

SPECIALTY-MODEL TELEPHONE SETS  
DESCRIPTION, INSTALLATION, AND FIELD MAINTENANCE

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1. GENERAL

1.01 This section describes and provides installation and field maintenance procedures for the DECO · TEL line of specialty telephone sets manufactured by American Telecommunication Corporation.

1.02 These specialty telephones are owned by the telephone company and can be identified by the stamping on the base as property of the telephone company. However, in the case of the Mickey Mouse telephone, the customer owns the housing and leases the internal components. Refer to the 622-100 subdivision of GTE Practices for maintenance procedures covering the repair and return of the customer-owned items.

1.03 The shop procedure for these telephones is in Section 997-153-800. A kit is available to convert a customer-owned Candlestick telephone shell into a working telephone. Information on the kit is provided in Section 473-425-201.

1.04 This section is reissued to include information on the Mickey Mouse telephone, both the rotary dial and Touch Calling versions. Due to the extensive changes involved, marginal arrows are omitted. Remove the previous issue of this section from the binder or microfiche file and replace it with this issue.

2. DESCRIPTION

2.01 The specialty telephones are available in Cradlephone, Chestphone, Candlestick telephone, and Mickey Mouse telephone models.

Cradlephone

2.02 The Cradlephone (Figure 1) is approximately 9-1/2 inches high, 8-1/2 inches wide, and 6-3/4 inches deep. The seven different models are approximately the same size and differ only in trim and color. The models are as follows:

- (a) Model No. DAG-1111-W (320110). This model has a Grecian cameo base with white figures on a blue background, a white handset with gold-plated trim, a white handset cord and line cord, and a gold-colored dial fingerwheel.
- (b) Model No. DAG-1310-B (320120). This model has a maple wood base, a black handset with gold-plated trim, a black handset cord and line cord, and a gold-colored dial fingerwheel.
- (c) Model No. DAG-1320-W (320111). This model has an antique white wood base, a white handset with gold-plated trim, a white handset cord and line cord, and a gold-colored dial fingerwheel.
- (d) Model No. DAG-1330-B (320112). This model has a Mediterranean pickled-finished wood base, a black handset with gold-plated trim, a black handset cord and line cord, a gold-colored dial fingerwheel.
- (e) Model No. DAG-1440-W (320113). This model has a white dial shell with a red brocade panel insert on a gold frame, a white handset with gold-plated trim, a white handset cord and line cord, and a gold-colored dial fingerwheel.
- (f) Model No. DAG-1441-W (320114). This model has a white dial shell with a green brocade panel insert on a gold frame, a white handset with a gold-plated

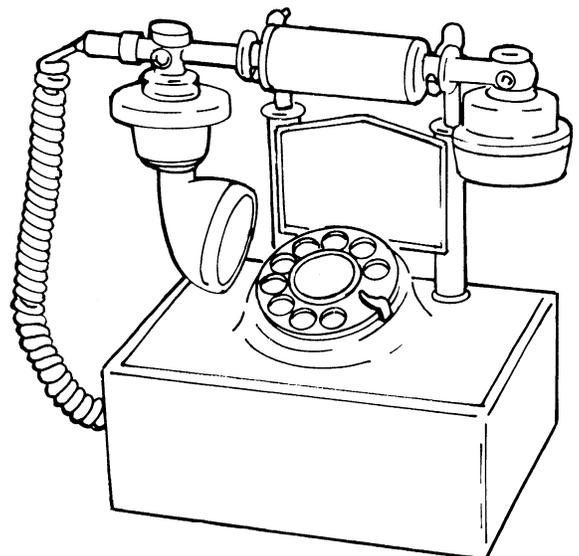


Figure 1. Cradlephone.

trim, a white handset cord and line cord, and a gold-colored dial fingerwheel.

- (g) Model No. DAG-1442-W (320115). This model has a white dial shell with a gold brocade panel inset on a gold frame, a white handset with gold-plated trim, a white handset cord and line cord, and a gold-colored dial fingerwheel.

2.03 The Cradlephone components are installed at the factory and consist of the following:

- (a) Type T1 or 75555 transmitter and Type U1 or U3 receiver capsule.
- (b) GTE Automatic Electric Type 51A rotary dial.
- (c) GTE Automatic Electric WA-1154-A transmission network.
- (d) Hookswitch from a STYLELINE® telephone.
- (e) GTE Automatic Electric Type 46A ringer.
- (f) Standard 5-1/2-foot line cord and 4-foot retractile handset cord.

Chestphone

2.04 The Chestphone (Figure 2) is a self-contained telephone housed in a wooden chest approximately 5-1/4 inches high, 10-3/4 inches wide, and 8 inches deep.

2.05 Six models of the Chestphone are available. Three models have a rotary dial, and three have a Touch Calling unit. The other differences are in the chest and color of the handset. The models are as follows:

- (a) Model No. DAG-2131-B (320117). This model has black leather panels inset on a walnut chest, a black handset, shell and cords, and a chrome-colored dial fingerwheel.

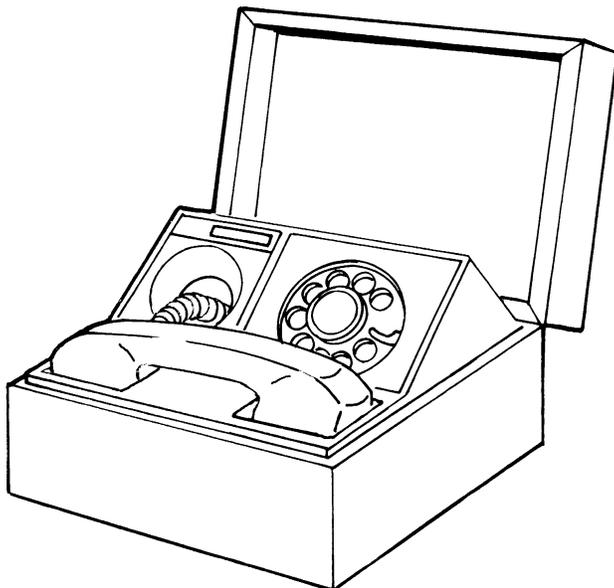


Figure 2. Chestphone.

- (b) Model No. DAG-2110-T (320116). This model has a brown carved walnut chest, a beige handset, shell and cords, and a chrome-colored dial fingerwheel.
- (c) Model No. DAG-2150-T (320118). This model has a brown walnut chest with a hunt scene inset on the lid, a beige handset, shell and cords, and a chrome-colored dial fingerwheel.
- (d) Model No. TAG-2131-B (320127). This model has black leather panels inset on a walnut chest, a black handset, shell and cords, and a Touch Calling unit.
- (e) Model No. TAG-2110-T (320126). This model has a brown carved walnut chest, a beige handset, shell and cords, with a Touch Calling unit.
- (f) Model No. TAG-2150-T (320128). This model has a brown walnut chest with a hunt scene inset on the lid, a beige handset, shell and cords, and a Touch Calling unit.

2.06 The telephone components in the rotary dial models of the Chestphone are the same as those in the Cradlephone (paragraph 2.03). The Touch Calling models also contain the same components except that the rotary dial is replaced with a Type 12C Touch Calling unit, and the transmission network is a WA-1155-A or a WA-1154-A network with the D-68849-A capacitor removed.

Candlestick Telephone

2.07 The Candlestick telephone (Figure 3) resembles the old upright telephone. The base is approximately 6 inches in diameter, and the overall height is approximately 12 inches. The housing is of molded plastic and the trim is brass-plated molded plastic. Three models are available and differ only in housing color:

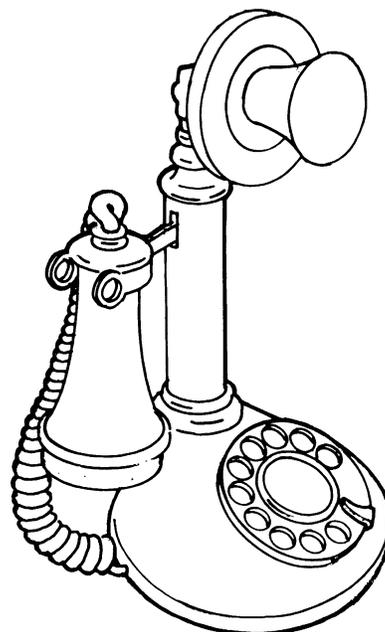


Figure 3. Candlestick Telephone.

- (a) Model No. 4101-B (320122): black housing.
- (b) Model No. 4101-R (320123): red housing.
- (c) Model No. 4101-W (320124): white housing.

2.08 The components of the Candlestick telephone are the same as those in the Cradlephone except that the transmission unit is from the STYLELINE telephone, and the hookswitch is from the STARLITE<sup>®</sup> telephone.

2.09 Early models of the Cradlephone and Chestphone may have a Stromberg-Carlson transmission network and hookswitch, and a GTE Automatic Electric dial and ringer.

