MICS-XC
Norstar-Companion
System
Coordinator
Guide

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Norstar Companion basics

Your Companion portable telephone allows you to leave your desk without missing important telephone calls. You can carry it with you to make and receive calls on the Norstar system. The portable telephones can access most Norstar business features such as call forward, call transfer, conferencing, and voice mail. Companion on Norstar consists of four main components:

ICS and Norstar XC software - Modular ICS XC software manages the telephone traffic between Companion Base Stations and portable telephones. Base Stations are connected to the ICS in the same way that Norstar sets are. Companion portable telephones are registered on the system and do not take up any ports on the system. Up to 60 portable telephones and up to 32 Base Stations (32 cells) can be connected to the system.

Companion Base Stations - Base Stations are positioned throughout the coverage area to send and receive calls between the portable telephones and the ICS. The Base Stations use advanced digital radio technology and support handoff and roaming within the coverage area which can be up to 160,000 square meters (three million square feet) when using the maximum number of Base Stations.

Companion portable telephones - The portable telephones used with Companion are small, lightweight units with fully digital performance to provide clear voice quality. Companion portable telephones feature a three line, 16-character, alphanumeric display. For more information on the portable used with your MICS XC system, refer to the *Companion Portable Telephone User Guide* that is supplied with it.

Administration and Maintenance Tools - Programming of the Companion system is easily and quickly done through a M7310 or M7324 digital telephone set. You can assign portable telephones to the system, check Base Station parameters, and enable and disable registration through programming.

Companion Diagnostic Software allows you to run diagnostics on the wireless system. This can be done either locally or remotely using a personal computer (PC).

New features in Norstar Companion

Norstar introduces Hunt Groups capability plus two new features including two wireless call pickup features, Directed Call Pickup and Group Pickup, and wireless Portable Language Selection. Enhancements have been made to wireless Call Forward No Answer and wireless Twinning.

For a complete list of other features supported on Companion portables refer to "System programming" on page 19.

Hunt Groups

Your Norstar system now allows you to establish Hunt Groups in your system. Hunt Groups are a group of Norstar sets that can be called by a single directory number. The Hunt Groups feature ensures calls are easily routed to the appropriate people. For more information about which features are affected by Hunt Groups see "System programming" on page 19.

For information on how to program Hunt Groups see the *Modular ICS System Coordinator Guide*.

Wireless call pickup features

The wireless call pickup features allow portable handset users to use a feature code to answer internal or external calls which are ringing at other sets. Two types of wireless call pickup are supported:

Directed Call Pickup

Directed Call Pickup allows you to answer any telephone that is ringing in your Norstar system by entering a feature code and specifying that set's DN. For more information see "Directed Call Pickup" on page 27.

Group Pickup

Group Pickup allows the portable user to answer a call ringing on another set in the same pickup group by entering a feature code. For more information see "Group Pickup" on page 28.

Wireless Portable Language Selection

This feature allows you to change the language of the prompts controlled by the ICS as they appear on the portable's display, including both the display prompts and voice prompts from voice mail.

Norstar supports English, French and Spanish. For more information see "Wireless Portable Language Selection" on page 28.

Wireless Call Forward No Answer enhancement

This enhancement stops the Companion portable from ringing when the call has been forwarded to its new destination. The portable user can still answer the call, but it does not ring. For more information see "Wireless Call Forward No Answer enhancement" on page 29.

Wireless Twinning enhancement

Wireless twinning is improved now that up to eight Answer Keys can be assigned to each portable telephone. In addition, more types of calls can be received on the Answer Keys, depending on their programming. For more information see "Twinning between Companion portables and Norstar wireline telephones" on page 20.

Programming

Tip - *With the addition of Hunt Groups some features may be affected. See "Features supported by Companion for Norstar" on page 25.*

For information on how to program Hunt Groups refer to Modular ICS System Coordinator Guide.

For general programming instructions, please refer to the "Getting Started" section in the *Modular ICS System Coordinator Guide*.

