

CS5061U01A-148 TELEPHONE SET DESCRIPTION
"GENESIS*" TELESYSTEM
IDENTIFICATION, INSTALLATION, CONNECTIONS, AND
MAINTENANCE

1. GENERAL

1.01 This section contains information for the CS5061U01A-148 telephone set (console) which is used as the principal element in the GENESIS teletsystem.

1.02 Whenever this section is reissued, the reasons for reissue will be listed in this paragraph.

1.03 This set is designed for PhoneCenter Store distribution and customer installation with the possible exception of the optional Intra-Premises Bus. The set does not contain company-owned components and is for sale to the customer in its entirety.

2. IDENTIFICATION

2.01 The console (Fig. 1 and 2) is microprocessor controlled with enhanced feature capabilities. The console is desk/wall convertible and provided with a field of 18 buttons for feature access, alphanumeric display, speaker, and a 12 button dial key pad which are used to provide many features beyond plain old telephone set (POTS) in the set. Interfaces to the circuit module and telephone modules are also available to expand functional capability. This set is capable of dial-pulse or TOUCH-TONE† signaling from the key pad and repertory dialer. The selection is made with an exterior switch on the bottom of the set (Fig. 3). This set is compatible with existing telephone sets.

2.02 The following design features are provided in the basic set:

- Repertory Dialing

* Trademark of American Telephone and Telegraph Company.

† Registered Service Mark of American Telephone and Telegraph Company.

- Emergency Repertory Dialing
- Save/Send
- Elapsed Time Display (Call Timer)
- Clock/Alarm
- Loudspeaker (Call Progress and Voice Monitor)
- Station Hold
- Ringer Control.

2.03 Optional features are provided to the console with the following.

Note: Detailed coverage of optional features and apparatus is provided in separate Bell System Practices.

(a) **Circuit Module:** This module (Fig. 4) provides firmware to add additional features to the console. The module plugs into a concealed area and when installed, new features are assigned to some of the console and telephone module feature buttons.

(b) **Telephone Modules (Fig. 5):** These modules provide hardware and controls for adding additional features to the system. They attach to the right side of the console and other telephone modules. When attached to the set the module appears to be an integrated part of the set.

(c) **Bus Structure (Fig. 6):** The intra-premises bus of the console is accessible by all modules connected to the basic set. The intra-premises bus (IPB) (Fig. 7) provides data and voice signaling

NOTICE

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



Fig. 1—CS5061U01A-148 Telephone Set (Console Desk-Type)

channels for communication between GENESIS telesystem in the residence.

3. DISPLAY AND FORMAT FEATURES

A. Repertory Dialing

3.01 The console (Fig. 1 and 2) contains 10 repertory dialing positions including three positions intended for emergency numbers.

3.02 Each repertory position is customer programmable from the telephone set dial key pad which provides one-touch dialing when the handset is off-hook or on-hook (using the loudspeaker). When

a repertory button is depressed the number associated with that position is shown on the display. Recording a number or replacing a number with a new one is possible either on-hook or off-hook.

3.03 The display provides an indication of the RECORD mode for programming and prompts the user during the programming sequence.

3.04 Stored numbers shall be retained in memory for a minimum of 72 hours during a commercial power interruption (without off-hook phone usage) and for a minimum of 5 minutes during battery replacement and 10 hours during off-hook operation.

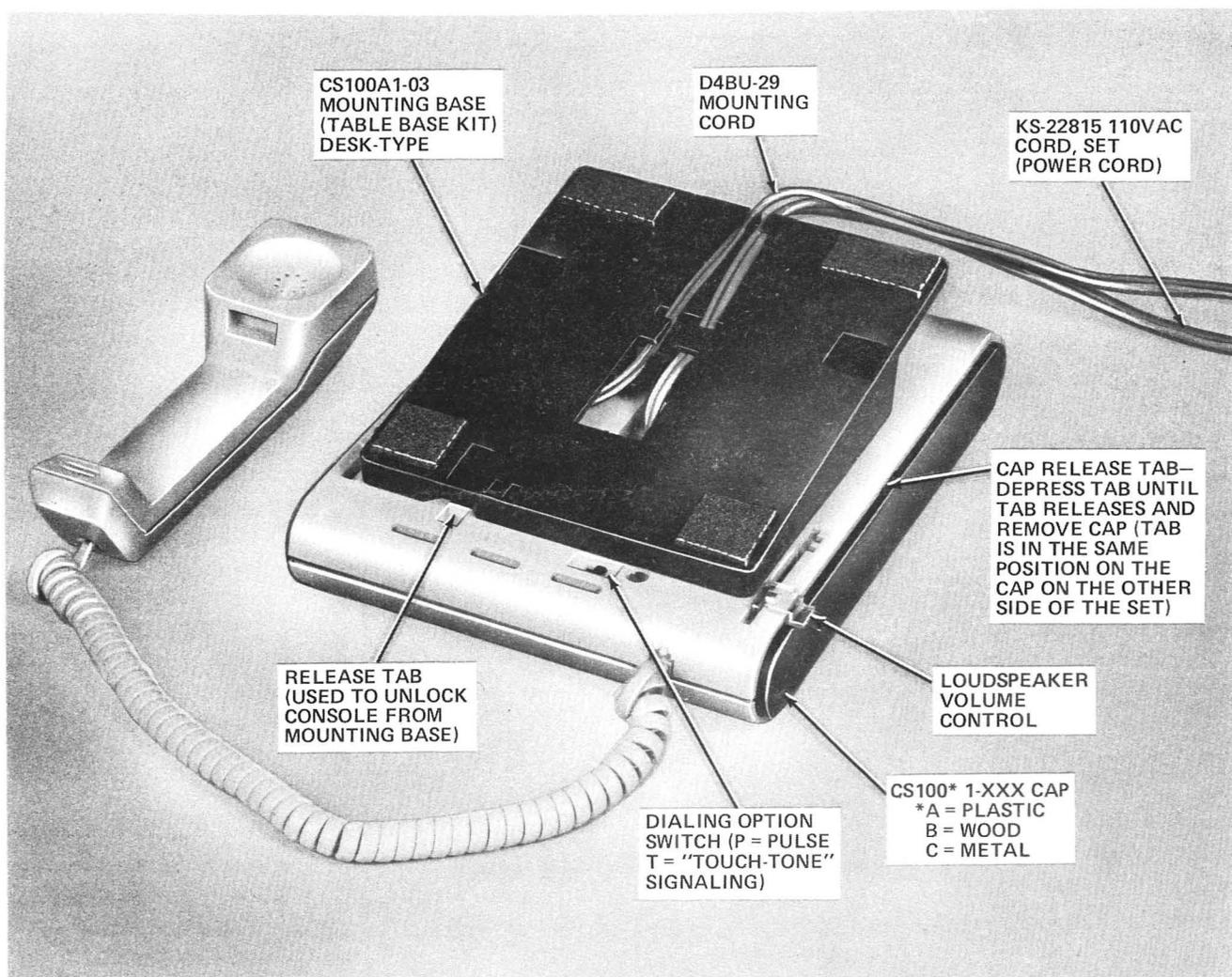


Fig. 3—Bottom View of Console (Desk-Type Mounting Base)

repertory button or after a timed interval of 30 seconds, whichever occurs first.

