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Modular ICS 5.0 System Coordinator Guide

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Getting started with Norstar

Your Norstar digital key system has many powerful features that can be customized to keep up with changes in your workplace.

Using this guide

The person who is responsible for adding or moving telephones or making changes to the system is called the system coordinator. This guide is designed to give the system coordinator all the information he or she needs to carry out these kinds of jobs.

The first section contains step-by-step instructions on changing the time and date, deciding how many rings it takes before a call is forwarded and other day-to-day programming. Once you understand these basic steps, you can move on to the many other features described in the second section of the guide, and refer to the first section only from time to time.

You can look at the contents page for an overview of the features that are available, or check the index for specific features or messages displayed on your telephone.

Emergency 911 Dialing

Emergency 911 Dialing is the capability to access a public emergency response system by dialing the digits 9 1 1.

Emergency 911 Dialing

State and local requirements for support of Emergency 911 Dialing service by Customer Premises Equipment vary. Consult your local telecommunications service provider regarding compliance with applicable laws and regulations.

Understanding programming

When your system is installed, your installer or customer service representative programs it to work with your telephone lines, with your private network, if you have one, and with optional equipment. They customize the system for your office. All programming is recorded in the *Modular ICS 5.0 Programming Record*.

You may want to further customize your system. For example, you can change how some features work, or adapt the system to changes in your office. Programming allows you to change settings that probably need to be updated regularly because of staff turnover or new business contacts. You can also assign features and program buttons on individual telephones.

There are four ways to customize and maintain your Norstar system:

- Initial programming is done for you by your installer or customer service representative. It deals mostly with how the system interacts with lines, telephones, and other equipment.
- Your programming as a system coordinator changes how features work for the system, as needed. It requires a system coordinator password.
- A basic programming password is available to allow individuals other than the system coordinator to make changes without giving access to sensitive programming capabilities.
- Personal programming is available to anyone through the Feature button on their Norstar telephone. It allows individuals to change how their telephone works to suit themselves.

Before you start

Before you begin programming, plan what changes you want to make. Record the changes in the *Norstar Programming Record* so that you have the information at hand. For example, if you are going to program system speed dial numbers, fill out the page in the *Norstar Programming Record* so that you have all the numbers and codes handy once you start programming.

What you'll need to do programming

Programming is done using a telephone that can show two lines of information on its display. Examples of telephones with two-line displays are shown on page 16.

You need a programming overlay to show which buttons to press when you are doing programming. See *The programming overlay* on page 19.

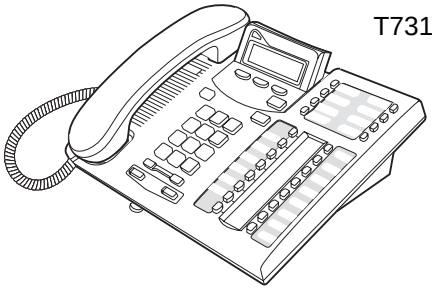
When you use a telephone for programming, it is taken out of service. This means it is unable to receive or make calls, and the call forward features do not work. Do not use the main reception telephone for programming because you may lose incoming calls.

Using Buttons

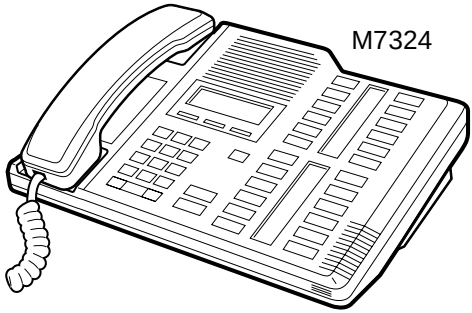
The two-line telephone you use for everyday calling can be used for changes and maintenance. Examples of telephones with two-line displays are shown in the illustration.

Sets used for programming and maintenance

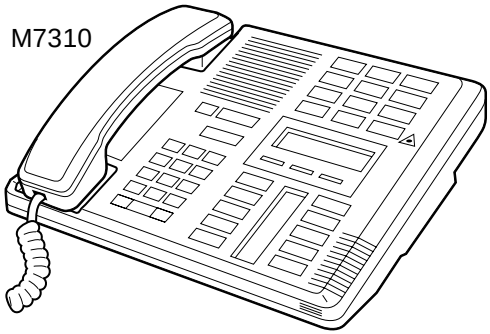
T7316



M7324

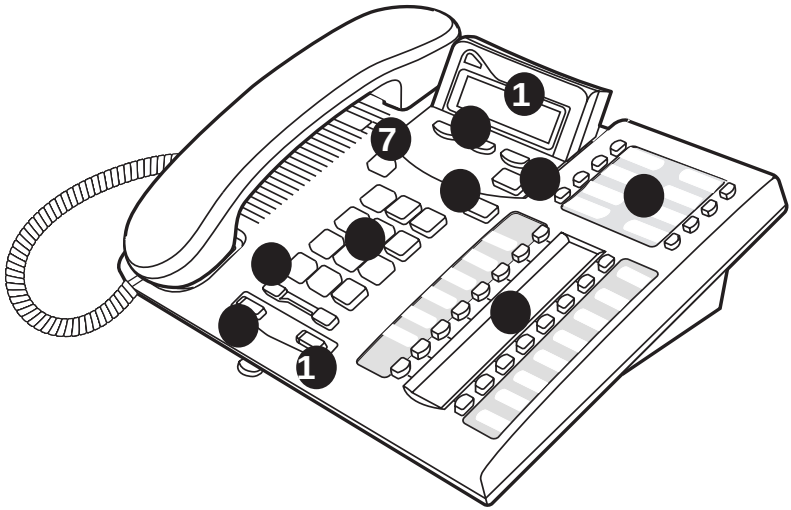


M7310



The next illustration numbers the buttons that are used for both day-to-day communication and programming on the T7316 set.

Business Series Terminal programming buttons

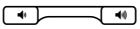
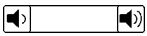


1 Display	Shows instructions for everyday calling as well as for programming.
2 Display buttons	Have a variety of uses. The current use is shown on the display above each button.
3 Dialpad	Used for dialing numbers when you are making calls. For programming, the dialpad is also used for entering numbers and letters
4 Memory buttons	Dial a number or feature code stored on the button.
5 Feature button	Allows you to enter a feature code while using or programming the telephone.
6 Hold button	Puts an active call on hold.
7 Release button	Hangs up an active call or ends programming.

❽ Volume rocker switch	Turns the volume you hear through the handset up or down. During programming this switch is used to adjust settings, such as for the display contrast.
❾ Mute	Mutes the transmitter in the handset.
❿ Handsfree	Allows you to speak to and hear a call without using the handset or headphones.

This guide shows the icons for Business Series Terminal buttons. Your set may have different labels, or the buttons in slightly different locations. Refer to the table below for comparable Norstar icons

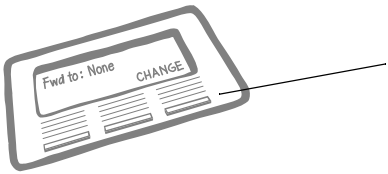
Telephone buttons

Business Series Terminals	Button description	Norstar sets
	Feature	Feature
	Handsfree	Handsfree Mute
	Mute	Handsfree Mute
	Hold	Hold
	Volume Control	
	Release	Rls

Using the buttons under the display

The three display buttons are used both for telephone features and programming. What each button does depends on what the display shows. Some display instructions that you may see when making changes on the systeminclude OK, CHANGE, or COPY. In this guide, display button instructions are underlined.

Display buttons

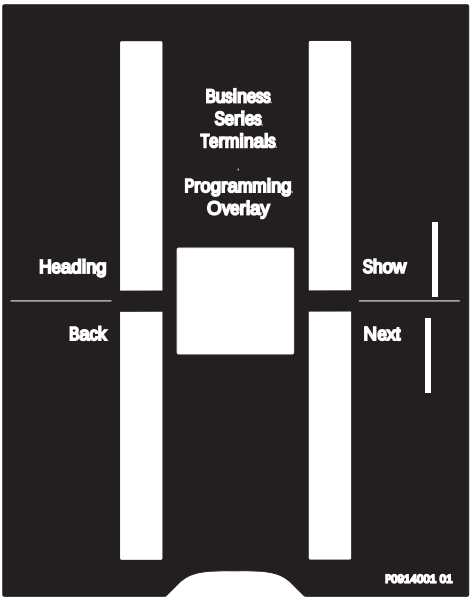


The programming overlay

When you begin programming, a group of buttons on the telephone become the buttons for moving through programming headings and settings. The programming overlay is a paper cutout that is included with the Programming record. It relabels the four buttons to name the actions you use during programming. If you lose the overlay, there is an extra overlay included in the back of this book that can be printed and cut out.

Programming buttons are active or inactive at different stages of programming. A button is active (meaning you can use that option), when the indicator next to it is lit (◀ or ▶).

Business Series Terminal programming overlay



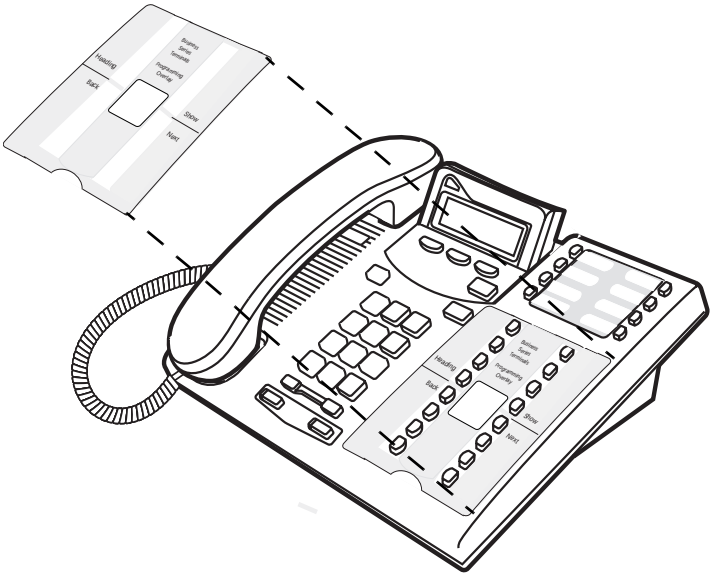
Displays the heading for the current level

Moves back one item on the current level

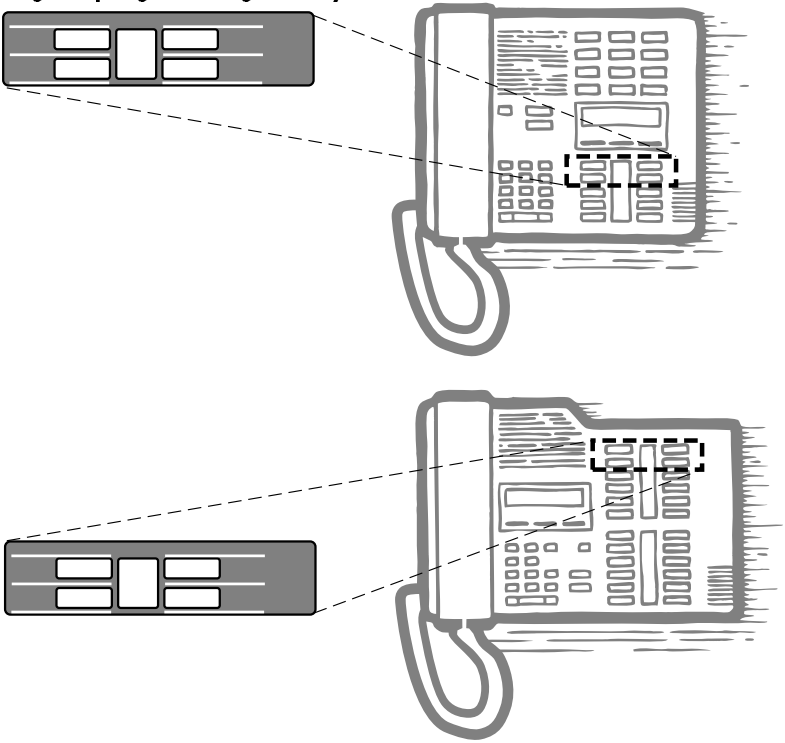
Displays the first setting within a menu level

Moves display one item forward on the current menu level

Placing the programming overlay on a Business Series Terminal



Placing the programming overlay on Norstar sets



A map for working in programming

The tables on the following three pages show the headings that display when you move through the display menu after pressing [ ] [*] [*] [C] [O] [N] [F] [I] [G] and entering the password (the default password is [A] [D] [M] [I] [N] or [2] [3] [6] [4] [6]).

The default Basic password ([B] [A] [S] [I] [C] or [2] [2] [7] [4] [2]) can be used with a limited number of feature codes, including [*] [*] [T] [I] [M] [E] and the codes for turning call services on and off. For more information, see *Using passwords* on page 196.

Terminals&Sets	Customize each telephone on the system. 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 change the button programming on any telephone on the system.
Lines	Program names for each line.
Services	Turn services on or off: Ringing service, Restriction service, and Routing Service.
Sys speed dial	Program up to 70 different telephone numbers so internal users can dial them with a two-digit code.
Passwords	Change or erase the password you use for programming, or the one you use for Call log. On an XC system, you can change the Companion portable telephone registration password.
Time&Date	Change the time, date, or both.
System prgrming	Access the headings that define Hunt Groups, Hospitality services. Enter the BusName, which displays on caller ID lines. On a MICS-XC system, access registration records for Companion portable telephones so you can disable or enable the sets.

