

UNITY CONFERENCING PRODUCT

COMPANION 4S HANDSFREE UNIT

User Guide and Warranty



IMPORTANT

This booklet contains easy step-by-step assembly procedures; to ensure trouble-free installation, please follow these instructions carefully.

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INTRODUCTION

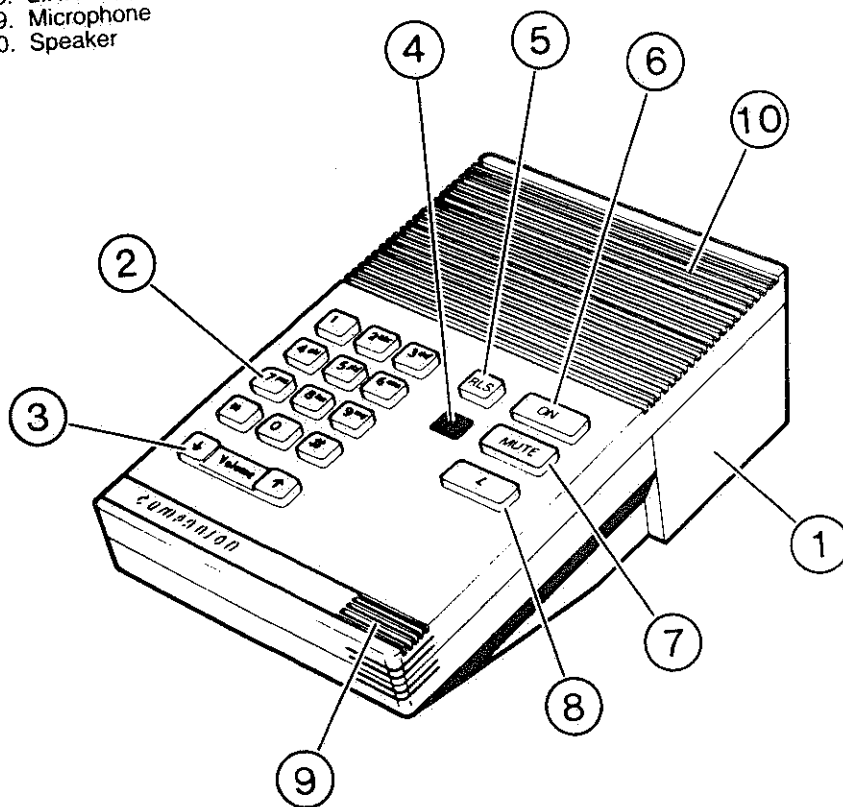
The COMPANION* 4S handsfree unit (NT1L06AA) is designed for use with UNITY* and other telephone sets to permit high-quality, voice-switched handsfree conversation. In operation with the associated telephone set, this compact unit provides the following features:

- Incoming calls received on either the handsfree unit or the telephone set.
- Automatic transfer of calls between the unit and the telephone set.
- On-hook dialing of outgoing calls on the handsfree unit dial pad.
- Automatic cut-off of the unit when the telephone handset is taken off-hook.
- Manual CO line cut-off when the Release button (RLS) on the unit is pressed.
- Voice transmission muting when the Mute button is pressed with no effect on reception.
- LINK* button (L) for access to telephone company custom calling features or PBX features.
- Rocker-action-type volume control for receive volume control.
- On/Release/Mute visual indicator.

CAUTION: To eliminate the possibility of accidental damage to the cords, plug and jacks, do not use tools or sharp instruments during installation.

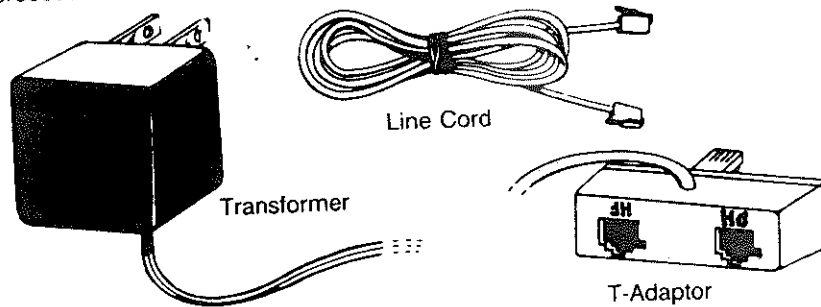
OPERATING FEATURES

1. Fully Modular Line Cord Connection
2. DIGITONE® Dial
3. Rocker-Action Volume Control Switch
4. On/Release/Mute Indicator Light
5. Release Button
6. On Button
7. Mute Button
8. LINK Button
9. Microphone
10. Speaker



INSTALLING THE COMPANION 4S

COMPONENT IDENTIFICATION. Packed separately within the carton are all components required for complete installation of your COMPANION 4S handsfree unit. Remove each item from its protective packaging before beginning the installation procedure.

