

5000AM TRANSACTION I SET BASE WITH 220- OR 2220-TYPE HAND TELEPHONE SET

1. GENERAL

1.01 This section contains identification, installation, connection, and maintenance information for the Transaction I telephone set which consists of a 5000AM base, faceplate and a 220- or 2220-type hand telephone set. For detailed information on components, refer to CD- and SD-69926-01.

1.02 This section is reissued to:

- Revise installation procedures
- Add information on fuses
- Add information on 5000A dial.

Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 For use behind a key system, A and A1 leads are provided by the black (BK) and yellow (Y) leads, respectively, in the mounting cord. If common audible ringing is to be provided, a separate ringer is required.

1.04 For additional information on the Transaction telephone system, refer to Technical Reference, PUB 41804, titled "Switched Network Transaction Telephone System Interfacing With Audio Response Units," and PUB 41805, titled "Transaction Telephone Systems Interfacing With Transmission Control Units."

2. IDENTIFICATION

2.01 The 5000AM Transaction I telephone set base, equipped with a 220- or 2220-type hand telephone set (Fig. 1) provides the standard features of a single line rotary or TOUCH-TONE® telephone set.

Note: If the customer elects to have the dial of the hand telephone set made inoperable

(as covered by 3.29) then it can only provide incoming service and card dialer service.

It can also automatically dial and electronically transmit information, read from a magnetic stripe on a credit card, or keyed on a 15-button manual entry pad (Fig. 1) to a data center for immediate credit authorization, check verification, or inventory control.

2.02 Design Features:

- Modular type
- Magnetic stripe card reader (ABA Track 2)
- Automatic dialer
- Click-disc type 15-button manual entry pad
- Operating instruction lamps (light emitting diodes [LED])
- Green/yellow approval or referral lamps (LED).

2.03 Optional Features:

- TT/DP (TOUCH-TONE/DIAL PULSE) option allows use of button pad and card reader into a rotary or a TOUCH-TONE dial office
- 15-button manual entry pad may be locked inoperable for outgoing calls
- TOUCH-TONE signal output level of set from button pad or card operation may be changed to compensate for loop loss
- An auxiliary manual entry pad (5000A-50 dial) may be connected to allow use of a Personal Identification Number (PIN).

NOTICE

Not for use or disclosure outside the
Bell System except under written agreement

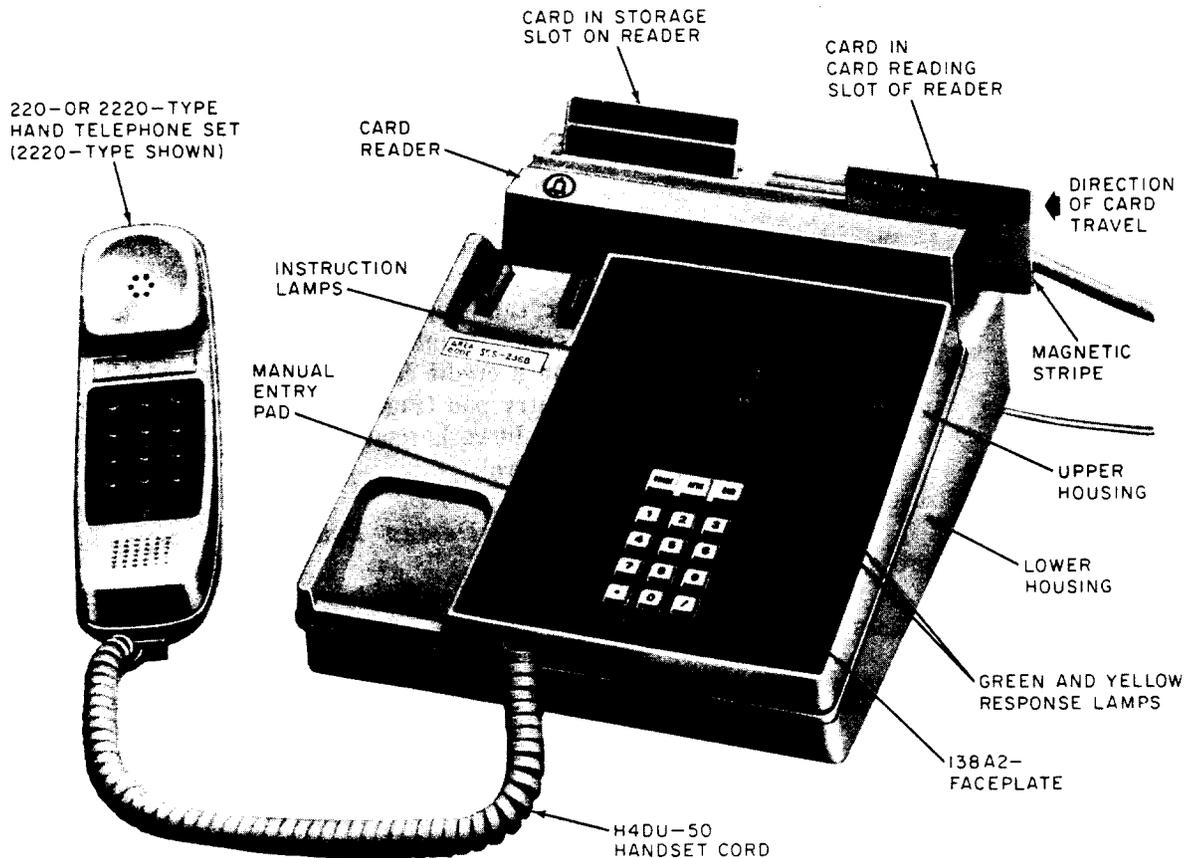


Fig. 1—5000AM Transaction I Telephone Set Base Equipped With 220- or 2220-Type Hand Telephone Set

2.04 The 5000AM Transaction I telephone set base is available in Ivory (-50) only. These bases will be shipped with a disposable protective faceplate, so it is necessary to order the proper faceplate separately (Table A).

2.05 Ordering Guide:

(a) The 5000AM Transaction I telephone set base consists of all the necessary circuitry including power unit and card reader and should be ordered as:

- Base, Telephone Set, 5000AM (includes the following):

Cord, Handset, H4DU-50

Adapter, 227A (for handset cord)

Cord, Mounting, D4BU-29 (7-foot provided, 14- or 25-foot available)

840703904 Test Card A (additional cards may be ordered)

Subscriber Instruction Booklet (SIB-2459B).

