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 GENERAL

HAND TELEPHONE SET—220A, 1220A, AND 2220B

IDENTIFICATION, INSTALLATION, MAINTENANCE, AND CONNECTIONS

1. GENERAL

1.01 This section is reissued to:

- Include 2220B hand telephone set
- Add H5AD (message waiting lamp) handset cord, D5AL and D5AN mounting cords (associated apparatus or equipment)
- Show handset cords are ordered separately
- Remove reference to dials, networks, receiver units, and transmitter units as being replaceable components
- Include test procedure for hand telephone set

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

2. IDENTIFICATION

2.01 The 220A (Fig. 1), 1220A, and 2220B (Fig. 2) hand telephone sets are components of the dial-in-handset TRIMLINE® telephone sets. The hand telephone set is a complete telephone set except for the handset cord and the ringer and line switch which are housed in a telephone base.

ORDERING GUIDE

- Set, Telephone, Hand, 220A-*
- Set, Telephone, Hand, 1220A-*
- Set, Telephone, Hand, 2220B-*

(a) **Replaceable Common Components:**

- Lamp, 53B
- P-25E803, Number Card Retainer

- P-28E320, Light Seal
- Form, E5002A (number card)

(b) **Associated Apparatus or Equipment:** (order separately)

- Cord, Handset, H4DB-*
- Cord, Handset, H5AA-*
- Cord, Handset, H5AD-* (Equipped with message waiting lamp)
- AC1-* Telephone Base
- AD1-* Telephone Base
- Cord, Mounting, D5AL-*(AD1 Base)
- Cord, Mounting, D5AN-*(AD1 Base, retractable)
- 2012A Transformer (for other suitable transformers, see section on transformers)

(c) **Customer Instruction Booklet:**

- GN-2426 (220A)
- GN-2433 (1220A)
- GN-2441 (2220B)

*Refer to Table A for color selection.

3. INSTALLATION

(a) **Planning**—When planning the installation of a hand telephone set together with its companion base, consider the following:

- Safety for yourself, customer, and maintenance personnel.
- Location—A 120V, 60 Hz power receptacle must be available, not under the control of

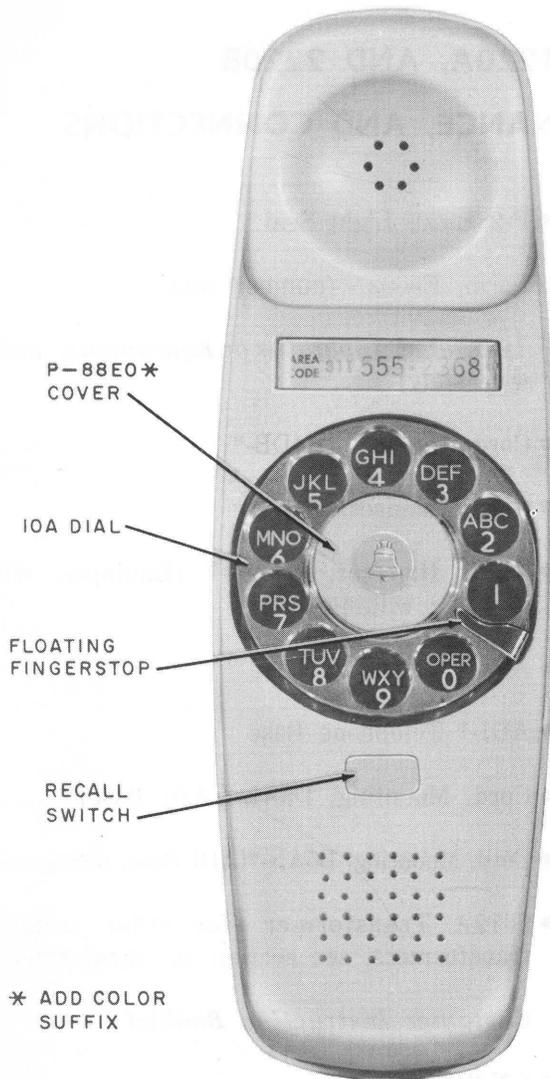


Fig. 1—220A Hand Telephone Set

a switch, that can be used for the transformer to provide power for the dial light.

- Distance between associated equipment or apparatus.
- General appearance of installation.