Mickey Mouse Telephone

2.10 The Mickey Mouse telephone housing (Figure 4) is a statuette of the character Mickey Mouse. The Mickey

Mouse telephone is approximately 15-1/2 inches tall, and the telephone base is approximately 8-1/2 inches square. The Mickey Mouse telephone statuette supports a standard telephone handset in its right hand.

2.11 Two models of the Mickey Mouse telephone are presently available:

- (a) TAG-8000 Touch Calling Mickey Mouse telephone.
- (b) DAG-8000 rotary dial Mickey Mouse telephone.

2.12 The telephone can be modified for use with a 10A1 or 10A2 Key Telephone System (KTS) or for frequency-selected ringing. Refer to part 5 of this section for the KTS modification procedure.

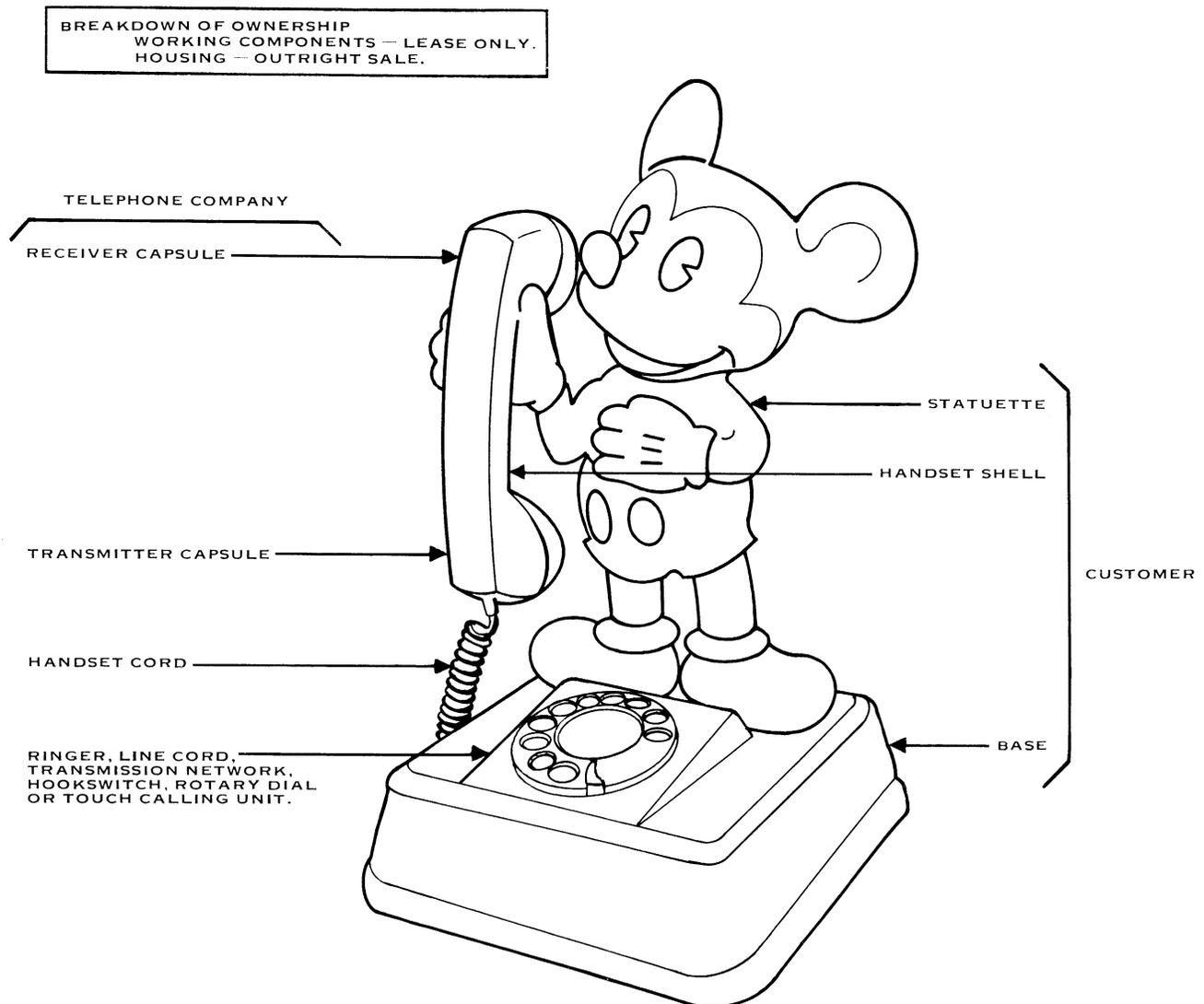


Figure 4. Mickey Mouse Telephone.

<sup>®</sup>Registered Trademark of GTE Automatic Electric Incorporated.

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2.13 Converting a rotary dial telephone to a Touch Calling telephone requires that the dial panel and the dial mounting bracket be changed. Refer to the shop procedure practice for the appropriate procedure.

3. PRECAUTIONS

3.01 Installation and maintenance personnel should exercise care when transporting, installing, or repairing the specialty telephones. Extreme care should be taken to avoid damage to the exterior case and decorator shell. All parts should be packaged and protected as necessary to preserve their finish.

3.02 To give maximum protection when transporting the specialty telephones that have been removed from service, the telephones should be packaged in containers similar to those in which the telephones were delivered.

NOTE: Under no circumstances shall connecting blocks, screws, or other miscellaneous items be placed in the packing carton with the telephone.

3.03 Packaged telephones should be carried and stored in such a manner that they cannot be bumped or dropped.

4. INSTALLATION

4.01 In locating the telephone, the installer should be guided by the customer's wishes (within the limitations of the installation requirements and other provisions outlined in this section). If the telephone cannot be located where specified by the customer, explain the reason to the customer.

4.02 All models of the specialty telephones are installed in the same manner; however, depending upon the type of service (i.e., PBX key telephone systems), the proper choice of features for the installation may necessitate changes as outlined in this section.

4.03 The specialty telephones are factory-wired, making them suitable for bridged ringing. By making the minor wiring changes listed in Table 1, the Cradlephones, Chestphones, and Candlestick telephones equipped with a GTE Automatic Electric transmission network can be adapted for either tip-party ringing, ring-party ringing, or tip-party ringing with ANI service. In addition, these telephones can be easily changed back to bridged ringing if previously used as tip-party ANI stations.

4.04 Tip-party, ANI frequency-ringing service is an additional modification that can be made to the Mickey Mouse telephone. The procedure is as follows:

- (a) Replace the installed ringer with a frequency ringer.
- (b) Install a 3-kilohm, 1-watt resistor between terminals 6 and 9.
- (c) Install a jumper between terminal 6 and the dial

shunt contact terminal.

- (d) Connect the GRN line cord lead to terminal 9.

4.05 The ringer on all specialty telephones except the Mickey Mouse telephone can be silenced if desired by the following procedure:

- (a) For divided-ringing telephones, move the YEL line cord lead to terminal 3 of the connecting block or remove the GRN ringer lead.
- (b) For bridged-ringing (without ANI) telephones, move the YEL line cord lead to terminal 3 of the connecting block or remove the RED ringer lead.
- (c) For tip-party ringing (with ANI) telephones, disconnect the GRN ringer lead.

NOTE: Do not move the YEL line cord lead. It must remain on terminal 4G of the connecting block.

4.06 Typical wiring diagrams of telephones with various GTE Automatic Electric transmission networks are shown in Figures 5 through 9. A typical wiring diagram of the Stromberg-Carlson transmission network is shown in Figure 10.

5. KTS MODIFICATION

5.01 Table 2 contains the procedure for modifying specialty telephones to KTS usage (refer also to Figures 11 through 13). The Cradlephone and Chestphone may be used in conjunction with an external key adapter, or may be permanently connected to one of the KTS lines.

5.02 The Type 46A ringer supplied with each Chestphone or Cradlephone may be connected across any single line or may be wired to provide a common audible signal for all lines.

5.03 The ringer in a Cradlephone, Chestphone, or Candlestick telephone may be removed and a Type FD-1068-AF buzzer mounted in its place. This buzzer is not a replacement for the ringer; it is used for low-voltage common-buzzer signaling.

6. FIELD MAINTENANCE

6.01 Field maintenance of the specialty telephones is limited to wiring connections and maintenance of ringer and handset components. Any further maintenance must be performed in the local repair shop.

Ringer

6.02 If the ringer fails to operate, ensure that the following conditions exist:

- (a) The ringer coil is not open.
- (b) All wire connections are tight and properly connected.