B. Emergency Dialing

3.08 Emergency telephone numbers (e.g. fire, police, doctor, etc.) may be programmed into appropriately identified feature button positions for one-touch dialing.

3.09 Depression of an emergency button shall cause the prompt "EMERGENCY NUMBER" and then the telephone number stored in that position to appear in the display.

3.10 Emergency feature buttons are illuminated for approximately 10 seconds after the set goes off-hook.

3.11 Telephone numbers stored in emergency locations are capable of being dialed during a commercial power failure using battery backup power.

C. Save/Send

3.12 After completion of a call and with the set on-hook, depression of the *YES button in response to the prompt "TO SAVE NUMBER - *YES" will cause the last telephone number entered into the display to be stored in a memory location. This num-

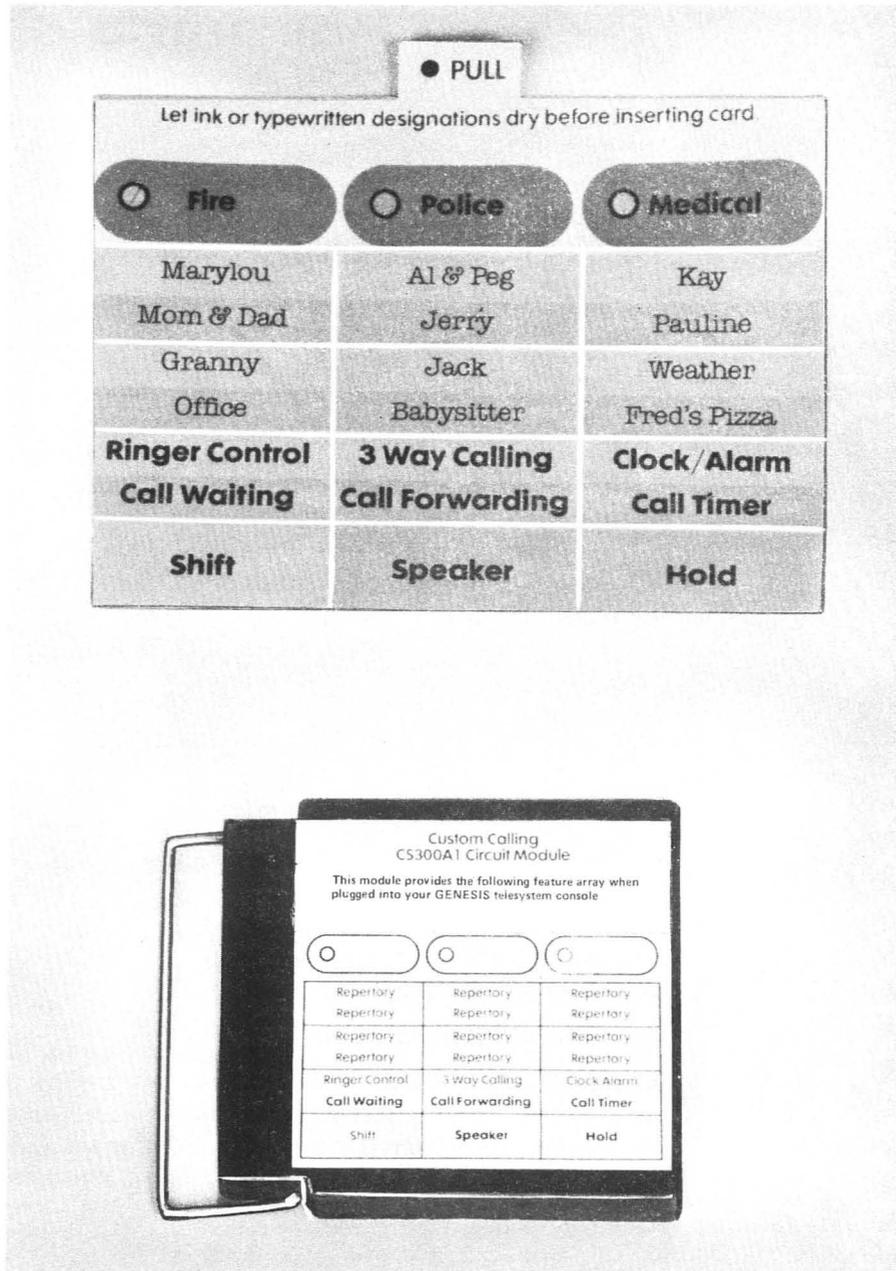


Fig. 4—CS300A1 Circuit Module and Associated Designation Strip

ber will be retained until replaced by depressing the *YES button when a subsequent telephone number is to be saved. The word saved and the telephone number will appear in the display to indicate that a telephone number has been saved in memory.

3.13 By going off-hook (the prompt "SEND=

XXXXXXX" appears in the display) and then depressing the Send button, the telephone number displayed is automatically dialed. Operation of the Send button does not alter the number stored in the memory.

D. Elapsed Time Display



Fig. 5—Console With General Purpose Telephone Module Attached

3.14 Elapsed time is measured by depressing the Call Timer button. Elapsed time from start shall be shown in the display in minutes and seconds. Timing stops when the Call Timer button is depressed again or, if the set is off-hook, and returned to the on-hook condition.

3.15 The timer is capable of displaying minutes and seconds up to 59 minutes and 59 seconds when in operation.

E. Station Hold

3.16 When the set is in the off-hook condition, the customer may put the set on hold by depressing the Hold button. The handset may then be placed on-hook without dropping the central office connection and the display will show the word "HOLD" to indicate the status of the set. The HOLD state is terminated by a time out (on-hook 2 minutes), taking the basic set off-hook or by momentarily depressing the Speaker button.

F. Clock/Alarm

3.17 A digital clock uses the alphanumeric display in the basic set to show the date and time of day. An alarm is also incorporated. An indication is given when the alarm is set and the alarm time will be displayed when the appropriate button sequence is activated.

G. Loudspeaker (Call Progress and Voice Monitor)

3.18 The Speaker button is provided for activation of the loudspeaker. The loudspeaker provides SPOKESMAN* loudspeaker type operation during conversation and call progress monitor for on-hook dialing. The loudspeaker will not function during commercial power failure.

* Registered Trademark of American Telephone and Telegraph Company.



Fig. 6—Console With Right Cap Removed

H. Scratch Pad

3.19 During a call, numbers can be “written” in the display by first depressing the Clear button until the display becomes blank (two presses at most). The phone is now in the scratch pad mode. Numbers may be entered from the key pad into the display and will not be dialed. Errors may be erased by depressing the Clear button which will erase the display. Depressing the Clear button while the display is blank or activating another feature turns off the scratch pad feature. Numbers written in the display in this manner may be dialed by depressing the Send button or may be saved in the save memory at the end of the call.

