

"TELEHELPER*" SPEAKERPHONE SYSTEM

IDENTIFICATION, INSTALLATION, CONNECTION, OPERATION, AND MAINTENANCE

1. GENERAL

1.01 This section contains information on the 10A transmitter-receiver (TELEHELPER speakerphone). The TELEHELPER speakerphone (Fig. 1) is a one piece rectangular shaped unit referred to in this section as speakerphone. The speakerphone is equipped with modular jacks and can be readily connected to residential single line modular rotary or TOUCH-TONE† dial desk or wall telephone sets.

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

1.03 A D-181062 Kit of Parts is required when the speakerphone is to be wall mounted in conjunction with a wall telephone set (Fig. 2).

Note: The speakerphone is not intended for use with multiline or business telephones and cannot be used on party line service.

2. IDENTIFICATION

2.01 The speakerphone is available only with a dark brown (-104) base and an ivory (-50) cover (Fig. 3). The base contains a sliding battery and cord connections cover (Fig. 5). Under this cover are two compartments; the larger one is for a standard 9-volt alkaline battery, the other contains two modular jacks. The eight conductor jack is labeled LINE, the six conductor jack is labeled PHONE (Fig. 5).

2.02 Design Features:

- Modular cord connected
- Compatible with both rotary and TOUCH-TONE service

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†Registered Trademark of American Telephone and Telegraph Company.

- Battery powered voice actuated transmit and receive switching
- Line powered receive amplifier
- No ac power required
- Weak battery alarm
- Battery interlock (battery not in circuit unless battery and cord connection cover is closed)
- Built in polarity guard.

2.03 Operational Features:



This speakerphone is not compatible with all network facilities due to limited available loop current, and may not function properly in all cases. When connected to facilities, such as analog loop carrier systems (SLC-1 and SLC-8 type) and long loops (over 1300 ohms) the volume and fidelity of the receive speech from the loudspeaker may not be acceptable.

- Both dialing and ringer alerting accomplished through the associated telephone set
- Speakerphone can be used for answer only (no associated telephone set)
- All nonassociated telephone sets on same line must be a minimum of 10 feet from speakerphone to prevent feedback
- Dialing on associated telephone set can only be accomplished with speakerphone in the OFF position
- With speakerphone switch in the ON position associated telephone set is disconnected

NOTICE

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

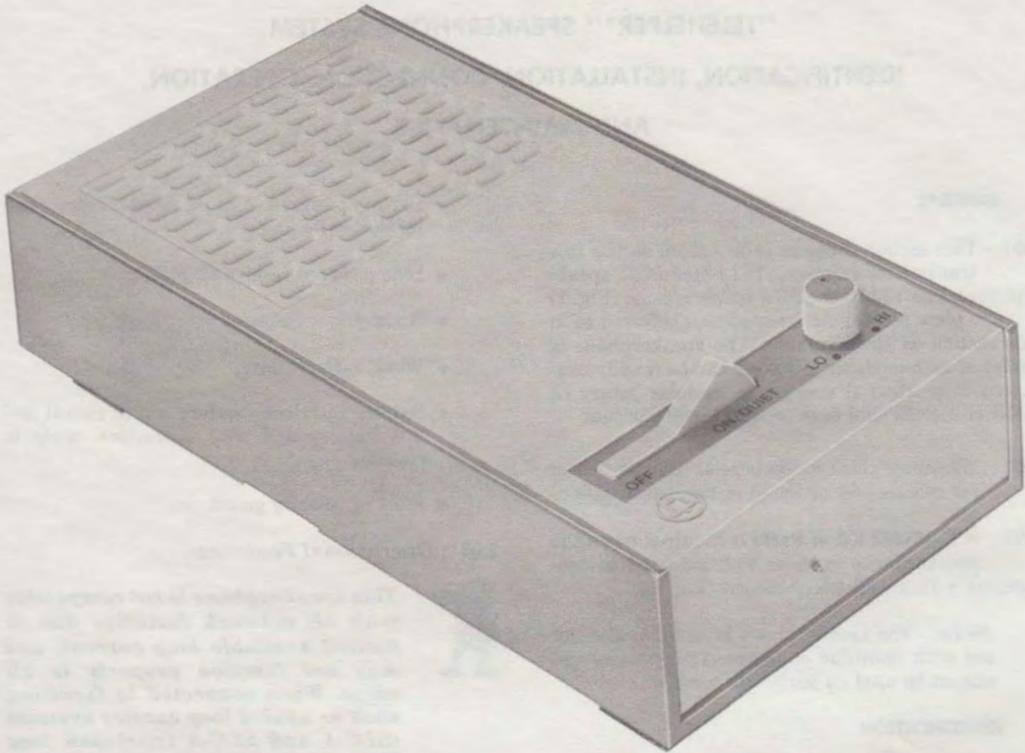


Fig. 1 — TELEHELPER Speakerphone

- With speakerphone switch in the QUIET (nonlocking) position the microphone is disabled
- Volume control adjusts receiver volume.

2.04 **Ordering Guide:**

(a) The TELEHELPER speakerphone is a modular adjunct and may be ordered as follows:

- Transmitter-Receiver, 10A-50 (includes):
Customer Instruction Booklet (CIB-28008GJWR)
Battery, KS-21618L2 (9-volt)
Cord, Mounting, D4BU-29 (2-foot).

(b) **Optional apparatus ordered separately:**

- D-180882 Kit of Parts (includes):

Adapter, 304A

Cord, Mounting, D8AA-87 (7-foot)

- Cord, Mounting, D6AA-87 (7-foot)

- Cord, Mounting, D8AA-87 (7-foot)

- Cord, Mounting, D8AA-87 (14-foot)

- D-181062 Kit of Parts (includes):

Adapter, 730B

841423718 Speakerphone Wall Mount Adapter

Mounting Template.