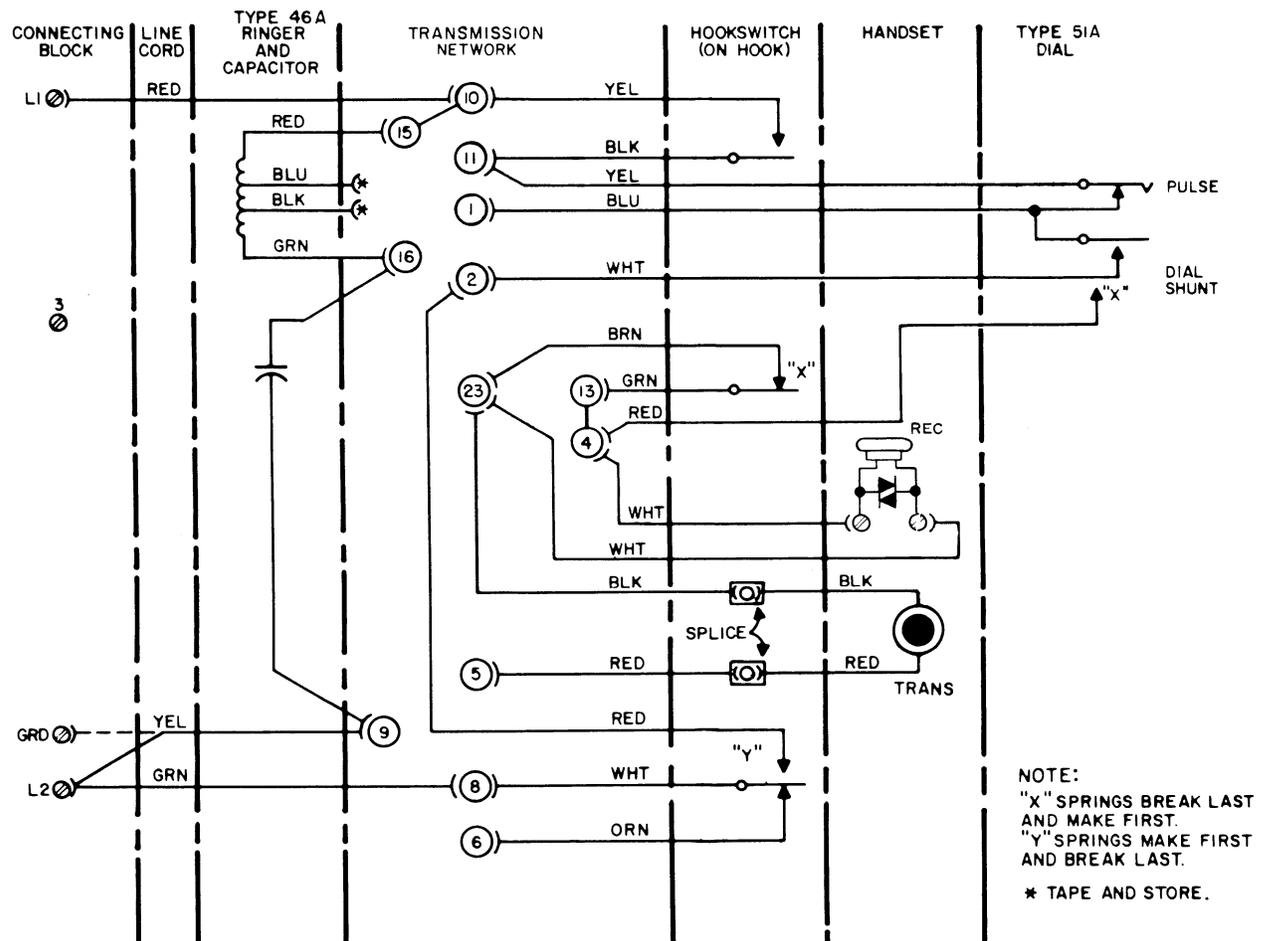
Table 1. Connections.

TYPE OF RINGING	TRANSMISSION NETWORK TERMINALS						CONNECTING BLOCK TERMINALS		
	RINGER				CAPACITOR		LINE CORD LEADS		
	RED	BLU	BLK	GRN			RED	GRN	YEL
Bridged	15 (10)	*	*	16	16	9	L1	L2	L2
Ring-Party	15 (10)	*	*	16	16	9	L1	L2	4G
Tip-Party	15 (10)	*	*	16	16	9	L2	L1	4G
Tip-Party with ANI	9	* (#)	21 (*)	16	16	6	L1	L2	4G

\* Tape and Store.

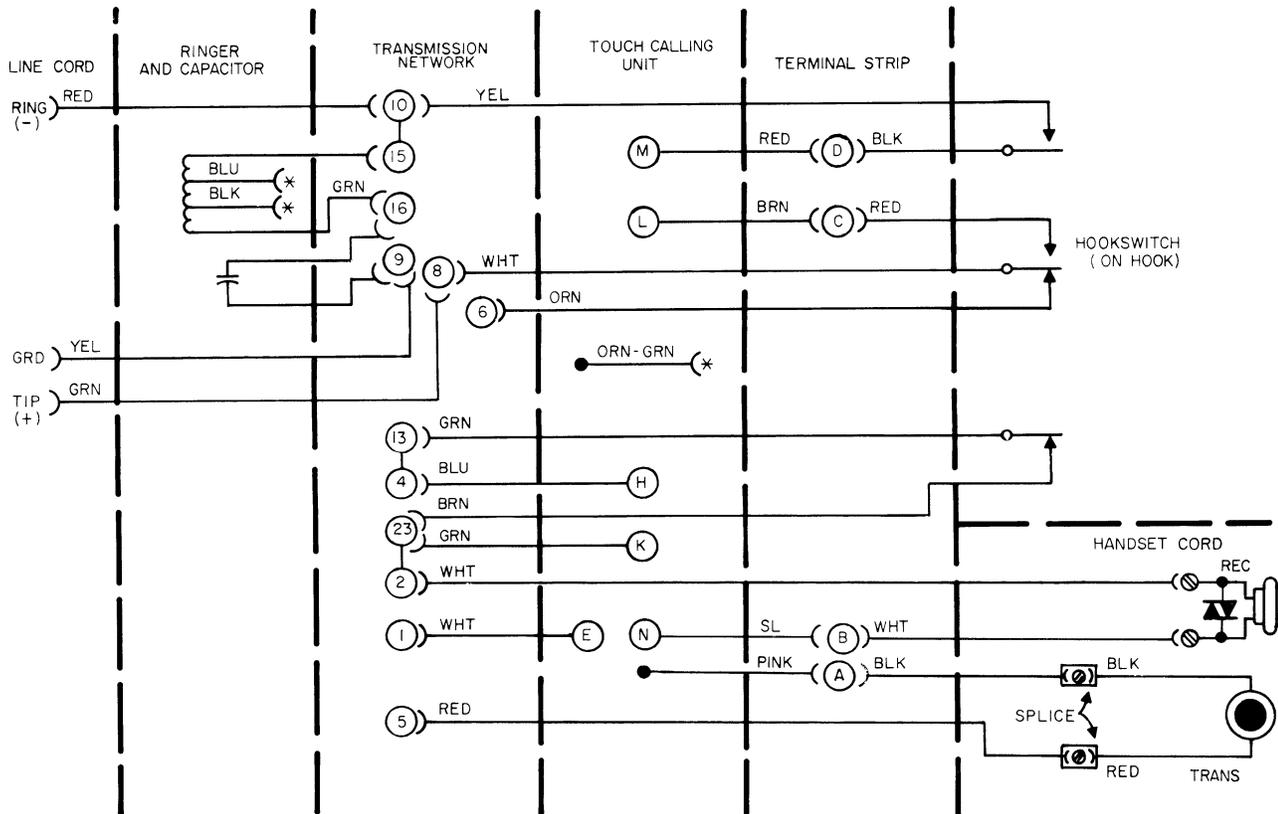
#Splice to BLU transmission network lead on Candlestick telephone.

( ) Candlestick telephone only.



NOTE:  
"X" SPRINGS BREAK LAST AND MAKE FIRST.  
"Y" SPRINGS MAKE FIRST AND BREAK LAST.  
\* TAPE AND STORE.

Figure 5. Typical Wiring Diagram of Specialty Telephones Equipped with GTE Automatic Electric Components.



NOTE :

\* TAPE AND STORE

Figure 6. Typical Wiring Diagram of Touch Calling Chestphone.

- (c) The bias spring is correctly positioned.
- (d) The gong is free of all obstructions such as loose wires or foreign material.

If the ringer is defective or damaged, replace it.

Cradlephone

6.03 To gain access to the apparatus assembly, proceed as follows:

- (a) Remove the four hex-head screws holding the bottom cover and lift off the bottom cover.
- (b) Remove the four screws in the apparatus assembly and carefully lift the assembly out of the base.

6.04 To replace the handset cord, refer to Figure 14 and proceed as follows:

- (a) Remove the receiver cap (item 2), lift out the receiver unit (item 3), and disconnect the leads.
- (b) Remove the three screws (item 7) holding the lower transmitter shell (item 6) to the upper transmitter shell (item 13).
- (c) Slide the two insulators (item 9) off the two connectors (item 8) and disconnect the cord leads.
- (d) Remove the cord holding screw (item 10) and pull out the cord (item 1).

- (e) Remove the two decorative nuts (item 20).
- (f) Feed the two WHT leads of the new handset cord through the handle (items 14, 22, and 16) and down through the receiver shell (item 15).
- (g) Connect the leads to the receiver unit (item 3) and screw on the receiver cap (item 2).
- (h) Feed the RED and BLK leads down through the upper transmitter shell (item 13).
- (i) Slip the two insulators (item 9) over the leads, make the connections to the transmitter leads, RED to RED and BLK to BLK, and slide the insulators over the two connectors (item 8).
- (j) Secure the handset cord to the handle (item 14) with the cord holding screw (item 10), and secure the lower transmitter shell (item 6) to the upper transmitter shell (item 13) with its three screws (item 7).
- (k) Replace the decorative nuts (item 20).

