

INSTRUCTIONS FOR INSTALLING MANUAL DC ROTARY DIAL OR
MANUAL TOUCH-TONE DIAL ON TELETYPE MODEL 33 OR 35
KEYBOARD SEND-RECEIVE SET (KSR) AND AUTOMATIC SEND-
RECEIVE SET (ASR) USING MODIFICATION KITS 182490, 182496,
193489 OR 195926 (ROTARY DIAL) OR 182489, 182497, 193487 OR
195925 (TOUCH-TONE DIAL)

1. GENERAL

a. The 182496 or 193489 Modification Kit when installed on a Teletype Model 33 or 35 (respectively) Keyboard Send-Receive Set (KSR) and Automatic Send-Receive Set (ASR), equips the set with a Manual DC Rotary Dial. The pulse contacts of the dial are wired in the telephone line circuit in the "off-hook" condition in the originate mode only. When the dial is operated, a set of normally-open contacts close silencing the speaker and/or hand-held receiver. Upon releasing the dial, the pulse contacts transmit measured DC pulses to the exchange equipment in accordance with the digit dialed.

b. The 182490 or 195926 Modification Kit is like the 182496 or 193489 Kit (respectively) except the 182500 DC Rotary Dial is not included.

c. The 182497 or 193487 Modification Kit, when installed on a Teletype Model 33 or 35 (respectively) Keyboard Send-Receive Set (KSR) and Automatic Send-Receive Set (ASR), equips the set with a Touch-Tone Dial. The dial is a manual push-button multi-frequency dial. Depression of the push buttons, corresponding to the number dialed, generates various frequencies which are fed through the loudspeaker amplifier into the telephone line via the sending amplifier to the 101C or 105A Data Set. Dialing proceeds much faster than with the rotary dial. As the station connects, the output of the touch-tone dial is disconnected from the Data Set so that there is no hazard connected with improper operation of the touch-tone dial at that time.

d. The 182489 or 195925 Modification Kit is like the 182497 or 193487 Kit (respectively) except the 182620 Touch-Tone Dial is not included.

e. The 182490, 182496, 193489 and 195926 Modification Kits consist of:

2	110743	Washer, Lock	1	181902	Faceplate (For 182490 or 182496 Kit)
2	151073	Screw			
4	181241	Screw w/Lock Washer	1	181907	Faceplate (For 193489 or 195926 Kit)
1	181281	Bracket w/Nut - Right			
1	181282	Bracket w/Nut - Left	1	182500	Dial, DC Rotary (Not in 182490 or 195926 Kit)
1	181283	Spacer			
1	181289	Window	1	182532	Filter
			1	182727	Bracket - Left
			1	182728	Bracket - Right

f. The 182489, 182497, 193487 and 195925 Modification Kits consist of:

3	181241	Screw w/Lock Washer	1	182620	Dial, Touch-Tone (Not in 182489 or 195925 Kit)
1	181289	Window			
1	181292	Window	1	182686	Resistor w/Plate, Variable
1	181903	Faceplate (For 182489 or 182497 Kit)	1	182720	Bracket
1	181906	Faceplate (For 193487 or 195925 Kit)	1	182799	Capacitor w/Terminals

g. For parts referred to, other than those included in the modification kits, refer to Teletype Parts Bulletin 1184B (Model 33 KSR and ASR Sets) or 1187B (Model 35 KSR and ASR Sets).

2. INSTALLATION (Figures 1, 2 and 3)

a. 182490, 182496, 193489 OR 195926 MANUAL DC ROTARY DIAL KIT (Figures 1 and 3)

NOTE

The rotary dial installation instructions that follow are based upon the assumption that the Call Control Unit does not have a dial. If the unit has another dial, the dial and its associated components must be removed.