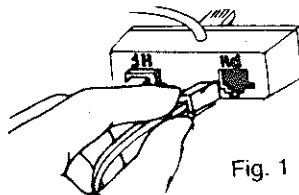


INSTALLATION PROCEDURE

LOCATION GUIDELINES. For best operation, the COMPANION 4S should be located on a hard surface (e.g., table, or desk top) and as far as possible from noise sources, such as typewriters. Do not locate the handsfree unit between parallel hard surfaces less than 1.8 m (6 ft) apart, in hard surface corners or under low, hard surfaced shelves less than .6 m (2 ft) in height. In addition, the front edge of the unit should be at least 51 mm (2 in) from the edge of the desk or table top, and no obstacles should be placed close to the microphone.

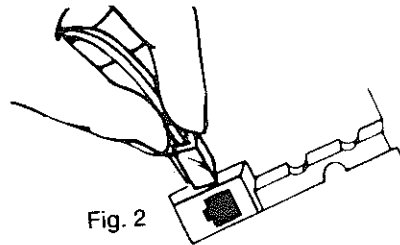
STEP 1

Carefully insert the line cord plug from the single line telephone set into the T-adaptor jack marked PH (Fig. 1). Ensure that the plug is properly seated (audible click) and installed in the correct jack.



STEP 2

Carefully insert the plug at either end of the COMPANION 4S line cord into the jack in the base of the unit (Fig. 2). Ensure that the plug is properly seated (audible click) and installed in the correct jack. Route cord under tabs in cord channel; continue fitting cord to edge of base.



STEP 3

Insert the plug at the other end of the COMPANION 4S line cord into the T-adaptor jack marked HF (Fig. 3). Ensure that the plug is properly seated (audible click) and installed in the correct jack.

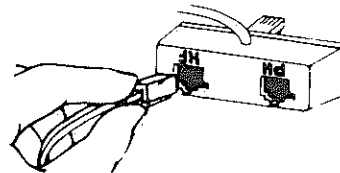


Fig. 3

STEP 4

Plug the T-adaptor into the wall jack receptacle (Fig. 4).

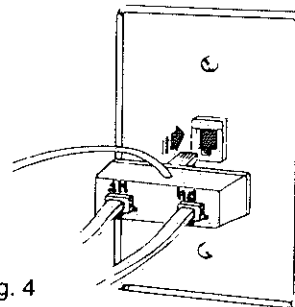


Fig. 4

STEP 5

Plug the power transformer into an electrical outlet (Fig. 5).



* May not be present.

CAUTION: This unit provides a contact closure ('A' Lead Control) across pins 2 & 5 of the telephone jack while the unit is 'on'. Some existing wire installations may have low voltage transformers on these 2 wires. If so, the transformer should be removed.

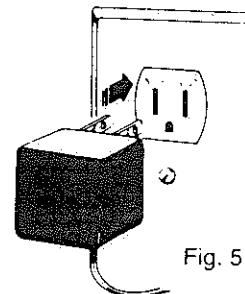


Fig. 5

OPERATIONAL CHECKS

1. **DIAL TONE.** Press the On button. Dial tone should be heard and the red indicator LED should light. If no dial tone is present, ensure that all plugs are properly connected to the correct jacks. If dial tone is still not present the wall jack may be wired improperly or the line may be out of order.
2. **PLACING A CALL.** If a call cannot be originated using the COMPANION 4S, check with the telephone company to verify that the line will accept tone-type signaling.
3. **RINGING.** The COMPANION 4S is not equipped with a ringer, and therefore any audible signaling must come from the associated telephone set. If calls can be originated on the telephone set but it fails to ring for incoming calls, contact the telephone company or check the associated telephone set.