(b) **Installing**

- (1) Connect the 220A, 1220A, or 2220B hand telephone set to a telephone base by plugging an H4DB cord (Fig. 3) or H5AA (tip

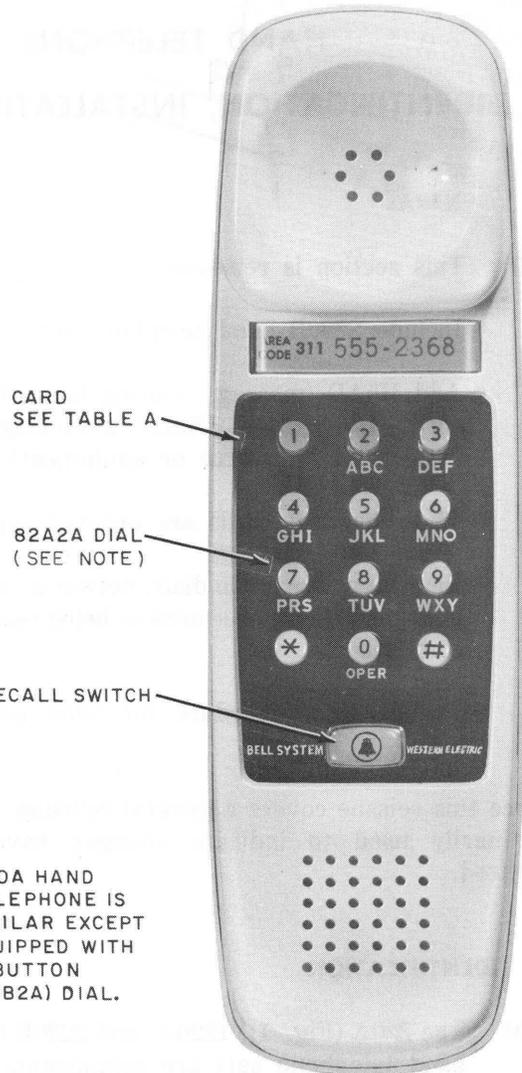


Fig. 2—2220B Hand Telephone Set

party lines) into the jacks on each component. The cord must be ordered separately.

- (2) If tip party identification is required, an H5AA cord must be used. Check under number card window to see that screw used in tip party identification switch is tightened down. The absence of a screw or screw hole in the identification switch position (Fig. 4) indicates that the connection has been made in the network at the factory. The H4DB and H5AA handset cords are available in 5-1/2, 9-, and 13-foot lengths.

TABLE A
COLOR SELECTION AND PIECE PART INFORMATION*

HAND TELEPHONE AND DIAL HUB COVER†		DIAL FACE CARD (1220 AND 2220)		
STANDARD COLOR	SUFFIX	COLOR	PIECE PART NO. (1220A ONLY)	PIECE PART NO. (2220B ONLY)
Black	-03	Slate	P-22F570	P-22F967
Ivory	-50	Cinnamon Brown	P-22F571	P-22F968
Green	-51	Dark Jade Gray	P-22F572	P-22F969
Red	-53	Burgundy	P-22F573	P-22F970
Yellow	-56	Gold	P-22F574	P-22F971
White	-58	Slate	P-22F570	P-22F967
Rose Pink	-59	Rose	P-22F575	P-22F972
Lt. Beige	-60	Sandalwood	P-22F576	P-22F973
Lt. Gray	-61	Slate	P-22F570	P-22F967
Aqua Blue	-62	Peacock Blue	P-22F577	P-22F974
Turquoise	-64	Turquoise Green	P-22F578	P-22F975

* Refer to Section 500-120-100 for promoted colors

† 220A hand telephone set only

(3) If message waiting lamp feature is required, an H5AD cord must be used. The lamp equipped end of the cord plugs into the hand telephone set. It is available in 5-1/2 foot length only.



If it is necessary to use an H5AA cord for other than tip party identification service, disconnect the (BL) ringer lead from B terminal on the terminal board in the base, insulate and store.

(4) The 220A, 1220A, and 2220B hand telephone sets are factory equipped with 53B dial lamps; power for lamps is supplied by a 2012A transformer or any other transformer where more than one dial light set is installed (see section of transformers). **DO NOT USE 2012B TRANSFORMER.**



The illumination of the dial diminishes with increased cord lengths. In installations where the illumination is considered inadequate, the 53B lamp may be replaced by a 53A, if the lamp power is supplied by a 2012A transformer and the combined lengths of mounting and handset cords exceed 15 feet. Refer to Part 4, Maintenance, for dial lamp replacement.