(1) On units equipped with the early design 182723 Bracket mount the 182532 Filter to the 182709 Support Bracket (Right) using two 151073 Screws and 110743 Lock Washers. On units with the later design 182723 Bracket assemble the 182532 Filter to the 181282 Bracket (Left) using two 151073 Screws and 110743 Lock Washers. See Figure 3.

(2) Assemble the 182500 DC Rotary Dial to the 182727 and 182728 Brackets or the 181281 and 181282 Brackets (depending on whether the unit has the early or later design 182723 Bracket) using two 181241 Screws w/Lock Washers. See Figure 3.

(3) On the 182717 Terminal Strip ("TS3" for Model 33 Sets or "H" for Model 35 Sets), move the W-O-BL wire from terminal 4 to terminal 10, the R-BL wire from terminal 6 to terminal 5, and the W-R-G wire from terminal 13 to 12. Connect the rotary dial wires to the proper terminals on the terminal strip. Refer to Figure 1.

(4) Secure the dial assembly using two 181241 Screws w/Lock Washers. On units with the later design 182723 Bracket add the 181283 Spacer under the 181281 and 181282 Brackets. See Figure 3.

(5) For 182490 or 182496 Modification Kit - Install the 181902 Faceplate.

(6) For 182490 or 182496 Modification Kit - Install the cover, name plate and volume control knob on the set after the call control unit has been installed and secured to the base of the set.

(7) For 193489 or 195926 Modification Kit - Install the 181907 Faceplate using two 182760 Screws found in the bag attached to the Call Control Unit. For Cabinets equipped with a hinged lower cover assembly, assemble the 194819 Spring Clip to the lower end of the faceplate using one 182760 Screw and one speed nut found in the bag attached to the Call Control Unit.

(8) Insert the 181289 Window into the slots provided in the faceplate.

b. 182489, 182497, 193487 OR 195925 MANUAL TOUCH-TONE DIAL KIT (Figures 2 and 3)

(1) Removal of the Cover

(a) Remove the faceplate by removing the screw at each end of the faceplate. Lift the front and back of the faceplate simultaneously and place aside. Retain the screws. For the later Model 35 Cabinet, only the back mounting screw need to be removed to take off the faceplate.

(b) For Model 35 Sets only - Lift the cover by unlatching the latch under the dome to the right of the printer. On sets not equipped with the hinged lower cover assembly, lift the cover assembly off the set.

(c) For Model 33 Sets only

1. Remove the platen knob and volume control knob by pulling outward.

2. Remove the name plate by prying the lower section forward then downward.

3. Remove the cover from the unit after removing the seven screws that hold the cover to the base. Lift the cover carefully.

(2) Removal of Rotary Dial (Figures 1 and 3)

(a) In order to install the manual touch-tone dial on a Model 33 or Model 35 Set it is required that the rotary dial and associated parts be removed, if present. Proceed as instructed in subsequent paragraphs.

(b) Remove the two screws that hold the 182727 and 182728 Brackets or the 181281 and 181282 Brackets and 181283 Spacer. Loosen the four screws on the 182717 Terminal Strip ("TS3" for Model 33 Sets or "H" for Model 35 Sets) and remove the four

leads (two white, blue and green) that connect the dial to the terminal strip. Remove and discard the two screws and lock washers that secure the 182532 Filter to the 182709 Support Bracket (Right). On units that have the filter mounted on the 181282 Bracket (Left) the filter need not be removed. Loosen the screws on terminals 14, 15, and 16 on the terminal strip and remove the red, black and yellow wires that lead from the filter.

(c) On the 182717 Terminal Strip ("TS3" for Model 33 Sets or "H" for Model 35 Sets) move the R-BL wire from terminal 5 to terminal 6, the O-G wire from terminal 7 to terminal 6, the W-R-G wire from terminal 12 to terminal 13, the BR-S wire from terminal 16 to terminal 15 and the W-O-BL wire from terminal 10 to terminal 4. In early Model 35 Sets the W-O-BL wire is on terminal 4. In these sets remove the strap between terminal 4 and terminal 10.