(c) **Replaceable components:**

- Alkaline Battery, 9-volt (customer replaceable only)

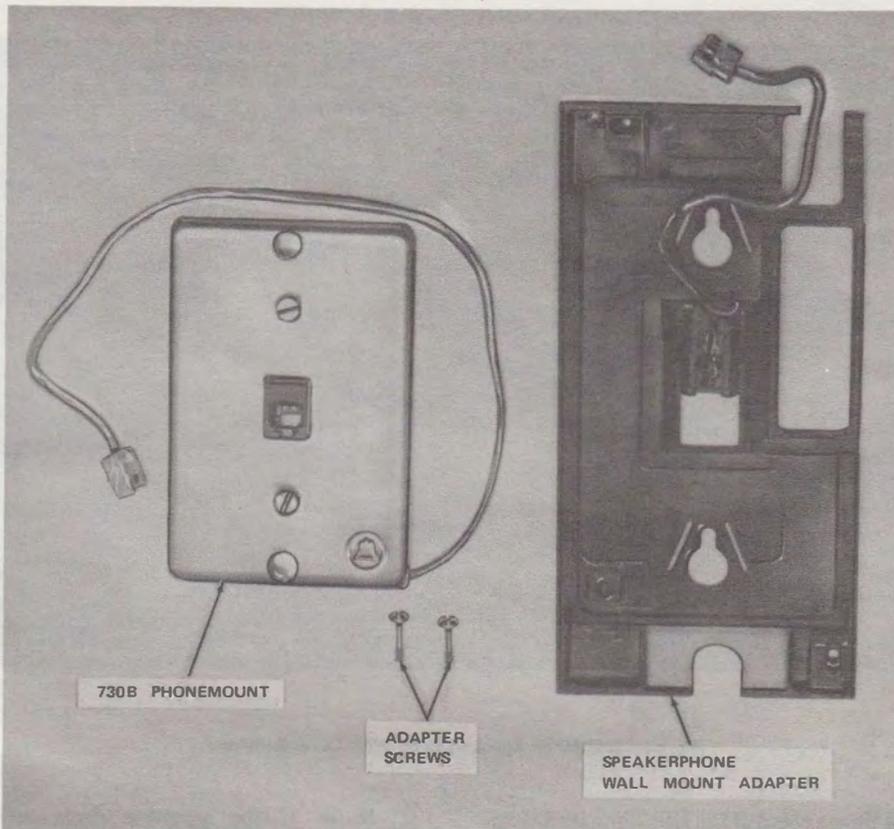


Fig. 2—D-181062 Kit of Parts Used When Wall Mounting Speakerphone

- Cord, D4BU-29 (2-foot)
- Cord, Mounting, D6AA-87
- Cord, Mounting, D8AA-87.

3. INSTALLATION AND CONNECTIONS

3.01 There are three types of installations: standard desk, optional desk, and wall.

A. **Standard Installation of Single Line Desk Telephone (Fig. 6)**

3.02 The central office line must be terminated in a standard modular connecting block that will

accept a D4BU mounting cord. The telephone set to be associated with speakerphone must also be modular.

Note: Select a location for mounting the speakerphone which will provide a hard surface beneath the speakerphone with no obstruction to the microphone port (Fig. 4). Also avoid locating in noisy locations and near sources of heat and dust.

3.03 Remove battery and cord connections cover on bottom of speakerphone. Plug the standard D4BU mounting cord into the jack labeled LINE (Fig. 5) dressing the cord through the plastic cord

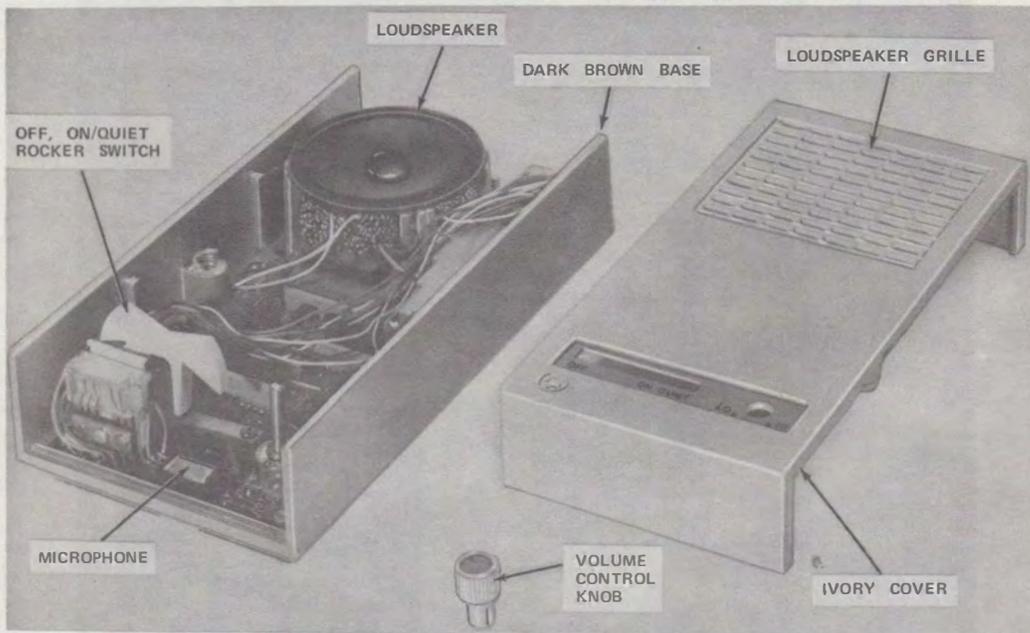


Fig. 3—TELEHELPER Speakerphone With Cover Removed

slot. Plug the other end of the D4BU into the CO line terminated connecting block.

3.04 Adjust volume control to minimum position and turn speakerphone on:

- Dial tone should be heard indicating proper connection to CO line
- A beeping sound (low battery alarm signal) should also be heard indicating a weak or no battery
- Turn speakerphone off, both sounds should cease.