System Coordinator user interface

Terminals & Sets	**Show set** Enter digits or press LIST.	**Capabilities**	**Fwd no answer**	**Fwd to** **Fwd delay**
			Fwd on busy	**Fwd to**
			DND on busy	
			Handsfree	
			HF answer back	
			Pickup grp	
			Page zone	
			Paging	
			D-Dial	
			Priority call	
			Hotline	**Intrn #** **Extrnl# .... Use prime line**
			Aux. ringer	
			Allow redirect	
			Redirect ring	
			ATA settings	**ATA ans timer** **Msg Indicate**
		Name		
		User preferences	**Model**	
			Button progrming	**# of buttons** **B01 ... BXX** **CLRTEL#FEATR**
			User speed dial	**# of speed dialers** **Spd # XX**
			Call log opt'ns	**No one answered** **Unanswered by me** **Log all calls** **No autologging**
			Dialing opt'ns	**Standard dial** **Pre-dial** **Automatic dial**
			Language	
			Display cntrst	
			Ring type	
			Voice path	**Dflt: Handsfree** **Headset**
		Restrictions	**Set restrictions**	**Set lock (Partial, Full, None)**
				Allow last no
				Allow saved no
				Allow link
		Telco features	**1st Display**	
			Called ID	
Lines	**Show lines** ___ Enter digits or press LIST	**Name**		

Note: Some headings will only show if required by the selected options for the previous heading.

Services	**Ringing service**	**Sched: Night Evening Lunch Sched 4 Sched 5 Sched 6**	**Off, Manual, Auto**	
	Restrn services	**Sched: Night Evening Lunch Sched 4 Sched 5 Sched 6**	**Off, Manual, Auto**	
	Routing service	**Sched: Night Evening Lunch Sched 4 Sched 5 Sched 6**	**Off, Manual, Auto**	
Sys speed dial	**Speed dial #** Enter digits or press LIST	**add/change tel #**		
		Use prime line		
		Display digits		
		Name		
Passwords	**Call Log pswds**	**Show set**	**Log pswd**	
	Progrming pswds	**Sys admin: 23646**		
		Basic: 22742		
	Reg. pswd (MICS-IX, only)			
	Hospitality	**Desk pswd: 4677**		
		Cond pswd:None		
Time&Date	**Hour**			
	Minutes			
	Year			
	Month			
	Day			
System Prgrming	**Hunt Group**	**Show Group**	**Member DNs**	
			Line assignment	**Show line ___ Unassigned/ Assigned**
			Mode	**Broadcast Sequential Rotary**
			Hunt Delay	
			If Busy	**BusyTone/Queue**
			Q Timeout	
			Overflow	
			Name	

System Prgrming (continued)	**Companion (MICS-XC only)**	**Registration**	**Registration**	
			Portable DNs	**Show DN Available/unavailable**
		Radio data	**Re-evaluation**	**Status**
			Radios	**Cell Assignment/Show radio Assigned/unassigned**
			Cells	**Show Cell Cell radios/Cell nghbrs/ Cell rad nghbrs**
	BusName			
	Hospitality	**Room/desk info**	**Show set**	**Room #**
				Adm pwd req'd
		Service time	**Hour**	
			Minutes	
		Alarm	**Attn attempts**	
			Retry intrvl	
			Attn duration	
			Time format	**12 hr/24 hr**
			Expired alarms	**Notify set**
				Use tone

Starting and ending a session

As system coordinator thefirst steps in making any change to the Norstar system are always the same.

`Jan 1  12:00pm`	Press [✆].
`Feature:`	Press [*] [*] [C] [O] [N] [F] [I] [G]. This is the same as pressing [*] [*] [2] [6] [6] [3] [4] [4].
`Password:` `RETRY`	Press [A] [D] [M] [I] [N]. This is the same as pressing [2] [3] [6] [4] [6]. Press RETRY to re-enter the password if you enter an incorrect character.
`Terminals&Sets`	The display shows the first of the seven headings available for administration programming.

[A] [D] [M] [I] [N] is the password, unless the password has been changed. Check the Programming Record for the most recent password.

Ending a session

Display digits:Y CHANGE	Press ☎ to end the session.
End of session	After a few seconds, the time and date reappears on the display.

The system makes any changes you indicated in programming as soon as you move away from a setting, either by using the navigation buttons or by pressing ☎.

You can see if the changes you made to telephone programming have taken effect by pressing the UPDATE display key. The display shows you how many telephones have not been updated.

Press DNs to see the specific extensions where programming changes have not taken effect yet. Items disappear from the list as they are updated.

Record any changes you make in the *Modular ICS 5.0 Programming Record*. If there is a problem with the system, the installer needs to see a history of the changes you have made.

Remember to inform people in your office of any changes you have made that affect them. For example, you may change system speed dial codes or change the number of rings before an unanswered telephone is forwarded.

Frequently used programming operations

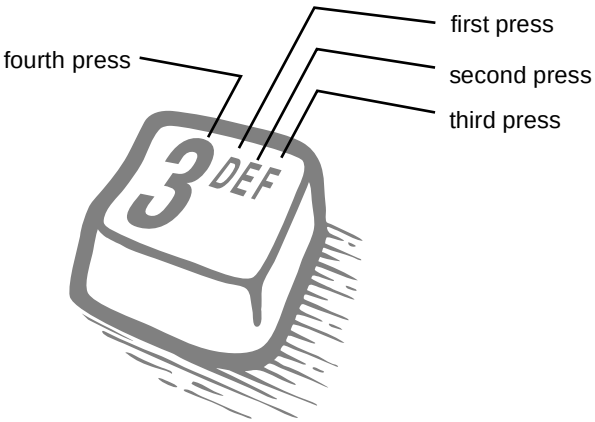
The following sections highlight the most frequently used programming operations. To consult these or other programming operations, see either the Table of Contents or the Index

Changing the time and date on the display

`Jan 1  12:00PM`	Press [⏲].
`Feature:`	Press [*] [*] [8] [4] [6] [3] (which is the same as [*] [*] [T] [I] [M] [E]).
`Password:` `RETRY`	Press [2] [2] [7] [4] [2] ([B] [A] [S] [I] [C]) or [2] [3] [6] [4] [6] ([A] [D] [M] [I] [N])

The passwords can be changed. See *Using passwords* on page 196 for more information.

Entering letters and numbers using the dialpad



In this example, you are changing the time to 1:30 p.m.

Hour:01 NEXT CHANGE	Press CHANGE.
Hour:_ CANCL	Press the dialpad buttons to enter the hour. Use two digits for all hours. The clock on the display shows either one or two digits.
AM OK CHANGE	The display prompts you to choose a.m. or p.m. Press CHANGE and OK to select p.m.
Hour:01 NEXT CHANGE	Press NEXT.
Minutes:00 NEXT CHANGE	Press CHANGE.
Minutes:_ CANCL	Press the dialpad buttons to enter the minutes.

If you are only changing the time and not the date, press ☎ to end your session.

In this example, you are changing the date to July 15, 1998.

Minutes:30 NEXT CHANGE	Press NEXT.
Year:97 NEXT CHANGE	Press CHANGE.
Year:_ CANCL	Press the dialpad buttons to enter the year.
Year:01 NEXT CHANGE	Press NEXT.
Month:01 NEXT CHANGE	Press CHANGE.
Month:_ CANCL	Press the dialpad buttons to enter the month.

Use numbers for the months: 01 is January; 12 is December.

Month:07 NEXT CHANGE	Press NEXT.

Day:01 NEXT CHANGE	Press CHANGE.
Day:__ CANCL	Press the dialpad buttons to enter the day.
Day:15 CANCL	Press ☎ to end your session.
End of session	

The clock controls the schedules used for services such as ringing and routing services.

After a power failure, the clock is behind by the length of time power was lost. For example, if the power is out for two minutes, the clock is two minutes behind.

Adding or changing a system speed dial

You program a speed dial on your Norstar so that anyone in your office can dial a frequently used number using a two-digit code.

To change a speed dial that already exists, follow the same steps. The new programming overwrites the previous number and settings.

Begin the programming session

Jan 1 12:00pm	Press ↺.
Feature:	Press * * 2 6 6 3 4 4.
Password: RETRY	Press 2 3 6 4 6.

Choose a speed dial code

Terminals&Sets▸	Press Next three times.
Sys Speed Dial▸	Press Show .
Speed dial #:… LIST	Press 0 1 .

You can pick any system speed dial code between 01 and 70.

Speed dial #:01▸ FIND	Press Show .

Add or change the telephone number

01:No number CHANGE	Press CHANGE.
01:… CANCL OK	Use the dialpad to program the telephone number that you want to add. The telephone number can be up to 24 digits long.
01:nnnnnnnn… CANCL BKSP OK	Your display shows the telephone number, which is represented by the row of n-characters shown here. Press OK.

Select a line for the speed dial code

01:nnnnnnnn CLR CHANGE	Press Next .
Use prime line CHANGE	Press CHANGE to see your options: Use prime line, a specific line (for example Use line: 01), a line pool (for example Pool code:71), or Use routing tbl.

Stop pressing CHANGE when the display shows the prime line again.

Use prime line CHANGE	In this example, the system selects the prime line automatically to dial speed dial code 01. This is the most common choice.

If you assign a specific line to a system speed dial number, only telephones with an appearance of that line can use the speed dial number.

Choose what shows up on the display

Use prime line CHANGE	Press Next .
Display digits:Y CHANGE	Your choices are Yes and No. Yes means the display shows the telephone number. Press CHANGE.
Display digits:N CHANGE	No means the display shows a name for the code.

Program a name for a speed dial

The system has a standard name to display, so it is not necessary for you to program one. However, if you have chosen not to display the telephone number, you may want a specific name.

Display digits:N CHANGE	Press Next .
Name:Sys Spd Di... CHANGE	Press Show .
...al 01 ... CHANGE	This is the name the display shows if youdo not change it. Press CHANGE.
Name:_ -->	Decide the name you want to give to the speed dial code.

Press the dialpad button that has the first letter of the name until the display shows the letter you want.

Name:S BKSP -->	Press -->.
Name:S_ <-- BKSP -->	Use the dialpad and --> until you have the entire name.

The name can be up to 16 characters long, including spaces.
Press # on the numeric dialpad to add spaces.

Name:SAVINGS BANK <-- BKSP -->	Press Next .

Name:SAVINGS BA... CLR CHANGE	Press ☎ to end your session.

Or you can press Heading, then Next to program another speed dial number.

```
End of session
```

Changing the name of a telephone

Begin the programming session

Jan 1 12:00PM	Press ↺.
Feature:	Press * * 2 6 6 3 4 4.
Password: RETRY	Press 2 3 6 4 6.

Change the name of a telephone

Terminals&Sets▸	Press Show.
Show set:_ LIST	Enter the internal number (DN) of the telephone or voice mail extension. In this example, the DN is 221.

If the set has already been given a name, it appears after DN: on the display.

221:221▸ FIND	Press Show then Next.
Name:221 CHANGE	This is the name the display shows if you do not change it. Press CHANGE.

Decide what name you want to give to the telephone number.

Name:_ -->	Press the numeric dialpad button that has the first letter of the name until the display shows the letter you want.
Name:J BKSP -->	Press -->.

Name:J… <-- BKSP -->	Use the dialpad and --> until you have the entire name.
Name:JEAN B <-- BKSP -->	Press Next to use the name you have entered.

The name can be up to seven characters long, including spaces.

Name:JEAN B CLR CHANGE	Press ☎ to end your session.

You can press Heading once to continue programming this telephone, or press Heading twice to return to the Terminals&Sets heading.

End of session

Changing the name of a line

Begin the programming session

Jan 1 12:00pm	Press ✆.
Feature:	Press * * 2 6 6 3 4 4.
Password: RETRY	Press 2 3 6 4 6.

Change the name of a line

Terminals&Sets▸	Press Next.
Lines▸	Press Show.
Show line:____ LIST	Enter the three-digit number of the line you want to name. In this example, the line is 002.

This is the name the display shows if you don't change it.

Line002:Line002▸ FIND	Press Show.

```
Name:Line002
             CHANGE
```

Press CHANGE.

Decide what name you want to give to the line.

```
Name:_
                 -->
```

Press the dialpad button that has the first letter of the name, until the display shows the letter you want.

```
Name:L
       BKSP      -->
```

Press -->.

```
Name:L___
<--    BKSP      -->
```

Use the dialpad and --> until you have the entire name.

The name can be up to seven characters long, including spaces.

```
Name:LOCAL
<--    BKSP      -->
```

Press [Next] to use the name you have entered.

```
Name:LOCAL
CLR           CHANGE
```

Press [↶] to end your session.

You can press [Heading] once to continue programming this line, or press [Heading] twice to return to the Lines heading.

```
End of session
```

Making changes to Call Forward No Answer

Begin the programming session

```
Jan 1  12:00PM
```

Press [↺].

```
Feature:
```

Press [*] [*] [2] [6] [6] [3] [4] [4].

```
Password:
              RETRY
```

Press [2] [3] [6] [4] [6].

Change where a call goes when there is no answer

```
Terminals&Sets▶
```

Press [Show].

Show set:... LIST	Enter the internal number (DN) of the telephone or voice mail extension. In this example the DN is 225.

If the set has been given a name, it appears on the display.

225:225 FIND	Press Show .
Capabilities▶	Press Show .
Fwd no answer▶	Press Show .
Fwd to:None CHANGE	Press CHANGE and enter the internal number where you want the calls to be sent. In this example the internal number is 221.

You can press CLR to change the destination back to None.