(3) Installation of Manual Touch-Tone Dial (Figures 2 and 3)

(a) Assemble the 182620 Touch-Tone Dial and the 182686 Variable Resistor w/Plate to the 182720 Bracket using the two dial clamping screws (present) and one 181241 Screw w/Lock Washer.

(b) Connect the touch-tone dial wires to the proper terminals on the 182717 Terminal Strip ("TS3" for Model 33 Sets or "H" for Model 35 Sets) together with the 182799 Capacitor w/Terminals. See Figure 2. Tighten all loosened terminal screws.

(c) Secure the dial assembly using two 181241 Screws w/Lock Washers. See Figure 3 for location of mounting holes.

(d) For Model 33 Sets only

1. Reinstall the cover, name plate, volume control knob and platen knob removed in Paragraph 2.b.(1)(c).

2. Install the 181903 Faceplate using the two screws retained in Paragraph 2.b.(1)(a). Discard the removed faceplate.

(e) For Model 35 Sets only - Install the 181906 Faceplate using the two screws retained in Paragraph 2.b.(1)(a). For later Model 35 Cabinet, transfer the lower locating bracket and its hardware from the removed faceplate to the new faceplate. Discard the removed faceplate.

(f) Insert the 181289 and 181292 Windows into the slots provided in the faceplate.

3. TEST PROCEDURES AND ADJUSTMENTS - 182489, 182497, 193487 OR 195925
MANUAL TOUCH-TONE DIAL KIT

NOTE

These test procedures and adjustments (except Paragraph f.) are necessary only when Data Set is not present. Paragraph f. applies when Data Set is present (Bell System: If Data Set is present, refer to BSP Section 591-018-300, Paragraph 9.09).

a. Equipment required:

(1) Power Supply +20V, 30 ma
-20V, 30 ma

(2) AC Vacuum Tube Voltmeter HP400D, or equivalent.

b. On the "P" Connector, connect +20V to terminal 25, -20V to terminal 41, and ground terminals 49 and 39. Connect the voltmeter to terminals 47 and 49.

c. Operate the touch-tone dial key digit No. 1. Adjust the 182686 Variable Resistor fully clockwise, for maximum output. The voltmeter should read over 1.5V rms.

NOTE

As the output level is increased, the meter will behave erratically. This is due to distorted wave shape caused by overload in the amplifier. The distortion will also be noticeable by listening to the loudspeaker.

d. Operate key digit No. 1 and adjust the variable resistor counterclockwise for 1.25V rms as read on the meter.

NOTE

This adjustment will be close to the final variable resistor setting which will be determined at the time of Data Set installation.