(b) One of the following is also required and must be ordered separately:

- Set, Telephone, Hand, 220A-50 (Rotary dial)
- Set, Telephone, Hand, 2220B-50 (TOUCH-TONE dial).

(c) If the auxiliary manual entry pad is to be used, it will be necessary to order the D-180687 Kit of Parts (which includes the 5000A-50 dial) and also an appropriate faceplate (Table A).

3. INSTALLATION

3.01 Terminate the local loop into a connecting block suitable for the D4BU-29 mounting

**TABLE A
TRANSACTION I
FACEPLATE ORDERING GUIDE**

TEL SET	FACEPLATE CODE NUMBER	LETTERING	INTENDED USE
5000AM Tel Set Base	138A1-*	Blank	Without Auxiliary Manual Entry Pad
	138A2-*	Standard Instructions	
	138B1-*	Blank	With Auxiliary Manual Entry Pad
	138B3-*	Standard Instructions	

* Add appropriate color suffix from Table B.

cord, but do not connect the mounting cord at this time. The use of a 625-type connecting block (Fig. 2) is recommended. For information on other modular connecting blocks or adapters, refer to Section 503-100-100.

Warning: Any magnetic stripe card may have its encoding destroyed if the card is carried or stored near a magnet or magnetized object.

3.02 Connect the TRIMLINE® handset to the 5000AM telephone set base using the handset cord and adapter. (A 616P jack is provided on the front of the base.)

3.03 Insure that there is an available 110-volt 3-wire AC receptacle, not controlled by a switch, within reach of the 6-foot power cord.



A 3-wire outlet is required for safety and proper operation of the set. Third conductor must be grounded. If third wire is not provided and grounded, the resistance of the set to electrostatic damage is lowered and the probability of failure is greatly increased.

3.04 To install 138-type faceplate, proceed as follows:

- (1) Remove disposable faceplate by lifting at the midpoints of the left and right edges.

When faceplate is bowed slightly, the locking tabs at top and bottom will release.

Note: If auxiliary manual entry pad is to be installed, do not install faceplate at this time.

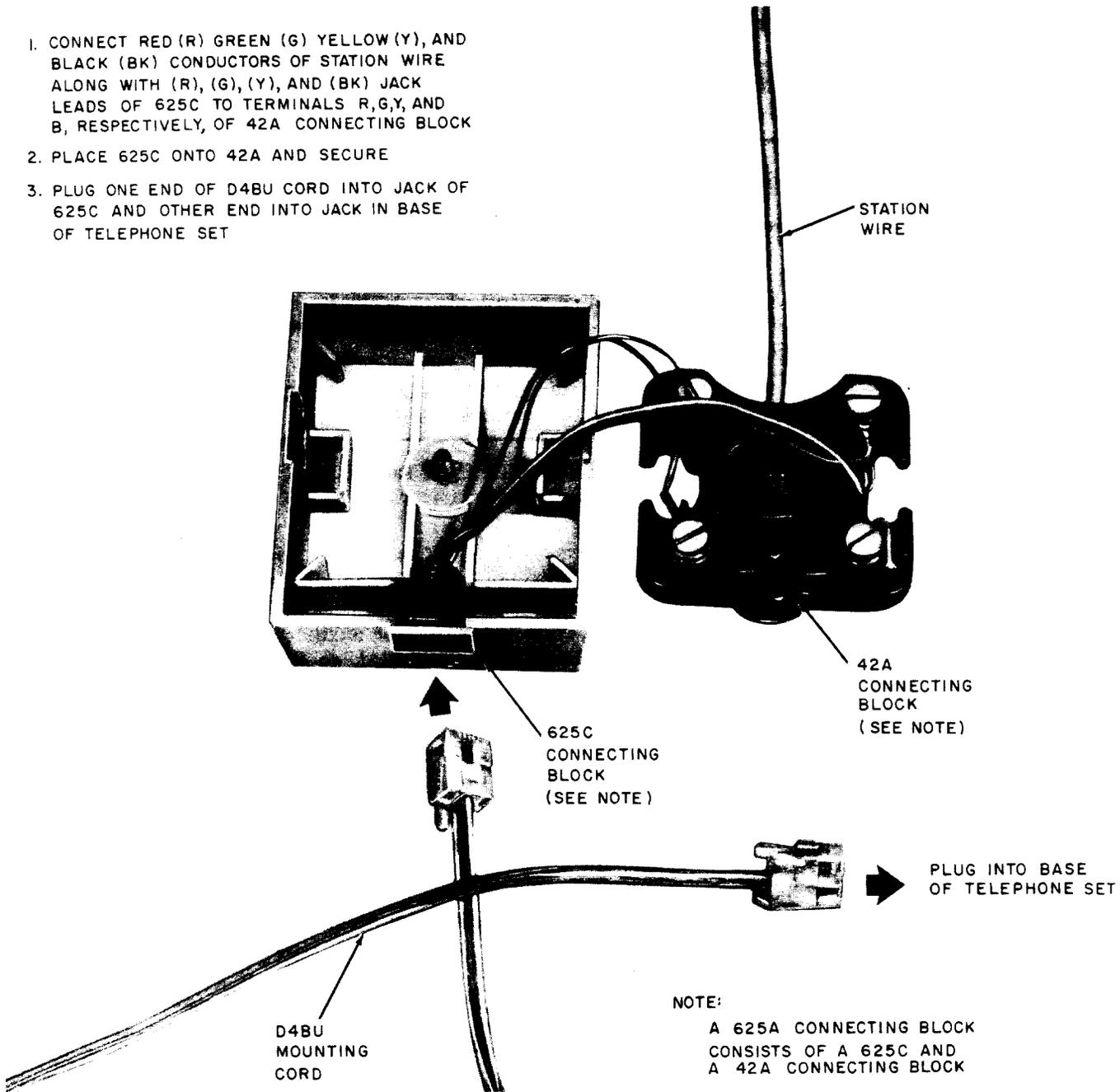
- (2) Install new faceplate by inserting bottom tab into housing and slightly bowing the faceplate enough to insert upper tabs into slots of housing.

TRANSMISSION MEASUREMENTS (INSERTION LOSS)

3.05 The signal output level of the TOUCH-TONE frequencies transmitted by the Transaction I set must be adjusted to match the loop being used. Make a loop insertion loss measurement using a 23D Transmission Measuring Set, or the equivalent, and a 900 ohm termination. Dial the milliwatt supply (1000 Hz) of the serving central office; read and record the loss of the loop.