Change the number of times the telephone rings before it is forwarded

Fwd to:221 CLR CHANGE	Press Next .
Forward delay:4 CHANGE	Use the CHANGE button to choose the number of times the telephone rings before it is forwarded.

Your choices are 2, 3, 4, 6 and 10 rings.

Forward delay:3 CHANGE	Press ☎ to end your session.

You can press Heading to continue programming capabilities for this telephone, or press Heading four times to return to the Terminals and Sets heading.

End of session

Tip - If the Norstar set is a member of a Hunt Group, the Call Forward no answer feature is overridden and the Hunt Group call continues to ring until the hunt time has expired. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Making changes to Call Forward on Busy

Begin the programming session

`Jan 1  12:00PM`	Press [↺].
`Feature:`	Press [*] [*] [2] [6] [6] [3] [4] [4].
`Password:` `RETRY`	Press [2] [3] [6] [4] [6].

Change where a call goes when a telephone is busy

`Terminals&Sets▶`	Press [Show].
`Show set:...` `LIST`	Enter the internal number, which gets assigned as the intercom number, of the telephone extension. In this example, the intercom number is 225.

If the set has been given a name, it appears on the display.

`225:225` `FIND`	Press [Show].
`Capabilities▶`	Press [Show].
`Fwd no answer▶`	Press [Next].
`Fwd on busy...`	Press [Show].
`Fwd to:None` `CHANGE`	Press CHANGE and enter the internal number where you want the calls to be sent. In this example, the internal number is 221.

You can press CLR to change the destination back to None.

`Fwd to:221` `CLR  CHANGE`	Press [☎] to end your session.

You can press [Next] to continue programming capabilities for this telephone, or press [Heading] three times to return to the Terminals and Sets heading.

```
End of session
```

Tip - If the Norstar set is a member of a Hunt Group, the Call Forward on busy feature is overridden and the Hunt Group call continues to ring until the hunt time has expired. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Making Changes to Do Not Disturb on Busy

When you are on a call and a second call comes in, your telephone rings softly to alert you to the second call. You can turn this feature on or off for each telephone.

Begin the programming session

`Jan 1  12:00pm`	Press [⏲].
`Feature:`	Press [*] [*] [2] [6] [6] [3] [4] [4].
`Password:` `RETRY`	Press [2] [3] [6] [4] [6].

Change Do Not Disturb on Busy

`Terminals&Sets▸`	Press [Show].
`Show set:...` `LIST`	Enter the internal number of the telephone extension. This becomes the number for the intercom button. In this example, number is 225.

If the set has been given a name, it appears on the display.

225:225 FIND	Press Show .
Capabilities▶	Press Show .
Fwd no answer▶	Press Next twice.
DND on Busy:N CHANGE	Press CHANGE to turn the feature on.
DND on Busy:Y CHANGE	A second press turns it off again. Press ☎ to end your session.

Press Next to continue programming capabilities for this telephone, or press Heading three times to return to the Terminals and Sets heading.

End of session

For more information on Call Forward and similar settings, see *Forwarding your calls to another Norstar telephone* on page 93.

What would you like to do next?

Some of the most common programming tasks are listed below. For a comprehensive list of settings and instructions, see either the Table of Contents or the Index.

Redirect calls coming in on a line.	See *Turning on Line Redirection* on page 98.
Allow individuals to answer calls that are ringing at another telephone.	See *Picking up a call ringing at another telephone* on page 48.
Assign telephones to different zones for paging.	See *Paging* on page 104.
Turn the night service on and off.	See *Making additional telephones ring* on page 189.
Use a basic password so others can take care of programming such as changing user speed dials, changing names, and changing the time and date.	See *Using passwords* on page 196.

Answering calls

Answering incoming calls with Hunt Groups

Your Norstar system now allows you to establish Hunt Groups in your system. Hunt Groups are a group of Norstar set DNs that can be called by a single directory number. The Hunt Groups feature ensures calls are easily routed to the appropriate people. You can program

- the members for a Hunt Group
- member position within a Hunt Group
- how calls are distributed
- how long a call spends looking for available members
- what happens if all members are busy

For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Answering an incoming call

There are three indications of an incoming call: ringing, a line button flashing, and a message on the display. You do not necessarily receive all three indications for any particular call. For example, you may have a line that has been set up not to ring at your telephone. If so, you see only a flashing line button. There are many possible combinations, depending on how your system is set up. See *Choosing a line using a line button* on page 66 for more information on the use of lines.

If you receive a priority call and your telephone has no free internal line buttons, you cannot transfer the priority call, you must accept or release it.

Line buttons

One line button for each line is assigned to your telephone. Press the line button to select the line you want to answer or use to make a call. Having several line buttons gives you immediate access to more than one line.

The M7100 or T7100 sets have two intercom paths which are used instead of line buttons to answer and make calls. Each set can be assigned two lines. You can press to switch between two calls, one active and one on hold.

What line indicators mean

▶ Flashing on and off for equal lengths of time	There is an incoming call on the line
▶ Flashing on and off more quickly	You have placed a call on hold
▶ Flashing on for longer than off	Someone else has put a call on hold on that line
▶ On, not flashing	You are connected to the call on that line or the line is in use elsewhere
Off	The line is free

Rings you may hear

A double beep every 10 seconds	A call has been camped to your telephone.
A long single ring	There is an external call on the line for you.
A shorter double ring	There is an internal call on the line for you or a call is being transferred to you.
A brief single ring	A call is being redirected on one of your redirected lines. You cannot answer this call.
Three beeps descending in tone	You are receiving a priority call.

Answering calls at a prime telephone

Each line in a Norstar system can be assigned a prime telephone. Calls not answered at their normal destinations are transferred to the prime telephone. The prime telephone is usually the attendant's telephone. The installer or customer service representative programs a prime telephone for a line.

Displays

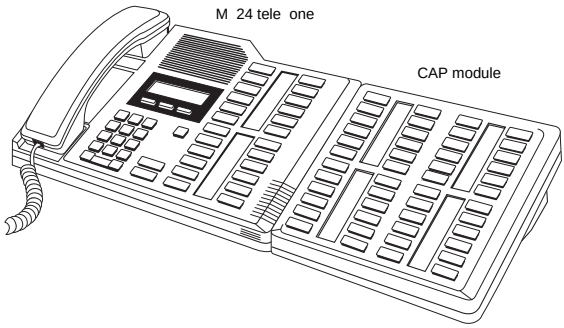
DND from 221	The person at telephone 221 has forwarded a call to you using Do Not Disturb.
DND transfer	The system has transferred a call to you from a telephone with Do Not Disturb turned on.
DRT Line001	Nobody answered this call so the system transferred it to you.
Line001 callback CALLBACK	Someone has camped, parked or transferred a call on line 001, but no one has answered it. Press CALLBACK or the line button to connect to the call.
Line001 to prime	There is no telephone that can receive a call on line 001 so the system has transferred it to you.
Line002>Line052	The call coming in on line 002 was intended for target line 052. Line 052 is busy so the call has come to you.

For other displays, see *Common feature displays* on page 227.

Using a central answering position (CAP) module

A central answering position (CAP) is a Norstar M7324 telephone and a CAP module that your installer or customer service representative programmed as a CAP. You can have five CAPs in a Norstar Modular system. It is best if the CAP is the prime telephone and direct-dial telephone for the lines and telephones it serves.

Norstar M7324 set with added CAP module



A CAP module is an add-on device that provides 48 extra memory or line buttons. You can connect one or two Norstar CAP modules to the telephone to increase the number of lines it can handle.

When a CAP module is first plugged into your telephone, some of the module buttons are already programmed to dial an internal number.

Customizing your CAP module

If your installer has programmed the CAP module to be the central answering position for your system, you can move external lines onto the CAP module by using [Feature] [*] [8] [1]. See *Moving line buttons* on page 138.

Any of the buttons on your CAP module that do not select lines can be programmed to dial internal or external numbers automatically. You can program features onto CAP module buttons. See *Time savers for making calls* on page 73 and *Customizing your telephone* on page 124 for information on programming memory buttons.

Buttons on a CAP module cannot be assigned as answer buttons.

Monitoring telephones with the CAP module

The indicators ▸ beside internal autodial buttons on your CAP module show the status of Norstar telephones.

The indicator is on when the telephone has:

- an active call
- Do Not Disturb turned on

The indicator is off when a telephone has:

- no active call
- a call on hold and no other active call

Tip - You can send up to 30 messages from a CAP.

Release button

Pressing [↩] ends a call. You do not have to put the receiver down. [↩] also ends feature programming.

While you are on a call, do not press [↩] to end a feature you are using. If you do, you disconnect the call. Use [⏻] instead.

Hearing aid compatibility

The receivers on all Norstar telephones and Business Series telephones are compatible with hearing aids as defined in the FCC rules, Part 68, section 68.316. Not all hearing aids are optimized for use with a telephone.

Viewing information about a call on the display

If you subscribe to Call Display services from your local telephone company, one line of information about an external caller is displayed after you answer. Depending on the setting and the external information available, either the caller's name or telephone number is displayed.

When you transfer an external call to another Norstar user, this information is displayed on the target telephone.

Call Display information becomes available between the first and second ring of an incoming call. If you answer before the Call Display information is available on your display, and you press e 8 1 1, you see only the line number or line name.

To use logging features with Call Display, see *Using Call Log* on page 116.

Using Call Information for a particular call

[Feature] 8 1 1

Call Information allows you to see information about incoming calls. This information is more detailed than the Call Display information you can receive automatically. For external calls, you can display the name of the called-party set, telephone number, and the line name. For an internal call, you can display the name of the called-party set and the internal number of that set. You can see information for ringing, answered, or held calls.

Call Information is available for calls even if they have been transferred, forwarded or rerouted in some way.

Names and numbers for external calls are displayed only if you have subscribed to Call Display services from your telephone company.

Tip - Call Log displays the same information as Call Information, along with the date and time of the call, and the number of times the caller called.

Displaying Call Information before or after answering

To find out who is calling or to display information about your current call:

1. Press [Feature] 8 1 1.
2. Press # or VIEW to display more information about an external call.

Call Display information becomes available between the first and second ring of an incoming call. If you answer before the

Call Display information is available on your display, and you press ✆ 8 1 1, you see only the line number or line name.

Displaying Call Information for a call on hold

1. Press ✆ 8 1 1. The display reads ▶Select a call.
2. Select the line on hold. Information about the call is displayed.
3. Press # or VIEW to display more information about an external call.

Tip - If your telephone automatically displays Call Display information for a call, you still need to press ✆ 8 1 1 before you can press # or VIEW to display more information about the call.

Making Call Display information appear automatically at a telephone

Each telephone that rings for an external line can display Call Display information for that line. After the call is answered, Call Display information is always shown at the telephone that answered the call. Your installer or customer service representative can program telephones to have automatic Call Display.

This feature is not available to ISDN terminals.

Changing which information is shown first about a call

Depending on the services you subscribe to, Call Display information may contain up to three parts:

- the name of the caller
- the number of the caller
- the name of the line in your system that the call is on.

For each telephone, you can determine which information is displayed first.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [↻] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show].
5. Press [Next] four times.
6. Press [Show].
7. Choose a setting at `1stDisplay:` using the `CHANGE` button. The choices are `Name`, `Numbr` or `Line`.

You may see `Unknown name` or `Unknownnum ber` on the display if the information is not available from your telephone company. You may see `Private name` or `Private number` on the display if the caller blocks that information.

Picking up a call ringing at another telephone

You can pick up a call ringing at another telephone by using Directed Pickup or Group Pickup.

Answering any ringing telephone using Directed Pickup

You can answer any telephone that is ringing in your Norstar system.

1. Press [c] [7] [6].
2. Enter the internal number of the ringing telephone.

Call Pickup cannot be used to answer private lines.

To use Call Pickup (Directed Pickup), the telephone must be ringing. If, for example, the auxiliary ringer is ringing, but the call is not ringing at a telephone, the call cannot be answered using Directed Pickup. It must be answered normally at a telephone that has a flashing indicator for the call, or by using Trunk Answer. You can answer a call that is ringing because someone has transferred the call to a telephone and the call is ringing on an intercom button.

Tip - Directed pickup can retrieve calls that are ringing on an Answer DN. While you may enter the internal number of the telephone you hear ringing, it may be calls from another telephone you are answering.

Answering any ringing telephone using Group Pickup

Your Norstar system can be divided into nine pickup groups. If you are a member of a pickup group, you can pick up a call that is ringing at any telephone in your pickup group.

1. Press [Feature] [7] [5].

Group Pickup cannot be used to retrieve a camped call.

If there is more than one incoming call at a telephone in a pickup group, a call ringing on an external line is answered first followed by calls on the prime line and, finally, calls on internal lines.

Tip - A Hunt Group call ringing at a Norstar set DN that is also a member of a call pickup group can be picked up by any Norstar set in that call pickup group. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Changing a telephone pickup group

Telephones can be put into and taken out of pickup groups.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [Feature] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show] twice.
5. Press [Next] five times.

6. Press CHANGE at Pickup grp: to assign the telephone to pickup group 1, 2, 3, or 4, 5, 6, 7, 8, 9, or to None.

Displays

Already joined	You are already connected to the telephone that made the call you are trying to pick up. This can happen if you are on a call to a co-worker, your co-worker dials the number of a telephone in your pickup group, and you attempt to pick up that call.
Pickup denied	There is no call that you can pick up or the call that was ringing has already been answered. You have tried to pick up a call on someone else's private line.
Pickup:	Enter the internal number of the telephone that is ringing. (You may use an internal autodial button to do this.) If you decide not to answer a ringing call after you have activated Directed Pickup, press [6].