Programming overview of XC using the System Coordinator password

Terminals&Sets
Capabilities
Name
User prefernces
Restrictions
Telco features

Lines
Name

Services
Ringing service
Restrn service
Routing service

Sys speed dial

Passwords
Call log pswds
Progrming pswds
Reg. pswd

Time&Date

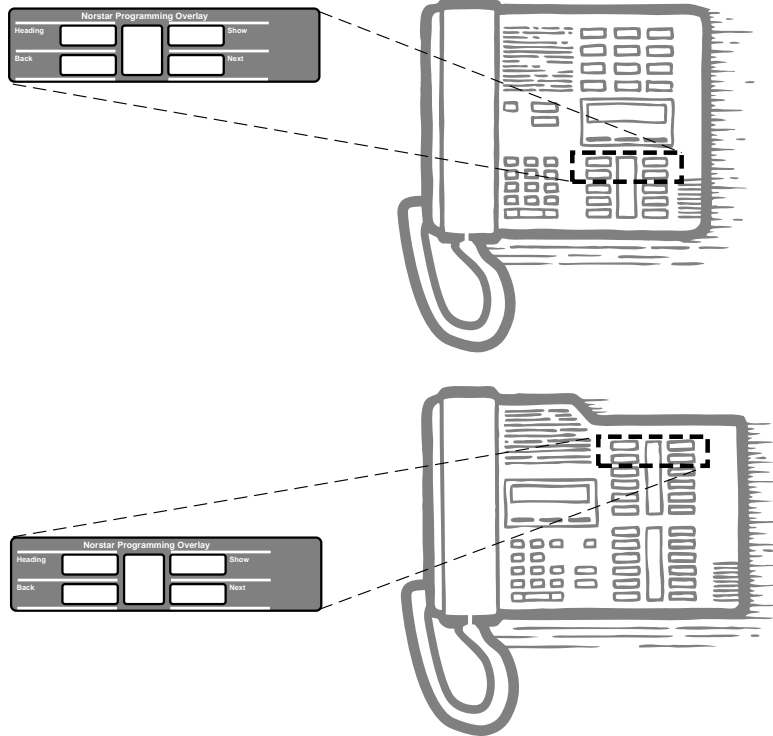| System prgrming |
| --- |
| Hunt groups |
| Companion |
| BusName |

Programming tools

A Norstar telephone

Programming is done at an M7310 or M7324 telephone. Use the buttons on the telephone to program a setting or to request a specific programming action. Norstar guides you with step-by-step instructions on the telephone display while you are programming.

The programming overlay

The programming overlay is a paper cutout that labels the four telephone buttons used during programming. The programming overlay is provided at the front of this guide.

Placing the programming overlay

	Norstar Programming Overlay	
Heading		Show
Back		Next

	Norstar Programming Overlay	
Heading		Show
Back		Next

Shows you the heading for the current level

Moves you one item back at the current level

Norstar Programming Overlay

Heading

Back

Show

Next

Shows you the first setting within the level

Moves you one item forward at the current level

The indicators (º   ) on the M7310 or M7324 telephone show
which buttons can be used at that programming step. The
functions on these buttons allow you to move through the
headings and subheadings of Norstar programming.

－   moves to a higher level in the hierarchy of headings and
            subheadings.

            moves to a lower level in the hierarchy of headings and
            subheadings, or begins programming for a heading or
            subheading.

‘   moves forward at the same level in the hierarchy of
            headings and subheadings.

‘‘   moves backward at the same level in the hierarchy of
            headings and subheadings.

The Norstar display buttons

Display buttons on the M7310 and M7324 telephones perform
many functions. One, two, or three display buttons may be
available at any one time depending on where you are in
programming. Press one of the display buttons to select the
function that you want.

Show line:_   —— Display message
COPY   —— Display button message
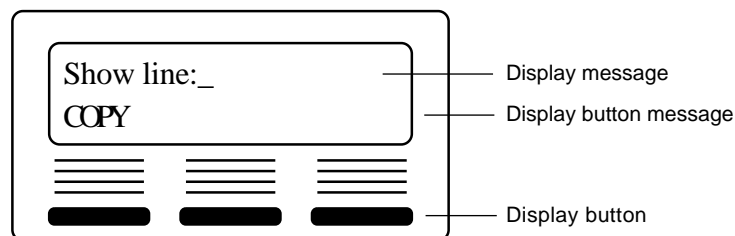
                     —— Display button

Special characters on the display

When a triangle (ˆ) is at the end of a programming heading
or subheading, it means you can press   to see
settings.

When an ellipsis (..) is at the end of a heading or subheading, it means you can press   to see the setting for that heading.

The Norstar Programming Record

The *Programming Record* provides a convenient way to record what you have programmed. It also helps you to plan your programming.

You may photocopy pages from the record as necessary for programming many telephones or lines.

Exiting programming

Norstar stores your changes automatically as soon as you alter any settings; you do not need to "save" your changes.

Press ®   . The display briefly reads End of session.

The update display

If any of the changes you have made to programming have not immediately taken effect, you see an UPDATE display button when you leave programming. The display shows you how many telephones have not been currently updated due to the system being busy with other programming or the telephone is in use.

Press DNs to see the specific sets where programming changes have not been updated. Items disappear from the list as they are updated, and UPDATE disappears once all changes are complete.

Entering numbers

Enter numbers from the Norstar telephone dial pad. The backspace display button may be used to edit the number.