3.05 Plug the (2 foot) D4BU-29 mounting cord into speakerphone jack marked PHONE. Run cord through cord slot and plug other end of cord into associated telephone set (Fig. 6).

Note: If the mounting cords are interchanged at speakerphone, the speakerphone will not operate.

3.06 Connect and place battery in battery compartment. Replace battery and cord connections cover (Fig. 5). Cover activates a switch which connects battery into circuits.



All subsequent batteries (Alkaline 9-volt) are to be provided and installed by the customer. If service is discontinued disconnect and discard the battery.

B. Optional Installation of Desk Telephone Using 304A Adapter (Fig. 7)

Note: Select a location for mounting the speakerphone which will provide a hard surface beneath the speakerphone with no obstruction

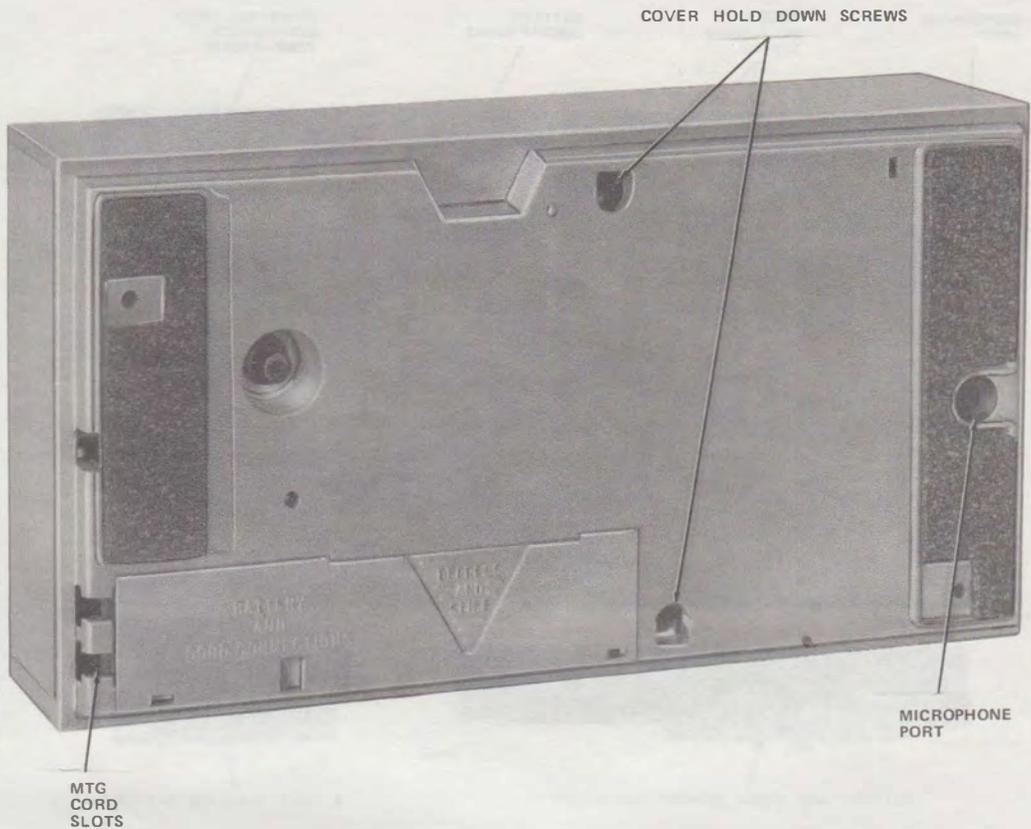


Fig. 4—Bottom of TELEHELPER Speakerphone

to the microphone port (Fig. 4). Also avoid locating in noisy locations and near sources of heat and dust.

3.07 To allow for independent associated telephone set or speakerphone portability, a D-180882 Kit of Parts (ordered separately) can be installed as follows.

- Plug the 304A adapter (Fig. 7) into a 625-type connecting block or equivalent.
- Remove battery and cord connections cover from bottom of speakerphone.
- Plug one end of the D8A A mounting cord into the larger (8-conductor) jack on the 304A adapter and the other end of the cord into the speakerphone jack labeled LINE.
- Plug one end of the standard D4BU mounting cord into the smaller 6 conductor jack on the 304A adapter. Plug the other end of the D4BU mounting cord into the telephone set jack.
- Replace battery and cord connections cover.

