across R7 (182763, 680 ohm, 1/2 watt) Resistor on the 193440 Card or R10 (182777, 680 ohm, 1/2 watt) Resistor on the 182630 Card (selector magnet driver cards).

(4) (Model 35 ASR only) Remove the 193420 Insulator over the wiring field. Loosen the four 180675 Screws and remove the 193467 Relay Assembly. Replace with a strap or strap across the 1800 ohm resistor located on the MSR Relay between the 3 and 4B Contacts. Replace the assembly and insulator.

(5) (Model 35 ASR-KSR only) Remove the signal generator contact box cover (covers) and install the 154166 Arc Suppressor across the contacts, making sure the longer lead is connected to the marking contact. (Refer to Figure 2.) Replace the contact box covers.

(6) (Model 35 ASR only) Connect the green wire w/terminal, on the 195646 Connector Assembly, to the positive side of a secondary power source supplying 20 MA and the blue wire to the negative side. (This provides the Auxiliary local circuit necessary for mode switching. The power supply may have a different voltage output than that of the signal line but must not be grounded.)

(7) Connect the negative side of the 20 MA DC signal line to Terminal K7 and the positive side to Terminal K8 of the 151411 nine position terminal board located at the rear of the call control unit.

(8) (Model 35 ASR-KSR-RO only) If these sets are wired for the "be busy" option rather than the "dont' answer" option, move the R-Y Wire in the ASR-KSR or the W-R-Y Wire in the RO from Terminal C-F4 to C-F5 on the 193422 Wiring Field.

c. 60 MA DC Signal Line

(1) Connect the 195646 Connector Assembly to the mating 50 pin connectors on the call control unit. (These call control unit connectors are normally used to link the Data Set to the teletypewriter.)

(2) (Model 35 ASR-KSR only) Replace the 177563 Signal Regenerator Circuit Card, if present, located on the left end of the electrical service unit with the 177564 Strapping Card. The beveled edge of the card should face the rear of the set. If the set has the old style connector, remove the tab from the 177564 Card if present.

(3) Convert the existing 500 ma externally adjusted (193440) and constant current (182630) Selector Magnet Driver Cards by: (See Figure 1 for card detail.)

(4) Replacing R1 (193448 ohm) Resistor on the 193440 or R1 (182779, 420 ohm) Resistor on the 182630 Card with the 182797 Resistor (135 ohm, 1/2 watt).

(5) Replacing with a strap or strapping across R7 (182763, 680 ohm, 1/2 watt) Resistor on the 193440 Card or R10 (182777, 680, 1/2 watt) Resistor on the 182630 Card.

NOTE

This modification kit supplies three 135 ohm resistors. This will convert an installation containing a Model 35 ASR with an ROTR. If the customer so desires he may replace the 193440 Circuit Card with the 193441 or the 182630 Card with a 182631 Card.

(6) (Model 35 ASR only) Remove the 193420 Insulator over the wiring field. Loosen the four 180675 Screws and remove the 193467 Relay Assembly. Replace with a strap or strap across the 1800 ohm resistor located on the MSR Relay between the 3 and 4B Contacts. Replace the assembly and insulator.

(7) (Model 35 ASR-KSR only) Remove the signal generator contact box cover (covers) and install the 154166 Arc Suppressor across the contacts, making sure the longer lead is connected to the marking contact. (Refer to Figure 2). Replace the contact box covers.

(8) (Model 35 ASR only) Connect the green wire w/terminal, on the 195646 Connector Assembly, to the positive side of a secondary power source supplying 60 ma and the blue wire to the negative side. (This provides the auxiliary local circuit necessary for mode switching. The power supply may have a different voltage output than that of the signal line but must not be grounded.)

(9) Connect the negative side of the 60 ma DC signal line to Terminal K7 and the positive side to Terminal K8 of the 151441 Nine Position Terminal Board located at the rear of the call control unit.

(10) (Model 35 ASR-KSR-RO only) If these sets are wired for the "be busy" option rather than the "don't answer" option, move the R-Y Wire in the ASR-KSR on the W-R-Y Wire in the RO from Terminal C-F4 to C-F5 on the 193422 Wiring Field.

(11) Replace the cabinet cover and bezel.

NOTE 1

To originate or answer a call the TST key (locking) is operated. This turns on the set motor (motors) and lights the TST lamp. To disconnect a call operate any of the three non-locking keys (ORIG., CLR., ANS.) which release the TST key and turn off the TST lamp.