4. INSTALLATION AND CONNECTIONS

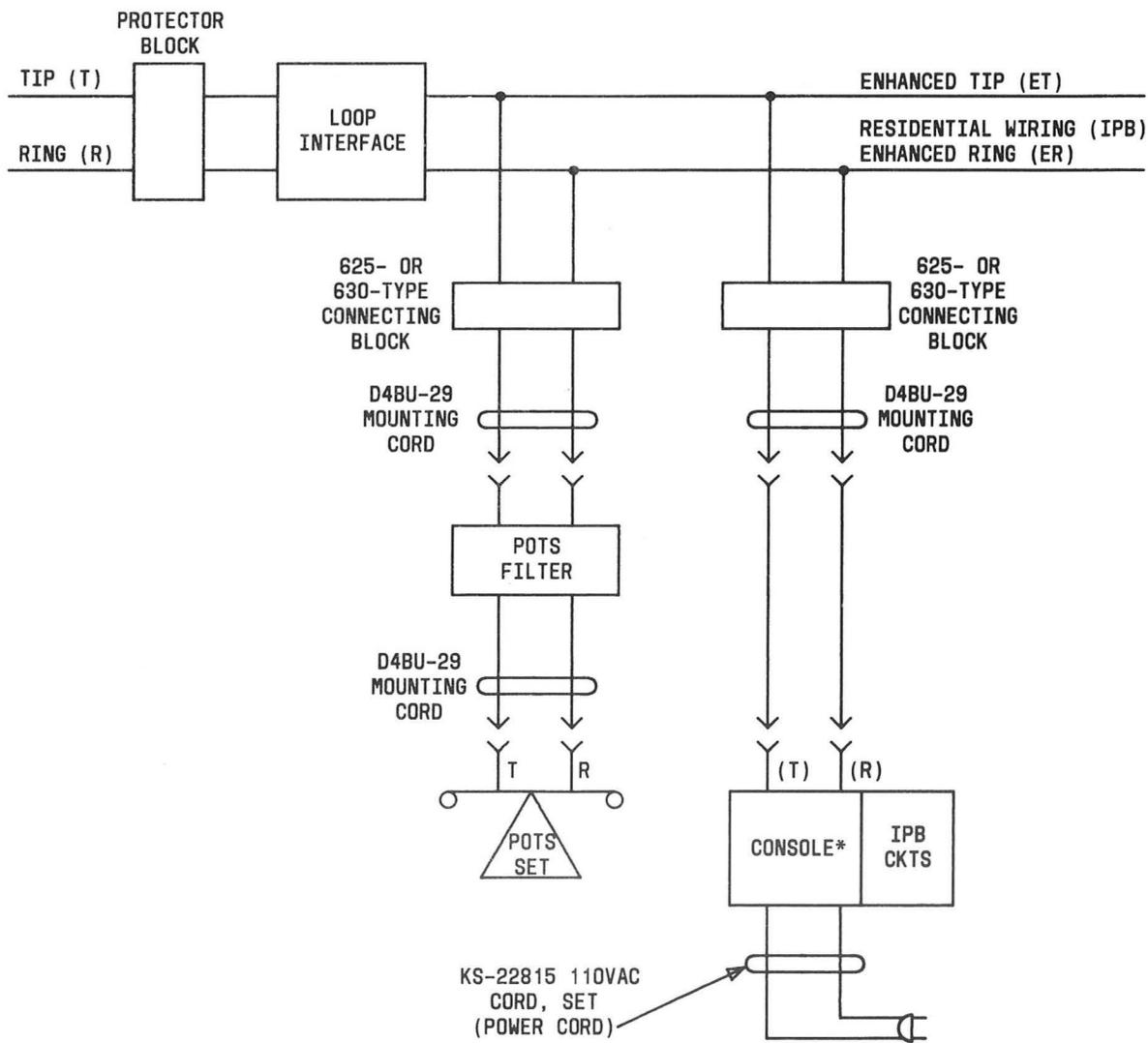
4.01 Upon original purchase, the customer chooses either mounting arrangement (desk or wall) and the necessary components (battery etc.) are pro-

vided by the PhoneCenter Store. The following installation and connection procedures are based on the fact that no assembly was performed on the console.

A. Console (Desk Type)

4.02 Install and connect the console as follows.

- (1) Position and connect the 14-foot D4BU-29 and 8-foot KS-22815 110 volt ac set cord (power cord) to the console as shown in Fig. 8.
- (2) Position the CS100A1 mounting base (table base kit) as shown in Fig. 3 and slide the base toward the top of the set until the release tab locks in place.
- (3) Dress the D4BU-29 and KS-22815 cords as shown in Fig. 3.
- (4) Without intra-premises bus, plug the D4BU-29 mounting cord into the 625-type con-



* POTS FILTER IS INCORPORATED INTO THE "GENESIS" TELESYSTEM INTERFACE CIRCUITRY

Fig. 7—Intra-Premises Bus

necting block and plug the KS-22815 set cord into a 110 volt ac outlet that is not switch controlled.

(5) With intra-premises bus, the same procedure applies as in Steps (1) through (4) **except** for the additional apparatus, wiring, and connecting arrangements that are required as shown in Fig. 7.

B. Console (Wall Type)

4.03 Install and connect the console as follows.

- (1) Attach the CS100B1 mounting base (wall base kit) to the 630-type connecting block (Fig. 9) and if additional stability is required, secure with the three screws provided.