Trunk Answer

The Trunk Answer feature allows you to answer a ringing call anywhere in the system from any telephone in the system. The line you are answering does not have to appear or ring at the telephone you are using.

Trunk Answer works only with calls that are ringing on lines for which a Ringing Service schedule is active and if Trunk Answer is enabled by your installer or customer service representative.

Answering a call using Trunk Answer

Press [feature] 8 0 0.

Tip - If there is more than one incoming call on lines in a Ringing Service, the Trunk Answer feature picks up the external call that has been ringing the longest.

Displays

`Line denied`	You have tried to pick up a call on someone else's private line.
`Pickup denied`	The call that is ringing is on a line that is not in a Ringing Service.

Answer buttons

You can use an Answer button to monitor calls on another person's telephone. All calls to the monitored Norstar telephone appear on the Answer button.

Answer buttons are useful for attendants who monitor incoming calls for one or several other people. For example, a secretary may have appearances for three different bosses on her answer buttons. Once a call for boss A is answered by the secretary, the appearance stops at that set. This allows for another (simultaneous) call to come in on the same line. The same is true for boss B and boss C. When incoming call traffic becomes high, the calls can then be routed to aHunt Group to optimize call handling. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

The `Answer button` heading under `Featr settings` allows you to determine what types of calls alert at the telephone.

Your choices are:

- Basic
- Enhanced
- Extended.

See the *Modular ICS 5.0 Installer Guide* for more information on programming Answer buttons.

ISDN terminals cannot be assigned Answer buttons to monitor other sets, but they can be monitored.

You cannot make calls using Answer buttons.

If more than one call is ringing at a telephone, the first call appears on the attendant Answer button. Any subsequent calls appear on intercom buttons, if they are available.

Tip - More than one attendant may have an Answer button for a single telephone. This allows two or more attendants to handle calls for a busy person.

Each telephone can handle calls for up to eight other people using a separate Answer button for each person.

Creating a Conference Call

You can talk to two people at once.

1. Make sure you have two calls, one active and one on hold.
2. Press [c] [3].
3. Press the appropriate button to retrieve the held call.

   This is automatic on the M7100 and T7100 telephones.

You can create a conference when you are on a call.

1. Make a second call.
2. Press [ ] [3].
3. Press the button where the first call is on hold to create a conference.

Only the person who established the conference can process the conference by using the procedures described in this section.

Tip - You can create a conference by releasing privacy on a call. See *Turning Privacy on or off for a call* on page 61.

Disconnecting one party

You can disconnect one party from a conference and continue talking to the other.

You can activate this feature on all Norstar and Business Series terminals except for M7100 or T7100 models.

1. Press the line button of the call that you want to disconnect. The call that you want to keep is automatically put on hold.
2. Press [ ]. The call is disconnected.
3. Press the line button of the held call to speak to the remaining person.

On a T7100 or on an M7100 set:

1. Press [ ] [#] [3], to place one caller on hold. Press [ ] again, to put the caller you want to keep on hold.
2. Press [ ]. The call is disconnected.

3. Press [↩] to speak to the remaining party.

Independently holding two calls

For all telephones except the M7100 and T7100 sets, you can put the two people in a conference call on hold independently so that they cannot talk to each other.

1. Press the line button of one person. The other person is automatically put on hold.
2. Press [↩]. The second person is put on hold.

You can re-establish the conference.

1. Take one call off hold.
2. Press [✆] [3].
3. Take the other call off hold.

Putting a conference on hold

You can put a conference on hold, allowing the other two people to continue speaking to each other by pressing [↩].

You can reconnect to the conference by pressing either of the held line buttons. For the M7100 telephone, press [↩].

Splitting a conference

You can talk with one person while the other person is on hold

You can activate this feature on all Norstar and Business Series terminals except for M7100 or T7100 models.

1. Press the line button of the person you want to speak to. The other person is automatically put on hold.

On an M7100 or a T7100 set:

1. Press [✆] [#] [3]. The first party is on hold.
2. Press [⌣], if necessary, to switch parties.

You can re-establish the conference.

1. Press [✆] [3].
2. Take the held call off hold. This is not necessary.

Removing yourself from a conference

You can remove yourself from a conference, and connect the other two callers through your Norstar system.

1. Enter the Transfer feature code [✆] [7] [0].

When you remove yourself from a conference using the Transfer feature, and both callers are from outside your system, one of the callers must have called you on a disconnect supervised line, or the call is be disconnected.

Displays

`3 parties only`	You are trying to add a fourth party to your conference call, or to join two conferences together. Release one call from the conference before adding another, or keep the two conferences separate.
`Conf. on hold`	You have put a conference call on hold.
`Conference busy`	You have tried to make a conference call, but your system is already handling its maximum number of conference calls.

`Line001 221` `TRANSFER`	You are on a conference with the two lines or telephones shown. You can drop out of the conference and leave the other two parties connected (Unsupervised Conference) by pressing TRANSFER or entering the Transfer feature code.
`Press held line`	You have activated the Conference feature with one call active and another on hold. Press the line of the call on hold to bring that person into the conference.

For other displays, see *Common feature displays* on page 227.

Listening to a call as a group

To allow people in your office to listen in on a call using Group Listening, press [✆] [8] [0] [2].

You hear the voice of the caller through the speaker of your set. Continue to speak to the caller through the telephone receiver. The microphone of your set is off, so the caller does not hear people in your office.

Canceling Group Listening

Group Listening is canceled automatically when you hang up or when you press [✆] [#] [8] [0] [2].

Tip - Keep the receiver away from the speaker, or you may hear feedback. The higher the volume, the more the feedback. Press [☎] to prevent feedback when hanging up.

Using Handsfree/Mute

The ability to use Handsfree must be turned on or off for each telephone. The type of Handsfree can be changed. Refer to *Changing Handsfree for a telephone* on page 59.

You must turn on Handsfree for a telephone to be able to use a headset.

Answering calls without lifting the receiver

1. Press the line button for the ringing call.
   This step is not necessary if you have a prime line assigned to your telephone.
2. Press . The internal microphone and speaker of the set are automatically turned on.

Handsfree is not available for M7100 or T7100 sets.

Tip - Direct your voice toward the telephone. The closer you are to the telephone, the easier it is for the microphone to transmit your voice clearly to your listener.

Making calls without lifting the receiver

1. Press .
   If you do not have a prime line assigned to your telephone, press a line button.
   The internal microphone and speaker of the set are automatically turned on.
2. Dial your call.
3. Speak normally.

Muting the set

1. Press [ ] to switch off the telephone microphone so that you can speak privately to someone in your office while you are on a handsfree call.
2. Press [ ] to turn the microphone back on again and continue your handsfree call.

Changing a regular call to handsfree

1. Press [ ].
2. Hang up the receiver.

Changing a handsfree to a regular call

Lift the receiver.

Using Handsfree

The indicator next to [ ] is solid when you have Handsfree turned on.

The indicator next to [ ] is solid when you mute the microphone.

Note: Other models of sets have only one button for both functions. In this case, when the set is on handsfree and the microphone is on, the light is solid. If the set is on handsfree and the microphone is off, the light flashes.

Wait for your caller to finish speaking before you speak. The microphone and speaker cannot both be on at once. The voice of your caller voice may be cut off if you both speak at the same time. Noises such as a tapping pencil could be loud

enough to turn on your microphone and cut off the incoming sounds.

To prevent a possible echo, keep the area around your telephone free of paper and other objects that might screen your microphone. Turning down the microphone volume — press the left end of [◄——►] while speaking — prevents echoes. When you change the volume level, both the microphone and speaker volume are adjusted. This is needed in order to prevent feedback problems.

Place the telephone so that any unavoidable local noise, such as an air conditioner, is behind it. This limits the amount of disruptive background noise.

Tip - In open-concept environments, use the receiver when handsfree communication is not necessary or when you need privacy during a call. Another option is to use a headset.

Changing Handsfree for a telephone

You can program the type of Handsfree used with each telephone or activate Handsfree Answerback.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [✆] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show] twice.

5. Press Next three times.
6. Choose a setting at **Handsfree:** using the **CHANGE** button.

There are three ways to set Handsfree for an individual telephone:

Handsfree:None CHANGE	Handsfree is not available to the telephone.
Handsfree:Auto CHANGE	You can make or answer a call without having to pick up the receiver or press . The internal microphone of the telephone and the speaker turn on automatically when you press a line or intercom button to make or answer a call.
Handsfree:Std CHANGE	A standard version of Handsfree described *Using Handsfree/Mute* on page 57 .

For other displays, see *Common feature displays* on page 227.

Both Auto and standard Handsfree allow you to use a headset with a Norstar telephone or a Business Series Terminal.

A Handsfree/Mute button is automatically assigned to a telephone that is programmed with Handsfree and is always located in the lower right-hand corner of the numeric dialpad.

Handsfree Answerback

Handsfree Answerback allows you to answer a voice call without lifting the receiver.

This feature is always turned off for an M7100 or the T7100 set.

You can turn Handsfree Answerback on or off for a telephone that is programmed to use Handsfree.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [✆] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show] twice.
5. Press [Next] four times.
6. Choose a setting (Yes or No) at `HF answerback:` using the CHANGE button.

Turning Privacy on or off for a call

[✆] [8] [3]

Lines in your system can be configured to have automatic privacy. If a line is not programmed with privacy, anyone with the line assigned to their telephone can join your call by pressing the line button. If a line is programmed with privacy, only one person at a time can use the line.

Privacy control cannot be used on internal or conference calls.

When another telephone joins a call, the participants on the call hear a tone, and a message appears on the Norstar display. You cannot join a call without this tone being heard.

Creating a conference by releasing privacy

If a line is programmed with privacy, you can turn privacy off to allow another person with the same line to join in your conversation and form a conference. All the rules applicable to a conference apply except there is only one line in use, instead of the usual two. This means that you cannot split a conference set up using Privacy.

1. Press [✆] [8] [3].
2. Tell the other person to press the line button and join your conversation.

Only two Norstar or Business Series Terminal sets, in addition to the external caller, can take part in this kind of conference.

Making a call private

[✆] [8] [3]

If a line is programmed not to have privacy, you can turn privacy on for a call, preventing other people with the same line from joining your conversation.

Checking call length using Call Duration Timer

[✆] [7] [7]

With this feature you can see how long you spent on your last call, or how long you have been on your present call.

Displays

`221 02:47`	The display shows the last call you made, or the current call, and the total elapsed time.
`Line001 01:45`	You parked your last call. The display shows the period the call was parked. This display only shows when the call is active at your telephone or has just been released by your telephone.

Disconnecting by accident

If you accidentally drop the receiver back into the telephone cradle while answering a call, you can quickly retrieve the call.

Pick up the receiver again or press ↺ within one second to be reconnected to your call.

Time

✆ 8 0 3

Use this feature to display the current date and time while you are on a call.

Making calls

There are many ways to make a call, depending on the programming and the type of call, as follows:

- Pick up the receiver and dial. The Norstar system supports three methods of dialing. See *Changing how you dial your calls* on page 68.
- Pick up the receiver, press a line button, and dial (if the call is not on your prime line).
- Press [ ] and dial to talk without using the receiver. See *Using Handsfree/Mute* on page 57.
- Press [ ], then press a line button, and dial to talk without the receiver if the call is not on your prime line.
- Press a line button and dial to talk without the receiver if Automatic Handsfree is assigned to your telephone.
- Use one of the features that make dialing easier. See *Time savers for making calls* on page 73.

Displays

221 busy PRIORITY LATER	The telephone you have called has no internal lines available. Press LATER to use the Ring Again or Message features or press PRIORITY to make a priority call.
9_ QUIT BKSP	You are dialing using Pre-dial. To erase an incorrect digit, press the left end of [ ] or BKSP. When the number is complete, select a line or lift the receiver.
95551234 TRANSFER	This prompt remains on your display as long as you are on a call you have dialed. To transfer the call, press TRANSFER.
Already joined	Your telephone is already connected to the telephone you are trying to call. Check your active line buttons, and return to that call.

Calling 221 PRIORITY LATER	Wait for the telephone to be answered. If no one answers, press LATER to use the Ring Again (page 72) or Message (page 107) feature, or press PRIORITY to make a priority call.
Can't ring again	You cannot use Ring Again on your current call. You can only use Ring Again while you have a busy signal on an internal call or line pool request or while an internal call is ringing.
Do not disturb PRIORITY LATER	The telephone you are calling has Do Not Disturb turned on. Press LATER to use the Ring Again or Messages features, or press PRIORITY to make a priority call.
Expensive route	You have dialed a number, but the least expensive route that the system is programmed to use is busy. Unless you release the call, it goes through on a more expensive route.
Hidden number	The last number you dialed or the number you saved for Saved Number Redial was a speed dial number that displayed a name rather than the number. The number is dialed correctly, but you cannot see it.
Line denied	You have attempted to use the private line assigned to another user.
Line 001 TRANSFER	Enter the digits of the number you want to dial.
No last number	You have not dialed an external telephone number since the last power interruption or system reset.
No line selected	Either you have no prime line or your prime line is busy. Select a line manually before dialing.
Not in service	You have entered the number of a telephone that is not in service.
On another call LATER	The telephone you have called is on another call. Press LATER to use the Ring Again or Message features.

`Restricted call`	The call you are trying to make has been restricted in programming. A possible reason is time-of-day restrictions on certain calls.
`Ring Again?` `YES NO EXIT`	Press YES to use Ring Again. Press NO to send a message. See *Sending messages* on page 107 and *Turning on Ring Again* on page 72.
`Select a line`	Either you have no prime line, or the prime line is in use, or the line programmed for an autodial number, speed dial number, or Hotline is in use. Select a line and dial again.
`Send message?` `YES NO`	Press YES to send a message. See Messages.