NOTE 2

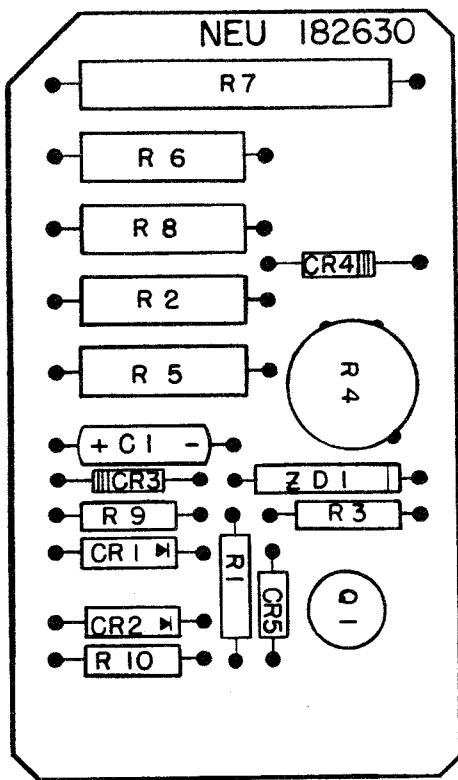
The following Wiring Diagrams and sheets should be referenced in this modification: For Model 33-5918WD, Sheets B1, B2, B3, B4, B6, and B7; For Model 35-6040WD, Sheets, B1, B2, B3, B4, B5, and B6, 6020WD, Sheets B1, B4, B5, B6, B7, and B8, and 6000WD, Sheets B7, B8, B9, B6, B5, B1, and B4. The Bell System should refer to standardized information for the above Wiring Diagrams.

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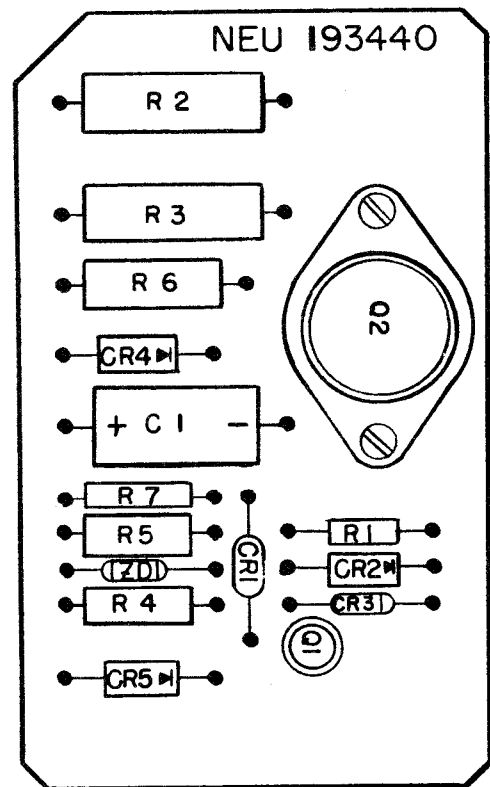
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501835



CONSTANT CURRENT
CARD



EXTERNALLY CONTROLLED
CARD

FIGURE 1.

154166

ARC SUPPRESSOR

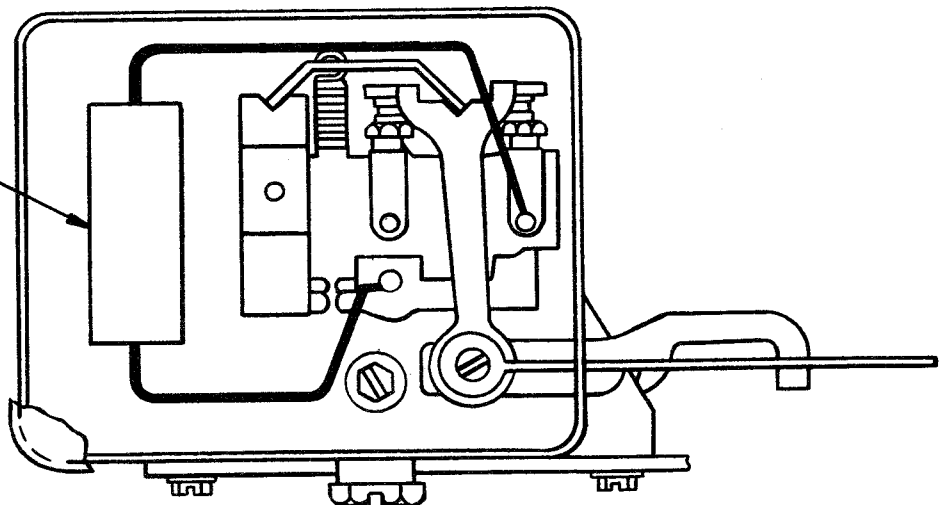


FIGURE 2.