Note: If a 191-type backboard has been in-

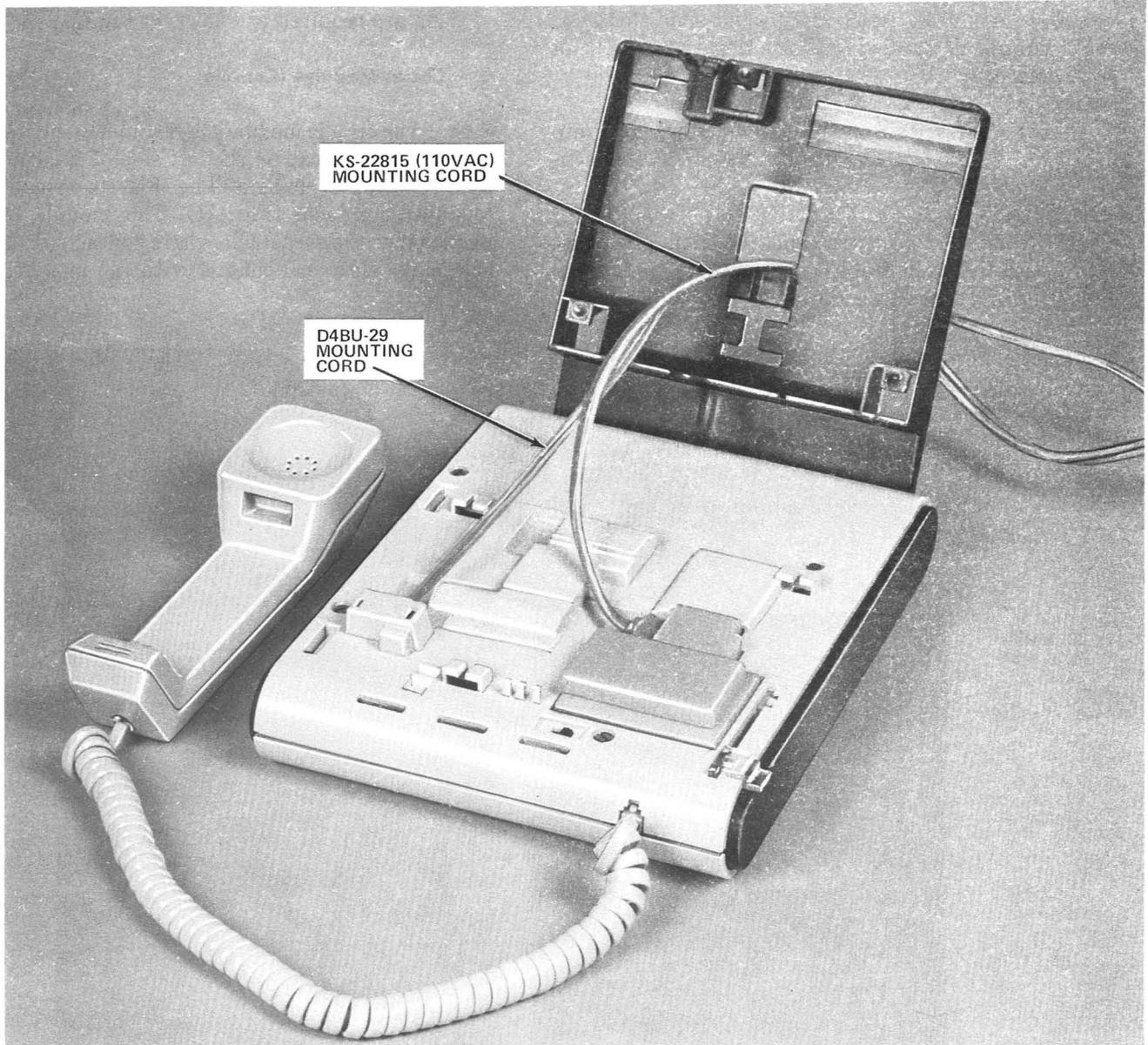


Fig. 8—Mounting Cord Connecting Arrangement (Desk-Type Mounting Base)

stalled around the 630-type connecting block, this backplate must be removed.

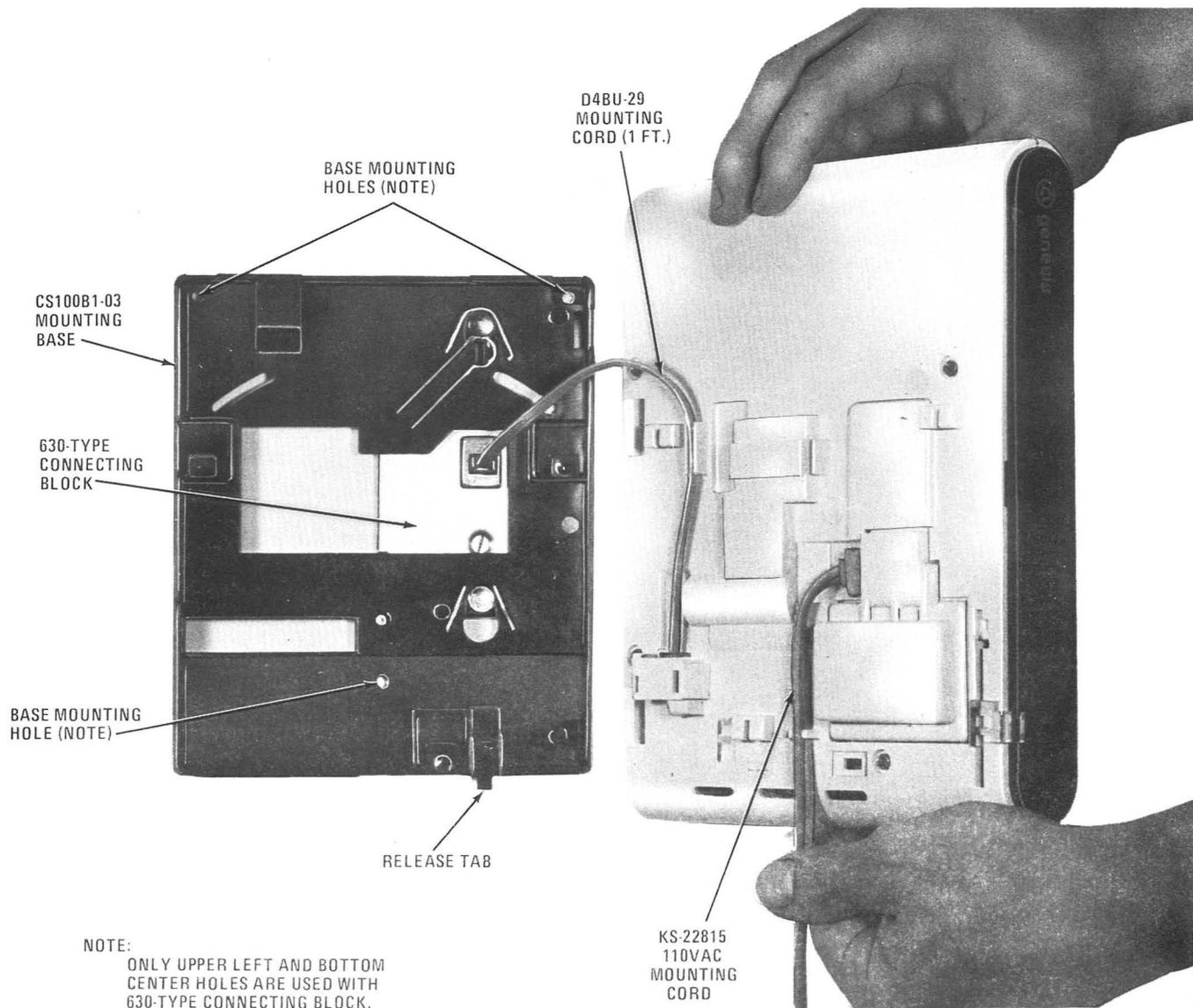
- (2) If the handset hook is not in the position for wall-type operation (retains handset in on-hook position) remove the number card and window holder, depress the plunger and slide the handset hook out of the base, (Fig. 10) turn 180
- degree and replace. Replace the number card and window holder.
- (3) Position and connect the 1-foot D4BU-29 mounting cord and 8-foot KS-22815 set cord (power cord) to the basic console as shown in Fig. 9.
- (4) Without intra-premises bus, proceed as follows.

- (a) Position the basic console on the CS100B1 mounting base (Fig. 9) and slide the basic console downward until the release tab locks in place.
- (b) Plug the KS-22815 (110 volts ac) cord into a 110 volts ac outlet that is not switch controlled.
- (5) With intra-premises bus, the same procedure applies as in Steps (1) through (3), and (4) (a)

and (b) **except** additional apparatus and connections are required as shown in Fig. 7.

C. Circuit Modules (Console)

4.04 The circuit module plugs directly into the console. The cap on the left side of the console is first removed by using a dime (Fig. 3), revealing the module receptacle (Fig. 11). The module is then pushed into the receptacle where contacts in the console make electrical contact with the module. After



NOTE:
ONLY UPPER LEFT AND BOTTOM
CENTER HOLES ARE USED WITH
630-TYPE CONNECTING BLOCK.