For other displays, see *Common feature displays* on page 227.

Choosing a line using a line button

You have one line button for each line assigned to your telephone. Press the line button to select the line you want to answer or use to make a call. Having several line buttons allows you immediate access to more than one line.

The M7100 and T7100 sets each have two intercom paths which are used instead of line buttons to answer and make calls. Each set can be assigned two lines. You can press to switch between two calls, one active and one on hold.

Line pools

A line pool is a group of external lines that can be shared by many telephones. You can use a line in a line pool to make an external call.

The MICS system can have 15 line pools, and a telephone can be programmed to access any number of them.

A line pool access code is a number you dial to get a line pool. The access code can be up to four digits long. You can have several different line pools for your system, each one giving you access to a different set of external lines. It is one way of sharing lines across telephones in a system.

Your installer or customer service representative programs the line pool access codes and gives each telephone access to a line pool.

Everyone in the office should have a list of the line pool access codes for the line pools their telephones can use.

Using a line pool to make a call

Use this process to make a line pool call:

1. Press [ ] 6 4 .
2. Enter a line pool access code.

If you have a free internal line, you can make a call using a line pool without entering the feature code first.

1. Select an internal line (intercom).
2. Dial the line pool access code.

Tip - If no lines are available in the line pool, you can use Ring Again at the busy tone. You are notified when a line in the line pool becomes available. See *Using Ring Again* on page 72.

Programming a memory button with a line pool feature code

When you program a button with the line pool feature code, you must enter a line pool access code after the feature code. The programmed line pool button accesses a specific line pool, not the line pool feature. See *Programming feature buttons* on page 126 for more information.

If you program a button with an indicator to access a line pool, when all the lines in a line pool are busy, the indicator for the line pool button turns on. The indicator turns off when a line becomes available.

Making calls from an ISDN terminal

ISDN terminals do not have line keys or intercom keys as do Norstar telephones. To make an outgoing call from an ISDN terminal, access an external line by entering a line pool code or by using the ARS feature.

Changing how you dial your calls

To change how how you dial your calls, use this feature:

1. Press [feature] [*] [8] [2].
2. Press [#] or NEXT until the dialing mode you want appears.
3. Press [speaker] or OK to select the displayed dialing mode.

The dialing modes feature code cannot be programmed onto a memory button.

Using Standard dial

Standard dial allows you to make a call by selecting a line and dialing the number. If you have a prime line, it is selected automatically when you lift the receiver or press [ ].

You cannot use Standard dial on an M7100 or a T7100 set unless you pick up the receiver first. If you have this type of set, use the Automatic dial or Pre-dial feature for on-hook dialing.

Using Automatic dial

Automatic dial allows you to dial a number without selecting a line. Your prime line is selected as soon as you start dialing a number.

Automatic dial does not work if your telephone has no prime line or if your prime line is in use.

Telephones connected to an analog terminal adapter (ATA) cannot use Automatic dial.

Using Pre-dial

Pre-dial allows you to enter a telephone number, check it, then change it before actually making the call. The call is not dialed until you select a line or line pool, or pick up the receiver. You can pre-dial both external and internal numbers. You must, however, select the correct type of line (external or internal) for the type of number you have entered.

Tip - If your telephone starts ringing while you are pre-dialing a number, you can stop the ringing by turning on Do Not Disturb ([ ] [8] [5]). This does not affect numbers you are entering.

You cannot pre-dial a telephone number if all the lines on your telephone are busy.

When the internal number you have called is busy

There are a couple of methods you can use if the set you are calling is currently busy.

Priority Call

If you get a busy signal or a Do Not Disturb message when you call someone in your office, you can interrupt them. Use this feature for urgent calls only.

Tip - Priority calls cannot be made to Hunt Group DNs. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Making a priority call

1. Press [c] [6] [9].
2. Wait for a connection, then speak.

A person who receives a priority call while on another call has eight seconds to accept or block the call. For information on blocking calls see *Stopping calls from ringing at your telephone: Do Not Disturb (DND)* on page 176. If the person does nothing, the priority call feature puts their active call, including conference parties, onExclusive Hold and connects your call.

Network note: Meridian systems networked to MICS systems through an SL-1 MCDN trunk cannot use camp-on or break-in (priority) codes from the Meridian to the MICS system.

Giving a telephone the ability to make priority calls

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [⊙] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show] twice.
5. Press [Next] nine times. The display shows `Priority call:`.
6. Press CHANGE to choose `Y` (Yes) or `N` (No)

Displays

`Call blocked`	You tried to place a priority call to another Norstar telephone. The person you called has blocked your call. Try to call later.
`Please wait`	The party you are calling has eight seconds to decide whether to accept or reject your priority call.
`Priority denied`	The telephone you are calling has already received a priority call or is unable to receive priority calls.

You can make a priority call only while your telephone displays:

`221 busy` `PRIORITY LATER`	The set you are trying to call has call on all assigned lines.
`Calling 221` `PRIORITY LATER`	

Do not disturb PRIORITY LATER	The set you are trying to call has the Do Not Disturb feature activated.
On another call PRIORITY LATER	The set you are trying to call is busy because the person is on another line.

Using Ring Again

Use Ring Again when you call someone on your Norstar system and their telephone is busy or there is no answer. Ring Again can tell you when they hang up or next use their telephone. You can use Ring Again to tell you when a busy line pool becomes available.

Tip - The Ring Again feature cannot be used when calling a Hunt Group DN. For more information on Hunt Groups see *Programming Hunt Groups* on page 147

Turning on Ring Again

1. Press [feature] [2] before you hang up.

Using Ring Again cancels any previous Ring Again requests at your telephone.

Canceling Ring Again

1. Press [feature] [#] [2] to cancel a Ring Again request.

Displays

Can't ring again	You cannot use Ring Again on your current call. You can only use Ring Again while you have a busy signal on an internal call or line pool request, or while an internal call is ringing.
Ring Again? YES NO EXIT	Press YES to use Ring Again. Press NO if you prefer to send a message.

Time savers for making calls

Storing a number on a memory button for Autodial

You can program memory buttons for one-touch dialing of internal or external telephone numbers.

Buttons used for lines, answer or Handsfree/Mute cannot be used as autodial buttons.

If the power to your Norstar system is off for more than three days, autodial numbers, and some other system programming, may be lost from the memory.

Adding an autodial button

Use these features to program external and internal numbers.

1. Press [Feature] [*] [1] to program an external number.

   Press [Feature] [*] [2] to program an internal number.

2. Choose a button and then enter the number as if you were dialing it.

When programming Autodial you can use:

- Last Number Redial
- Saved Number Redial
- destination codes — choose [Intercom] as the line
- host system signalling

Choosing a line for Autodial

To include a line selection for an external number, press the line or intercom button before you enter the number. To select a line pool, press a programmed line pool button, or press the button labelled Intercom and enter a line pool access code.

If you select a line before pressing the autodial button, the call goes out on the line you have selected instead of the line that is part of the autodialer programming.

For the M7100 and T7100 sets, an external autodialer can be programmed only by using a line and not a line pool.

Tip - If you do not include a line selection in an autodial number, the call uses your prime line (if you have one).

Using intercom as the line for Autodial

If you press the button labelled Intercom as the line for an external autodial number, you must include a valid line pool access code or a destination code. If line pool access codes or destination codes are changed, remember to reprogram autodial numbers.

Displays

987... QUIT BKSP OK	Continue to enter digits until the number is complete. Press ◄ or BKSP to erase an incorrect digit. Press ☎ or OK when you are finished.
Autodial full	The memory allotted to autodial numbers in your Norstar system is full.

`Button erased`	While programming external Autodial, you erased the button by pressing [↩] or OK before entering any digits.
`Enter digits` `QUIT OK`	Enter the number you want to program. Choose the line first, if necessary, then enter the number exactly as if you were making a call.
`Intercom #: …` `QUIT`	Enter the internal telephone number you want to program.
`Invalid number`	You are programming an internal autodial button and have entered a number that is not an internal number on your system. Enter a valid internal number. If the number you are entering is a destination code, use external autodial.
`Press a button` `QUIT`	Press the memory button you want to program.
`Program and HOLD`	Enter the number you want to program onto the button, then press [↩].
`Program and OK` `QUIT OK`	Enter the number you want to program onto the button, then press [↩] or OK. You may include a line or line pool selection in an autodial sequence by selecting the line before entering any digits.
`Programmed`	The number is stored on the button.

For other displays, see *Common feature displays* on page 227.

Using Last Number Redial

Press [✆] [5] to redial the last external number you dialed.

Last Number Redial records a maximum of 24 digits.

Tip - If you have a programmed Last Number Redial button, you can use Button Inquiry ([✆] [*] [0]), then press the Last Number Redial button followed by [#]) to check the last number before you dial it.

Preventing a telephone from using Last Number Redial

Last Number Redial can be restricted at individual telephones.

You need the programming template found at the front of this guide. See *A map for working in programming* on page 22 for more information.

1. Press [✆] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show].
5. Press [Next] three times. The display shows `Restrictions`.
6. Press [Show] twice.
7. Press [Next]. The display shows `Allow last no:`.
8. Press CHANGE to choose `Y` (Yes) or `N` (No).

Displays

`Hidden number`	The last number you dialed was a speed dial number that displayed a name rather than the number. The number is dialed correctly, but you cannot see it.
`No last number`	You have not dialed an external telephone number since the last power interruption or system reset.

Tip - You can copy a number onto an autodial button using Last Number Redial.

Using Speed Dial

Norstar provides two types of speed dialing: system and personal.

- System Speed Dial programming allows you to assign two-digit speed dial codes to the external numbers your co-workers call most frequently.
- Personal or User Speed Dial programming allows individuals to program their own speed dial numbers.

Speed dial numbers are subject to the same restriction filters as regularly dialed numbers. Your installer or customer service representative can program system speed dial numbers to bypass dialing restrictions.

Speed dial numbers may include host system signaling codes.

Making a speed dial call

Tip - There is no difference between using User Speed Dial and using System Speed Dial. They differ only in how you program them.

1. Press ⏎ 0 to quickly dial external telephone numbers that have been programmed onto speed dial codes.
2. Enter the appropriate two-digit speed dial code.

Changing and adding System Speed Dials

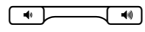
System Speed Dial codes are numbered from 01 to 70. The system coordinator assigns numbers to System Speed Dial codes for the entire system. See *Adding or changing a system speed dial* on page 29.

Adding or changing User Speed Dial

To add or change a User Speed Dial number on your telephone:

1. Press ⏎ * 4 .
2. Enter a two-digit code from 71 to 94 that you want to associate with a telephone number.
3. To include a line selection for this number, press the line or intercom button. To select a line pool, press a programmed line pool button, or press the button labelled as intercom and enter a line pool access code.
   For the M7100 and T7100 sets, you can select only a line pool.
4. Enter the number you want to program.
5. Press ⏎ or OK.

Displays

01:9… CANCL BKSP OK	Continue entering the number you want to program. You can change the number by pressing BKSP or  . When you are finished, press or OK.
Enter digits QUIT OK	Enter the telephone number you want to program exactly as if you were dialing it normally. When you are finished, press or OK.
Invalid code	You have entered a code outside the code range (01-70 for system, 71-94 for personal).
No number stored	There is no number stored on the speed dial code you have dialed.
Program and HOLD	If you want to program a line or line pool selection for this speed dial number, select the line or line pool. Otherwise, enter the telephone number exactly as if you were dialing it normally. When you are finished, press .
Program and OK QUIT OK	If you want to program a line or line pool selection for this speed dial number, select the line or line pool. Otherwise, enter the telephone number you want to program exactly as if you were dialing it normally. When you are finished, press OK.
Select a line	There is no line associated with the speed dial number you are trying to use. Select a free external line or line pool and enter the speed dial feature code again.
Unknown number	The system cannot dial the number stored. Reprogram the number.

For other displays, see *Common feature displays* on page 227.

Using Saved Number Redial

[feature] 6 7

You can use this feature while you are on an external call that you dialed to save the number so that you can call it again later.

Each telephone can save one number at a time with Saved Number Redial, not one number for each line.

Tip - You can copy a number onto an autodial button using Saved Number Redial.

Saved Number Redial records a maximum of 24 digits.

Dialing a saved number

Press [feature] 6 7 when you are not on a call.

If you have a programmed Saved Number Redial button, you can use Button Inquiry ([feature] * 0) to check the last number before you dial it.

Preventing a telephone from using Saved Number Redial

Saved Number Redial can be restricted at individual telephones.

You need the programming template found at the front of this guide. See *A map for working in programming* on page 22 for more information.

1. Press [feature] * * 2 6 6 3 4 4.
2. Press 2 3 6 4 6 (the default System Coordinator password).

3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show].
5. Press [Next] three times. The display shows `Restrictions`.
6. Press [Show] twice.
7. Press [Next] twice. The display shows `Allow saved no:`.
8. Press `CHANGE` to choose `Y` (Yes) or `N` (No).

Displays

`Hidden number`	You have saved a speed dial number that displays a name rather than the number. The number is dialed correctly, but you cannot see it.
`No number saved`	You have tried to save the number of an incoming call. You can only save numbers that you have dialed yourself.

Handling many calls at once

Using Hold

You can temporarily suspend a call by pressing [hold].