Note: When disconnecting a speakerphone

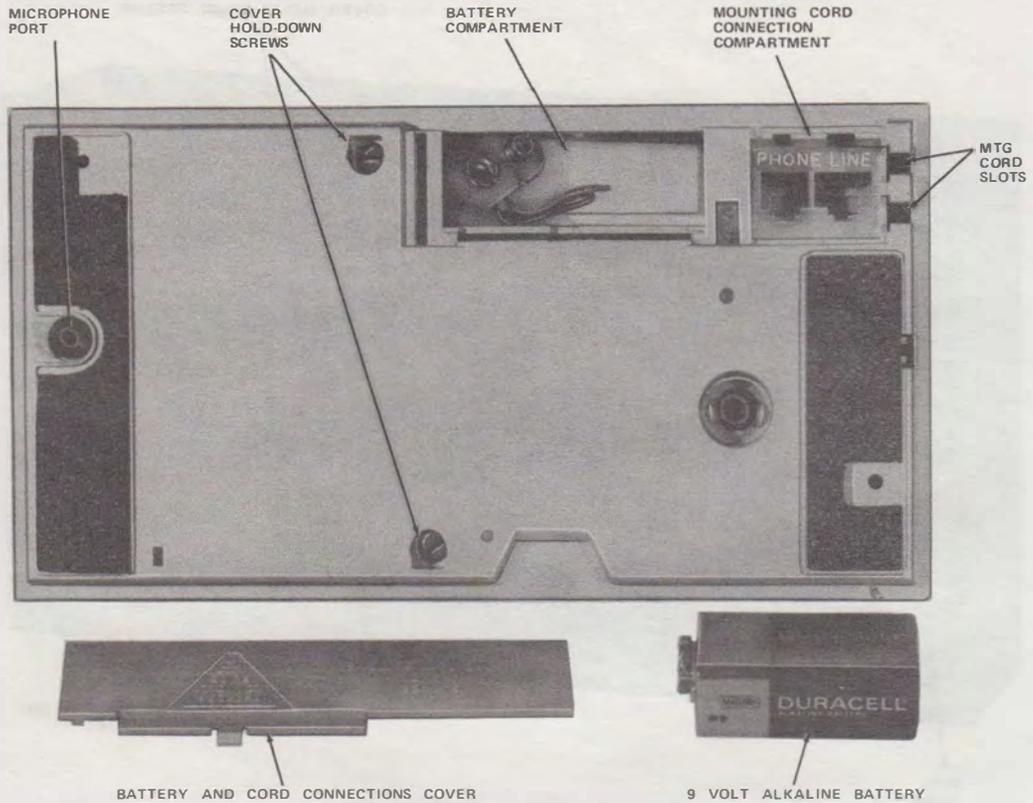


Fig. 5—Bottom View of The TELEHELPER Speakerphone With Battery and Cord Connections Cover Removed

utilizing the D-180882 Kit of Parts unplug the D8AA mounting cord from the 304A adapter. **Do not unplug mounting cord from speakerphone as this will disconnect the associated telephone set from the incoming line.**

C. Wall Installation Using D-181062 Kit of Parts (Fig. 2)

3.08 The speakerphone can be wall mounted in conjunction with the residence wall telephones shown on template (Fig. 8).

Note: Select a location for mounting the

speakerphone which will provide a hard surface beneath the speakerphone with no obstruction to the microphone port (Fig. 4). Also avoid locating in noisy locations and near sources of heat and dust.

3.09 To mount the speakerphone with a new or existing wall telephone proceed as follows.

Note: The wall telephone must be modular with an associated 630A4 connecting block installed. If a modular wall telephone is already installed, remove from 630A4 connecting block.

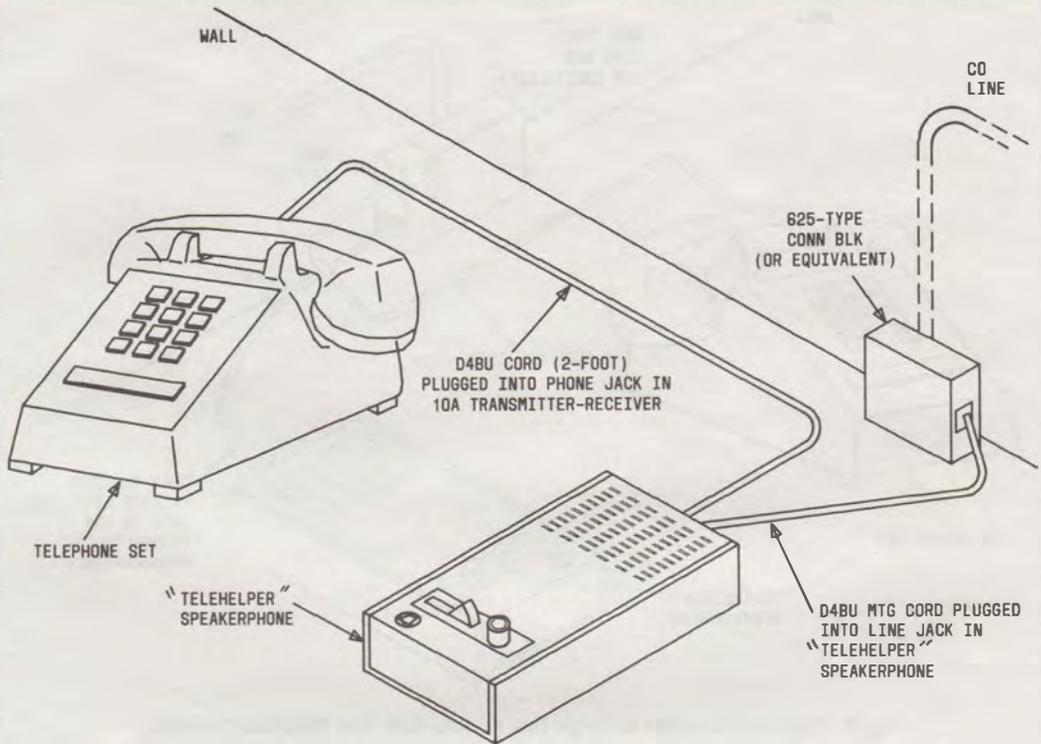


Fig. 6—Recommended Installation for Single Line Modular Desk Type Telephone Set

- (1) Place template (Fig. 8) over 630A4 connecting block. Level template and mark the two X locations (associated with the type of set to be installed) through template onto wall. Remove template.
- (2) Remove battery and cord connections cover from speakerphone.
- (3) Plug 730B phonemount cord into speakerphone modular jack labeled PHONE and dress cord through cord slot (Fig. 10).
- (4) Plug wall mount adapter cord into speakerphone modular jack labeled LINE and dress cord through cord slot (Fig. 10).
- (5) Connect and place battery in battery compartment. Replace battery and cord connections cover.
- (6) Place wall mount adapter on rear of speakerphone dressing the adapter lead and the 730B phonemount lead between speakerphone and adapter mount (Fig. 11 and 12). Screw adapter mount onto speakerphone making sure cutouts in adapter mount align with battery cover (Fig. 13).
- (7) Place speakerphone with mount over 630A4 in which central office line is terminated and press down.
- (8) Mount the 730B phonemount (Fig. 10) (attached cord exiting bottom of plate) to the wall using template marks, and center top and bottom mounting holes (Fig. 12).