Chestphone

6.05 To gain access to the apparatus assembly, remove the four screws holding the baseplate to the base frame and carefully lift out the apparatus assembly.

6.06 To replace the handset cord, refer to Figure 15 and proceed as follows:

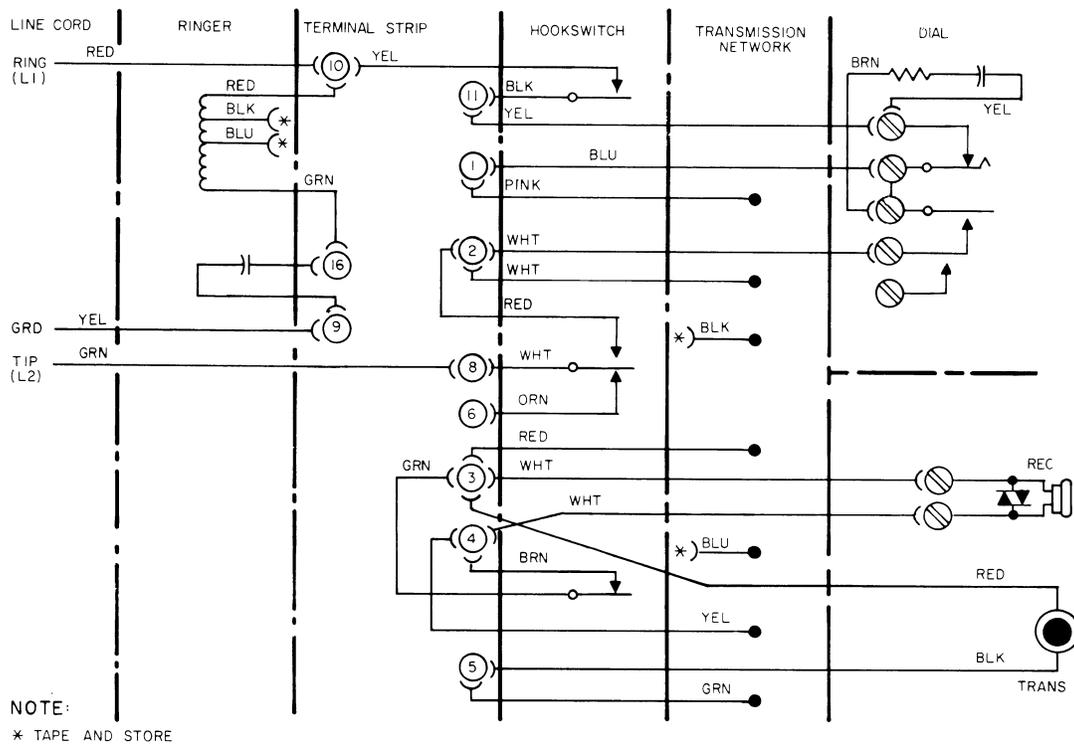


Figure 7. Typical Wiring Diagram of Candlestick Telephone.

- (a) Remove the two screws (item 2) to release the cover (item 1).
- (b) Remove the three screws (item 4) and receiver cover (item 3).
- (c) Disconnect the leads from the receiver (item 5).
- (d) Disconnect the RED and BLK handset cord leads from the connectors (item 6) and pull the cord out of the notch in the transmitter cover (item 7).
- (e) Insert the new handset cord leads through the notch in the transmitter cover.
- (f) Connect the RED and BLK cord leads to the connectors (item 6) (RED to RED and BLK to BLK).
- (g) Connect the WHT leads to the receiver (item 5).
- (h) Position the receiver and install the receiver cover (item 3) and screws (item 4).
- (i) Place the receiver leads in their channel, place the cover (item 1) on the base, and secure it with two screws (item 2).
- (j) Pass the cord through the hole in the base cover and route it through the channel in the base. Connect the leads to the transmission network as indicated in the appropriate figure.

Candlestick Telephone

6.07 To gain access to the components in the base of the Candlestick telephone, remove the four screws around

the perimeter of the base. Carefully lift the housing up off the base.

6.08 To gain access to the terminals, the platform holding the dial and hookswitch must be lifted off. The platform is held by a screw at the bottom of the base and a second screw at the top of the platform.

6.09 To replace the earpiece (handset) cord, proceed as follows:

- (a) Unscrew the earpiece cap and disconnect the leads from the receiver.
- (b) Unscrew the hook fitting from the earpiece housing and pull the cord out of the earpiece housing.
- (c) Remove the strain relief from the cord and pull the cord out of the hook fitting.
- (d) Insert the new cord through the hook fitting and place the strain relief on the cord.
- (e) Pass the leads into the earpiece housing and screw the hook fitting onto the housing.
- (f) Tape and store the RED and BLK leads, and connect the WHT leads to the terminals on the receiver.
- (g) Place the receiver into the earpiece housing and screw the earpiece cap onto the housing.
- (h) Tape and store the other end of the RED and BLK leads, and connect the WHT leads to terminals 3 and 4 in the base.

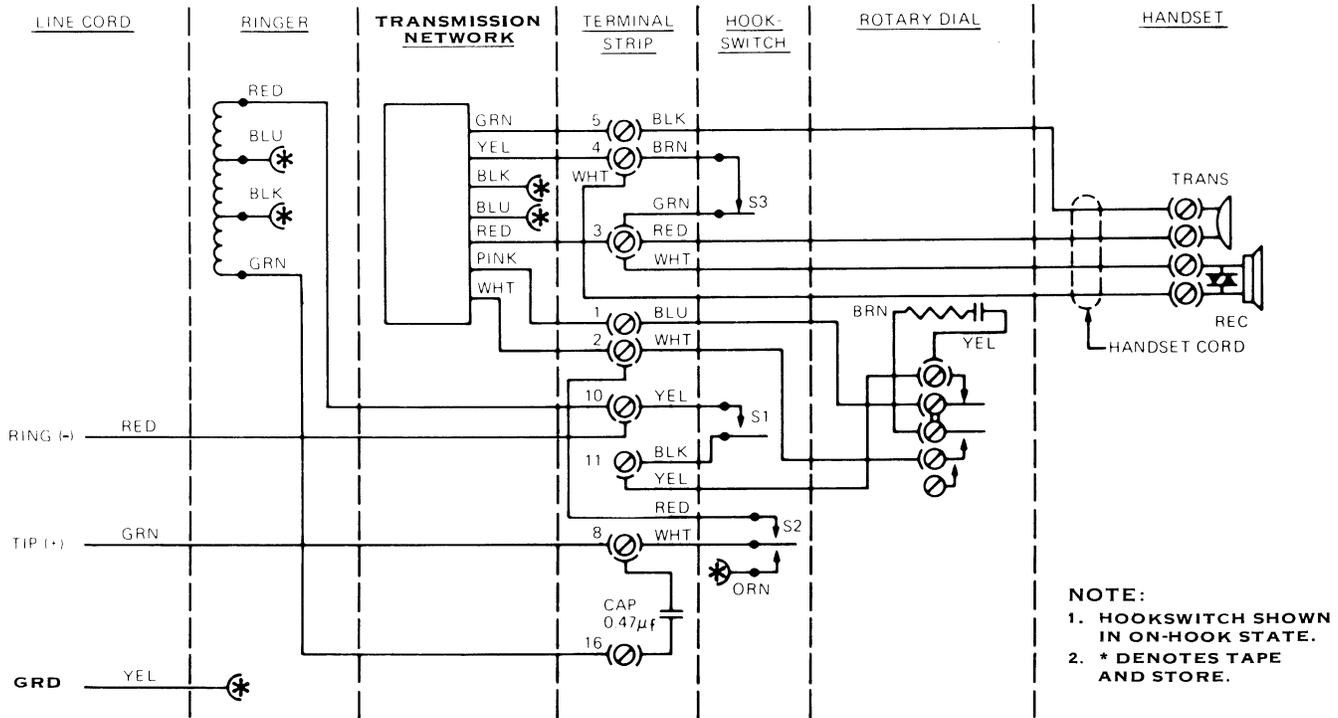


Figure 8. Typical Wiring Diagram of Mickey Mouse Telephone Equipped with Rotary Dial.