When a call is on hold, its indicator flashes on all telephones that have access to the line. The call can be retrieved from any of these telephones.

On the M7100 and T7100 sets, [hold] alternates between two lines. One line is active, the other is on hold. These sets cannot retrieve a call placed on hold by another telephone.

Tip - Answered Hunt Group calls can be placed on hold at the answering Norstar set. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Retrieving a held call

You can connect to a call on hold by pressing the flashing line button of the held call.

Holding automatically

If your line has been programmed with full autohold, you can switch from one call to another and have your calls put on hold automatically.

Press the line button of the caller you want to speak to. Your current caller is put on hold automatically.

Listening on hold

If you have been put on hold, you can hang up the receiver while you wait for the other person to return.

1. Press [↩].
2. Hang up the receiver.
3. Press the line button of the call. You may hear indications from the far end that you are on hold, for example, tones or music.
4. When the person you were talking to returns you hear them through your telephone speaker. Lift the receiver and talk.

Tip - If Automatic Handsfree has been assigned to your telephone, you can use the Handsfree/Mute feature instead of Listen on Hold.

Holding a call exclusively

You can put a call on Exclusive Hold so that it can be retrieved only at your telephone.

Press [✆] [7] [9] or [✆] [↩]. The line appears busy on all other telephones, and the call cannot be picked up by anyone else in the office.

Displays

`On hold: LINENAM`	You have placed one or more calls on hold. The name of the line that has been held the longest is displayed.

Using Call Queuing

[e] [8] [0] [1]

If you have more than one call ringing at your telephone, use this feature code to choose the call that has the highest priority.

Call Queuing answers incoming external calls before callback, camped, and transferred calls.

Transferring calls

Using the transfer feature

Transfer allows you to direct a call to a telephone in your Norstar system, within thenetwork, or external tothe network.

Transferring a call

1. Press [feature] [7] [0].
2. Call the person to whom you want to transfer the call.
3. If you want to talk to the person to whom you are transferring the call, wait for them to answer, and speak to them before proceeding.
4. When you are ready to complete the transfer, press [handset] or JOIN.

You cannot use Last Number Redial, Saved Number Redial, a speed dial code, Priority Call or Ring Again to dial the number for a transfer.

Depending on how a private network call is routed, it may not always be possible for the system to return a transferred call to you if the transferred call is not answered. When transferring a call to a private network destination, stay on the line until the person to whom you are transferring the call answers.

You cannot use the Line Pool feature code to access a line pool for a transfer. To use a line pool, use a programmed line pool button, or press the key labelled Intercom and enter a line pool access code.

If you have an auxiliary ringer programmed to ring for calls on an external line, and you transfer a call on that line without

announcing the transfer, the auxiliary ringer rings for the transferred call.

Transferring external calls

If an external call is transferred to a busy telephone, or not answered after a few rings, the call automatically rings again at the telephone from which it was transferred, and the display indicates that the telephone was busy or that no one answered.

When transferring an external call to an external number, the external call you are trying to transfer must be an incoming call on a disconnect supervised line.

While on a conference call, you can remove yourself from the conference and connect the other two callers using the Transfer feature. However, if both of the other people are from outside the system, at least one of the outside callers must have called you and both of the outside calls must be on disconnect supervision lines.

Note: Transfer via Hold on DID lines is not supported. Once a call is answered the line appearances on all other sets are free immediately to take other calls. This allows a greater number of calls to be received. Use the Call Park feature to transfer a call.

In certain situations, you may experience lower volume levels when transferring an external call to an external person, or when transferring two external callers from a conference call.

Canceling a transfer

You can reconnect to the person you are trying to transfer at any time before the transfer is complete.

1. Press [transfer] [#] [7] [0] or CANCL.
2. If you are not reconnected to your original call, press [transfer] and then press the line key of the original call, which is now on hold.

Displays

221>222 CANCL RETRY JOIN	You are talking to the person you want to transfer the call to. Press RETRY if you decide to transfer the call to someone else. Press [transfer] or JOIN to transfer the call.
221 no reply CALLBACK	The person to whom you tried to transfer a call did not answer. Press CALLBACK or the flashing line button to reconnect to the call. On the 7100 sets, lift the receiver.
Do not disturb CANCL RETRY JOIN	The person to whom you tried to transfer a call has Do Not Disturb active on their telephone. Press JOIN to transfer the call anyway. Press RETRY to transfer the call to someone else. Press CANCL or the flashing line button to reconnect to the call (on the M7100 or T7100 sets, press [transfer] [#] [7] [0]).
Invalid number CANCL RETRY	You entered an invalid internal number. Press RETRY and enter the number again.
Line001 hung up	The external caller you were transferring hung up before the transfer was complete.
Line001>221 CANCL RETRY JOIN	Press JOIN to transfer the call on line 001 to telephone 221. Press RETRY if, after talking to the person at extension 221, you decide to transfer the call to someone else.
Not in service CANCL RETRY	The telephone to which you are trying to transfer a call is out of service.

`Restricted call` `CANCL RETRY`	You cannot transfer the call because of telephone or line restrictions.
`Still in trnsfer` `CANCL RETRY`	Complete the transfer in progress before you access a new feature, answer another alerting call, or select an outgoing line.
`Transfer denied` `CANCL RETRY`	Your transfer cannot be completed for one of these reasons: • All the resources needed to perform a transfer are in use. Try again later. • You have tried to transfer an external call to another external party. Some restrictions apply. • You cannot transfer a conference call.
`Transfer to:2...` `CANCL RETRY`	Press RETRY if you entered the wrong internal number or if the person to whom you are transferring the call is unavailable.

For other displays, see *Common feature displays* on page 227.

Using Camp-on

You can transfer an external call to another telephone within the system, even if all of its lines are busy.

1. Press [c] [8] [2].
2. Dial the number of the telephone you want to camp the call to.

Camped calls appear on a line button on the receiving telephone, if one is available. If there is no line button available, you receive a message on the display and hear camp tones.

Each set can handle only one camped call at a time.

Note: Meridian systems networked to MICS systems through an SL-1 MCDN protocol trunk cannot use camp-on or break-in codes from the Meridian to the MICS system.

Displays

221 Camp max CALLBACK	You tried to camp a call to a telephone that already has a camped call. The call has come back to you. Press the CALLBACK button or the line button to reconnect to the call. On the M7100 or the T7100 set, just pick up the receiver.
221 DND CALLBACK	The person to whom you redirected a call has Do Not Disturb active on the telephone. The call has come back to you. Press the CALLBACK button or the line button to reconnect to the call. On the M7100 telephone, just pick up the receiver.
Camp denied	You have tried to camp an internal call. You can only camp external calls.
Camp to: CANCL	Dial the number of the internal telephone to which the call is sent.
Camped: 221 CALLBACK	The telephone to which you camped a call did not answer the call. The call has come back to you. Press CALLBACK or the line button to reconnect to the call. On the M7100 or T7100 sets, just pick up the receiver.
Line 001 hung up	A call you camped has come back to you, but the caller hung up before you could reconnect.
Not in service CALLBACK	The telephone to which you have camped a call is out of service or is being used for programming. The call has come back to you. Press CALLBACK or the line button to reconnect to the call. On the M7100 or T7100 sets, just pick up the receiver.
Release a call	The line that the camped call is on is in use or that line does not appear at your telephone. Release the line or release an internal line.

For other displays, see *Common feature displays* on page 227.

Parking a call

You can suspend a call so that it can be retrieved from any telephone in your system.

1. Press [feature] 7 4 .
2. Use the Page feature ([feature] 6 0) or press PAGE to announce the retrieval code displayed by your telephone.

Retrieving a parked call

1. Select an internal line.

   On an M7100 or a T7100 set, pick up the receiver.

2. Dial the Call Park retrieval code.

Using Call Park

When you park a call, the system assigns one of 25 codes for the retrieval of the call. These codes consist of the Call Park prefix, which may be any digit from 1 to 9, and a two-digit call number between 01 and 25. For example, if the Call Park prefix is 1, the first parked call is assigned Call Park retrieval code 101.

The Norstar system assigns Call Park codes in sequence, from the lowest to the highest, until all the codes are used. This round-robin approach means that a greater variety of codes are used, which makes it easier for a call to reach the right person when more than one incoming call is parked.

The highest call number, which is made up of theCall Park prefix followed by 25, is used only by analog telephones or devices connected to the system using an analog terminal adapter (ATA) or an Analog Station Module (ASM). Analog telephones or devices cannot use the other Call Park codes.

Your installer or customer service representative programs both the Call Park prefix and the delay before parked calls are returned to the originating telephone. External calls parked for longer than the programmed delay are returned to your telephone.

Tip - Answered Hunt Group calls are parked in the same manner as other calls. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Call Park can be disabled by your installer or customer service representative.

Displays

`Already parked`	The person you were talking to has already parked your call. You cannot park the same call.
`No call to park`	You have attempted to use Call Park with no active call on your telephone. If the call you want to park is on hold, reconnect to it before you park it.
`Invalid number`	You have entered an invalid retrieval code.
`No call on: 101`	There was no call on the retrieval code you entered.
`Park denied`	You have tried to park a conference call. Split the conference and park the calls separately. The person who retrieves the calls can reconnect the conference.
`Parked on: 402` `PAGE EXIT`	Record the code shown. Use Page ([ ] [6] [0]) or press PAGE to announce the call and its retrieval code.
`Parking full`	All available retrieval codes are in use. Transfer the call or take a message instead.

For other displays, see *Common feature displays* on page 227.

Using Callback

When you direct a call you have answered to another telephone, the system monitors the call to make sure it is answered. If no one answers the call within a set length of time, the system directs it back to you.

Callback generates a variety of displays. Most occur after a set delay and are listed in the index. Some occur immediately if the telephone to which you are directing a call is out of service or otherwise unavailable. These are listed with the descriptions of the specific features such as Transfer or Camp-on.

Forwarding your calls

Forwarding your calls to another Norstar telephone

Use this feature to forward your calls within your system or network.

1. Press [✆] [4].
2. Enter the number of the internal telephone to which you want your calls forwarded.

Use Line Redirection to forward calls outside the system. Line redirection takes precedence over Call Forward.

Canceling Call Forward

1. Press [✆] [#] [4].

Using Call Forward at your telephone

When you use [✆] [4], all calls go to the destination you select, regardless of how Forward on busy and Forward no answer are programmed.

Tip - If your Norstar set is a member of a Hunt Group, the Call Forward all calls setting is overridden by the Hunt Group routing for Hunt Group calls. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

If the telephone to which you forwarded your calls does not have the same external lines as your telephone, the forwarded calls appear on intercom buttons.

If a call is forwarded, it does not ring but the line indicator flashes on your telephone. You can answer the call by pressing the button next to the flashing indicator.

Tip - Beware of creating call-forward loops

f you are one of a group of people who regularly forward their calls to one another, be aware that it is possible to set up forward loops where a call is forwarded from one telephone to another in a circle, and is never answered anywhere.

Overriding Call Forward

If you call someone who has their calls forwarded to you, your call rings at that set telephone even though they are forwarding their calls to you.

Changing the automatic Call Forward settings for a telephone

Call forwarding occurs automatically when a call is not answered or the line is busy. These automatic options are changed in programming.

For step-by-step instructions, see *Change where a call goes when there is no answer* on page 34.

Changing Forward no answer

Forward no answer redirects unanswered calls to another telephone on your Norstar system.

Tip - If the set is a member of a Hunt Group, the Call Forward no answer feature is overridden and the Hunt Group call continues to ring until the hunt time has expired. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Line Redirection takes precedence over Forward no answer.

For instructions for changing Forward no answer refer to *Change where a call goes when there is no answer*on page 34.

Changing the delay before a call is forwarded

You can assign the number of times that the incoming call rings at your telephone before the call is forwarded. To estimate the delay time in seconds, multiply the number of rings by six.

For step-by-step instructions, see *Change the number of times the telephone rings before it is forwarded* on page 35.

Forward on busy

Forward on busy redirects your calls to another telephone on your Norstar system when you are busy on a call, or when you have Do Not Disturb activated at your telephone. For step-by-step instructions, see *Making changes to Call Forward No Answer* on page 34.

Line Redirection takes precedence over Forward on busy. Calls that are redirected by Line Redirection are not affected by any Call Forward features or Call Forward programming.

Telephones that have Forward on busy active can receive priority calls. If you are busy on a target line call, another call to that target line is redirected to the prime telephone for that target line.

Tip - If the set is a member of a Hunt Group, the Call Forward on busy feature is overridden and the Hunt Group call continues to ring until the hunt time has expired. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

DND on Busy

When you are busy on a call and a second call comes in, your telephone rings softly to alert you to the second call. If you find this second ring distracting, you can have the system prevent a second call from disturbing you by assigning Do Not Disturb (DND) on Busy to your extension.

When DND on Busy is turned on for the set, internal and private network callers hear a busy tone instead of ringing when you are on the telephone. External callers are transferred to the prime set used in your system. For step-by-step instructions, see *Making Changes to Do Not Disturb on Busy* on page 37.

If you use DND on Busy, the line indicator for an external incoming call flashes, but your telephone does not ring.

Forward on busy takes priority over DND on Busy.

If an external call uses a target line, the call is processed according to the programming of the target line. If the target line is busy, the caller may hear a busy tone or be routed to the prime set for the target line regardless of the DND on Busy programming for the telephone.