3.06 It is recommended that at this time the set should be opened (3.07) and all option plugs on main printed wiring board (PWB) checked to insure that they are in their "when shipped" positions as shown by Tables C and D or Fig. 4. Check wiring terminations and if any loose connections are found, reterminate per Fig. 9.

1. CONNECT RED (R) GREEN (G) YELLOW (Y), AND BLACK (BK) CONDUCTORS OF STATION WIRE ALONG WITH (R), (G), (Y), AND (BK) JACK LEADS OF 625C TO TERMINALS R,G,Y, AND B, RESPECTIVELY, OF 42A CONNECTING BLOCK
2. PLACE 625C ONTO 42A AND SECURE
3. PLUG ONE END OF D4BU CORD INTO JACK OF 625C AND OTHER END INTO JACK IN BASE OF TELEPHONE SET



NOTE:
A 625A CONNECTING BLOCK
CONSISTS OF A 625C AND
A 42A CONNECTING BLOCK

Fig. 2—Installation of 625A Connecting Block

3.07 To open set in order to access option plugs and/or terminals proceed as follows:

- (1) Disconnect power plug from AC outlet, if connected.
- (2) Invert set and loosen the two captive screws holding the upper housing and chassis (Fig. 3).
- (3) Lay the upper housing and chassis to the right, as shown by Fig. 5, without disconnecting any cables.

TABLE B

COLOR ORDERING GUIDE (SEE NOTE)

HAND TEL SET		FACEPLATES	
SUFFIX	COLOR	SUFFIX	COLOR
-50	Ivory	-100	Avocado
		-108	Teak
		-109	Walnut
		-111	Gold
		-112	Orange
		-113	Brown
		-114	Red
		-115	Blue
		-118	Black

Note: The 5000AM telephone set base is available in Ivory only and the hand telephone set should also be Ivory. The faceplate must be ordered separately.

(4) To reassemble, reverse procedure.

3.08 Set the TOUCH-TONE signal output level for the actual measured loss (AML) of the loop (3.05) as follows:

- (1) Place the option plugs in their proper positions for the measured loss. As shown in Table C and Fig. 4.
- (2) If the actual measured loss of the loop is 3.9 dB, or less, resistors R2 and R3 should be placed in the circuit. This is done by moving the orange (O) and slate (S) leads from pins T2 and R2 to pins O and S, respectively. See Table C and Fig. 9.

Note: Early production sets do not have the pin connector arrangement but have clip type terminals for placing resistors R2 and R3 in the circuit. The green (G) and red (R) leads from the 623E4 jack are connected to terminals T and R, respectively, and the (O) and (S) leads are connected across the

resistors by clip-type terminals. If the AML of the loop is 3.9 dB, or less, proceed as follows:

(a) Remove (G) lead from terminal T on control board. Remove either end of (O) lead from clip-type terminal at R3 and connect to terminal T. Connect (G) lead which was removed from T to now vacant R3 clip-type terminal.

(b) Remove (R) lead from terminal R on control board. Remove either end of (S) lead from clip-type terminal at R2 and connect to terminal R. Connect (R) lead which was removed from R to now vacant R2 clip-type terminal.

(3) If loss of loop exceeds 12 dB the quality of the service may be impaired. Defer, according to local procedures, until an acceptable loop is made available.

3.09 Connect the set to the telephone line by inserting the mounting cord into the connecting block.

3.10 Remove the gum-backed "OPTIONS" sticker which is packed with the base and attach it to the bottom of the base near the front. If the service order does not call for the implementation of any options (Dial Pulse, Lockout, or disconnection of the ringer) at this time, reassemble set and proceed to 3.12.

Note: If the order calls for making dial of hand telephone set inoperable, do not disable dial until all testing is completed.

OPTIONS



The service order must specify that each option is, or is not, required. If the service order does not so specify, the sales representative should be contacted, or refer to supervisor for clarification of requirements.

3.11 If the service order specifies that the Dial Pulse and/or Lockout options be activated,

TABLE C

ADJUSTMENT OF *TOUCH-TONE* OUTPUT LEVEL (NOTE)

LOOP LOSS IN DBs	OPTION PLUG POSITIONS ON MAIN PWB			WIRING ON CONTROL BOARD						NOMINAL OUTPUT LEVEL IN DBM
				RESISTOR - R2			RESISTOR - R3			
	R-34	R-35	R-36	LEAD COLOR	REMOVE FROM PIN	CONNECT TO PIN	LEAD COLOR	REMOVE FROM PIN	CONNECT TO PIN	
0 to 1.9†	E33-E34	E31-E32	E28-E29	(S)	R2	S	(O)	T2	O	-13.5
2.0 to 3.9†	E34-E35	E30-E31	E28-E29	(S)	R2	S	(O)	T2	O	-11.5
4.0 to 5.9	E34-E35‡	E30-E31‡	E27-E28‡	-	-	-	-	-	-	- 9.5
6.0 to 7.9	E34-E35	E30-E31	E28-E29	-	-	-	-	-	-	- 7.5
8.0 to 10.4	E34-E35	E31-E32	E27-E28	-	-	-	-	-	-	- 5.5
10.5 or more	E34-E35	E31-E32	E28-E29	-	-	-	-	-	-	- 3.0

Note: See Fig. 4 for location of option plugs on main PWB.

See Fig. 9 for location of wiring option on control board.

† If loop loss is 3.9 dB or less, resistors R2 and R3 should be connected into the circuit as shown. (See Note 4 of Fig. 9).

For early production sets, refer to note after 3.08 (2).

‡ Plug positions when shipped from factory.

TABLE D (SEE NOTE)

PLACEMENT OF OPTION PLUGS

OPTION	PLUG POSITION	RESULT
Key Pad Lock out	*E42—E43	Not locked (can dial out from key pad)
	E43—E44	Locked (cannot dial out from key pad)
TT/DP Dialing	*E21—E22	Key pad dials in TT frequencies
	E22—E23	Key pad sends out dial pulses
FSK†	*E40—E41	FSK receiver is not present
	E39—E40	FSK receiver is present

* Option plug positions when shipped.

† Frequency shift keying (FSK) option not available at this time.

Note: See Fig. 4 for location of option plugs.