(5) When the hand telephone set is used in conjunction with a key telephone system, the dial lamp can be powered by the 101G or equivalent power supply component of the key system apparatus. In this case, the 53B dial lamp must be replaced with the 53A lamp and the 10V ac tap on transformer used.

(6) Install Form E-5002A (number card) in space provided above the dial. Use

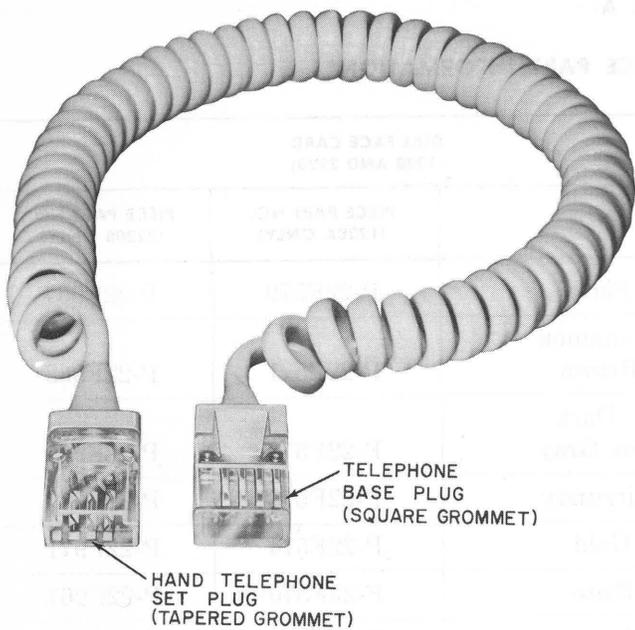


Fig. 3—H4DB Cord

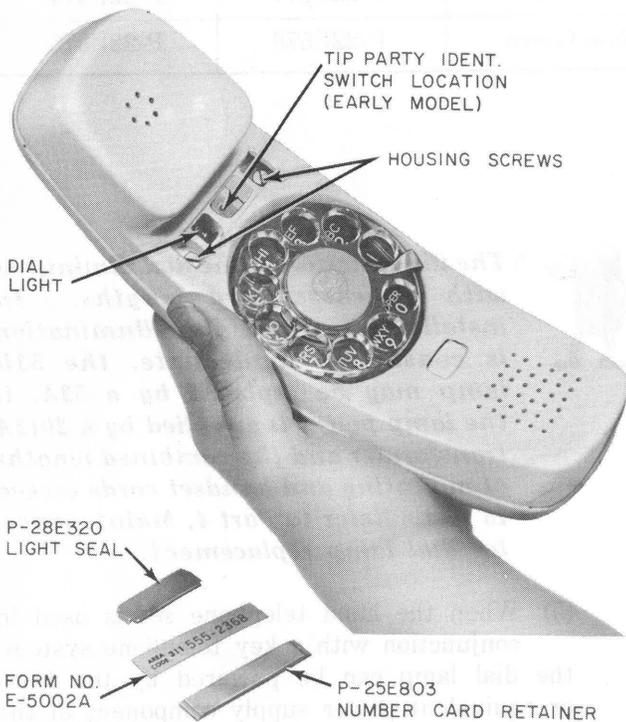


Fig. 4—220A Hand Telephone Set, Number Card Removed

KS-16750L2 releaser to remove number card holder. Replace holder by inserting one end in the recess. Put light pressure on the other end to cause a slight outward bow and snap into recess.

INSTRUCTING THE CUSTOMER

(a) **Recall Switch (Fig. 1 and 2):** Point out recall switch and explain advantages of switch. Example: If a person receives busy tone at conclusion of dialing a number, he may depress the recall switch for a few seconds; then release. Dial tone will again be heard. This is done in place of depressing line switch plunger on the telephone base.

Caution: If the recall switch is depressed during conversation or dialing, Central Office equipment may be disconnected.

(b) **“Floating” Finger Stop (220A only)**

- Demonstrate finger stop by dialing a digit. Then depress recall switch.

Note: When demonstrating finger stop, be guided by local instructions in choosing digits to dial. Some digits (i. e., 1 or 9) may be used as special access numbers for services such as DDD in ANI offices.