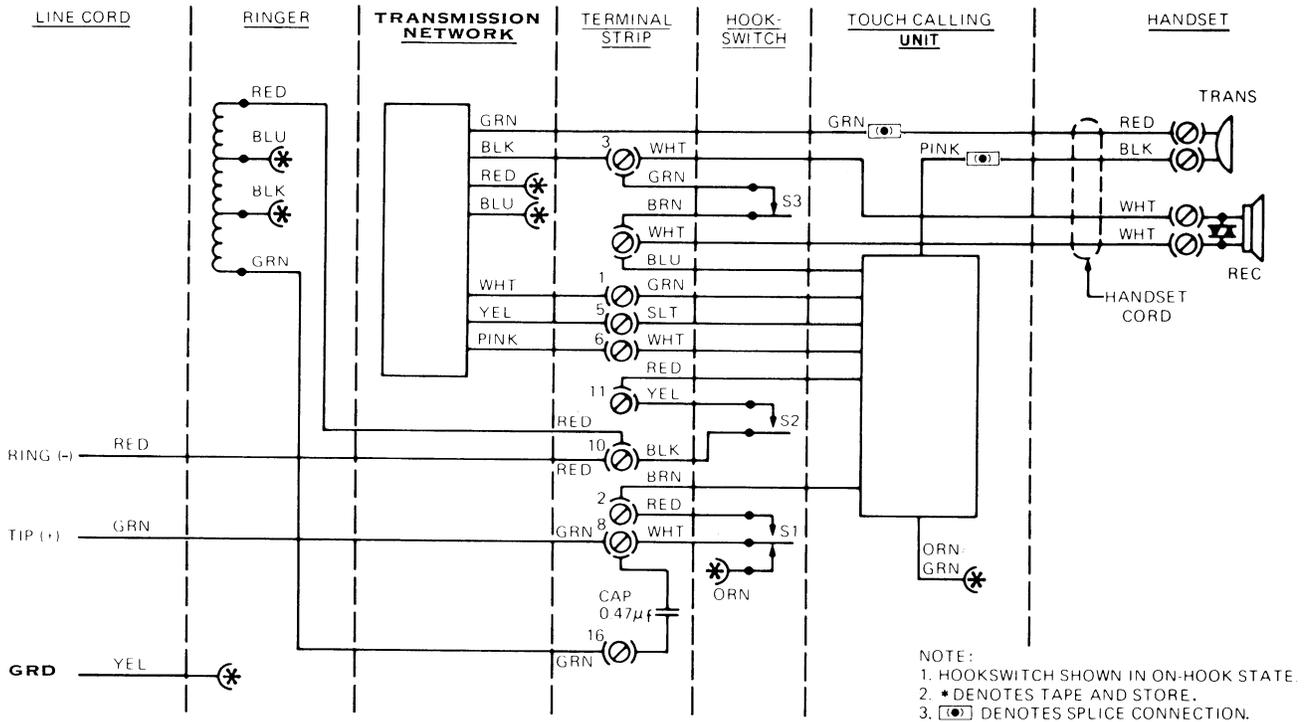


Figure 9. Typical Wiring Diagram of Mickey Mouse Telephone Equipped with Touch Calling Unit.

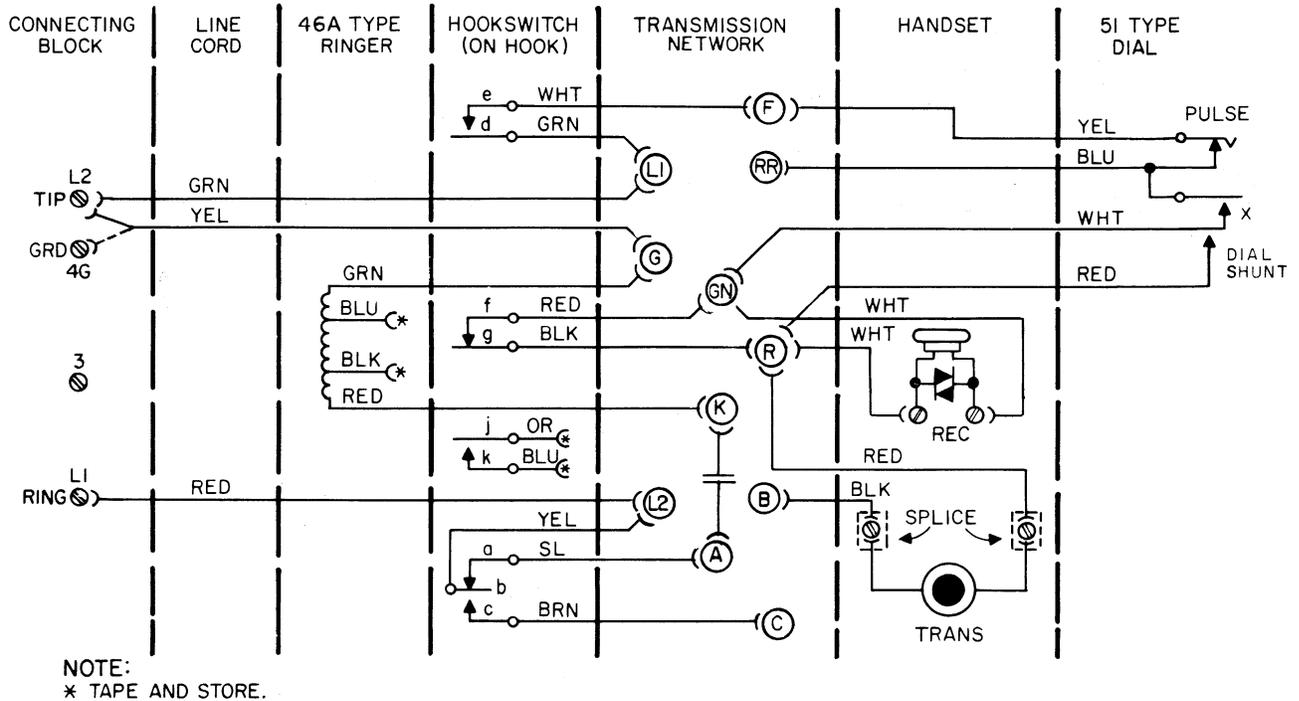


Figure 10. Typical Wiring Diagram of Specialty Telephones Equipped with Stromberg-Carlson Components.

6.10 To replace the transmitter, proceed as follows:

- (a) Unscrew the transmitter cap from the transmitter housing.

NOTE: Do not attempt to unscrew the transmitter cap by grasping the horn.

- (b) Lift out the transmitter and release the snap and ring terminals from the transmitter.
- (c) Place the snap and ring terminals on the new transmitter.
- (d) Insert the transmitter into the transmitter housing and screw the transmitter cap onto the housing.

Mickey Mouse Telephone

6.11 Ownership and maintenance of the housing, handset shell, and base of the Mickey Mouse telephone are the responsibility of the customer. Refer to the 622-100 subdivision of GTE Practices for procedures covering the repair and return of the customer-owned items (Figure 4).

6.12 To gain access to the components in the base assembly of the telephone, refer to Figures 16 and 17 and proceed as follows:

NOTE: Only the relevant item numbers of those shown in Figures 16, 17 and 18 are referenced in paragraphs 6.12 through 6.13.

- (a) Remove the handset (item 6 of Figure 16) from the actuator lever hand (item 15 of Figure 16) and lay the Mickey Mouse figure on its back.
- (b) Loosen the four captive screws (item 20 of Figure 17) securing the base assembly (item 1 of Figure 17) to the housing (item 17 of Figure 16).
- (c) Carefully separate the housing assembly from the base assembly.
- (d) To reassemble, perform (a) through (c) in reverse order. Ensure that the pilot pins in the base assembly engage the pilot holes in the housing assembly before tightening the securing screws.

6.13 To gain access to the transmission network connections or to replace the transmission network, refer to Figure 17 and proceed as follows:

- (a) Separate the housing assembly from the base assembly as described in paragraph 6.12.
- (b) To replace the transmission network, detach the network leads from the terminal board connections.
- (c) Remove the two nuts (item 27 of Figure 17) securing the network.

NOTE: Do not remove the transmission network insulator.

- (d) Discard the transmission network.
- (e) Install the replacement network by performing (a) through (c) in reverse order. Connect the trans-