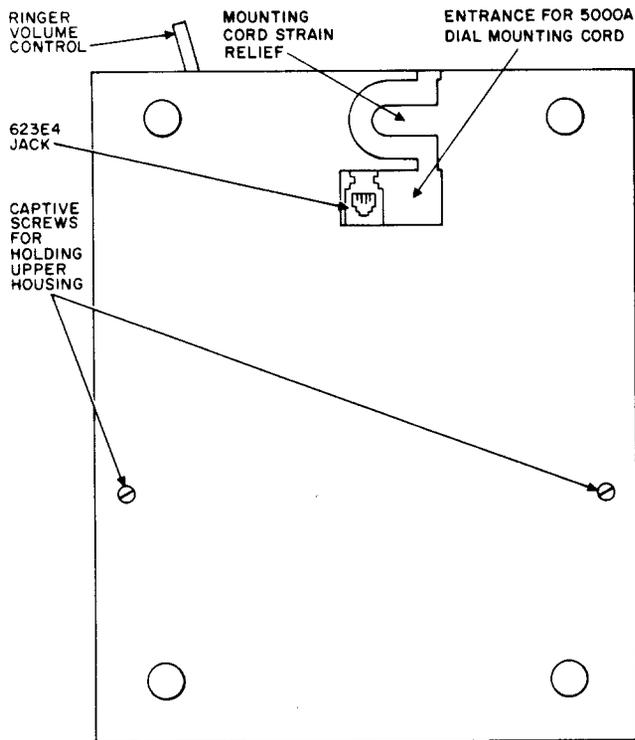


Fig. 3—Bottom of 5000AM Transaction I Telephone Base

or that ringer be disconnected, access the main PWB (3.07) and proceed as follows:

(a) If both the Dial Pulse and Lockout options are called for:

- (1) Place TT/DP option plug for DP per Table D.
- (2) Place upper housing and chassis back on set and reconnect AC power cord.
- (3) Go off-hook and, using manual entry pad, dial any test number and verify that the call is completed. This tests the dial pulse feature.
- (4) Disconnect power cord, lay upper housing and chassis aside, and move Lockout option plug to lockout position per Table D.
- (5) Reassemble set and reconnect AC power cord.
- (6) Test lockout by going off-hook and depressing any button on manual entry pad to verify absence of dial pulses being transmitted.

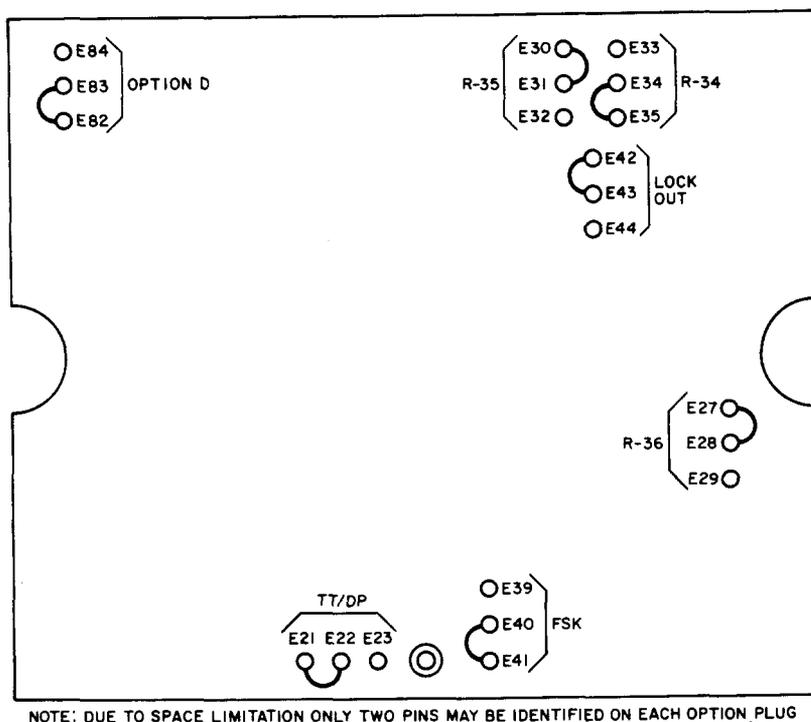


Fig. 4—Main PWB, Option Plug Locations Showing Plug Positions as Shipped

Note: If the service order specifies keyboard lockout, the TT/DP option plug must still be set for the correct class of service, TOUCH-TONE or Rotary.

(b) If only Dial Pulse option is specified:

- (1) Proceed as in (a) Step (1), (2), (3), and (5).

(c) If only Lockout option is specified:

- (1) Move Lockout option plug per Table D.
- (2) Reassemble set and reconnect AC power cord.
- (3) Test lockout by going off-hook and depressing any button on manual entry pad to verify absence of TOUCH-TONE frequency signals.

(d) To disconnect P2B ringer:

- (1) Remove red (R) and black (BK) ringer leads from terminal P1 and T, respectively, on control board, insulate and store.

- (2) Reassemble set and reconnect AC power cord.

Note: Indicate on the sticker on the base of the set any options that are implemented.

3.12 With handset on-hook, plug in power cord and then go off-hook momentarily to reset Transaction I telephone set.

Note: If no lamps light when handset is taken off-hook, either AC receptacle is defective or fuses may be open. If fuses are suspected, refer to 4.02 in Maintenance section.

PRELIMINARY TEST PROCEDURE

3.13 Go off-hook by lifting handset; first instruction lamp will light. Run test card A, (card is packed with the 5000AM base) through the card reader from right to left. Card must be held with the magnetic stripe down and to the front and must be moved through the slot smoothly and without hesitation. First instruction lamp should go out and second instruction lamp should light. Correct operation of these two lamps indicates that the test card is properly coded and the card reader