- To prevent dialing errors, every digit dialed requires rotation of fingerwheel until finger is stopped.

(c) **AC1 Telephone Base:** Show customer how to place 220A, 1220A, or 2220B hand telephone set in waiting position as shown in Fig. 5.

4. MAINTENANCE

4.01 In areas where RF suppression is required, replace the hand telephone set with a set that has been modified by the local distributing house. Modified sets will not be recoded but will be stamped **“RF Suppressed See 500-150-100”**. Stamp is located adjacent to handset cord jack where the set code is stamped.

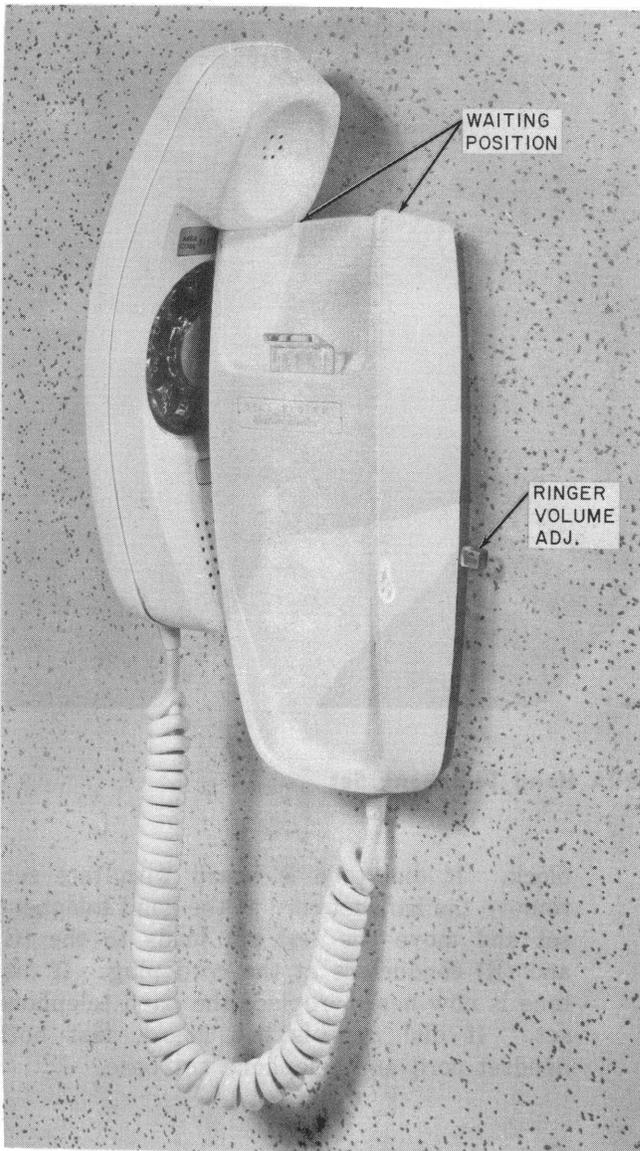


Fig. 5—220A Hand Telephone Set in Waiting Position on AC1 Telephone Base

4.02 Field maintenance of the 220A, 1220A, and 2220B hand telephone sets is limited to the following:

- Dial lamp
- P-25E803 number card retainer
- P-28E320 light seal
- Form E-5002A number card
- Handset Cords

4.03 Replace defective dial lamp and handset cord as follows:

- (a) **Dial Lamp:** To replace a defective dial lamp (Fig. 6), use 553A tool. To gain access to the lamp, remove number card retainer, number card, and light-seal plate.
- (b) **Handset Cord:** To replace a plug ended handset cord (Fig. 7), use a KS-16750L2 releaser. Insert tool in space provided and apply pressure against spring clip toward body of plug. When spring clip has been depressed, pull plug out of jack.