A line number must always be entered as a three-digit number. Line numbers from 10 to 99 must be entered with a leading zero (line 020, for example). Similarly, line numbers less than 10 must be entered with two leading zeros (line 002, for example).

Internal telephone numbers, also referred to as directory numbers (DNs), can be three to seven digits long. The DN length can be changed in programming.

Entering letters and numbers using the dial pad
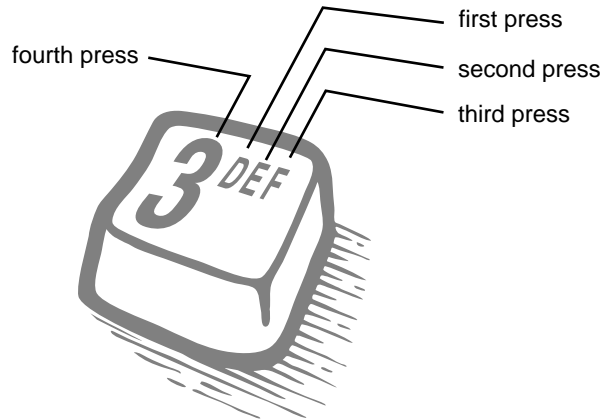
Programming headings

Programming specific to Norstar Companion System Coordinators is covered in this guide. Refer to *Modular ICS System Coordinator Guide* for all other System Coordinator programming.

After pressing *f* • • Ç Ø ˆ Ï È Ì and entering the password (the default password is Å Î ˜ È ˆ or ¤ ‹ fl › fl), you see the following programming headings.

Terminals&Sets	Terminals and sets - Customize the many features used by telephones. You can change where a call is forwarded, give a telephone a name, or allow certain features to be used at a telephone. You can also change the button programming on any telephone on the system.
Lines	Lines - Program names for each line.
Services	Services - Turn services on or off. Services include Ringing service (often called night service) that allows additional telephones to ring, Restriction service that blocks certain kinds of calls and Routing Service that decides what lines a call uses.
Sys speed dial	System speed dial - Program up to 70 different telephone numbers so that people in your office can dial them with a two-digit code.
Passwords	Passwords - Change the password you use for programming, or erase a Call log password. On a XC system, you can also change the password for Companion portable telephone registration.
Time&Date	Time and date - Change the time, date, or both.
System prgrming	System programming - On a XC system, you can enable or disable registration for Companion portable telephones.

Registration password

The portable telephones must be registered with the Norstar system before they can be used. The recommended steps are as follows:

1. Change the registration password for your system.

2. Enable registration for the system.

3. Confirm the availability of directory numbers (DNs) for each Companion portable telephone.

4. Individually register each Companion portable telephone.

5. Disable registration for the system.

Changing the Registration password

To ensure unauthorized portables are not registered to your system, a separate level of password access is provided. You can, and should, set your own password to prevent unauthorized handsets from registering on your system. You can change the Registration password under the Passwords heading in programming.

> ***Change password to avoid incorrect registration.***
>
> To ensure accurate registration, change the Registration password before registering any portables. If there is another wireless system in radio range, and both systems have the same Registration password and registration enabled, you may accidentally register on the other system instead of on your own.

The default Registration password is **RADIO**
(‡ ¤ ‹ › fl).

Use CHANGE, the dial pad and OK to program the Registration password.

Record the password in the Programming Record.

Tip - *You can choose any combination of one to six digits. It is easier to remember the password if the digits spell a word. Provide this password only to selected personnel to prevent unauthorized access to programming. The implications of such access may include the rearrangement of line assignments, which could affect the operation of the Norstar system.*

Companion programming

Perform Companion programming in System programming.

Registration

> **Software Keys are required to activate wireless capabilities (U.S. only)**
>
> To take advantage of the wireless capabilities available to your Norstar system, you must first enable a certain number of portable credits using Software Keys purchased through Northern Telecom. Keys are obtained and entered into the system by the installer. For more detailed information on enabling Norstar Companion, see the *Norstar-Companion MICS-XC Installer Guide.*

You must enable registration for the entire Norstar system to allow registration of individual portables. The options are Yes (Y) and No (N). Yes indicates that Registration is enabled. No is the default and indicates that Registration is not enabled.

Use   and <u>CHANGE</u> to enable or disable registration.

> **Registration should normally be disabled.**
>
> For security reasons, and to prevent unauthorized users from being registered to your system, set registration to N when you have finished registering the portables.

Portable DNs

Once registration is enabled for your Norstar Companion system, a series of extension numbers (637 to 666) automatically becomes available for registration. Check that an extension number is available before registering a portable telephone to it.

If the extension number shows a status of Available, it is ready for registering a Companion portable telephone.