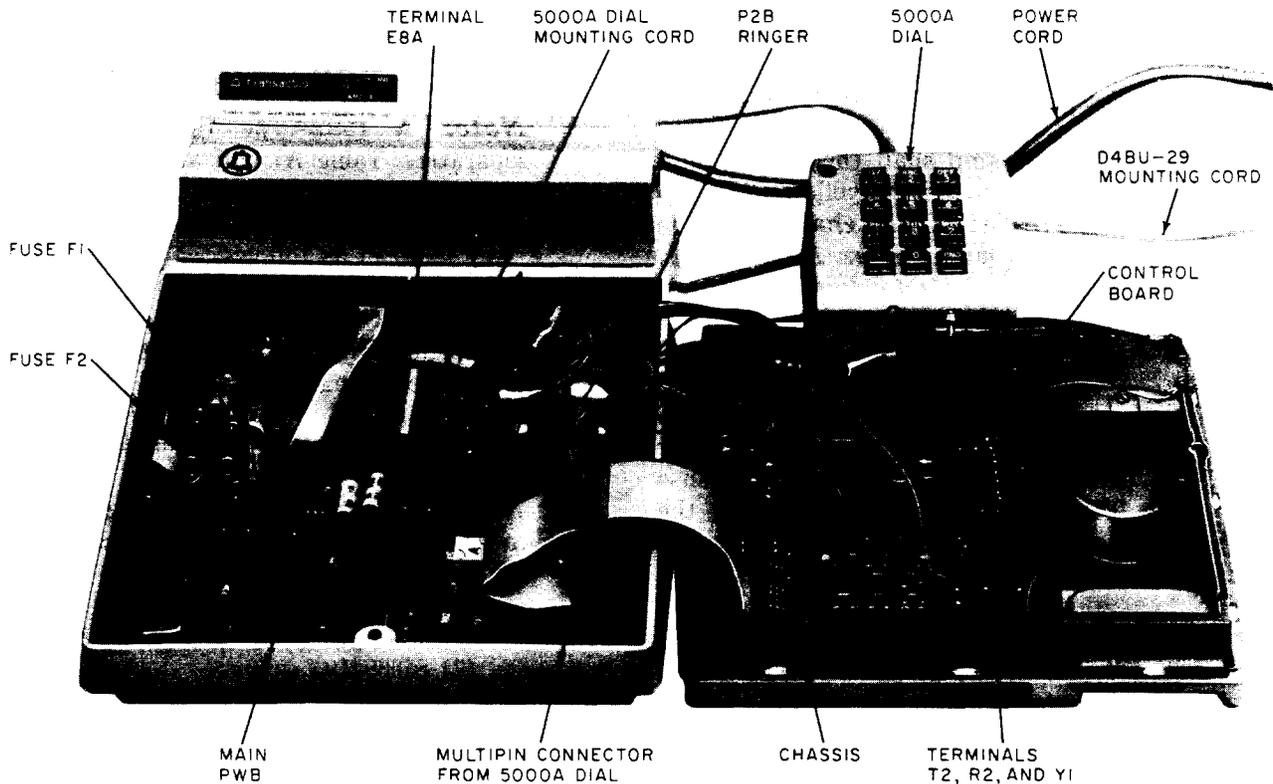


Fig. 5—5000AM Transaction I Telephone Set Base With Upper Housing and Chassis Laid Aside and 5000A Dial Connected

is good. If the card is not read correctly the first lamp will blink and the card reading procedure should be repeated.

INSTALLATION TEST PROCEDURES

3.14 Using the TRIMLINE handset, perform the normal tests, including ringback, for a rotary or TOUCH-TONE telephone set (as applicable) according to local procedures.

REMOTE TEST PROCEDURE



In the following test there must not be over a 10-second delay between steps or the test line will interpret this as an error.

Note: If an interrupted tone (1/2 second on, 1/2 second off), lasting about 5 seconds, is heard at any time, an error is indicated. The 1A Transaction Telephone Test Line Station (TTTLS) will disconnect at the end of the

interrupted tone. To retest, it will be necessary to redial the test line (3.15) through (3.19).

3.15 Go off-hook, first instruction lamp is lighted and dial tone is heard. Manually dial the number of the Transaction Telephone Test Line Station (TTTLS), using the TRIMLINE handset.

3.16 When the call is completed to the TTTLS, it will respond with a 3-second answer tone which will be heard on the TRIMLINE handset. After the answer tone has terminated, the test card should be passed through the reader two (2) times. The instruction lamps should sequence—the second instruction lamp should light after the card is passed through the first time, and when the card has been passed through the second time, the third lamp will be lighted.

3.17 Key in digits by depressing buttons on the manual entry pad, *in sequence*, 1 through 9, ●, 0, /, and END. The third instruction lamp will now be extinguished. While you are doing this, the set will transmit the buffered data as

TOUCH-TONE pulses. It is not necessary to wait for the end of transmission of data from the test card.

3.18 The green (G) lamp shall then light for 3 seconds and go out as the yellow (Y) lamp lights. Three TOUCH-TONE characters are transmitted as the (Y) lamp lights. After the (Y) lamp lights and the three characters are transmitted, depress the ERASE button and pause to listen for the transmission of two more TOUCH-TONE characters. Next, depress the ATTN button and hear two more characters transmitted. (If you do not hear an interrupted tone, the set is working properly.) You may hear a muted 3 second response tone. The TTLS will disconnect. Place the handset on-hook. The yellow lamp may be extinguished by momentarily going off-hook.

3.19 Go off-hook, dial the TTLS using the handset and then depress END button four times. As this call is answered by the test line, the fourth instruction lamp will be lighted. (On the standard faceplate, this lamp is labeled "Follow Special Instructions.") This tests the lamp and associated circuitry. Go on-hook to release test line. Go off-hook momentarily to reset Transaction telephone set and extinguish lamp. If no auxiliary manual entry pad is provided, proceed to 3.25.

AUXILIARY MANUAL ENTRY PAD (PERSONAL IDENTIFICATION NUMBER [PIN])

3.20 If the auxiliary manual entry pad is to be used, it should be installed at this time. Install the D-180687 Kit of Parts (Fig. 6), which includes:

- 1—5000A-50 dial
- 1—841934946 mounting plate
- 1—841935109 key (push-to-lock, push-to-unlock)
- 4—840694194 screws
- 1—840713366 label
- 2—D-161488 connectors (provided with kit of parts manufactured after 1st quarter of 1976).

(1) Remove faceplate by lifting at the midpoints of the right and left edges. When faceplate

is bowed slightly, the locking tabs at top and bottom will release.

Note: A 138B-type faceplate (ordered separately, Table A) will also be required.

(2) Install 841934946 mounting plate and 841935109 key (Fig. 7) as follows:

(a) Remove screw holding static arrester spring (Fig. 7) and slide mounting plate under the spring. Replace the screw holding the spring and the associated lead. This should secure right side of mounting plate.

Note: The static arrester spring is intended to ground the faceplate and the chrome ring for electrostatic protection.

(b) Secure left side of mounting plate with (2) 840694194 screws.