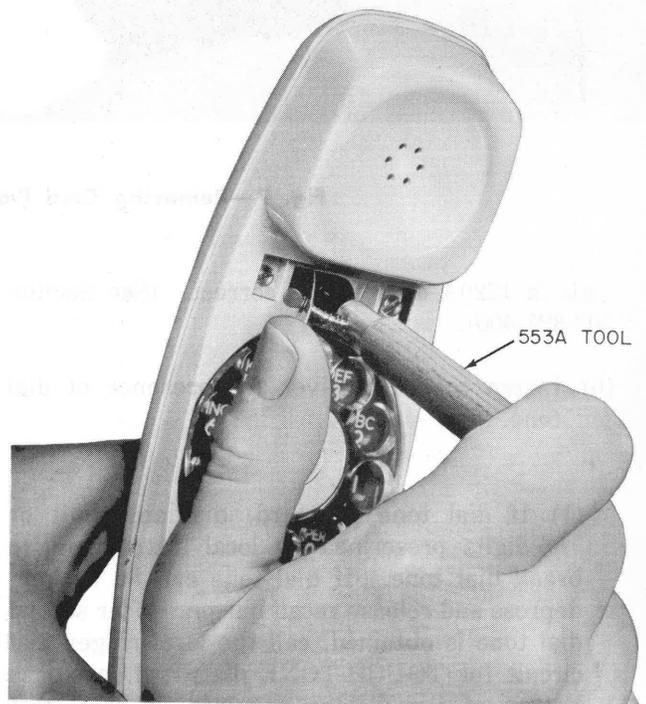


Fig. 6—Replacing Dial Lamp



If transmission troubles are experienced or the dial is inoperative, replace the hand telephone set.

4.04 To test hand telephone set proceed as follows:

- (a) Make sure all connections are correct and secure, and line polarity for TOUCH-TONE®

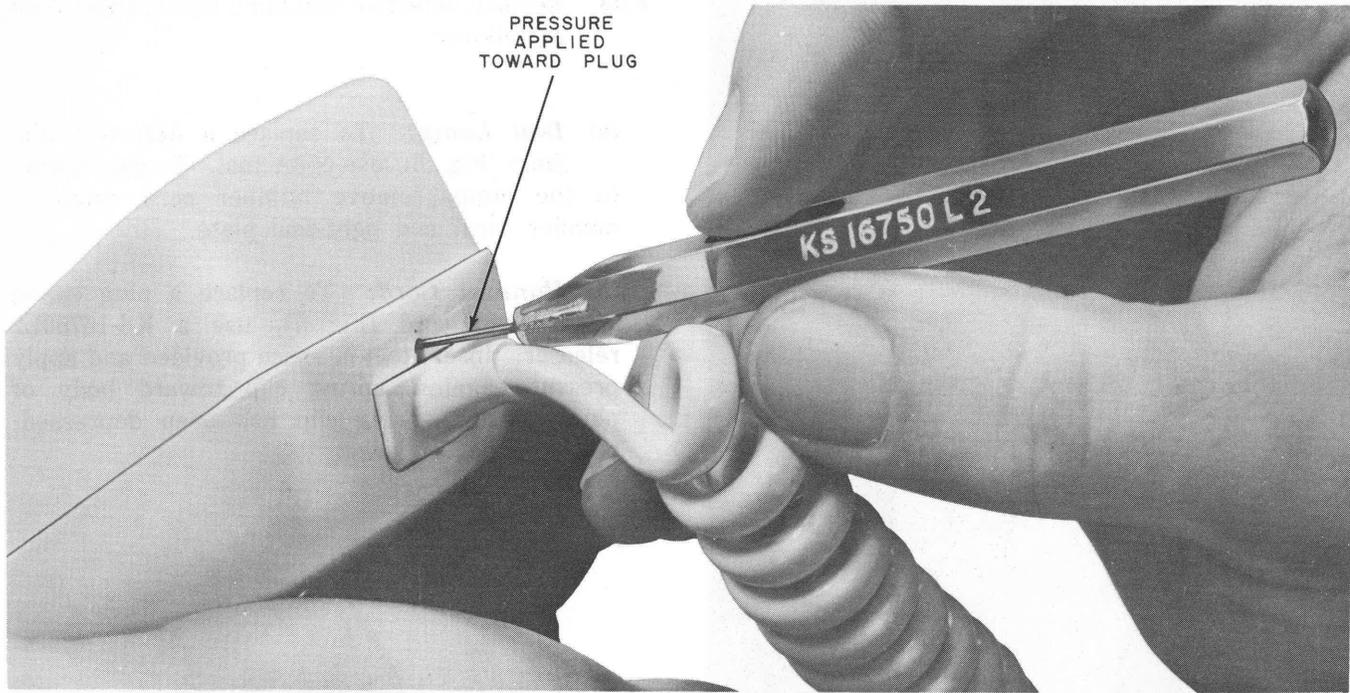


Fig. 7—Removing Cord From 220A Hand Telephone Set

dials in 1220A or 2220B is correct. (See Section 502-321-400).