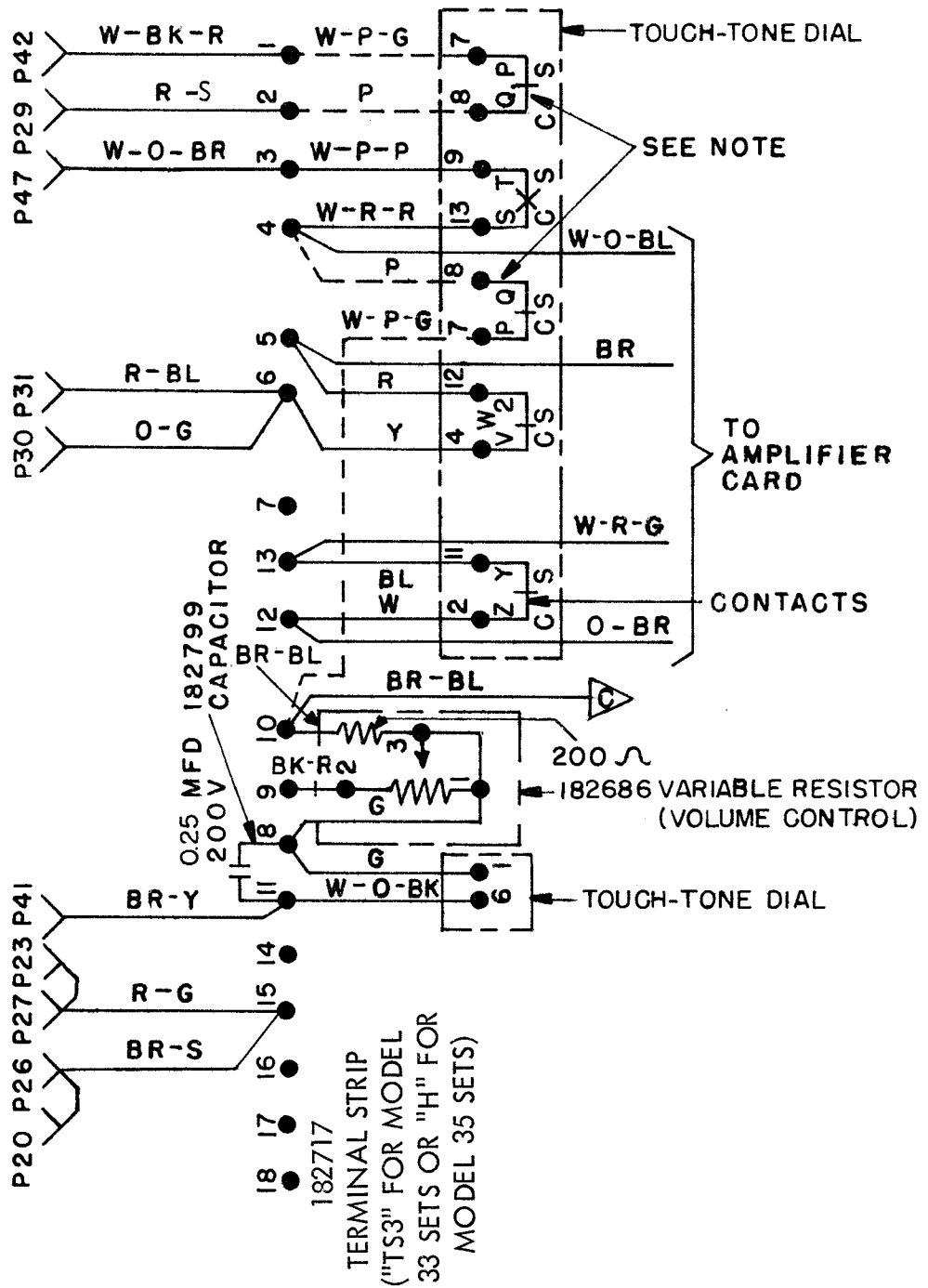
e. With the variable resistor adjusted as in Paragraph d., operate keys digit No. 1 and digit No. 2 simultaneously. The voltmeter should read .80-1.05V rms; operate keys digit No. 3 and 6 simultaneously, the meter should read .95-1.15V rms.

f. With the set connected to the line and the Data Set installed, the variable resistor should be adjusted so that the touch-tone levels will equal the normal F1 tone as required by the particular drop on the line.