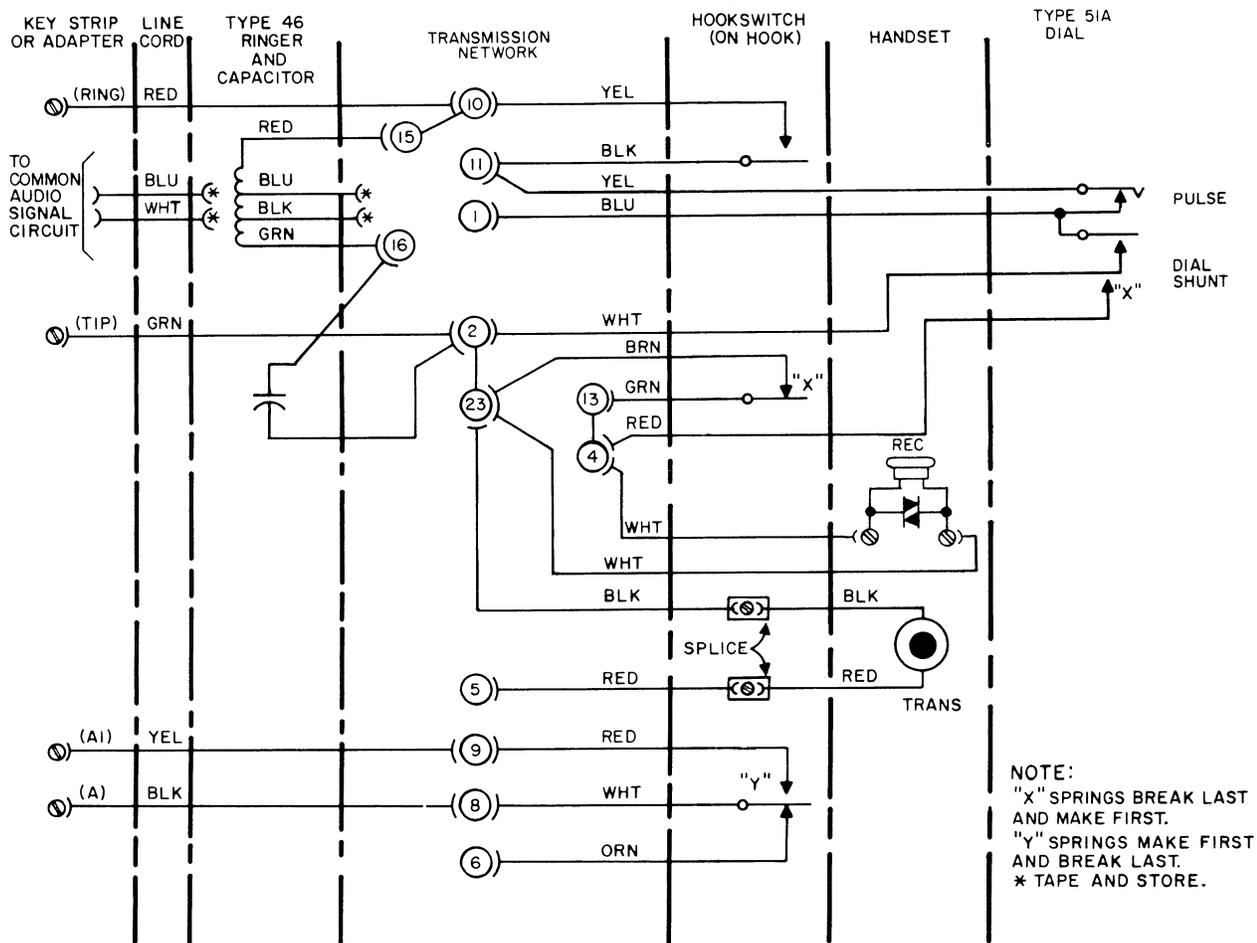


Figure 11. Typical Wiring Diagram of Specialty Telephones Equipped with GTE Automatic Electric Components and Wired for Use in KTS.

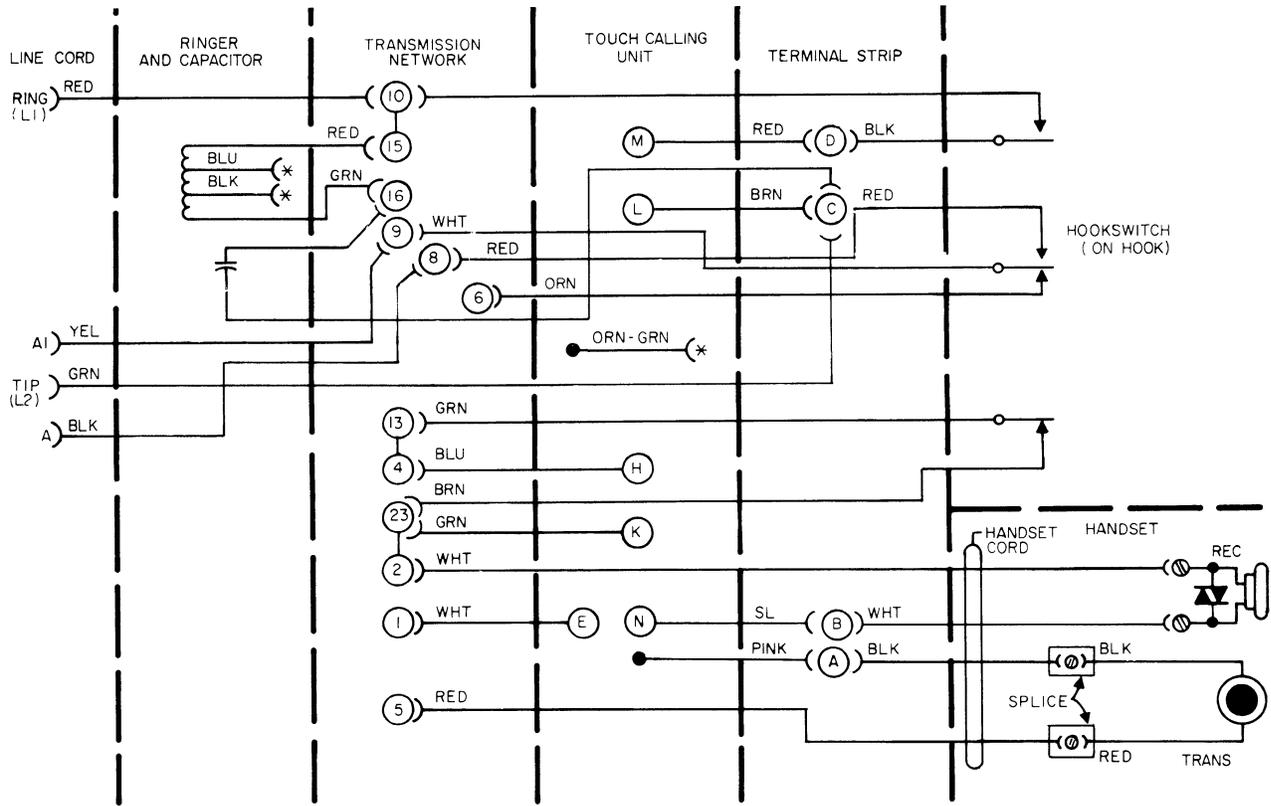
mission network leads according to the wiring diagrams in Figures 8 and 9.

6.14 To replace the handset cord in the Mickey Mouse telephone, refer to Figures 17 and 18 and proceed as follows:

- (a) Unscrew the receiver cap (item 2 of Figure 18). Detach the WHT receiver leads from the receiver.
- (b) Unscrew the transmitter cap (item 5 of Figure 18). Remove the transmitter (item 6 of Figure 18) and the transmitter cup (item 7 of Figure 18) from the handset housing (item 1 of Figure 18). Detach the RED and BLK transmitter leads from the transmitter cup.
- (c) Remove the cotton ball (item 4 of Figure 18) and work the handset cord (item 8 of Figure 18) free from the handset housing (item 1 of Figure 18).
- (d) Separate the housing assembly from the base assembly as described in paragraph 6.12.

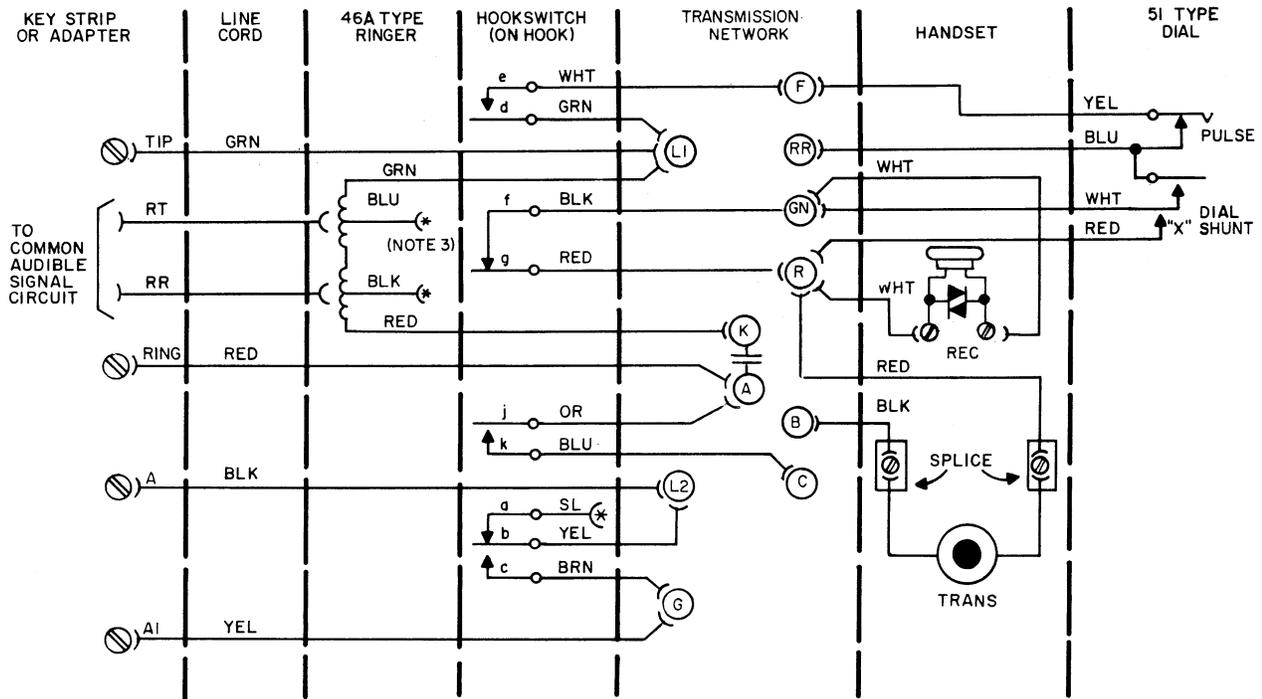
- (e) Loosen the screw (item 4 of Figure 17) and free the handset cord (item 8 of Figure 18).
- (f) Disengage the J-hook on the handset cord (item 8 of Figure 18) from the cord restraint bracket (item 30 of Figure 17).
- (g) Detach the handset cord lugs from the terminal board connections (item 22 of Figure 17) and pull the handset cord free of the base (item 1 of Figure 17).
- (h) Discard the handset cord.
- (i) Install the replacement handset cord by performing (a) through (g) in reverse order. Ensure that the transmitter cup notch (item 7 of Figure 18) engages the handset cord restriction when reinstalling the handset transmitter parts. Connect the handset cord leads according to the wiring diagrams in Figures 8 and 9.