(c) Insert 841935109 key with trimmed portion to right, the LED in the upper right, and the two indexing or alignment holes over tabs on the mounting plate to the left.

(d) Secure right side of key using the other (2) 840694194 screws provided.

(3) Install new 138B-type faceplate.

(4) Open the set (3.07); lay the upper housing and chassis to the right (Fig. 5).

(5) Hold the lower housing up on its side and feed the mounting cord of the dial through the cord entrance hole in the base pan. Using Fig. 5, make connections as follows:

(a) Plug multipin connector of mounting cord into connector on flex ribbon cable.

Note: A polarizing key in the female connector assures proper mating of connectors.

(b) Connect 508 plug to 841935109 key.

(c) Connect the black (BK) spade-tipped mounting cord conductor to terminal E8A on the main PWB.

Note: In early production sets there is no terminal E8A. In this case, remove the black

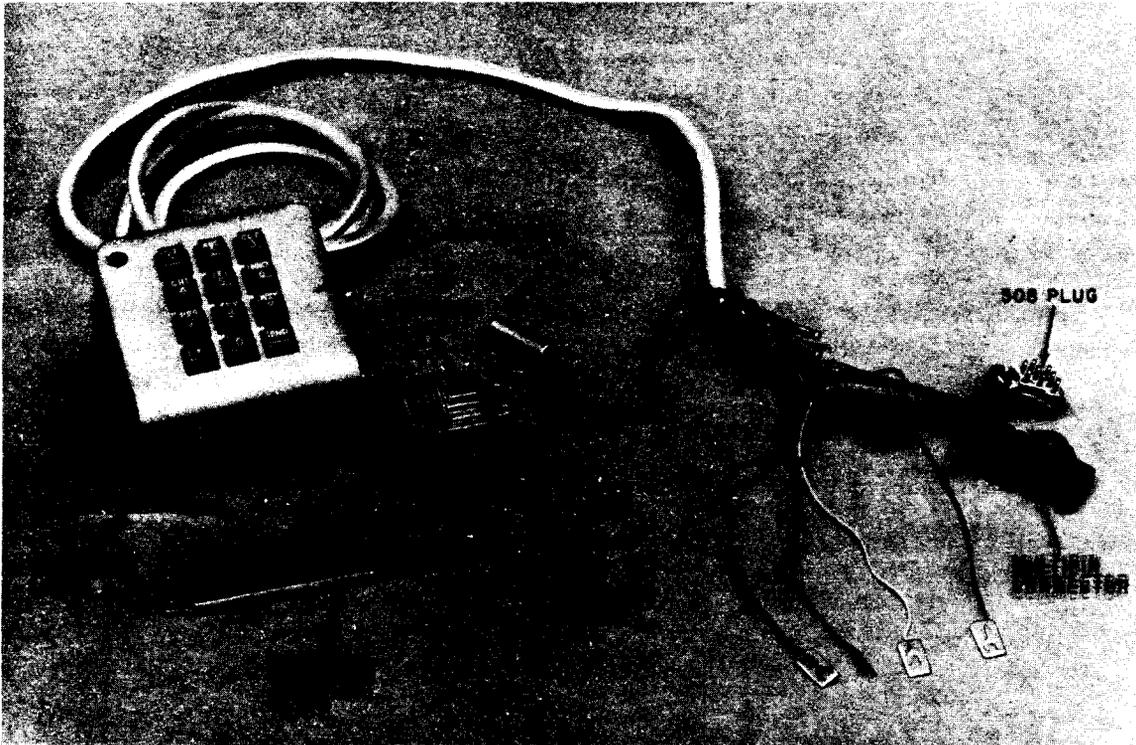


Fig. 6—D-180687 Kit of Parts

(BK) lead connected to terminal E8 and plug into the connector on the black mounting cord conductor; tape or insulate the connection. Now connect the black spade-tipped mounting cord conductor to terminal E8.



If the auxiliary manual entry pad should ever be removed, it is imperative that leads be reconnected to their normal locations. Remove the (BK) lead from the connector on the black mounting cord conductor and reterminate on terminal E8.

(d) Connect the slate (S) spade-tipped mounting cord conductor to terminal Y1 on the control board (Fig. 9).

(e) Connect the white (W) spade-tipped mounting cord conductor to terminal W on the control board (Fig. 9).

Note: In later production models, there is no terminal W on the control board; in this

case, insulate and store the white mounting cord conductor.



In some early production sets, the control board had neither a Y1 nor a W terminal. If a PIN pad is to be provided with one of these sets, the (S) and (W) spade-tipped mounting cord conductors should be connected together using a D-161488 connector.

(f) Insulate and store any unused mounting cord leads.

(6) Replace upper housing and chassis and tighten captive screws holding upper and lower housing together.

(7) Place jacketed portion of mounting cord under strain relief as shown in Fig. 3.

(8) Affix 840713366 label to top of 5000A dial directly above number buttons.