If the extension number shows a status of Registered, a Companion portable telephone is already registered to that extension number. In this case, you can either pick a different extension number, or deregister the current portable telephone. You must perform deregistration both at the portable and during either an Installer or System Coordinator programming session.

Press   to view registered and available DNs.

Note: The DN range 637 to 696 can be used by either portable telephones or ISDN S loops. You can assign all 60 of the DNs to S loops and none to portable telephones. You can assign up to 30 DNs to portable telephones, leaving 30 for S loops. Within these two limits you can choose a combination of ISDN and portable telephone DNs. For more information, refer to *Modular ICS Installer Guide*.

Deregistering a portable

Deregister an extension number when:

• you must replace the portable due to loss or breakage

• you want to assign the handset to someone with a different telephone number than the previous user

Press   and <u>DEREG</u> to deregister a DN.

Tip - *This procedure does not clear the registration data in the portable. You must also deregister from the portable telephone ("on-the-air" deregistration). For instructions, see the Companion Portable Telephone User Guide that is supplied with the portable.*

Radio data
Re-evaluation

Re-evaluation automatically assigns the proper cell configuration to each radio in a Base Station. When adding or removing Base Stations, Re-evaluation must be applied to the system.

Re-evaluation Status

Press   to see the Re-evaluation status. If the display reads r e q u i r e d, you can carry out the re-evaluation by pressing <u>CONTINUE</u> and following the prompts.

Radios

Radio programming settings apply to Base Stations.

Cell assignment

A cell is the area covered by one or more radios in close proximity. As you move around your office while on a call with your portable, the call is handed off from one cell to another. A call on a portable can be handed off from one cell to another only if those cells are programmed as neighbors. The Norstar system automatically assigns cell neighbors and re-evaluates the cell-to-cell configuration when Base Stations are added or removed.

The cell assignment setting allows you to see if a Base Station radio is assigned to a cell in the Companion system.

Press   and enter the 5-digit radio number to see the setting: Assigned or **Unassigned**.

Cells

Cell programming allows you to examine the cell radio, cell neighbor, and cell radio neighbor configurations. Choose the cell you want to examine by pressing   and the cell number (01 to 32).

Cell radios

This subheading allows you to view the 5-digit number of any radios assigned to this cell. For example, if radio 07012 is in the cell, the display shows `07012 asgned`. Press and enter the 5-digit radio number to view the setting: Assigned or **Unassigned**.

Cell nghbrs

This subheading allows you to view the 2-digit number of any cells that border a particular cell in a system. Press and enter the cell number to see the settings: Assigned or **Unassigned**.

For example cell 01, the display shows `Nghbr:03` and `Nghbr:04`. This means that cells 03 and 04 have been assigned as cell neighbors.

Cell rad nghbrs

This subheading allows you to view the 2-digit number of any cells that border a particular cell in a system (the cell neighbors) plus any cells that border the cell neighbors. Press and enter the cell number to see the settings: Assigned or **Unassigned**.

For example cell 01, the display shows `Rad nghbr:03`, `Rad nghbr:04`, and `Rad nghbr:11`. Cell 11 does not appear as a cell neighbor (see the example under Cell nghbr), therefore it must be a neighbor of cell 03 or 04.

Registering individual portables

You must do two things to register each portable with the Norstar system:

- Register the portables by entering the Registration password on each one.

- Verify that the portable operates properly.

For instructions on registering and verifying each Norstar Companion portable with the Norstar-PLUS Modular ICS system, refer to *MICS-XC Norstar-Companion Installer Guide*.

For instructions on operating a Norstar Companion portable, see the *Companion Portable Telephone User Guide* that is supplied with the portable.

When you distribute the portables, tell the users that the portables are registered and give them the corresponding extension numbers.

Tip - *You can register a portable to more than one system. You cannot register a portable to more than one extension number per system. You cannot register more than one portable to one extension number.*

If a portable telephone is to be used in more than one Norstar or Companion system, its owner must know which registration slot number was used to register the portable telephone with each system. (It is preferable that each user have the system they use most often registered in slot 1.)

If a portable telephone is lost or broken, deregister it from the system before replacing it with another portable telephone.

System programming

Once the registration process is complete, portable telephone programming is much the same as it is for Norstar desk telephones. Some of the programming settings do not affect the operation of the portable.

See your *Modular ICS System Coordinator Guide* for detailed instructions on how to program your Norstar system.