OPERATION

1. On/Release/Mute LED Indicator.

A LED indicator light, located on the right side of the COMPANION 4S face, below the Release button, is lit when the unit is on, goes out when the unit is off and flashes when the unit is muted.

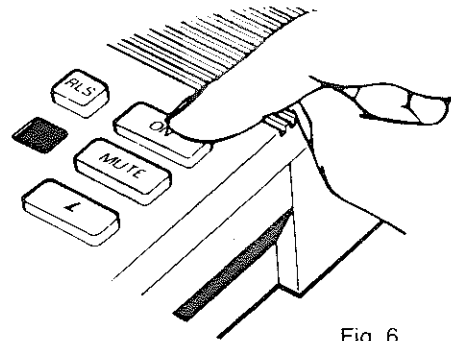


Fig. 6

2. On Button. Pressing the On button activates the unit. When operated (Fig. 6), dial tone is heard and the red LED indicator lights.

3. Dial Keypad. The dial keypad is located on the front face of the unit (Fig. 7); this dial operates with tone service only. When the COMPANION 4S is turned on, the dial on the associated telephone is disconnected and all dialing must be done from the handsfree dial keypad.

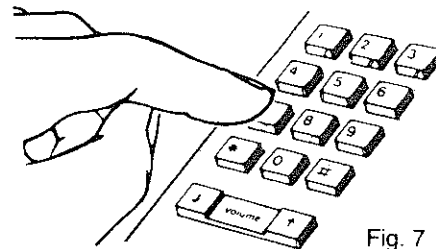


Fig. 7

4. Volume Control Switch. This is a rocker-action switch, located on the face of the unit below the dial keypad. To lower the speaker volume, touch the left side of the switch (↓) repeatedly until the desired level is reached (Fig. 8). Touch the right side of the rocker switch (↑) to increase the volume. The COMPANION 4S must be on to adjust the volume.

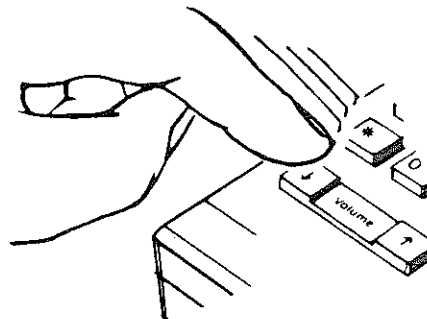


Fig. 8

5. **Mute Button.** The Mute button is located on the right side of the unit (Fig. 9). Operating this button enables the user to converse privately with a third person without the called party hearing the conversation. The user can, however, hear the called party.

Note: It is not necessary to hold the Mute button down; a single operation is sufficient. When the mute feature is operational the red LED indicator flashes. To resume normal conversation, press the On button. The LED indicator stops flashing and returns to a steady on condition.

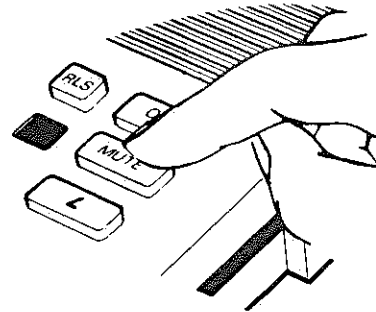


Fig. 9

6. **Release Button.** The Release button (RLS), located above the indicator light turns the handsfree unit off (Fig. 10). When operated the red indicator light goes out.

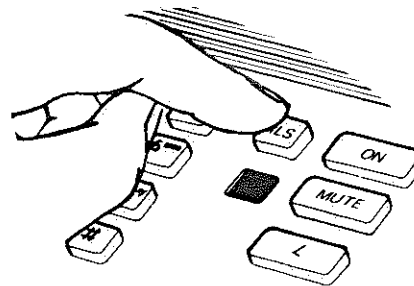


Fig. 10

7. **LINK Button.** This button (L), located below the Mute button (Fig. 11), is pre-programmed to provide a timed line break (400-600 ms). Operating this button allows access to telephone company custom calling features or PBX features if provided.

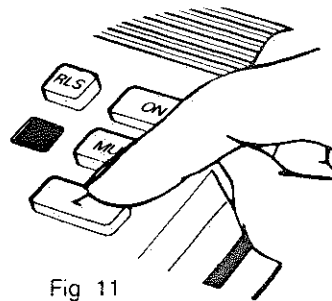


Fig. 11

TRANSFER FUNCTION

FROM COMPANION 4S TO TELEPHONE SET

If the user wishes to transfer from the COMPANION 4S to the handset for privacy during a conversation; lift the telephone handset. The call is automatically transferred to the telephone set and the red LED indicator goes off.