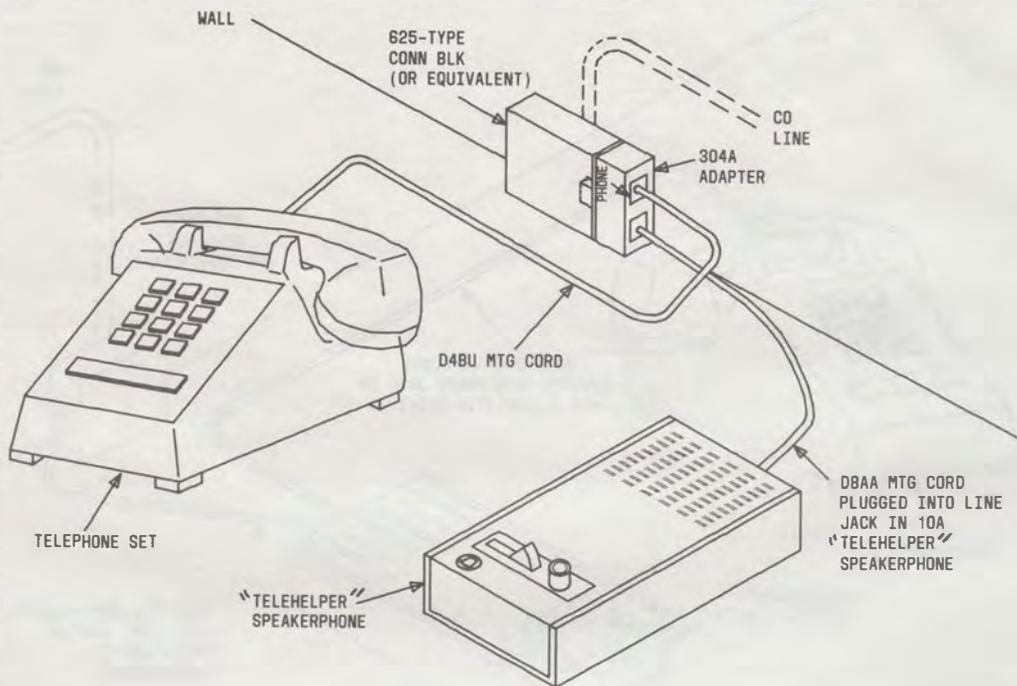


Fig. 7—Optional Installation for Single Line Modular Desk Type Telephone Set With D-180882 Kit of Parts

Note: Tighten the screws firmly but avoid overtightening which could distort adapter.

- (9) Place telephone set onto 730B phonemount and press down.

4. INSTALLATION TEST

A. Associated Telephone Set

4.01 To test telephone set associated with speakerphone, proceed as follows:

- Make sure speakerphone rocker switch is in OFF position
- Remove handset from telephone set
- Dial ring back code to check ringer

- Check telephone set transmission and reception
- If a 304A adapter is provided disconnect the speakerphone D8AA cord from adapter or connecting block and check that telephone set continues to operate properly.

B. Speakerphone

4.02 To test speakerphone proceed as follows:

- Make sure speakerphone rocker switch is in OFF position
- Turn volume control knob to mid position
- Dial up test number as per local instructions
- At completion of dialing push speakerphone rocker switch to ON position

- When the speakerphone switch is operated to the ON position the telephone set should be disconnected from circuit and ringing or called party should be heard through speakerphone
- If beeping tone is heard check for weak battery, no battery, or loosened battery and cord connections cover
- Turn volume control knob, volume should increase or decrease
- Hold speakerphone rocker switch in QUIET (nonlocking) position and check that speakerphone transmission is disabled, but receive speech is still heard from loudspeaker.

5. OPERATION

5.01 The following characteristics govern the use of the speakerphone:

- When dialing a number the speakerphone rocker switch must be in the OFF position
- When changing from telephone to speakerphone or back either the speakerphone or the associated telephone set must be on the line at all times to maintain connection with distant party

Note: When changing from telephone to speakerphone turn the speakerphone on before replacing handset on-hook. When changing from speakerphone to telephone lift the handset off-hook before turning the speakerphone off.

- The speakerphone volume control knob adjusts only the receive volume and has no effect on the transmit level
- When the speakerphone rocker switch is in the ON position the associated telephone set is disconnected from the line
- When the speakerphone rocker switch is held in the QUIET position transmission to the

distant party is prevented allowing a private off-line conversation at the speakerphone location.

Note: Operation of the rocker switch to the QUIET position disables the voice-operated circuit (paragraph 5.03) and locks the speakerphone in the receiver mode with transmit disabled.

Note: Incoming speech is not interrupted by operation of rocker switch to QUIET position.

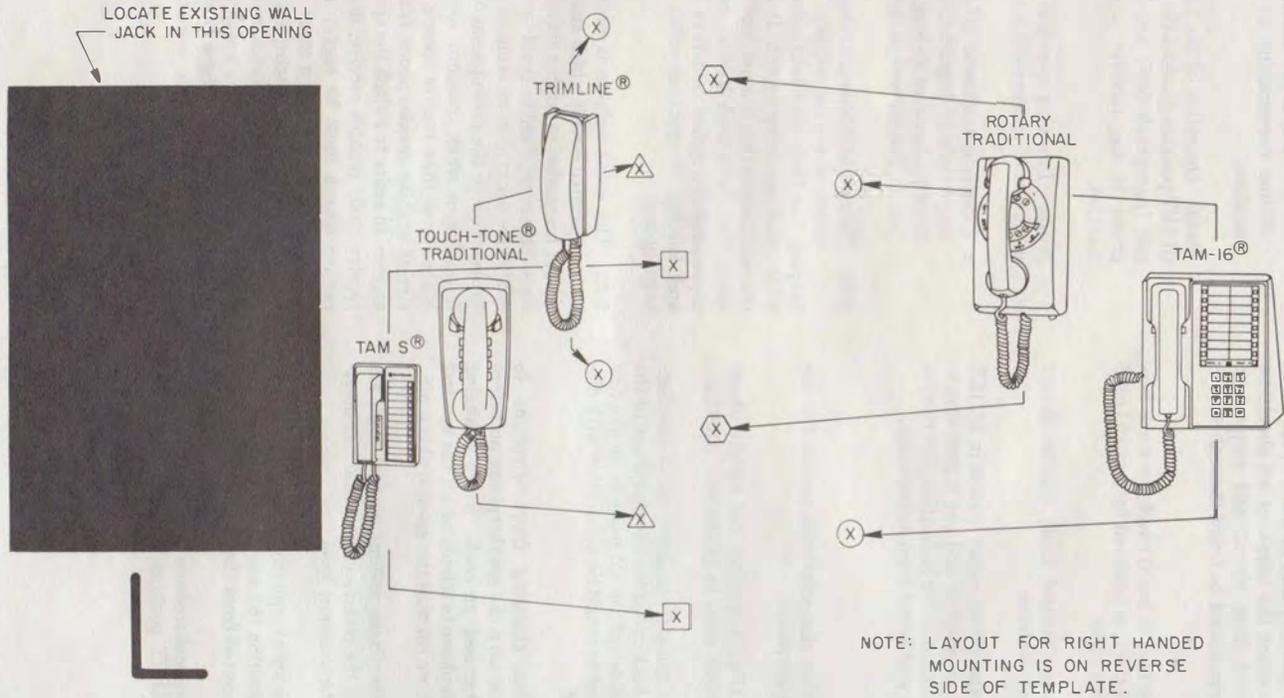
- Extension telephone off-hook on same line may result in degradation of receive speech from loudspeaker on long loops due to reduction in line current to speakerphone.