The following table shows the recommended settings for your Norstar system:

Heading	Setting	Notes
Terminals&Sets Capabilities		
Fwd no answer	Fwd to: <DN> Fwd delay: <number of rings>	
Fwd on busy	Y	
DND on Busy	N	
Handsfree	N	
HF answerback	None	
Pickup group	<group number>	A portable can be part of a pickup group and answers calls ringing at telephones in the same group when the user enters • ‡ fl .
Paging	Y	
Page zone	1	

Heading	Setting	Notes
D-Dial	Set 1	A portable cannot be a Direct-Dial telephone. It can use the Direct-Dial digit.
Hotline	None	
Priority call	Y	Requires special configuration of hardware and programming
Restrictions Set restrictions		
Set lock	Y	Does not apply to portables.
Allow last no	Y	Does not apply to portables.
Allow saved no	Y	Does not apply to portables.
Allow link	Y	This can be set to N for portables.

Twinning between Companion portables and Norstar wireline telephones

Using Answer DNs

If you have both a wireline (desk) telephone and Companion portable telephone you can answer calls from either device by using Norstar's Answer DN feature. Any call that normally rings at your desk can also appear and ring at your portable if it is assigned the desk telephone DN as an Answer DN. This arrangement is called twinning.

It is also possible to have calls to the portable appear on the desk telephone as an Answer DN.

An Answer DN for a desk telephone and portable is programmed exactly the same way as for two desk telephones. An installer or customer service representative programs Answer DNs.

You can have up to eight Answer Keys assigned to your portable.

The types of calls that your portable's Answer Keys receive are programmable. See the *Modular ICS System Coordinator Guide* for more information.

> **Tip** - *Hunt Group calls cannot be forwarded using the Call Forward features.*

> **Tip** - *An Answer DN is the recommended method for twinning a portable with a desk set. This ensures that all calls arriving at the desk telephone appear and ring at the portable. A twinned portable using an Answer DN does not ring for an incoming call if it is currently on another call.*

Norstar Voice Mail message waiting indication occurs on the twinned portable only if it has been assigned a voice mail box.

If your Norstar Voice Mail box has been assigned to your desk set, log on using the desk set DN when accessing the voice mail box from the twinned portable.

For more detailed information on how to access Norstar Voice Mail using your Norstar Companion portable, refer to *Portable Telephone Feature Card* that is supplied with the portable telephone.

Using target lines

Wireline and wireless telephones can be twinned using target lines. The line for the desk telephone can be configured to appear on the portable, or the line for the portable can appear on the desk telephone. Incoming external calls ring at both.

When you twin wireline and wireless telephones using line assignments, each telephone has its own internal DN. When someone wants to call you or forwards a call to you internally, they must choose between the desk telephone and the portable DN. The call appears and rings only at the internal DN that was dialed.

Tip - *A portable can have an Answer DN and share a line assignment with a desk telephone.*

Using your portable telephone

Your Companion portable telephone communicates with the Norstar system using radio waves. The radio transceivers for the system are located in the Companion Base Stations installed around your office. Each Base Station contains two radio transceivers and can handle two portable telephone calls at once.

Your portable telephone is truly portable. Not only can you start a telephone conversation anywhere in the office, you can continue that conversation while you walk through the building. As you move from one part of your office to another, your call is handed off from one Base Station to another.

If you notice a decrease in voice quality while moving with a portable telephone, you are moving out of range of your system's Base Stations. There are three possible reasons for this:

- The Base Stations that cover the area you are moving into may already be busy and therefore cannot pick up your call.

- Large pieces of furniture or movable partitions may have been moved into a position that blocks the signal between you and the Base Station.

- You may have moved out of the area covered by your Companion system. (Retrace your steps until you are back in range.)

In *rare* instances, during a Norstar Voice Mail session, softkey display prompts on your portable may disappear. This is a normal condition and is minimized by staying within the Companion coverage area.

While moving within a Companion coverage area, a slight "clipping" may be heard during a call. This indicates that your call has been "handed off" from one radio cell to the next.

Problems with lost connections are rare, but if you notice an increase of such incidents after making large changes in the layout of your office, your Base Stations may need to be moved or reprogrammed to accommodate the new arrangement. In this case, contact your installer or customer service representative to change the Base Station configuration. (In the U.S. you need to obtain UTAM Inc. approval before making changes to the Base Station configuration.) Refer to *MICS-XC Norstar-Companion Installer Guide* for more information.

Tip - *If you try to send a message from a desk telephone to a portable telephone, the display of the desk telephone shows* Can't send msg.

Using Norstar features

It is possible to use many of the same Norstar features available to a Norstar telephone on your portable telephone. The table below lists which features are available for use on your portable telephone. For additional information on features and the special key sequences required to use them, refer to the feature card that is supplied with your portable telephone.