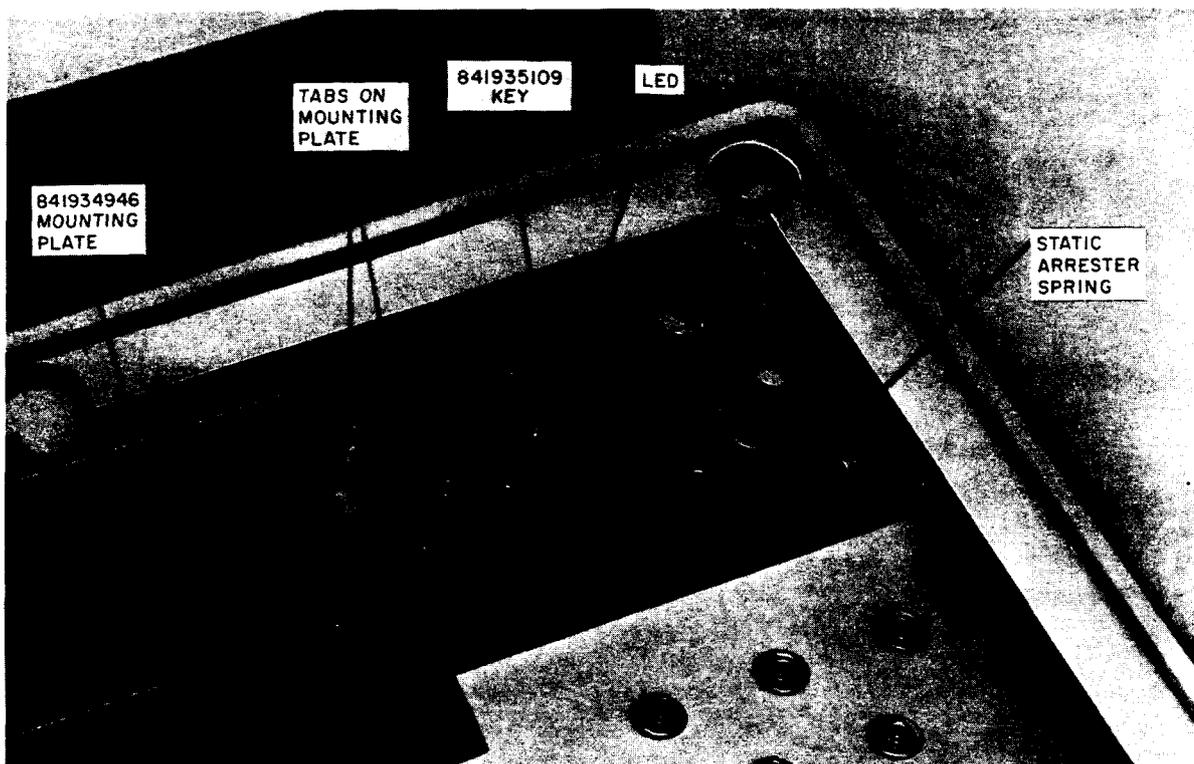


Fig. 7—5000AM With Faceplate Removed Showing Mounting Plate and 651G Key Installed

3.21 To test the auxiliary manual entry pad, press the Personal Identification Number (PIN) key to enable the pad. Observe that both Light Emitting Diodes (LED) light, one on the PIN key and one on the 5000A-50 dial. Depress the PIN key again and observe that both LED's are extinguished.

3.22 Repeat 3.15 and 3.16 and then press the PIN key to enable the pad.

3.23 Key in by depressing, *in sequence*, digits 1 through 9, ●, and 0 on the 5000A-50 dial. (It is not necessary to wait for data from card to be transmitted.) Depress / (slash) on the 5000AM base and then depress END on the 5000A-50 dial. The third instruction lamp shall be extinguished.

3.24 The green response lamp shall light for 3 seconds and go out as the yellow lamp lights. Depress the PIN key and place the handset on-hook. Go off-hook momentarily to extinguish the yellow lamp and reset the Transaction I set.

FINAL TEST PROCEDURE

3.25 If the customer has a dialing card, ask him to use his card and place a call to his data center to verify that data center can be reached.

3.26 This completes the test procedures. Write the telephone number of the TTLS on the test card for customer's future reference and give test card to customer along with the Subscriber Instruction Booklet. Explain to the customer the use of the test card per Subscriber Instruction Booklet.

DIAL RESTRICTION OF HAND TELEPHONE SET

3.27 Some customers may want the dial of the hand telephone set restricted from making outgoing calls. This feature is not recommended and will only be incorporated at the customer's insistence.

Note: If dial restriction is to be provided, all installation tests must be completed prior to making the modification.



If dial is restricted, the set can no longer be used as a normal telephone set since calls can only be initiated by a dialing card.

3.28 Only the 220-type hand telephone set may be restricted. If dial restriction is requested at a location that has been equipped for TOUCH-TONE service, the 2220-type hand telephone set should be replaced with a 220-type hand telephone set that has been modified per 3.29.

3.29 To restrict the dial in a 220-type hand telephone set, proceed as follows:

- (1) Remove handset cord from handset using KS-21107 releaser or equivalent.
- (2) Remove cover or number card retainer located just above dial using KS-21107 releaser or equivalent.
- (3) Remove light seal plate and the 2 screws located under retainer. This will release the cover from the handset.
- (4) Place a strap between the pulsing contacts as shown in Fig. 8. The dial will remain in the handset.

Note: If new 220C-50 handset has been provided, place strap between the two screws located near the top center of the flex wiring board.

- (5) Reassemble handset and reconnect handset cord.
 - (6) Note this modification on the option sticker.
- 3.30** Outgoing calls may now be made only by using a dialing card.

4. MAINTENANCE



Before attempting to make any maintenance tests, check option sticker under base of set, to see what options (3.11 or 3.29) may have been implemented.

4.01 In case of commercial power failure, Transaction telephone sets can be used as standard telephone sets using the TRIMLINE handset. All

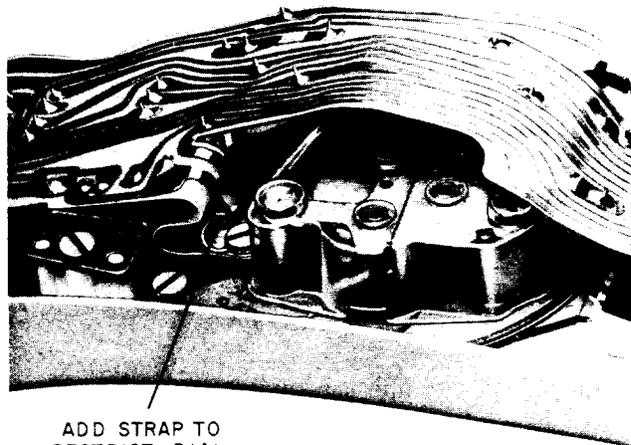


Fig. 8—Restricting Dial of 220-Type Hand Telephone Set

other functions of the Transaction telephone set are rendered inoperative by the loss of AC power.



If dial of hand telephone set has been restricted (3.29), the set cannot be used as a standard telephone set. The restricted handset may be unplugged and replaced for maintenance testing purposes. Be sure to reinstall customer's handset when testing is completed.

4.02 There are two fuses, (F1 for -12 volt and F2 for +5 volt circuitry) mounted on a block near the left rear corner of the main PWB, Fig. 5. If a fuse failure is suspected, the fuses may be removed (access per 3.07), and checked visually or observe the following indications:

- (1) If fuse F1 is open:
 - (a) No TOUCH-TONE or dial pulse signals may be heard on handset when buttons are depressed on manual entry pad.

Note: If Lockout option has been activated this would be an inconclusive test.

 - (b) Lights on set may or may not be operable.
- (2) If F2 fuse is open, there will be no lamps operable on set. These are Bussman MDL

one point six (1.6) ampere fuses and may be obtained locally.