(b) Listen to set receiver for presence of dial tone.

(1) If dial tone is heard, dial any digit or digits prescribed by local instructions to break dial tone. If dial tone can be broken, depress and release recall button. After second dial tone is obtained, call the local ringer test circuit for TOUCH-TONE dials and test each button of the dial as required by local test procedures. If dial fails test, replace complete hand telephone set.

(2) If dial tone is not heard, in set receiver, connect dial hand test set at connecting

block. If dial tone is heard with test set, remove the handset cord at the hand telephone set and move the test set leads to the (G) and (R) conductors at the cord plug. If dial tone is now heard, replace the hand telephone set. If dial tone is not heard, test both handset cord and telephone set base.

5. CONNECTION INDEX

Fig. 8—220A Hand Telephone Set—Wiring Diagram

Fig. 9—1220A or 2220B Hand Telephone Set—Wiring Diagram

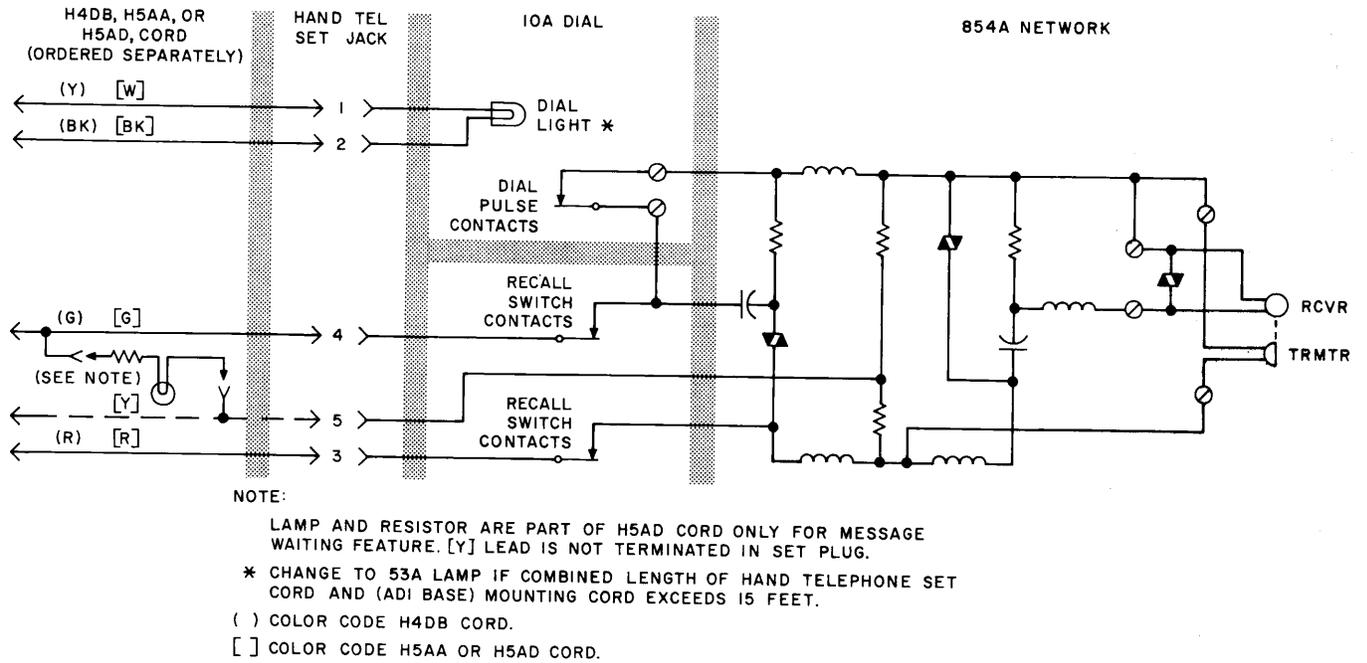
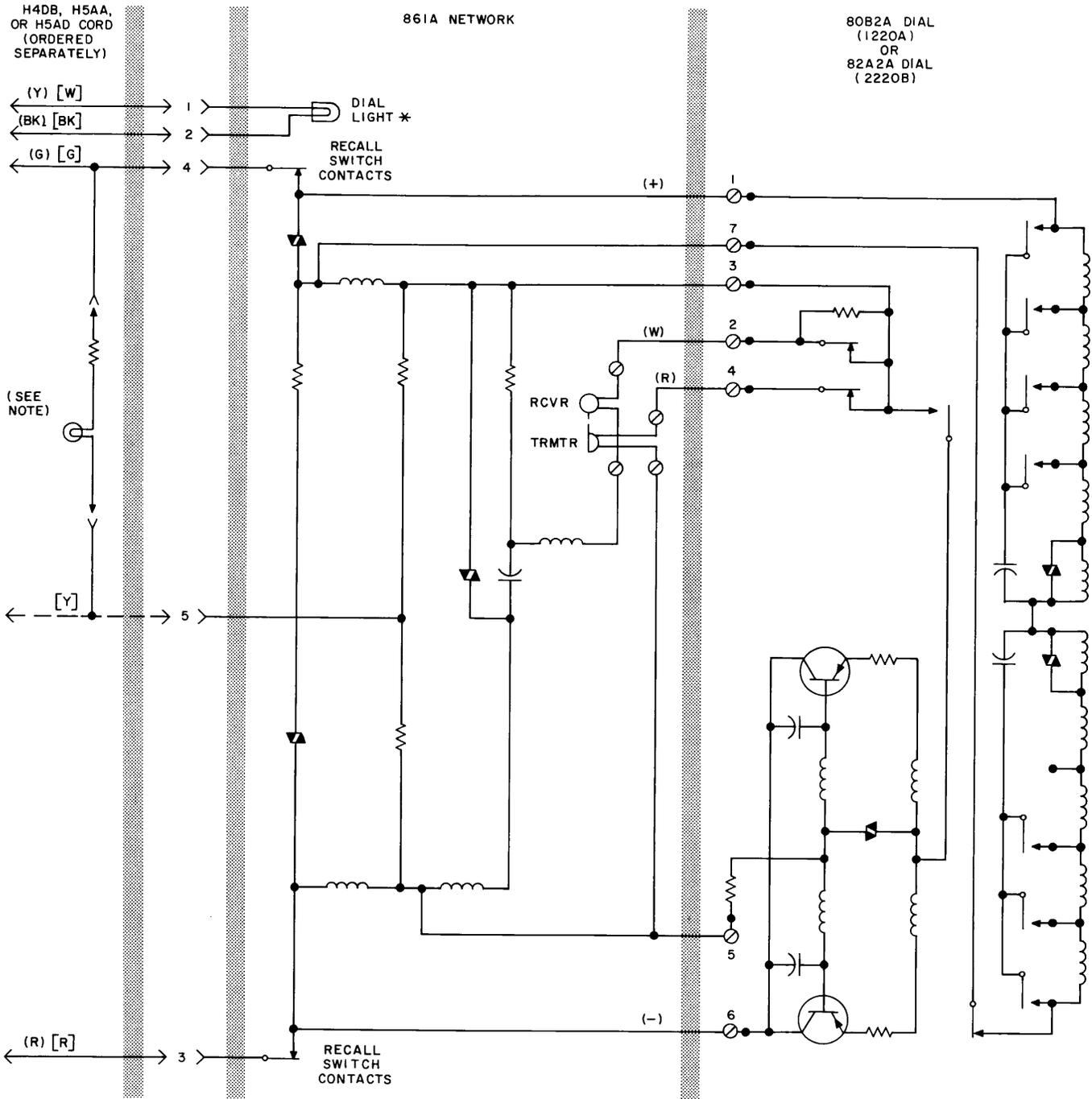


Fig. 8—220A Hand Telephone Set—Wiring Diagram

SECTION 502-320-100



NOTE:
 LAMP AND RESISTOR ARE PART OF H5AD CORD ONLY FOR MESSAGE WAITING FEATURE. [Y] LEAD IS NOT TERMINATED IN SET PLUG.
 * CHANGE TO 53A LAMP IF COMBINED LENGTH OF HAND TELEPHONE SET CORD AND (ADI BASE) MOUNTING CORD EXCEEDS 15 FEET.
 () COLOR CODE H4DB CORD
 [] COLOR CODE H5AA OR H5AD CORD

Fig. 9—1220A or 2220B Hand Telephone Set—Wiring Diagram