6.15 For any further replacements, refer to the shop procedure Section 997-153-800 of GTE Practices.



NOTE:  
\* TAPE AND STORE

Figure 12. Typical Wiring Diagram of Touch Calling Chestphone  
Wired for Use in KTS.



- NOTES:
1. TO PREVENT FALSE HOLD CONDITION WHEN HANDSET IS RESTORED, HOOKSWITCH CONTACTS D AND E MUST BREAK BEFORE B AND C BREAKS.
  2. FOR COMMON AUDIBLE WITH 10A1 AND 10A2 KTS DISCONNECT RINGER FROM NETWORK AND RECONNECT TO RT AND RR LEADS.
  3. \* TAPE AND STORE.

Figure 13. Typical Wiring Diagram for Specialty Telephones Equipped with Stromberg-Carlson Transmission Network Used in KTS.

Table 2. Conversion of Specialty Telephones to KTS Usage.

CRADLEPHONE AND CHESTPHONE (ROTARY DIAL) WITH GTE AUTOMATIC ELECTRIC COMPONENTS		CHESTPHONE (TOUCH CALLING)	
STEPS	OPERATION	STEPS	OPERATION
1	Disconnect RED hookswitch lead from terminal 2 and reconnect it to terminal 9.	1	Disconnect RED hookswitch lead from terminal-strip terminal C and connect to transmission network terminal 2.
2	Disconnect capacitor lead from terminal 9 and reconnect it to terminal 2.	2	Disconnect ringer capacitor lead from transmission network terminal 9 and reconnect to terminal-strip terminal C.
3	Remove the three-lead line cord and replace with a four-lead or six-lead line cord.	3	Disconnect WHT hookswitch lead from transmission network terminal 8 and connect to terminal 9.
4	Connect line cord to the transmission network as follows:  GRN lead (Tip) to terminal 2. RED lead (Ring) to terminal 10. YEL lead (A1) to terminal 9. BLK lead (A) to terminal 8.	4	Remove the three-conductor line cord and replace with a four- or six-conductor line cord.
		5	Connect the line cord to transmission network as follows:  RED lead (Ring) to terminal 10 GRN lead (Tip) to terminal-strip terminal C. BLK lead (A) to terminal 8. YEL lead (A1) to terminal 9.
SPECIALTY TELEPHONES WITH STROMBERG-CARLSON COMPONENTS		MICKEY MOUSE TELEPHONE (TOUCH CALLING AND ROTARY DIAL) WITH GTE AUTOMATIC ELECTRIC COMPONENTS	
STEPS	OPERATION	STEPS	OPERATION
1	Disconnect SL hookswitch lead from transmission network terminal A. Tape and store.	1	Disconnect RED hookswitch lead from terminal 2 and reconnect it to terminal 6.
2	Untape the ORN hookswitch lead and connect to transmission network terminal A.	2	Disconnect capacitor lead from terminal 8 on transmission network and reconnect it to terminal 2.
3	Disconnect BRN hookswitch lead from transmission network terminal C and connect to terminal G.	3	Remove three-lead line cord and replace with four- or six-lead line cords.
4	Untape BLU hookswitch lead and connect to transmission network terminal C.	4	Connect line cord as follows:  GRN lead (Tip) to terminal 2. RED lead (Ring) to terminal 10. YEL lead (A1) to terminal 8. BLK lead (A) to terminal 6.
5	Remove the three-conductor line cord and replace with a four- or six-conductor line cord.		
6	Connect line cord to the transmission network as follows:  RED lead (Ring) to terminal L1. GRN lead (Tip) to terminal A. BLK lead (A) to terminal L2. YEL lead (A1) to terminal 6.		

NOTE: Insulate and store all unused leads.



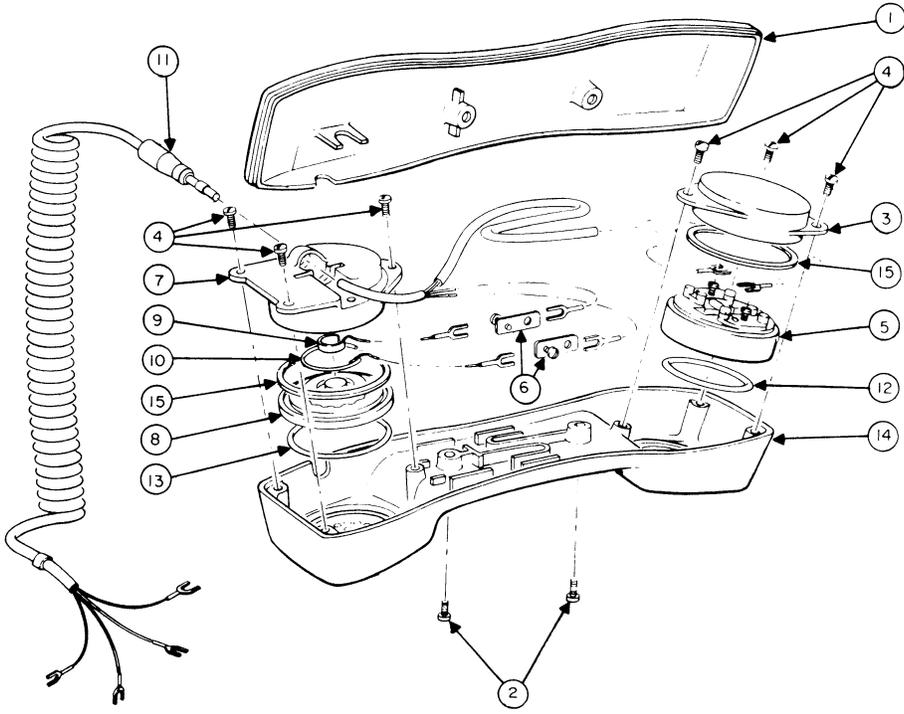


Figure 15. Chestphone Handset Assembly.