Tip - If a set is a member of a Hunt Group and the set activates this feature, the set does not receive notification of incoming Hunt Group calls while on a call. The DND on busy feature overrides the Hunt Group. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Call Forward and Voice Mail

If you want a voice mail system to pick up unanswered calls automatically, do either of the following:

- use the internal number of your voice mail as the destination when you program Forward no Answer and Forward on busy
- make the ring delay greater than the delay used by your voice mail system, if your voice messaging system or service automatically retrieves calls

Displays

`Forward denied`	There are several reasons why you may get this message. For instance, you cannot forward your calls to a telephone that has been forwarded to your telephone.
`Forward>221` `CANCL`	Your calls are being forwarded to telephone 221.
`Not in service`	Two or more telephones are linked in a forwarding chain, and one of them is out of service or is being used for programming.

For other displays, see *Common feature displays* on page 227.

Line Redirection

Line Redirection allows you to send your external calls to a telephone outside the office. You may choose to redirect all your external lines or only some of them.

Line Redirection takes precedence over the Call Forward feature. If both features are active on a set, incoming external calls on redirected lines are routed to the specified Selective Line Redirection (SLR) external destination. Incoming internal calls are forwarded to the specified Call Forward destination.

You cannot use the Line Redirection feature on an M7100 or a T7100 set, or on a telephone connected to an ATA.

Turning on Line Redirection

Follow these steps to turn on Line Redirection on your set:

1. Press [feature] [8] [4].
2. Select the outgoing line to be used for redirected calls.
3. Enter the number to which calls are redirected.

   Refer to the list below for suggestions.
4. Select the lines to be redirected.

In step 3, you can enter the telephone number to which you want to redirect calls, using one of the following methods:

- Press an external autodial button.
- Enter an external telephone number (using no more than 24 digits) then press [ ] or OK.
- Press [ ] or OK if the line you have chosen as the outgoing line is a private network line that does not require you to dial digits.

If you use ALL to redirect all your lines, it is important that you wait until all the lines on your telephone light up before pressing [ ] or OK. If you press [ ] or OK before all the lines light up, those lines not lit are not redirected.

Tip - The line chosen for redirecting calls on other lines can be used normally when it is not busy on a redirected call. To avoid redirection failing because the chosen line is in use, choose a line pool with several lines in it.

Tip - The system does not check that the number you give for line redirection is a valid one. If you redirect to an invalid number, redirection fails. Using an autodial button to enter the redirection number helps avoid this possibility. An autodial button used for line redirection must be programmed to use a specific line.

Canceling Line Redirection

When you are ready to resume service, use this procedure to cancel line redirection.

1. Press [Feature] [#] [8] [4].
2. Select the lines you no longer want to be redirected.

Allowing a telephone to redirect calls

You can use programming to determine if a set can use the redirect calls feature and turn it on or off.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [Feature] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show] twice.
5. Press [Back] four times. The display reads `Allow redirect:`.
6. Press CHANGE to select `Y` (Yes) or `N` (No).

Turning the redirect ring for a telephone on or off

You can program a telephone to ring briefly (200 milliseconds) when a call is redirected to one of the lines assigned to it.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [Feature] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show] twice.
5. Press [Back] three times. The display reads `Redirect ring:`.
6. Press CHANGE to select `Y` (Yes) or `N` (No).

Tip - If a telephone has redirect ring enabled, it rings briefly for redirected calls on one of its lines even if another telephone set up the line redirection.

Displays while redirecting lines

`Intercom`	You selected the intercom button as the facility to place the call on. Enter a line pool code or a destination code.
`Line Redirection` `QUIT ADD REMOVE`	Press [*] or ADD to begin redirection. Press [#] or REMOVE to cancel a previous redirection.

No line to use	You have one external line on your set, but you need a second line to perform line redirection. Redirect your external line using a line pool as the outgoing line.
Outgoing line	You are attempting to redirect a line and the line you have chosen is the outgoing line you have selected as a destination. You cannot redirect a line to itself. Select another line.
Pool code: ... QUIT	Enter a valid line pool access code.
Redir by 221 OVERRIDE	You have attempted to redirect a line, but someone else has already redirected that line. Press * or OVERRIDE to override the previous redirection and redirect the line as you want.
Redirect denied	You can redirect calls only on individual lines.
Select line out QUIT	Select the line that is used to redirect calls out of the system.
Select line(s) QUIT ALL	Press the lines to be redirected. To undo a line selection, press it again. Press ALL to redirect all your lines.
Select line(s) ALL OK	Continue to press the lines to be redirected. Press ⌣ or OK when you are finished.
Unequipped line	The line you are attempting to redirect cannot be redirected because the hardware does not support redirection.

Displays while canceling redirection

Select line(s) QUIT ALL	Press the lines that are no longer to be redirected. The lines light up as you press them. Once you cancel redirection for a line you cannot restore it by pressing the line again. Press ALL to cancel redirection for all your lines. When you are finished, press ⌣ or OK.

Select line(s) ALL OK	Continue to press the lines that are no longer to be redirected. Press [↩] or OK when you are finished.

For other displays, see *Common feature displays* on page 227.

How Line Redirection is different from Call Forward

Call Forward forwards all calls that arrive at a particular telephone to another telephone within the Norstar system. Line Redirection redirects only the lines you specify, no matter which telephones they appear on, to a telephone outside the Norstar system. Line Redirection takes precedence over Call Forward.

Using Line Redirection

You redirect lines at a telephone, but once redirected, the lines are redirected for the entire system.

You can redirect only lines that appear at line buttons on your telephone.

You can answer the telephone if it rings while you are in the middle of programming Line Redirection, but none of the Norstar call handling features are available until the feature times out. If you need to use a Norstar feature to process the call, quit Line Redirection programming by pressing [e]. Do not press [☎] or you disconnect the call you are trying to process.

While you are programming Line Redirection you do not receive any indication of calls that do not actually ring at your telephone.

Be careful to avoid redirection loops. If for example, you redirect your lines to your branch office and your branch office

redirects its lines to you, you can create a redirection loop. If these calls are long distance, you end up paying charges.

In certain situations, callers may experience lower volume levels when you redirect calls to an external location.

Communicating in the office

Paging

Paging allows you to make announcements over the Norstar system using the telephone speakers, or your loudspeaker system, if one is available.

Making a page announcement

1. Press [feature] [6] [0].
2. Choose a page type. Page types are:
   - [1] through the telephone speakers (internal page)
   - [2] through an external speaker (external page)
   - [3] both internal and external (combined page)
3. If necessary, choose a zone.
4. Make your announcement.
5. Press [drop].

Tip - Instead of entering the Page feature code followed by the page type, you can enter the following shortcut codes.

Page zone 0 is all zones.

Internal	[feature] [6] [1] and zone (0 to 6)
External	[feature] [6] [2] (code 2 has no zones)
Combined	[feature] [6] [3] and zone (0 to 6)

Activating and deactivating the ability to page

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [Feature] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show] twice.
5. Press [Next] seven times. The display reads `Paging`.
6. Press `CHANGE` to select the setting: `Y` (Yes) or `N` (No).

Creating page zones

Each telephone can be assigned to one of six zones for receiving pages.

Tip - Hunt Group DNs cannot be included in a page zone. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

You need the programming template. See *Getting started with Norstar* on page 13 for more information.

1. Press [Feature] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.

4. Press [Show] twice.
5. Press [Next] six times. The display reads `Page Zone`.
6. Press CHANGE to select the setting: `1`, `2`, `3`, `4`, `5`, `6` or `None`.

You can make a telephone part of a page zone only if the telephone has paging set to `Y` (Yes).

A zone is any set of Norstar telephones that you want to group together for paging, regardless of their location. The maximum number of sets in a page zone is 50.

Your installer programs whether a tone sounds before a page begins, and the maximum number of seconds a page can last before it is automatically turned off.

Tip - Make sure that everyone who needs to make page announcements has a list showing which telephones are in which page zones. Enter this information into your Modular ICS 5.0 Programming Record.

Displays

`Enter zone:...` `ALL`	Enter the desired page zone number (0- 6) or press ALL.
`Invalid zone`	You have entered a page zone code that is not between 0 and 6.
`Page choice:` `SETS SPKR BOTH`	Select the type of page you want. See the list in *Making a page announcement* on page 104.
`Page timeout`	The time allotted for paging has expired.
`Paging ALL`	You are making a page. The display shows the page zone you have chosen. Press [✆] or [☎] when you are finished.

Paging busy	A page is already being made in the page zone you have requested.

For other displays, see *Common feature displays* on page 227.

Tip - You can make an announcement to one person by placing a voice call to their telephone.

Using Page with external paging equipment

When you make a page that uses external paging equipment—external page or combined page—the Long Tones feature is automatically activated for the external paging system only. This allows you to control optional equipment with the Long Tones feature.

Sending messages

The Messages feature allows you to leave a message on the display of another digital set or to analog telephones connected to an Analog Station Module (ASM). The Messages feature indicates if you have any messages waiting.

The Messages feature uses a message waiting list to keep a record of your internal messages and your external voice mail messages if you subscribe to a voice message service with visual message waiting indication.

Sending a message

You can leave a message on the display of another telephone in your Norstar system.

You can send up to four messages to different telephones, including your voice message center. If your telephone is a direct-dial telephone or a central answering position (CAP), you can send up to 30 messages.

Only the designated direct-dial telephone for an analog telephone connected to an Analog Station Module (ASM) can send messages to analog telephones by pressing [Feature] [1]. Depending on the programming setup, the analog telephone provides either a Stuttered Dial Tone or a Message Waiting Lamp to inform the user of messages pending.

If your reply to a message is forwarded or is answered at another telephone using the Call Pickup feature, the message remains on your telephone until you cancel it or successfully contact the telephone that sent the message.

For analog telephones connected to an ASM, the message waiting indicator remains on until the user invokes [Link] [#] [6] [5]. If the analog telephone has the Message Reply Enhancement feature set to Yes, the message waiting indicator is turned off automatically after the reply call is answered no matter from where the call is answered.

For more information on the Message Reply Enhancement feature, see the *Norstar Modular ICS 5.0 Installer Guide*.

1. Press [Feature] [1].
2. On a telephone with a two-line display, press ADD.
   Note: This step is not necessary on a telephone with a one-line display.

3. Enter the internal number of the person to whom you want to send the message. The person's display reads `Message for you`.
4. On analog telephones connected to an Analog Station Module (ASM), the message waiting indicator is activated.

Canceling a message you have sent

1. Press [✆] [#] [1]. The display reads `Cancel for:`.
2. Enter the internal number of the person to whom you sent the message.

Viewing your messages

You can receive up to four messages from different telephones, including your voice message center. A single message from your voice message center may pertain to several voice messages.

On a telephone with a one-line display

1. Press [✆] [6] [5]. The display shows the first message.
2. Press [*] or [#] to move through your messages.

On a telephone with a two-line display

1. Press MSG. The display shows your first message.
2. Press NEXT to move through your messages.

Replying to a message

You can call the person who sent a message or your voice message center while you are viewing the message.

On a telephone with a one-line display

Press [0].

On a telephone with a two-line display

Press CALL.

If you want to call your voice message center using a line other than the programmed line, exit your message list and dial the voice message center telephone number using normal dialing methods.

Replying to a message using an analog telephone connected to an ASM

On an analog telephone connected to an Analog Station Module

Press Link * 6 5. The system automatically retrieves and connects the user to the oldest message sender. (The message can originate from either the designated direct-dial telephone or the internal voice mail system.)

If the analog telephone has the Message Reply Enhancement feature set to Yes, and the sender is the designated direct-dial telephone, the message waiting indicator is turned off automatically after the reply call is answered, no matter from where the call is answered.

For analog telephones connected to an ASM, using the Message Waiting Reply feature (Link * 6 5), retrieves only internal messages sent to the user.

Analog telephones connected to an ASM cannot retrieve external messages by using the Message Waiting Reply feature (Link * 6 5). For external messages, users must call back the external voice mail center to retrieve their

messages. When doing so, the message waiting indicator on the analog telephone is turned off automatically.

Tip - If there is no voice mail system installed, only the designated direct-dial telephone can send messages to an analog telephone connected to an Analog Station Module (ASM) using [✆] [1]. The analog telephone can in turn invoke a single digit access code to reach the designated direct-dial telephone and retrieve messages.

If the designated direct-dial telephone of an analog telephone connected to an Analog Station Module (ASM) is changed, messages sent by the previous designated direct-dial telephone are kept in the incoming message list of the analog telephone until they are retrieved.

Removing items from your message list

You can erase a message while you are viewing it in your message list. If the message is from your voice message center, this only erases the message notification at your telephone. You need to erase the voice message at your voice message center. Refer to your voice message center documentation.

On a telephone with a one-line display

Press [⌣].

On a telephone with a two-line display

Press ERASE.

Removing items from your message list using an analog telephone connected to an ASM

To remove both internal and external messages on an analog telephone connected to an Analog Station Module

Press [Link] [#] [6] [5] to invoke the Cancel Message Waiting feature.

On analog telephones connected to an ASM, the Cancel Message Waiting feature cancels the oldest message received. The system no longer provides either a Stuttered Dial Tone or a Message Waiting Lamp if there are no messages pending.

Viewing messages you have sent

On a telephone with a two-line display, you can view the messages you have sent.

1. Press [feature] [1].
2. Press SHOW to display your first sent message.
3. Press NEXT to move through your sent messages.