Features supported by Companion for Norstar

Feature	Description
Call Forward	Send calls to another telephone in your Norstar system. The display does not indicate that calls are being forwarded. Hunt Group calls override all Call Forward features. A Hunt Group DN can be a Call Forward destination.
Call Information	Display the name or extension of an internal caller. In addition, if your system is equipped to receive CLASS information (Caller ID), the external caller is displayed.
Call Park	On your portable, park a call.
Call Park Retrieval	On your portable, retrieve a parked call.
Cancel Call Forward	Cancel the Call Forward feature, where calls are automatically sent to another telephone in your Norstar system.
Conference	See your *Portable Telephone Feature Card*.
Directed Call Pickup	Answer any telephone that is ringing in your Norstar system.
Group Pickup	Answer a call ringing on another set in the same pickup group.
Host system signaling	Link and pause are available. See the Telephone Features section of the *Modular ICS System Coordinator Guide* for more information.
Line Pool	On your portable, use line pools the same way a desk telephone does.
Mute	Prevent the person you are on the portable telephone with from hearing you. Also, you can mute a portable's ringing for an incoming call.
Page	On your portable, page an individual telephone, several telephones, external speakers, or the entire system. A Hunt Group DN cannot be in a page zone.

Feature	Description
Pause	Program in an external autodial sequence to insert a 1.5 second delay.
Prime line	0n your portable, may be either an Intercom Line, an Assigned Line or a Line Pool.
Priority call	See "Supporting additional features for Companion portables" on page 29. Hunt Groups reject priority calls.
Privacy	In programming, change the privacy setting for an external line assigned to the portable. This does not give the ability to change the privacy setting on a call by call basis.
Release	See your *Portable Telephone Feature Card*.
Speed Dial	System speed dial codes only. No personal speed dial codes. The portable has a directory that you can use to store up to 50 entries for telephone numbers.
Switching between two calls	When on a portable call, switch to another incoming call. You can then switch back to the first call. See your *Portable Telephone Feature Card*.
Transfer	See your *Portable Telephone Feature Card*.
Transfer using directory	Transfer a call using your portable's directory. See your *Portable Telephone Feature Card*.
Trunk Answer	Grab a ringing call for lines placed in a Service Mode.
Voice call	See "Supporting additional features for Companion portables" on page 29. Hunt Groups reject voice calls.
Wireless Portable Language Selection	Change the language of the prompts controlled by the ICS as they appear on the portable's display.
Wireless Call Forward No Answer	Stop the portable from ringing when the call has been forwarded to its new destination. The portable user can still answer the call but it does not ring.

Using new features

Directed Call Pickup

To answer any telephone that is ringing in your Norstar system:

1. Press • ‡ fl .

2. Enter the internal number (DN) of the ringing telephone.

You must turn on the Directed Call pickup feature for the system in Modular ICS programming before a user can use the feature. The *MICS-XC Norstar-Companion Installer Guide* contains a programming template and complete programming information.

To turn on Directed Call pickup for an ICS:

1. Press *f* • • ¤ fl fl ‹ › › on a Norstar telephone with a two-line display.

2. Press ¤ fl fl ‹ › › (the default Installer password), ‡ ¤ ‡ fi ° ‡ (the default System Coordinator Plus password), or the current Installer or System Coordinator Plus password.

3. Press ' six times. The display shows S y s t e m p r g r m i n g .

4. Press . The display shows H u n t g r o u p s .

5. Press ' . The display shows F e a t r s e t t i n g s .

6. Press . The display shows B a c k g r n d m u s i c .

7. Press ' 11 times. The display shows D i r e c t d p i c k u p .

8. Press <u>CHANGE</u> to select the setting: Y (Yes) or N (No).

Group Pickup

Group Pickup allows the portable user to answer a call ringing on another set in the same pickup group.

To answer a call ringing at a telephone in your pickup group, press • ‡ fi .

Modular ICS programming allows you to place all telephones, including portable telephones, into pickup groups.

To assign a portable telephone to a Call Pickup group:

1. Press *ƒ* • • ¤ fl fl ‹ › › on a Norstar telephone with a two-line display.

2. Press ¤ ‹ fl › fl (the default System Coordinator password), or enter the current password.

3. Press and enter the internal number (DN) of the telephone.

4. Press twice. The display shows `Fwd no answer.`

5. Press ' five times. The display shows `Pickup grp:.`

6. Press the <u>CHANGE</u> display button to assign the telephone to pickup group (1 through 9), or to `None.`

See the *Modular ICS System Coordinator Guide* for more information about Directed Pickup and Group pickup.

Wireless Portable Language Selection

This feature allows you to change the language of the prompts controlled by the ICS as they appear on the portable's display, including both the display prompts and voice prompts from voice mail.

Norstar supports English, French and Spanish.

English

Press • • fi , ∕ .

French

Press • • fi , ¤ .

Spanish

Press • • fi , ‹ .

See the *Modular ICS System Coordinator Guide* for more information about choosing a language for the display.