FROM TELEPHONE SET TO COMPANION 4S.

When a call is in progress using the telephone handset and the user wishes to transfer to the COMPANION 4S, press the On button on the handsfree unit then place the handset on-hook and continue the conversation using the handsfree unit.

Note: When the COMPANION 4S is on, the dial and feature buttons of the associated telephone set cannot be used. If the user wishes to retain telephone set features, such as automatic dialing, place the call using the telephone set and then transfer to the COMPANION 4S when ringing occurs.

On some telephone sets i.e. UNITY III, a second step may be required to complete the transfer. After pressing and releasing the COMPANION 4S On button, the secondary step is press and release the telephone set's Release or Off button.

MEANS OF CONNECTION

Connection of this terminal to the public switched network must be through an FCC standard network interface jack (RJ11W or RJ11C)† which you can order from your telephone company. In some states, customers are permitted to install their own jacks. Terminal connection is easy. Just press the small plastic tab on the end of the terminal line cord into the receptacle until it snaps. To disconnect, simply press the tab and pull.

†RJ11W Wall Mount RJ11C Conventional

SIGNALING METHOD

This terminal is equipped with a pushbutton dial to enable the set to signal in tone (DTMF).

This set can complete calls to local and long distance lines.

This set can also complete long distance calls via computer phone systems such as MCI, SPRINT, etc.

REGISTRATION

This Northern Telecom terminal is registered with the FCC based upon compliance with Part 68 of its rules. Connection of this terminal to the nationwide telecommunications network must be through a standard network interface jack (RJ11W or RJ11C) which you can order from your telephone company if not already installed.

Note: FCC registration does not constitute an expressed or implied guarantee on performance. Only the Northern Telecom warranty set forth in this booklet covers the performance of this terminal.

TELEPHONE COMPANY/RINGER EQUIVALENCE INFORMATION

DO NOT NOTIFY THE TELEPHONE COMPANY

It is no longer necessary to call the telephone company to notify it of the Registration and Ringer Equivalence Numbers of any telephone instrument being connected to the Public Switched Telephone Network. Instead, the telephone company will call and request this information, if a need arises in the future.

IMPORTANCE OF RINGER EQUIVALENCE NUMBER

The FCC Registration label, found on the bottom of your terminal, includes the Ringer Equivalence Number (REN). This number is a representation of the electrical load that will be applied to your telephone line once the set is plugged into your jack. The telephone line serving your premises will not operate properly if the total ringer load exceeds the capability of the telephone company central office equipment. That is, if too many ringers are connected to the line, there may be insufficient energy to ring your telephones. If the ringer load is excessive, you may also have difficulty dialing telephone numbers.

If you desire to know the total REN allowed for your telephone line, you may call your telephone company and they will inform you. However, as a rule of thumb, a total REN of five (5) should permit normal operation of your equipment. To determine the total ringer load, list the REN of each of your terminals connected to the telephone line. Add these numbers and the result is the total REN for your line. If this number exceeds five (5), you may wish to consult with your telephone company to determine whether or not proper operation of your equipment is possible.

RIGHTS OF THE TELEPHONE COMPANY

If your terminal causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will be given the opportunity to correct the situation and you will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your terminal. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

RADIO/TV INTERFERENCE

New Federal Communication Commission (FCC) Rules require that you be notified of the following: Northern Telecom terminals equipped with electronic push button dials generate and use radio frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. These terminals have been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules. While these rules are designed

to provide reasonable protection, there is no guarantee that interference will not occur in a particular installation. If this terminal does cause interference to radio or television reception, which can be determined by placing a call while monitoring, the user is encouraged to try to correct the interference by the following measures:

- Reorient the receiving TV or radio antenna where this may be done safely.
- To the extent possible, relocate the receiver with respect to the terminal equipment.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communication Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

REPAIR INSTRUCTIONS

If you experience trouble with this terminal, follow the procedures outlined below.

— Determine whether the problem is in your terminal.