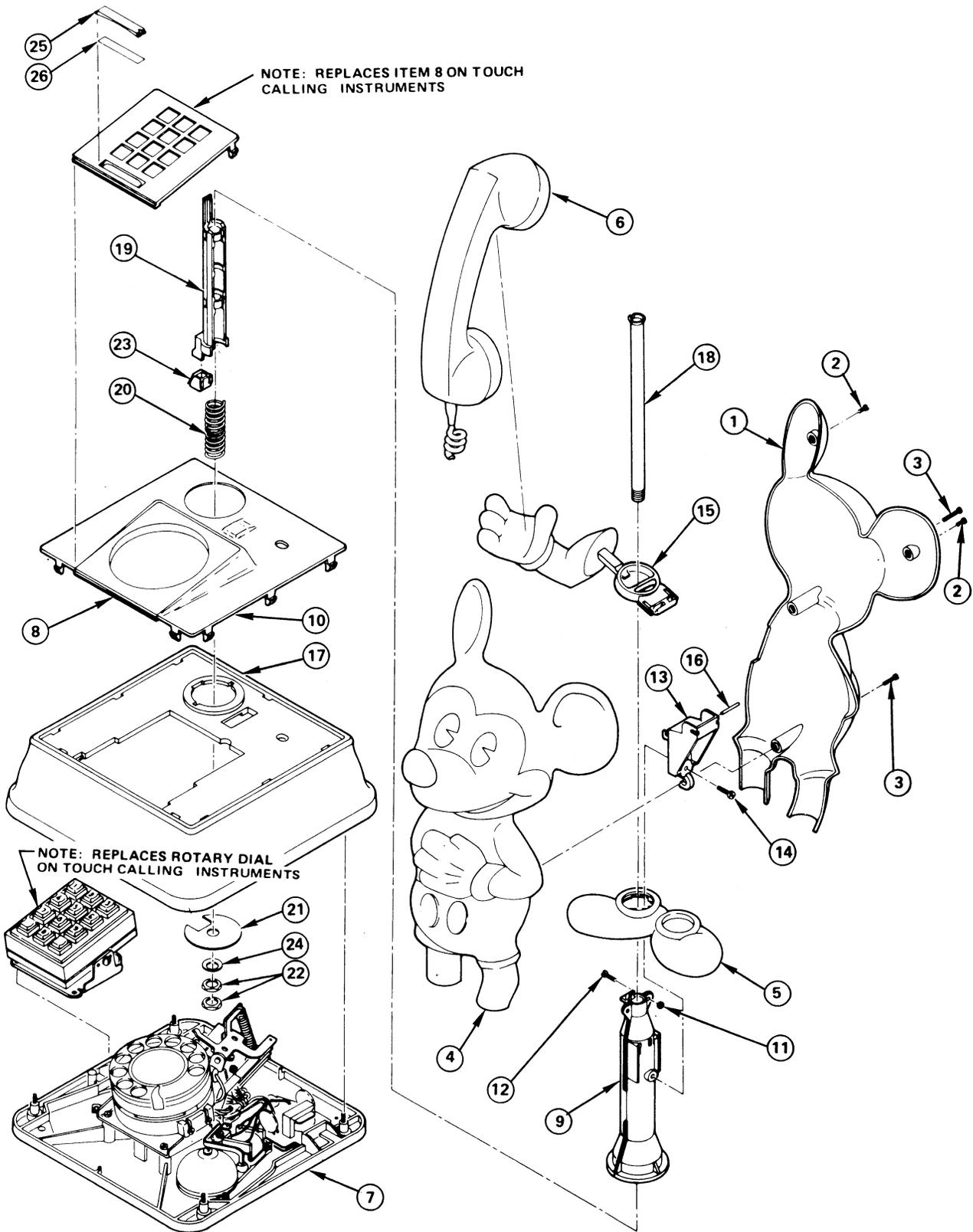


Figure 16. Mickey Mouse Telephone Assembly.

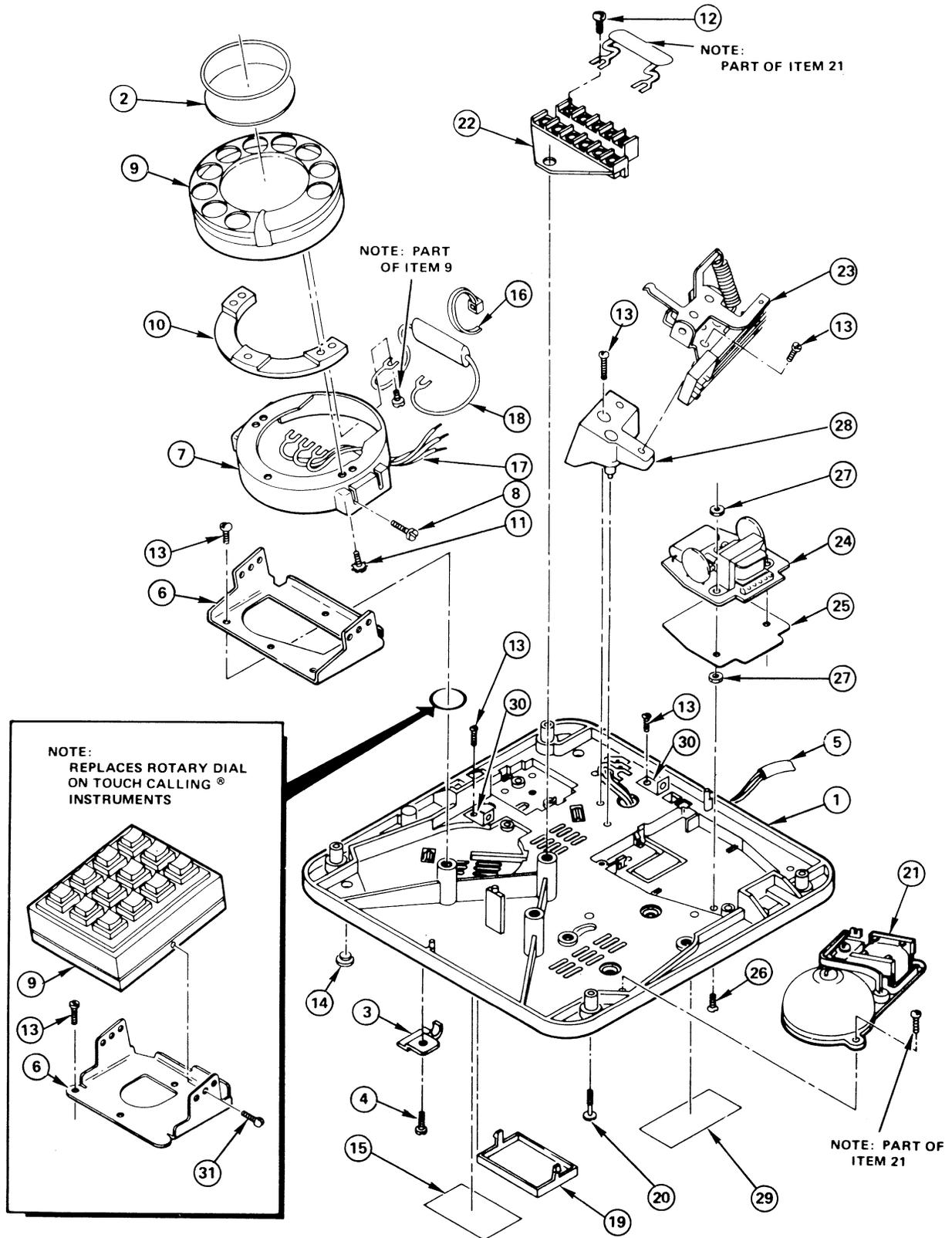


Figure 17. Mickey Mouse Telephone Base Assembly.

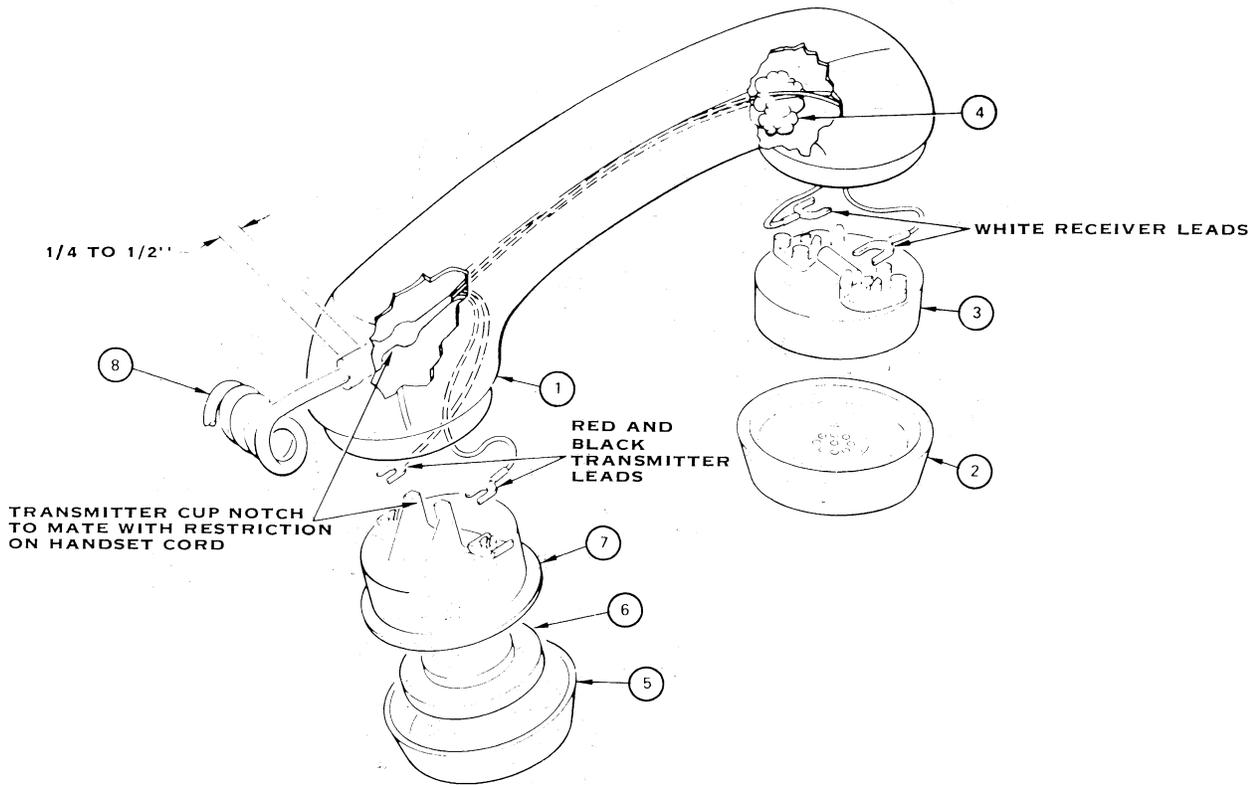


Figure 18. Mickey Mouse Telephone Handset Assembly.