Wireless Call Forward No Answer enhancement

This improvement stops the Companion portable from ringing when the call has been forwarded to its new destination. The portable user can still answer the call, but it does not ring.

The settings for Call Forward No Answer are found under `Terminals & Sets` in ICS programming. See the *Modular ICS System Coordinator Guide* for more information.

Supporting additional features for Companion portables

Two additional Norstar features can be used with a portable if lines and hardware (an analog terminal adapter (ATA)) are specifically configured to support them:

- Voice Call (• fl fl)

- Priority Call (• fl ·)

Your installer or customer service representative can set up and program your system to support these features.

Refer to the *Portable Telephone Feature Card* that is supplied with the portable for the special key sequence required to use this set of features.

Troubleshooting

When there is a problem with a portable, follow these steps:

1. Make sure the portable is compatible with the Norstar software version.

2. Verify that the portable is ON and that the battery is not low.

3. Establish a radio connection to get a dial tone.

If no dial tone is present:

*   Verify that dial tone is available from the ICS.

*   The portable may not be registered. Try to register the portable again. For more information, refer to the "Registering individual portables" on page 16.

*   Check that the portable is using the correct registration slot.

*   Verify that the portable has been assigned the correct internal number by calling it from another telephone.

Glossary

A

Answer button: A telephone button with an indicator that is used to monitor another telephone. The answer button indicates incoming calls destined for the other telephone. Someone working at a telephone with answer buttons (an attendant, for example) can receive all ringing and visual indication of incoming calls for other telephones, and answer those calls when necessary.

One telephone can have up to four Answer buttons. An Answer button is automatically assigned to a telephone when that telephone is assigned an Answer DN.

Answer DN: The internal or directory number (DN) of a telephone that is monitored by an Answer button. You can assign up to four Answer DNs to a telephone under Line Access in Terminals and Sets programming.

B

Base Station: A Companion component that is mounted on walls and ceilings to provide a radio link to an office or other area where Companion portable telephones are used. Each Base Station houses two radios that allow portables to send and receive calls through the ICS.

See also UTAM.

C

Call Forward: A feature that forwards all the calls arriving at your telephone to another telephone in your Norstar system. To have calls forwarded outside the system, use Line Redirection.

Call Park: A feature that allows you to place a call on hold so that someone can retrieve it from any other telephone in the Norstar system by selecting an internal line and entering a retrieval code. The retrieval code appears on the display of your telephone when you park the call. You can park up to twenty-five calls on the system at one time.

Cell: The area covered by one or more radios in close proximity within a Norstar Companion system. Calls on portable telephones are passed from one cell to another as the user moves around the office.

Companion: The name for Northern Telecom communication systems which use radio technology to transmit and receive signals between its components and the Norstar system.

Companion Wireless provides mobility in the workplace. Calls that used to ring just at your Norstar set can also appear and ring at your portable.

Companion ID: An eight character (alphanumeric) number assigned by Northern Telecom to identify each Companion wireless system. This Companion ID is sent to each customer once radio or portable credits have been purchased. The Companion ID must be provided each time codes or credits are obtained using the Northern Telecom Customer Response Center.

Companion portable telephone: Hand-held wireless telephone which allows complete mobility within the reach of Companion Base Stations or an external antenna. Portables offer many but not all Norstar features and share much of the same programming as "wired" desk sets.

Conference: A feature that allows you to establish a three-person call at your Norstar telephone.

credits: See Portable Credits.

D

Directory number (DN): A unique number that is automatically assigned to each telephone or data terminal. The DN, also referred to as an internal number, is often used to identify a telephone when settings are assigned during programming. Default DN assignments start at 21 in a two-digit (non-expanded) system and 221 in a three-digit (expanded) system.

DN: See Directory number.

E

event message: Event messages are stored in the system log and displayed during a Maintenance session. They record a variety of events and activities in the Norstar system.

H

handoff: An activity of Companion wireless components. Handoff occurs when the system "finds" a new cell to maintain the link between a portable telephone and the ICS.

I

ICS (**integrated communication system**): The central hardware component in the Norstar system. The ICS has its own processor and memory, and provides a physical point of connection for the various types of devices, telephones, and expansion modules used in Norstar.

The ICS can function on its own as a basic system (with 32 Norstar telephones and up to 48 external lines), or with the addition of Trunk Modules (TM) that supports more external lines, or Station Modules (SM) that support more Norstar telephones.

Integrated Services Digital Network (ISDN): A digital telephone service that allows for a combination voice and data connection over a single, high-speed connection. ISDN service can operate over the same

copper twisted-pair telephone line as analog telephone service.

K

Key Service Unit (KSU): Please see Integrated Communication System (ICS).

L

Line pool: A group of lines used for making external calls. Line pools provide an efficient way of giving a telephone access to external lines without taking up many line buttons. A line is assigned to be a member of a line pool by your customer service representative.