Fig. 9 — Mounting and Connecting Arrangements for Wall Mounting Base and Console

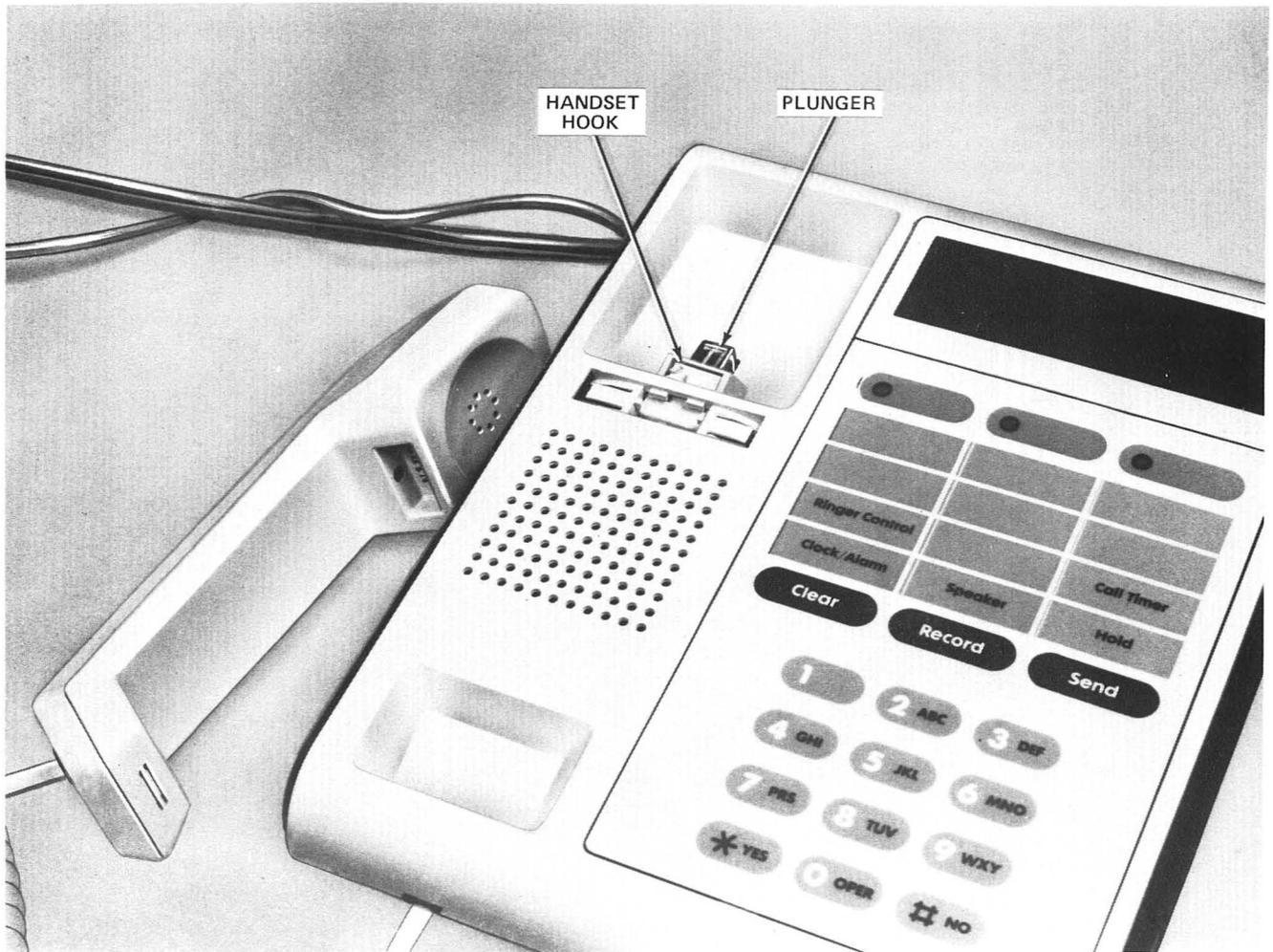


Fig. 10—Handset Hook Conversion (Shown Exposed for Wall Mounting)

the module is fully inserted, replace the cap and the set is fully operational. Removal of the module is accomplished by reversing this procedure.

D. Telephone Modules

4.05 Telephone modules are attached directly to the console or other telephone modules as follows.

- (1) By using a dime, remove the cap (Fig. 3 and 12) on the right side of the console or telephone module that is to receive the new telephone module.
- (2) Join the new module to the basic set or existing attached telephone module so that electrical

contact is made to the 110 volt ac bus and data bus as shown in Fig. 12 and 13, and insert retainer clips.

- (3) Replace cap on right most side of telephone module.

Note: For both wall and desk mounting an additional mounting base must be added for each telephone module (see paragraphs 4.02 and 4.03).

E. Designation Card Installation and/or Replacement

4.06 Remove the lens frame by lifting the top of the lens frame as shown in Fig. 14. Remove the designation card by pulling the tab marked PULL