WARNING: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE FUSES ONLY WITH 1.6 AMP SLO-BLO (BUS MDL) OR EQUIVALENT.

4.03 Other field maintenance of the sets shall consist of the following:

- (a) Check for line continuity (dial tone).
- (b) Check for proper connection of cords and jacks.
- (c) Check for loose wire or connections on main PWB or control board (Fig. 9).
- (d) Replacement of H4DU-50 handset cord and/or 227A adapter.

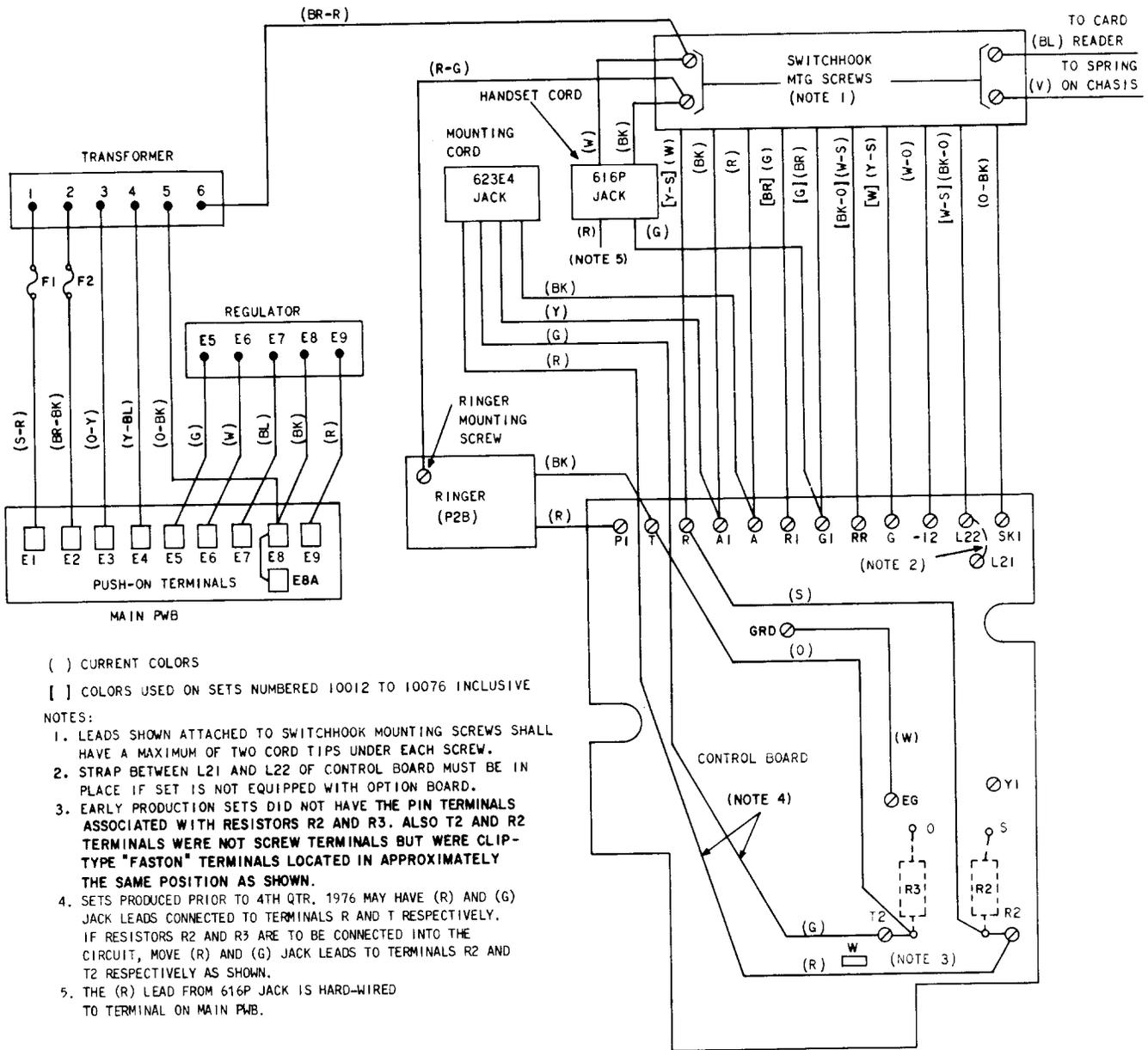
(e) Replacement of D4BU-29 mounting cord.

(f) Replacement of TRIMLINE handset.

(g) Replacement of auxiliary manual entry pad.

4.04 If the loss of the loop changes due to cable activity, etc. and/or difficulty is encountered in communicating with the remote data center, the loop loss should be measured and the TOUCH-TONE signal output level adjusted per 3.08.

4.05 Field repairs on the 5000AM base shall not be attempted. Return defective base to Western Electric Service Center in accordance with local procedures. If base is being replaced, return disposable faceplate from new base with defective base.



- () CURRENT COLORS
 [] COLORS USED ON SETS NUMBERED 10012 TO 10076 INCLUSIVE
- NOTES:
- LEADS SHOWN ATTACHED TO SWITCHHOOK MOUNTING SCREWS SHALL HAVE A MAXIMUM OF TWO CORD TIPS UNDER EACH SCREW.
 - STRAP BETWEEN L21 AND L22 OF CONTROL BOARD MUST BE IN PLACE IF SET IS NOT EQUIPPED WITH OPTION BOARD.
 - EARLY PRODUCTION SETS DID NOT HAVE THE PIN TERMINALS ASSOCIATED WITH RESISTORS R2 AND R3. ALSO T2 AND R2 TERMINALS WERE NOT SCREW TERMINALS BUT WERE CLIP-TYPE "FASTON" TERMINALS LOCATED IN APPROXIMATELY THE SAME POSITION AS SHOWN.
 - SETS PRODUCED PRIOR TO 4TH QTR. 1976 MAY HAVE (R) AND (G) JACK LEADS CONNECTED TO TERMINALS R AND T RESPECTIVELY. IF RESISTORS R2 AND R3 ARE TO BE CONNECTED INTO THE CIRCUIT, MOVE (R) AND (G) JACK LEADS TO TERMINALS R2 AND T2 RESPECTIVELY AS SHOWN.
 - THE (R) LEAD FROM 616P JACK IS HARD-WIRED TO TERMINAL ON MAIN PWB.

Fig. 9—Partial Schematic Showing Conductors Attached by Screws or Push-On Terminals