M

M7310 telephone: A telephone that has a two-line display, three display buttons, 10 programmable memory buttons with indicators, and 12 dual-memory programmable buttons without indicators. An M7310 telephone can be equipped with a Busy Lamp Field.

M7324 telephone: A telephone with a two-line display, three display buttons, and 24 programmable memory buttons with indicators. An M7324 telephone can be equipped with a CAP module.

P

Portable Credits (U.S. only): Predefine the maximum number of portables that can be registered to the system. Systems can only register as many portables as there are available Portable Credits. To register additional portables, you must obtain Portable Credit Codes for the number of additional portables you need. You can obtain additional codes whenever you need to expand the number of portables, up to a maximum of 60 portables for each XC 2.0 system.

portable telephone: See Companion portable telephone.

Prime line: A line on your telephone that is automatically selected when you lift the receiver, press the Handsfree/Mute button or use an external dialing feature. A Prime line is assigned to a telephone by your customer service representative.

programming: A series of procedures that set the way the Norstar system works. Programming includes system-wide settings and individual telephone and line settings.

programming overlay: A paper template that is placed over the top four memory buttons with indicators on the M7310 or M7324 telephone during programming. The overlay labels indicate the special function that each of the four buttons takes on during programming. The overlay is found at the front of this guide.

R

Radio Credits (U.S. only): The XC 2.0 system recognizes Base Stations as `Radio credits`. The number of Radio Credits licenced to be supported by the system is embedded in the UTAM Activation Code. Two radio credits are needed for each Base Station.

Radio Data: The section of Companion programming that contains all the headings to set up cells and radios in your Norstar Companion system.

Receive Signal Strength Indicator (RSSI): A measurement of the signal strength that the Base Station receives from a particular portable. The strongest value is about -35 dBm; the weakest value is approximately -94 to -100 dBm.

Recovery Key (U.S. only): See UTAM Recovery Key.

Registration: The procedure for assigning an extension on the Norstar system to a Companion portable telephone. Registration is controlled using system programming and performed "over the air" using the portable telephone.

Registration password: A password that prevents unauthorized users from registering portables on the Norstar Companion system.

Regression Key (U.S. only): Restores the previous system

security number so that previously applied UTAM Activation Keys and Portable Credit Keys can be reentered to restore full system operation. Also required in cases of system recovery. This key cannot be reused.

Remote Power Interconnect (RPI) device: An interface providing remote power for the Base Stations. Each RPI can power up to 8 or 16 Base Stations.

Roaming: Roaming is the ability of a portable telephone to make and receive calls anywhere within the coverage area of a Norstar Companion system.

RSSI: See Receive Signal Strength Indicator.

S

Set lock: A feature that allows you to limit the number of features that may be used or programmed at a telephone. Full telephone lock allows very few changes or features, Partial telephone lock allows some changes and features, and No telephone lock allows any change to be made and any feature to be used. Telephone lock is assigned during Terminals&Sets programming.

Software keys (U.S. only): Software keys administered by UTAM Inc. to control user capacity and to ensure system location verification for unlicensed, personal wireless communication devices. They must be obtained and entered into your Norstar Companion

system in order to activate wireless capability.

System Coordinator password: A one- to six-digit password that prevents unauthorized access to system programming. The system coordinator password can be assigned and changed in programming.

T

Target line: A line dedicated to receiving calls from outside the Norstar system.

Transfer: A feature that lets you redirect a call to another telephone in your Norstar system, over a network or outside your Norstar system.

Twinning: With the XC 2.0 system, the ability of users who have both a wireline (desk) telephone and Companion portable telephone to answer calls from either device. Twinning is made possible either through assigning Answer DNs or configuring target lines.

U

UTAM Activation Code (U.S. only): Activates the wireless capability on a new system and in system upgrades involving a change to the number of Base Stations supported.

UTAM Inc. (U.S. only): The Federal Communications Commission (FCC) has appointed UTAM Inc. as the body responsible for coordinating and verifying the installation or relocation of personal wireless communication devices operating between 1.92 GHz and 1.93 GHz. This allows UTAM Inc. to monitor and control the level of wireless activity within this band for a specified geographical location.

UTAM Recovery Code (U.S. only): Reactivates a Companion wireless system that has been disabled and restores the Companion system to its previous radio credit capacity.

W

wireless: See Companion.

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After you have finished programming, store your Norstar Programming Overlay in the slots provided on the back cover.

Après avoir terminé la programmation, rangez la grille Norstar dans les fentes prévues à cet effet à la fin de ce guide.

Cuando haya terminado de programar, inserte en estas ranuras su Plantilla de programación Norstar que se encuentra en la contra tapa.