- (1) If you have more than one terminal and you experience problems with all of them, or
- (2) If you have only one terminal and it works in some modular outlets but not in others (plug your terminal into different modular outlets to check for this condition), your problem may be in the local telephone company lines or central office equipment. Contact your local telephone company repair service listed in the front of your phone book.

If you find the problem is in your terminal, refer to the following guideline for obtaining service:

- (1) If the terminal is covered by the Northern Telecom Inc. Warranty, follow the procedures set forth in the Warranty under "Purchaser's Responsibility" for obtaining repair or replacement of the terminal.
- (2) If the terminal is covered by a Telephone Company Maintenance Agreement, follow the procedure set forth in the Maintenance Agreement for obtaining repair or replacement of the terminal.
- (3) If the terminal is no longer covered by the Northern Telecom Inc. Warranty, and is not covered by a Telephone Company Maintenance Agreement, you may return the terminal to the manufacturer for repair or refurbishment. You will be billed for any repairs. Manufacturer's policy and procedure on repair and refurbishment is available upon request either by writing to:

Northern Telecom Inc.
Product Service Center
640 Massman Drive
Nashville, TN 37210

or by calling the toll-free number: (800) 251-1758

In Tennessee call (615) 883-9220

Repair to this equipment can only be made by Northern Telecom Inc. and its authorized agents, and by others who may be authorized by the FCC.

LIMITED TWENTY-FOUR MONTH WARRANTY

COVERAGE

Northern Telecom Inc. warrants this terminal against defects and malfunctions for a period of twenty-four (24) months from the date of original purchase. If there is a defect or malfunction, Northern Telecom Inc. will, at its option, and as the exclusive remedy, either repair or replace the terminal at no charge, if returned within the warranty period.

If replacement parts are used in making repairs, these parts may be refurbished, or may contain refurbished materials. If it is necessary to replace the terminal, it may be replaced with a refurbished terminal of the same design and color. If it should become necessary to repair or replace a defective or malfunctioning terminal set under this warranty, the provisions of this warranty shall apply to the repaired or replaced terminal until the expiration of ninety (90) days from the date of pick up, or the date of shipment to you, of the repaired or replacement set, or until the end of the original twenty-four month warranty period, whichever is later.

EXCLUSIONS

Northern Telecom Inc. does not warrant this terminal to be compatible with the equipment of any particular telephone company. This warranty does not extend to damage to product resulting from improper installation or operation, alteration, or neglect or abuse, or misuse, fire or natural causes such as storms or floods after the terminal is in your possession.

NORTHERN TELECOM SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS, DAMAGE OR EXPENSE DIRECTLY OR INDIRECTLY ARISING FROM THE CUSTOMER'S USE OF OR INABILITY TO USE THIS TERMINAL, EITHER SEPARATELY OR IN COMBINATION WITH OTHER EQUIPMENT. This paragraph, however, shall not apply to consequential damages for injury to the person in the case of terminals used or bought for use primarily for personal, family or household purposes.

THIS WARRANTY SETS FORTH THE ENTIRE LIABILITY AND OBLIGATIONS OF NORTHERN TELECOM INC. WITH RESPECT TO BREACH OF WARRANTY, AND THE WARRANTIES SET FORTH OR LIMITED HEREIN ARE THE SOLE WARRANTIES AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING WARRANTIES OR FITNESS FOR PARTICULAR PURPOSE AND MERCHANTABILITY.

STATE LAW PROVISIONS

This warranty gives you specific legal rights and you may have other rights which vary from state to state.

Some states do not allow the exclusion or limitation of incidental or consequential damages or allow limitations on implied warranties or their duration, so that above exclusions or limitations may not apply.

PURCHASER'S RESPONSIBILITY

Should the terminal fail during the 24-month warranty period, please return it for repair service to the place of purchase or directly to:

Northern Telecom Inc.
Product Service Center
640 Massman Drive
Nashville, Tennessee TN 37210

You will be responsible for shipping charges, if any. When you return this terminal for warranty service, you must present proof of date of purchase.

If you have any questions regarding the warranty and or repair procedure, you may write to the above address or call toll-free: 800-251-1758. In Tennessee call (615) 883-9220.

*Trademarks of Northern Telecom



NORTHERN TELECOM INC.
640 MASSMAN DRIVE, NASHVILLE, TENNESSEE 37210

615-883-9220 TWX: 810-371-1341

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