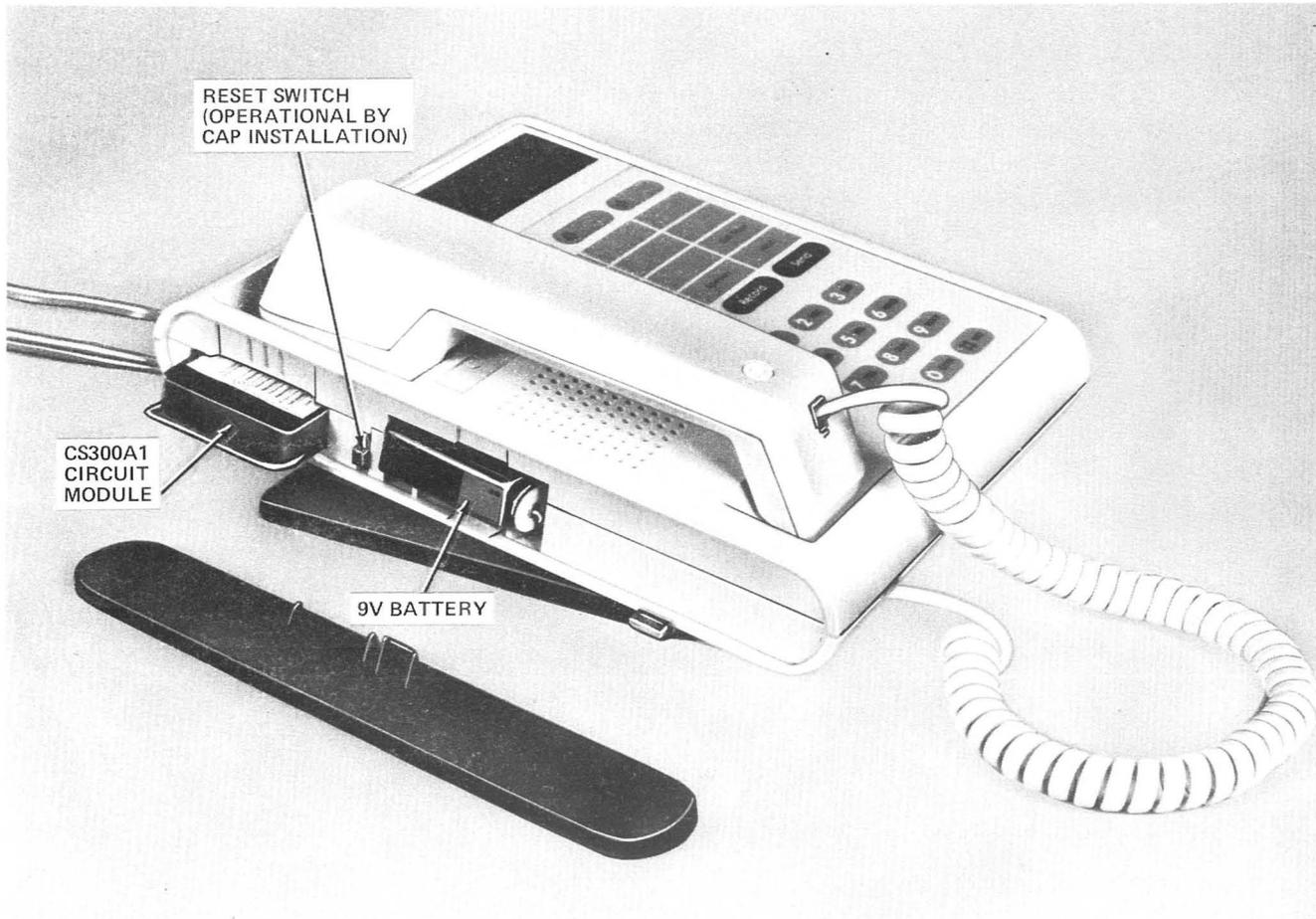


Fig. 11—Circuit Module and 9-Volt Battery Installation (Console)

outward from the set (Fig. 14). Slide the new designation card into the area vacated and replace the lens frame.

5. MAINTENANCE

A. AC and/or DC Power Failure

5.01 In the event of an ac power failure, the 9-volt battery backup will maintain POTS and emergency calling service for a maximum period of 10 hours (off-hook usage). It is necessary to replace the battery within this time frame to maintain the previous mentioned services (console only). There is no power loss indication other than the loss of the display.

5.02 If a battery failure occurs, (ac power still on) a "BATTERY DEAD" prompt will appear in

the display to indicate the need for immediate battery replacement (Fig. 11) to prevent POTS and emergency service loss in the event of an ac power failure and also to prevent set damage in case of battery leakage. In the event of a low battery, the "LOW BATTERY" prompt will appear in the display, this also indicates immediate battery replacement.

B. System Checkout and Trouble Locating

5.03 The following procedures provide a complete check of all features and will determine the probable defective components in the event of a failure.

Note: Component replacement consists of handset, handset cord, D4BU-29 mounting cord,

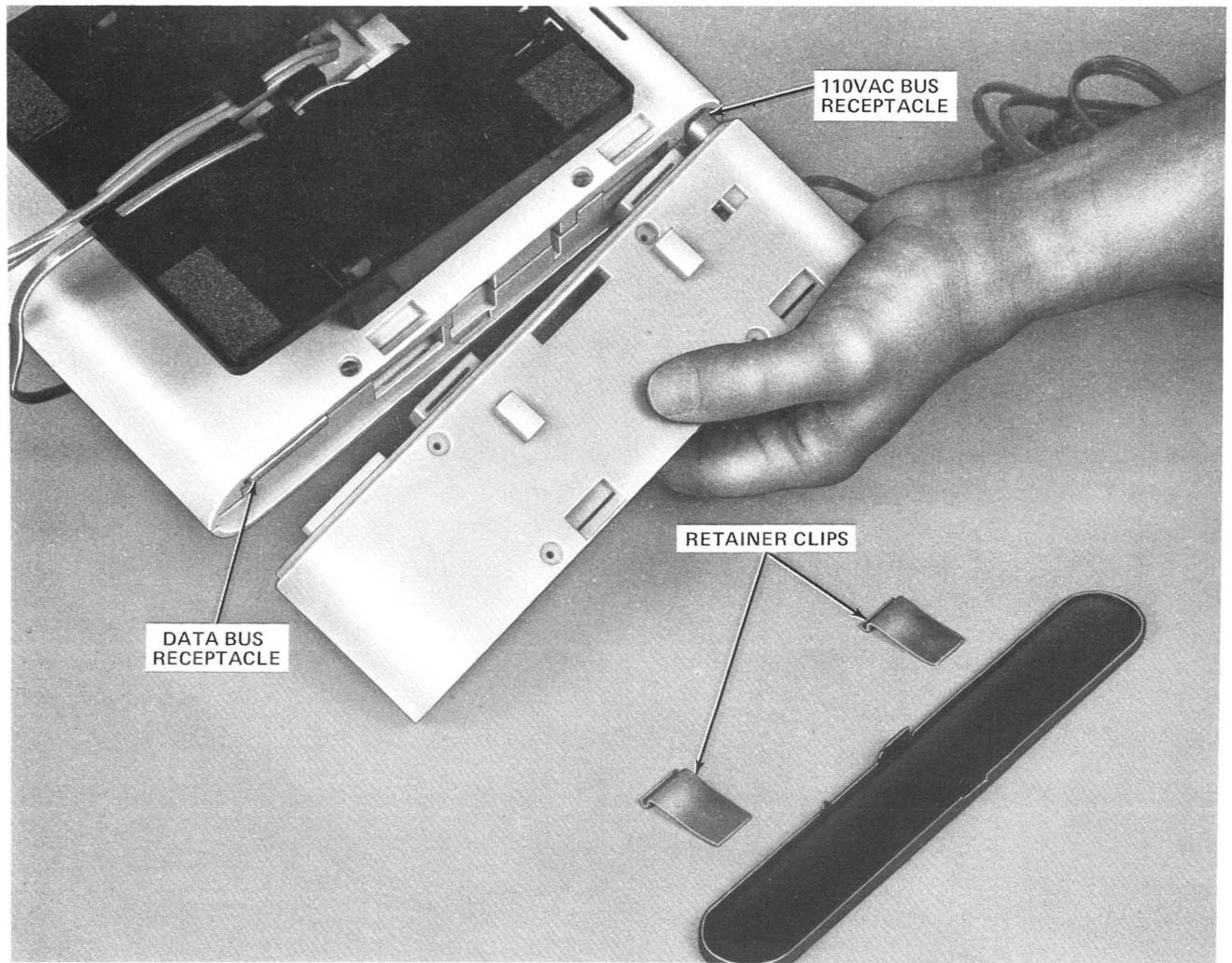


Fig. 12—Joining Console and/or Telephone Module With Telephone Module

KS-22815 110 volt ac set cord, 9 volt battery, or the entire telephone set.

5.04 When performing the tests special attention should be directed to the depress and momentarily depress action. The term depress is interpreted

to mean that the key is to remain depressed until instructed to release. The term momentarily depress is interpreted to mean firmly depressed and then released.