5.02 The speakerphone provides an automatic indication of a weak battery. This is a low level beeping tone from the loudspeaker which is only audible when receiving speech. It is turned off when transmitting so that it is not transmitted to the other party. Test for a weak battery can be performed by depressing the rocker switch to its QUIET position and holding it operated while listening for the beeping tone.

5.03 The speakerphone is provided with a voice operated circuit which enables only one direction of transmission (either transmit or receive) at a time. This is required to avoid "singing" which would otherwise occur due to acoustic feedback from the loudspeaker to the microphone. When neither party is talking or when transmit speech is present at a higher level than receive speech, the voice operated circuit enables speakerphone transmit and disables receive. In order to switch the speakerphone into the receive mode (enable receive, disable transmit) the receive speech must be higher than the switching threshold and in addition must be higher than the transmit speech (if present) and any noise at the speakerphone location. Speakerphone installation in a noisy location should be avoided since it will result in poor performance where portions of words are clipped or even complete words and sentences are missed.

TOP

USE THIS SIDE FOR
LEFT HANDED SPEAKERPHONE MOUNTING



SELECT ONLY THE TWO "X" MARKS APPROPRIATE TO YOUR TELEPHONE

Fig. 8—Template Found in D-181062 Kit of Parts (Reduced in Size)

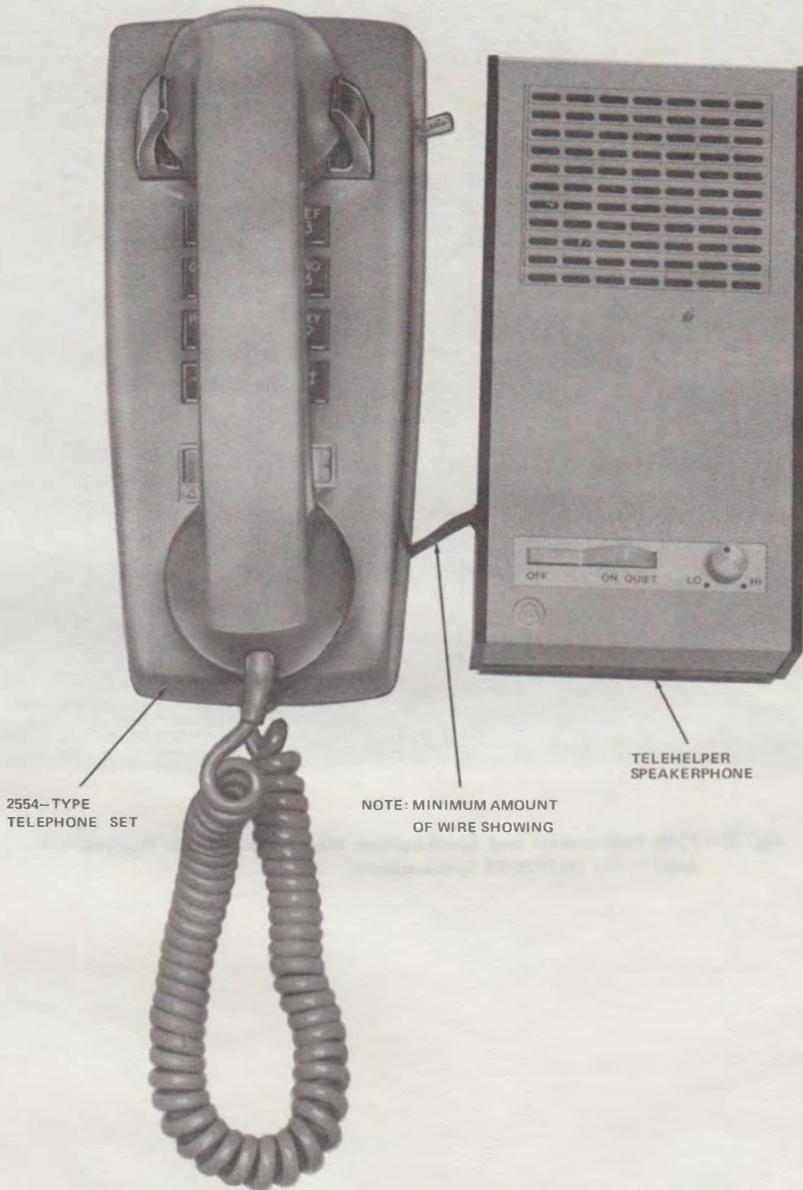


Fig. 9—TELEHELPER Speakerphone Wall Mounted With 2554-Type Telephone Set

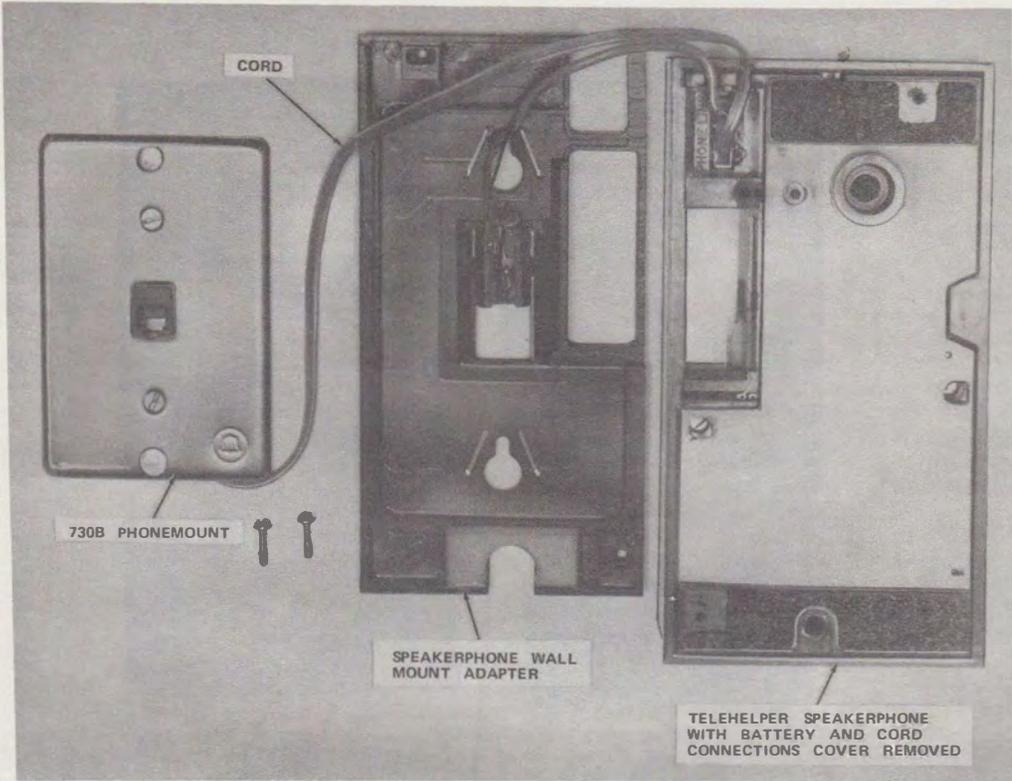


Fig. 10—730B Phonemount and Speakerphone Wall Adapter Cords Plugged Into Jacks in The TELEHELPER Speakerphone

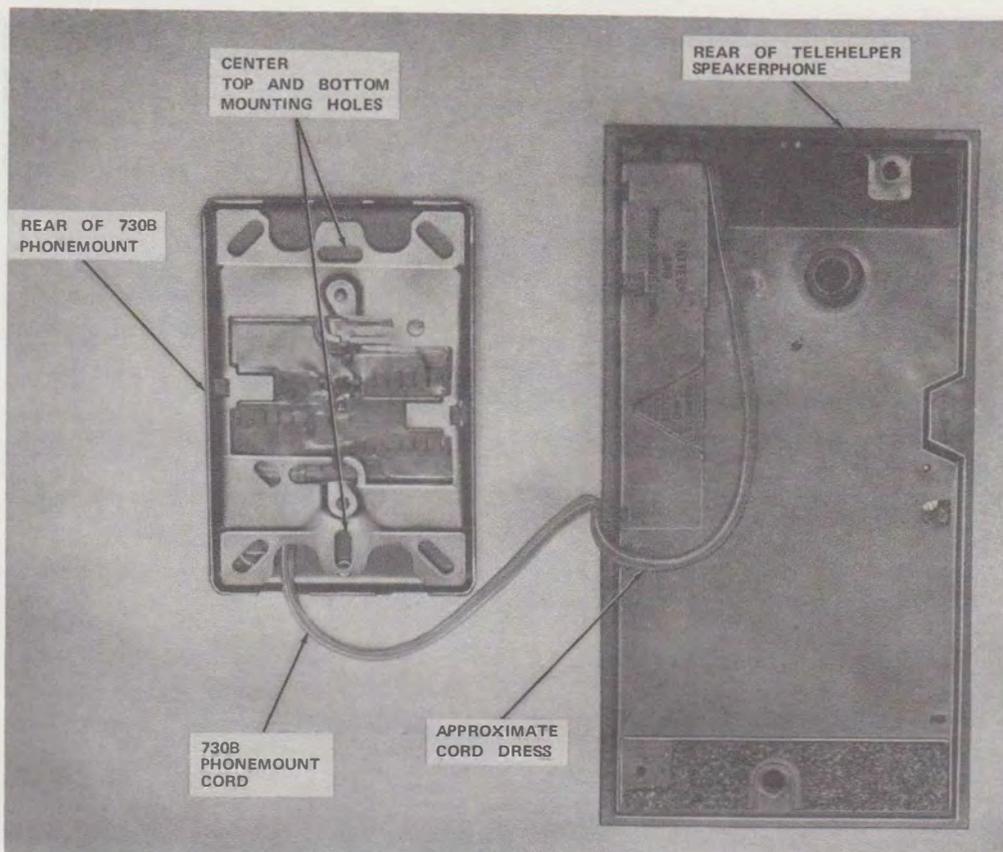


Fig. 11— Approximate Cord Dress of 730B Phonemount Cord With Telephone Location Right of TELEHELPER Speakerphone