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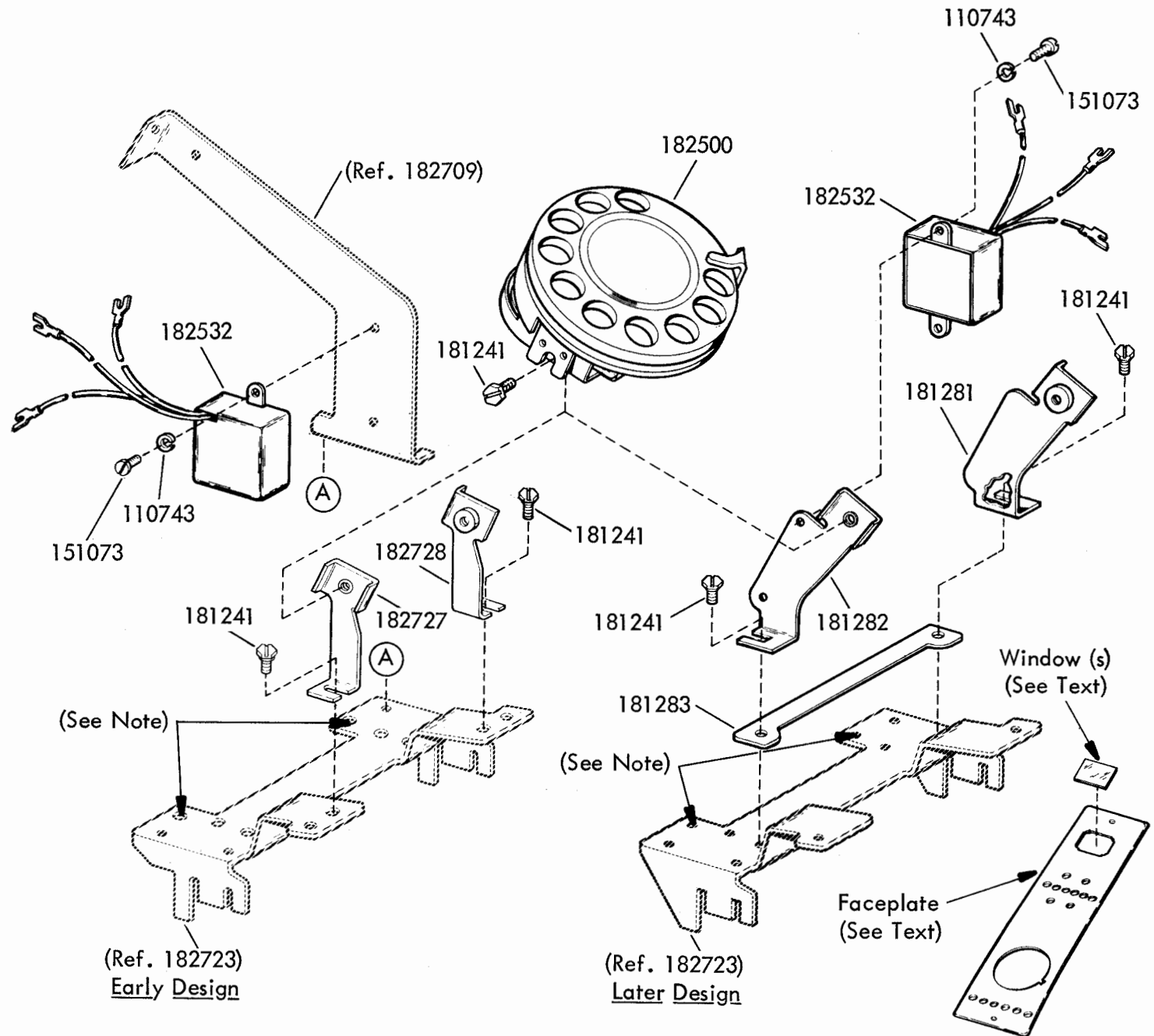
NOTE: ON STATIONS EQUIPPED WITH DIAL TONE DETECTION, CONNECT THE Q, P CONTACT TO TERMINALS 1 AND 2 AS SHOWN.

ON STATIONS EQUIPPED WITHOUT DIAL TONE DETECTION, CONNECT THE P, Q CONTACT TO TERMINALS 4 AND 10 AS SHOWN.

FIGURE 2. TOUCH-TONE DIAL CONNECTIONS
(182489, 182497, 193487 OR 195925 MODIFICATION KIT)

FIGURE 3.

NOTE:
MOUNTING HOLES
FOR TOUCH-TONE
DIAL ASSEMBLY
(182620 Touch-Tone
Dial not shown).



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