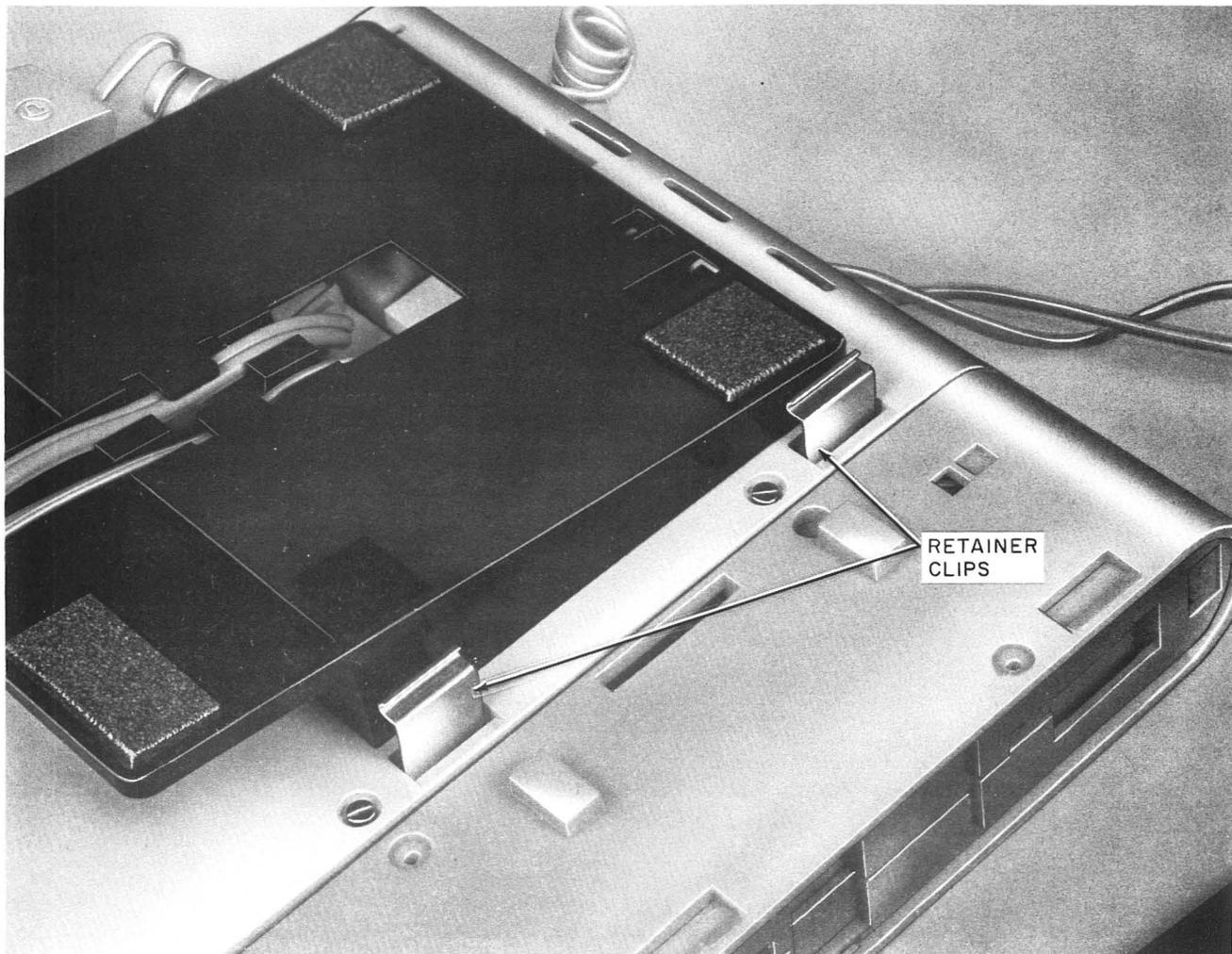


Fig. 13—Retainer Clips Partially Inserted

STEP	ACTION	VERIFICATION
Clock Set Test		
1	<i>Note:</i> If a circuit module has been installed into the console, it is necessary to momentarily depress the Shift button prior to Step 2.	
2	Momentarily depress Clock/Alarm button.	“SET CLOCK?” appears in the display.
3	Momentarily depress the *YES button.	“MIN = XX CHANGE?” (XX denotes minute value) appears in the display.

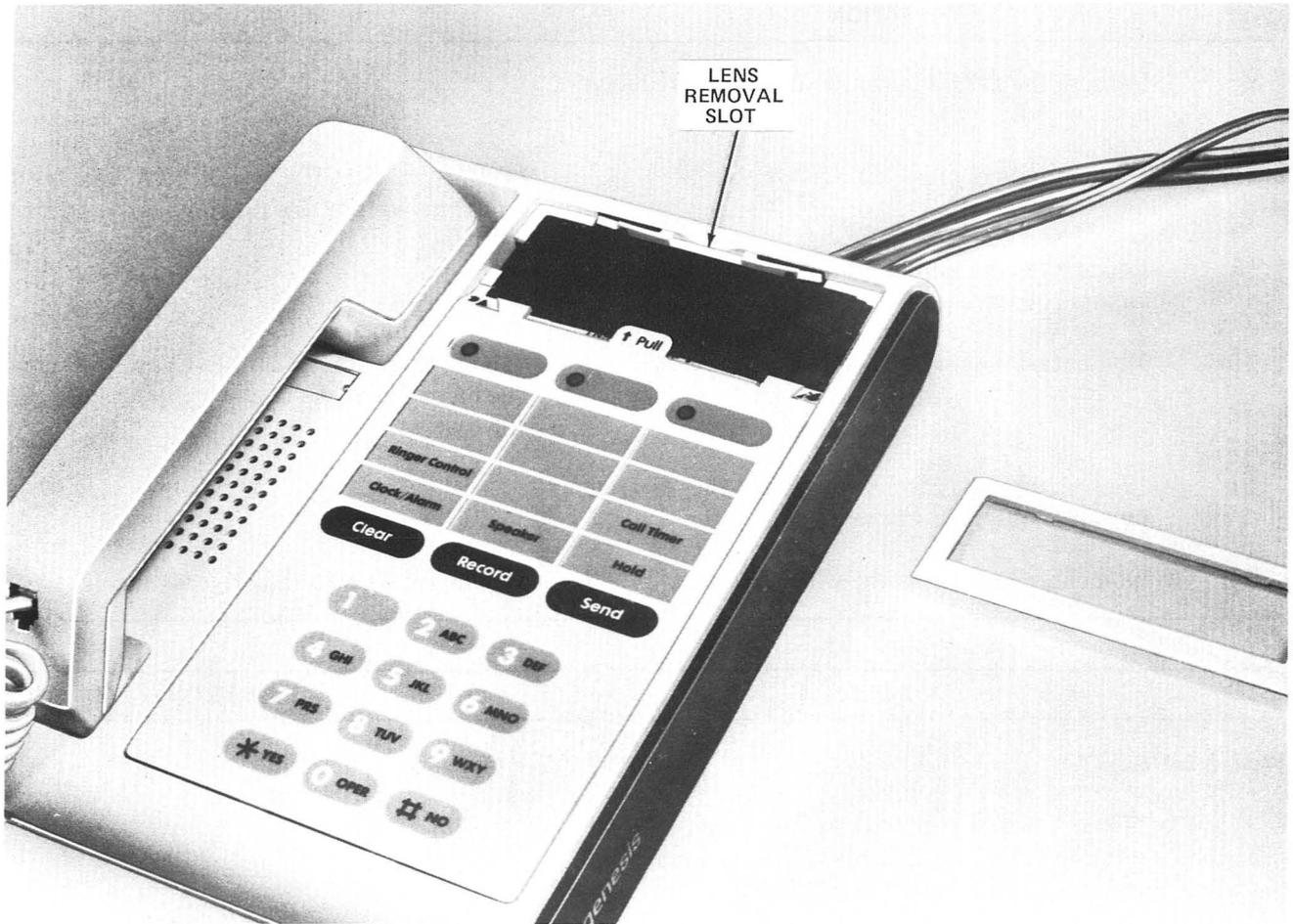


Fig. 14—Designation Card Replacement

STEP	ACTION	VERIFICATION
4	Depress the *YES button until the desired minute value is observed in the display.	
5	Momentarily depress the #NO button.	“HOUR = XX AM/PM CHANGE?” (XX denotes hour value) appears in the display.
6	Depress the *YES button until the desired hour and AM or PM is observed in the display.	
7	Momentarily depress the #NO button.	“DAY = XXX CHANGE?” (XXX denotes the day indication, example SUN) appears in the display.