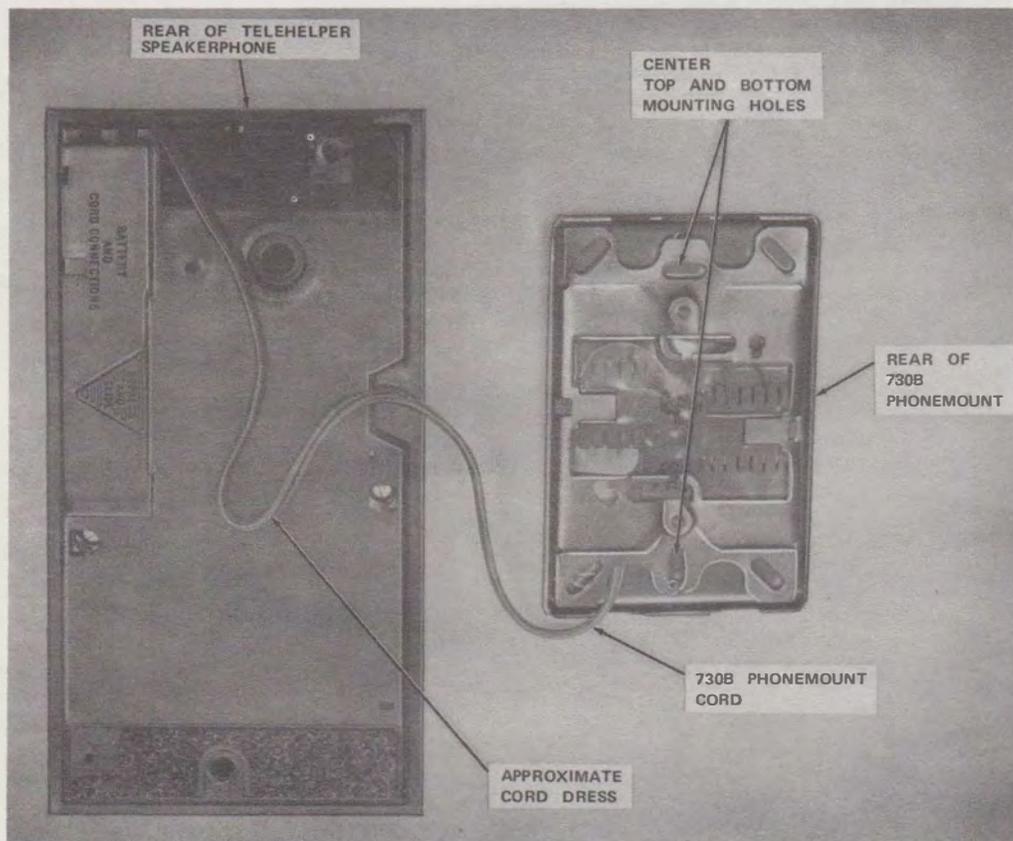


Fig. 12— Approximate Cord Dress of 730B Phonemount Cord With Telephone Location Left of TELEHELPER Speakerphone

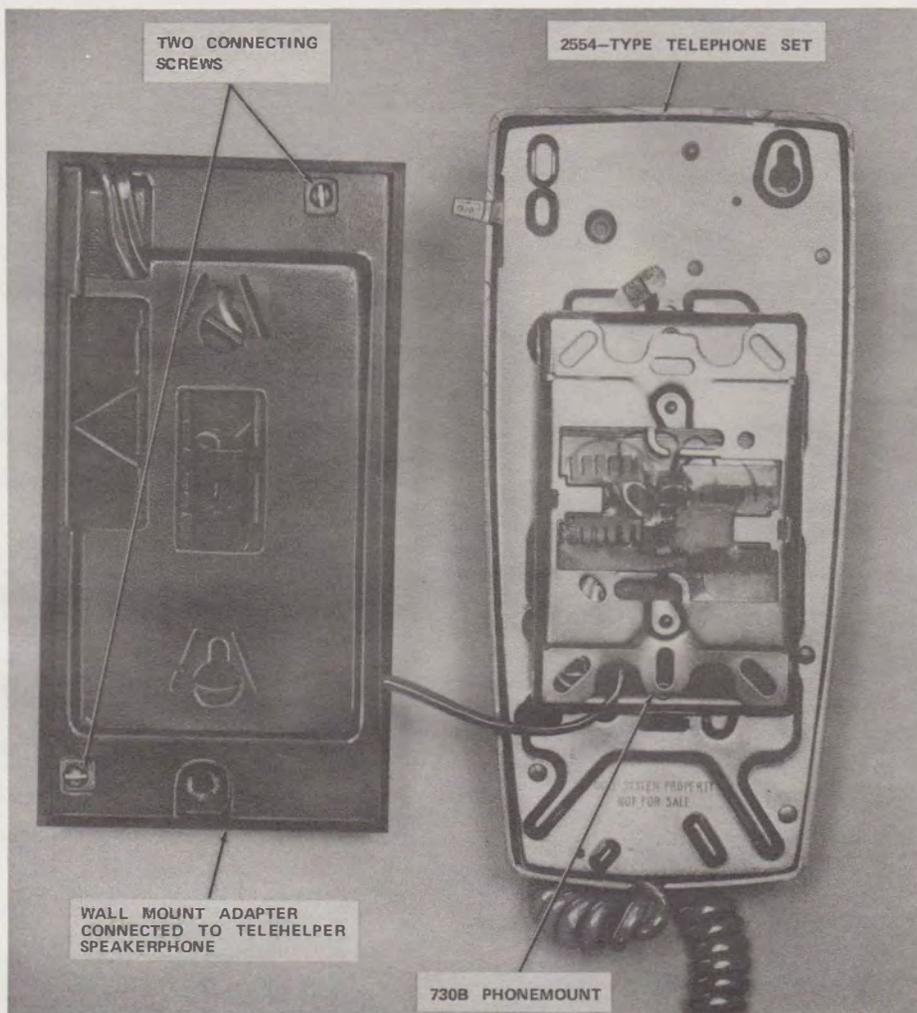


Fig. 13—Rear View of TELEHELPER Speakerphone With Wall Mount Adapter Attached and 2554-Type Telephone Connected on 730B Phonemount