STEP	ACTION	VERIFICATION
8	Depress the *YES button until the desired day is observed.	
9	Momentarily depress the #NO button.	“DATE = XX CHANGE?” (XX denotes date value) appears in the display.
10	Depress the *YES button until the desired date value is observed.	
11	Momentarily depress the #NO button.	“MONTH = XXX CHANGE?” (XXX denotes the month indication, example JAN) appears in the display.
12	Depress the *YES button until the desired month is observed in the display.	
13	Momentarily depress the Clear button.	Display reverts to the original state.

STEP	ACTION	VERIFICATION
Alarm Set Test		
1	<i>Note:</i> If a circuit module has been installed into the console, it is necessary to momentarily depress the Shift button prior to Step 2.	
2	Momentarily depress Clock/Alarm button.	“SET CLOCK?” appears in the display.
3	Momentarily depress the #NO button.	“ALARM = XX:XX AM/PM” (X denotes hour and minute value) appears in the display for 2 seconds. “ALARM = ON/OFF CHANGE?”
4	Momentarily depress the *YES button until the desired ON or OFF function is observed in the display.	
5	Momentarily depress the #NO button.	“MIN = XX CHANGE?” (X denotes minute value) appears in the display.
6	Depress the *YES button until the desired minute value is observed in the display.	
7	Momentarily depress the #NO button.	“HOUR = XX AM/PM CHANGE?” (X denotes hour value) appears in the display.

STEP	ACTION	VERIFICATION
8	Depress the *YES button until the desired hour value and "AM" or "PM" is observed in the display.	
9	Momentarily depress the Clear button.	Display reverts to the original state.

STEP	ACTION	VERIFICATION
Ringer Control Test		
1	<i>Note:</i> If a circuit module has been installed into the console, it is necessary to momentarily depress the Shift button prior to Step 2.	
2	Momentarily depress Ringer Control button.	"VOL = XXXX CHANGE?" (X denotes HIGH, OFF, LOW, MED) appears in the display.
3	Depress the *YES button until the desired ringer setting is observed in the display.	
4	Momentarily depress the Clear button.	Display reverts back to original state.
		<i>Comment:</i> If the ringer is in the OFF position. The time of day, AM/PM, and RINGER OFF appear in the display.

STEP	ACTION	VERIFICATION
Timing Test		
1	Momentarily depress the Call Timer button to start timing.	"Hour, minutes, AM, or PM," (present time) and "00:00" (timing start) appear in display (0 denotes minutes and seconds of timer).
2	Momentarily depress the Call Timer button to stop timing. An on-hook (call completion) condition will perform the same function as Step 2.	"Hour, minutes, AM, or PM, and XX:XX" (elapsed time in minutes and seconds) appear in the display for 5 seconds and then return to the standard on-hook display. The prompt in this case is "TIME OF CALL = XX:XX"

STEP	ACTION	VERIFICATION
3	Momentarily depress the Clear button.	Display reverts back to original state.

STEP	ACTION	VERIFICATION
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Save/Send and Dialed Number Display Test

1	Remove the handset and dial a test number that is not already stored in the set memory (maximum 16 digits).	Note: Any numbers dialed will remain on the display until another function is activated. The number dialed appears in the display.
2	After call is completed replace the handset.	“XXX-XX SAVE?” appears in the display for 15 seconds. (X denotes number to be saved).
3	Momentarily depress *YES button.	The telephone number called and “SAVED” appears in the display for 3 seconds.
4	Remove the handset.	“SEND = number dialed” Step 1 appears in the display.
5	Momentarily depress Send button.	The number in Step 4 is automatically dialed.
6	After termination of the call, replace the handset.	

STEP	ACTION	VERIFICATION
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Record and One Button Dialing (Console) Test

1	Note 1: If a circuit module has been installed into the console, it may be necessary to momentarily depress the Shift button prior to Step 5.	
2	Note 2: Steps 3 through 5 also are used to store a number in a location that had a previously stored number.	
3	To record a number (up to 16 digits) in the three emergency and seven 1-button dialer locations, momentarily depress the Record button.	“ENTER NUM THEN LOC” appears in the display for 30 seconds.

STEP	ACTION	VERIFICATION
4	Enter number to be stored using the alphanumeric keys.	Note: If nothing is entered within 30 seconds the console times out and returns the display to normal. The number to be stored appears in the display (10 seconds).
5	Momentarily depress one of the three emergency or seven 1-button dialer locations in which the number is to be stored.	The number and "STORED" appears in the display for 3 seconds.
6	Repeat Steps 3 through 5 for each number to be stored.	
7	To verify each number recorded, momentarily depress each memory location button.	Note: If the emergency button is depressed "EMERGENCY 1, 2, or 3" and then the telephone number appears in the display. Stored number appears in display for 3 seconds.
8	Remove handset, (emergency LED lamps light for 10 seconds) momentarily depress the stored number location to which the call is to be placed.	Note: See Step 7 for emergency number display. Stored number appears in display and is dialed by the set.
9	After call completion, replace handset.	Display is restored to normal.

STEP	ACTION	VERIFICATION
Clear and Scratch Pad Test		
1	Remove handset and establish test call.	
2	Momentarily depress the Clear button.	Display becomes blank.
3	Note: If a number is entered in error, momentarily depress the Clear button and repeat Step 2. Enter a series of numbers from the dial key pad buttons (16 maximum).	Numerical values appear in display.
4	Replace handset.	Display reverts back to original state.

STEP	ACTION	VERIFICATION
Speaker Operation Test		
1	Remove handset and establish test call.	
2	After conversation has been established, momentarily depress the Speaker button.	After a 3-second interval, conversation of both parties is heard over the speaker and handset receiver.
3	Momentarily depress the Speaker button.	The speaker is silenced.
4	Replace handset.	Display reverts back to original state.
5	Momentarily depress Speaker button.	Speaker is activated and dial tone is heard.
6	Establish a test call using the dial key pad.	Call progress tones are heard over the speaker.
7	Momentarily depress the Speaker button.	The speaker is silenced and the display reverts back to original state.

STEP	ACTION	VERIFICATION
Hold Test		
1	Note: When the console is on hold the only active buttons are the Speaker and the Hold. All other buttons are inactive.	
2	Remove handset and establish a test call.	
3	Momentarily depress Hold button.	"HOLD" appears on the display and the line is held.
4	Momentarily depress Hold button again.	Verify test (original call) call is still established.
5	Replace handset.	Call is terminated.
6	Remove handset and establish a test call.	
7	Momentarily depress Hold button.	"HOLD" appears on the display and the line is held.
8	Replace handset.	Verify after a 2 minute period "HOLD" will extinguish and the display reverts back to the original state.