Displays

`Cancel denied`	You have entered an invalid number when attempting to cancel a message.
`Cleared>LINENAM` `NEXT`	You have cleared an external message from your message waiting list. The message itself exists in your voice message center until you erase it there.
`In use: 221`	You are trying to call from your message waiting list. The line that you are trying to use is being used by the identified Norstar user.
`L001:LINENAMVMsg` `NEXT CALL CLEAR`	You are viewing your message list. The display shows the number and name of the line that was used for your voice mail message.
`Message denied`	You have tried to send a message to an invalid internal number or to a telephone that is out of service.
`Message list` `SHOW ADD EXIT`	SHOW appears only if you have outstanding messages. Press SHOW to review messages you have sent. Press ADD to send a new message.

`Message to:`	Enter the internal number of the telephone to which you want to send a message.
`Messages & Calls` `MSG CALLS`	You have one or more messages and one or more new Call Logs. Press [✆] [8] [0] [6] to change the first line of the display to the current time and date.
`No button free`	You have no line button free with which to reply to a message.
`No number stored`	There has been no number programmed for the voice message center. Contact your voice messaging service provider.
`Start of list` `NEXT`	You are at the beginning of your list of messages. Press NEXT to move through your messages.
`Their list full`	You are trying to send a message to a user whose message waiting list is full.
`Your list full`	You have tried to send a message but list of sent messages on your set is full. Cancel one of the messages you have sent, if possible, or wait until you have received a reply to one of those messages.

For other displays, see *Common feature displays* on page 227.

Using Voice Call

[✆] [6] [6]

Use this feature to make an announcement or begin a conversation through the speaker of another telephone in the system.

Tip - Hunt Groups cannot accept voice calls. Answer buttons have no appearances for voice calls, and the set does not ring for voice calls. For more information on Hunt Groups see *Programming Hunt Groups* on page 147. For more information on Answer buttons see *Answer buttons* on page 51.

Muting Voice Call tones

When a voice call begins at your telephone, you hear a beep every 15 seconds as a reminder that the microphone is on.

To stop it from beeping, pick up the receiver or press [mute].

Answering a Voice Call without touching your telephone

If Handsfree Answerback is assigned to your telephone, you can respond to a voice call without touching the telephone.

Handsfree Answerback is not available to the M7100 or the T7100 sets.

When someone makes a voice call to you, simply start talking. Your telephone's microphone picks up your voice.

Once you have answered a voice call, you can put it on hold, transfer it, or otherwise treat it as a normal call.

Preventing Voice Calls to your telephone using Voice Call Deny

[feature] 8 8

Use this feature to prevent voice calls to your set. The result is that Voice calls ring like regular internal calls. Your other calls proceed normally.

Canceling Voice Call Deny

Press [feature] # 8 8.

Displays

Dial voice call	Dial the internal number or press the internal autodial button of the person to whom you want to speak.
Microphone muted	Your handsfree microphone is muted. Press or pickup your receiver to respond to the voice call.
No voice call	The telephone receiving the call cannot accept voice calls for one of the following reasons: it is active or ringing with another call; Call Forward is turned on; Do Not Disturb is turned on; Voice Call Deny is turned on; it is not a Norstar telephone. Your call proceeds automatically as a regular ringing call.
Voice call	The line is open for you to speak.

Tracking your incoming calls

Using Call Log

Telephones can automaticallylog Call Display information for calls on an external line. The line must appear on that telephone but it does not have to be a ringing line.

If your system is equipped with the appropriate equipment and you have subscribed to the call information feature supplied by your service provider, you are able to capture information about incoming callers in your call log. The same feature is supplied by an ISDN service package that comes with calling line identification (CLID).

Call Log creates a record of incoming external calls. For each call the log can contain:

- sequence number in the Call Log
- name and number of the caller
- indication if the call was long distance
- indication if the call was answered, and identify who answered it
- time and date of the call
- number of repeated calls from the same source
- name of the line that the call came in on

Call Log can help you to

- keep track of abandoned or unanswered calls
- track patterns for your callers, for example, volume of calls and geographical location of calls

- record caller information quickly and accurately
- build a personal telephone directory from log items

The long distance indicator and the name and number of the call may not be shown in the log. This information depends on the Call Display services provided by your local telephone company and the local telephone company of the caller.

To use the features on the following pages, your telephone must be have spaces available in its Call log. Your installer or customer service representative programs each telephone with an appropriate number of spaces.

Call Log options

With this feature, you can select the type of calls to be stored in your Call Log. Choose from four Autolog options: `No one answered`, `Unanswerd by me`, `Log all calls`, `No autologging`.

1. Press [✆] [*] [8] [4]. The display shows the current option.
2. Press [#] or NEXT to change the option.
3. Press [✆] or OK to select the display option.

Logging a call manually

[✆] [8] [1] [3]

If your calls are not automatically logged, you can manually log call information when you are connected to an external call. Storing information for your current call can be helpful in many situations.

For example, you may want to

- record caller information without using paper and pencil
- record only selected calls of your choice, rather than relying on the automatic Call Log
- quickly record caller information before a caller hangs up

Enabling and disabling autobumping

Your log has a set number of items that it can hold. When it becomes full, new calls cannot be logged. When your log is full, Autobumping automatically deletes the oldest Call Log item when a new call is logged.

Press [feature] 8 1 5 to enable autobumping.

Press [feature] # 8 1 5 to disable autobumping.

Viewing your Call Log

To view your log:

1. Press [feature] 8 1 2. The display shows the number or previously read items (old) and the number of new, unread items (new) in the log.
2. Press * or OLD to view old items; press # or NEW to view new items.
3. Press 0 or RESUME to display the last item you viewed, the last time you viewed your Call Log.

Names and numbers for external callers are displayed only if you have subscribed to Call Display services from your local telephone company.

Viewing a Call Log item

Press [volume] or MORE to view the information for a call log item.

Erasing log items

You should routinely erase log items to make space for new items in your log.

1. Display the item you want to erase.
2. Press [ ] or ERASE.
3. Press [ ] to exit.

If you accidentally erase an item, you can retrieve it.

1. Press [ ] or UNDO immediately after accidentally erasing an item.
2. Press [ ] to exit.

Making a call using Call Log

You may find it helpful to place calls from within your Call Log. The number stored for each call may vary depending on the type of call. For example, if the call was placed from a Centrex or PBX system, the first few numbers may need to be trimmed before you can make the call. If the number you want to call is long distance, or if you want to use a line pool, you may need to add numbers.

To place a call:

1. Display the log item for the call you want to place.
2. Display the associated telephone number.
3. Press [volume] or TRIM, once for every digit that you want to remove.

4. Dial any extra digits required.
5. Press an external line or line pool button.
6. Lift the receiver. (This is not necessary if Handsfree is programmed at your telephone.) The displayed number is dialed.

Creating a password to your Call Log

To access your Call Log through a password:

1. Press [c] [*] [8] [5]. The displays reads `Newpas swrd:`.
2. Enter your four-digit password. The display reads `Repeat New:`.
3. Re-enter your four-digit password. The display reads `Password changed`, which confirms that your password has been assigned.

To enter Call Log using your password:

1. Press [c] [8] [1] [2] to enter Call Log. If you have programmed a password, the display reads `Password:`.
2. Enter your four-digit password.

If you forget your Call Log password, it can be deleted in programming. See *Using passwords* on page 196.

Changing your Call Log password

Use this procedure when you want to change the Call Log password for your set.

1. Press [c] [*] [8] [5]. The display reads `Old passwrd:`.
2. Enter your old password. The display reads `New passwrd:`.

3. Enter your new four-digit password. The display reads `Repeat New:`.
4. Re-enter your password. The display reads `Password changed`, which confirms that your password has been changed.

Deleting an assigned password

Use this procedure when you want to delete an assigned password.

1. Press [✆] [*] [8] [5]. The display reads `Old passwrd:`.
2. Enter your old password. The display reads `New passwrd:`.
3. Press [⌣] or `OK`. The display reads `No pswd assigned`, which confirms that your password has been deleted.

Programming a telephone to log calls automatically

Your installer or customer service representative can program each telephone to automatically log calls coming in on a line.

Displays

`1:Unknown name`	The caller's name is unavailable.
`1:Unknown number`	The caller's number is unavailable.
`12:KATE SMITH` `NEXT ERASE MORE`	_ indicates a new item.
`12)KATE SMITH` `NEXT ERASE MORE`	) indicates that the call was answered.
`12$KATE SMITH` `NEXT ERASE MORE`	$ indicates a long distance call.

49/1234567890123 NEXT ERASE MORE	/ indicates that the stored number has been shortened to its final 11 digits. Press ◄ ► or MORE to display additional information about the call.
Call(s) bumped	One or more log entries have been deleted by the Autobumping feature while you are looking at the Call Log.
Hold or release	Hold or release your active call before entering Call Log.
In use: SETNAME	The external line is in use.
Jan 4 9:00a 3X NEXT ERASE MORE	The repeat call counter, shown along with time and date, indicates the number of calls you received from the same caller.
Line001)227 NEXT ERASE MORE	This call was answered at another telephone (227).
Line001)Logit NEXT ERASE MORE	This call was logged manually.
Line001 NEXT ERASE MORE	This call was not answered.
Messages & Calls MSG CALLS	There are one or more items in your message waiting list, and there are one or more new items in your Call Log. Press ✆ 8 0 6 to change the first line of the display to the current time and date.
New calls begin	You have viewed your last old log item and now view your new log items.
No info to log	No information is available for the call.
No log assigned	No log space has been assigned to the telephone.
No resume item	The resume item has been removed because of Autobumping, repeat call update, or log reallocation while you are looking at the Call Log.

For other displays, see *Common feature displays* on page 227.

Using external Voice mail

If you subscribe to a voice message service outside your office, you can access that service through your Norstar system. Your installer or customer service representative programs your Norstar telephone to indicate when you have a voice message waiting on a particular line.

To find out if your external voice message service works with Norstar, or if you have any problems with your service, contact your voice message service provider.

Customizing your telephone

Finding out what a button does using Button Inquiry

[ ] [*] [0]

You can use this feature to check the function of any line, intercom, or programmed button on your telephone.

On the M7100 and the T7100 sets, Button Inquiry shows your internal number followed by the function assigned to your single memory button.

Displays

001 <LINENAME> SHOW OK	The display shows the number and name of the line. Press SHOW to view the redirection status of the line.
123456789012345... VIEW→ OK	Press # or press VIEW→ or ←VIEW to view a number that is too long to fit on the display. Press [ ] or OK when you are done.
221 <SETNAME> NEXT VIEW→	The display shows the directory number of the telephone, and the assigned name. Press NEXT to see the first line assigned to ring at the intercom button.
<Feature name> SHOW OK	The name of the feature assigned to a button is displayed when you press the button. Press # or SHOW for additional information.
Press a button EXIT	Press the button you want to check. Press [ ] or EXIT when you are finished.

For other displays, see *Common feature displays* on page 227.

Changing the set display contrast

Use this feature to adjust the contrast on your set.

1. Press [✆] [*] [7].
2. Press a number on thedialpad to choose thecontrast level you prefer.

On a two-line telephone, you can use the UP and DOWN display buttons to adjust the contrast. The number of contrast levels available varies from one telephone model to another.

Changing the language on the display

You can select the language used on the display of eachset. The languages supported depends on which Profile was installed on your system at Startup.

English is the default first language.

Refer to the *Modular ICS 5.0 Installer Manual* for a list of languages supported by each profile. Check the programming guide to determine which Profile was assigned to your system.

You can program [✆] [*] [5] [0] [1], the first language code, on to a memory button. If you want subsequent languages to display, you can keep pressing the button until the language code you want appears on the display.

You cannot program [✆] [*] [5] [0] [2] or [✆] [*] [5] [0] [3] onto a memory button.

Programming a feature code onto a memory button

You can program a feature code onto a memory button. In some cases, pressing the button a second time cancels the feature.

Programming feature buttons

Any memory button not programmed as an external or internal line, target line, Answer button, or Handsfree/Mute button, is available for features.

1. Press [Feature] [*] [3].
2. Press the memory button you want to program with a feature.
3. Enter the appropriate feature code you want to assign onto the button.

The following feature codes cannot be programmed onto a memory button: Long Tones and any code beginning with [*] except [Feature] [*] [5] [0] [1] (Language Choice) and [Feature] [*] [7] (Contrast Adjustment).

Tip - When you program a button with the line pool feature code, you must enter a line pool access code after the feature code. The programmed line pool button accesses a specific line pool, not the line pool feature.

Erasing a feature button

1. Press [Feature] [*] [1].
2. Press the feature button.
3. Press [Drop] or OK to erase the button.

Displays

<Feature name> SHOW OK	The name of the feature assigned to a button is displayed when you press the button. SHOW appears when there is more information available. Press # or SHOW for additional information.
Enter code:	If you are checking a speed dial button, enter the two-digit speed dial code that you want to check.
F_ QUIT CLEAR	Enter the feature code, or press ☎ or QUIT to quit programming or CLEAR to clear the numbers you have entered. The system accepts the entry as soon as you enter a valid feature code.
Feature code: QUIT	Press ✆ and enter the feature code you want to assign to the button. You cannot enter invalid codes.
Feature moved	You have programmed a button with a feature that was already programmed onto another button. The feature has moved to the button you just programmed. Its original button is now blank.
Press a button EXIT	Press the button you want to check. Press ✆ or EXIT when you are finished.
Program and HOLD	Enter the number you want to program and press ⌣. To erase the button, just press ⌣.
Program and OK QUIT OK	Enter the number you want to program and press OK. To erase the button, just press ⌣ or OK.

For other displays, see *Common feature displays* on page 227.

Labeling your set

The Business Series Terminals have label strips that come with each set. You can print the label for each button on your set and install the strip beside the buttons. The Norstar M-series sets have individual keycap labels. This section suggests the process for setting up the labelling for your set.

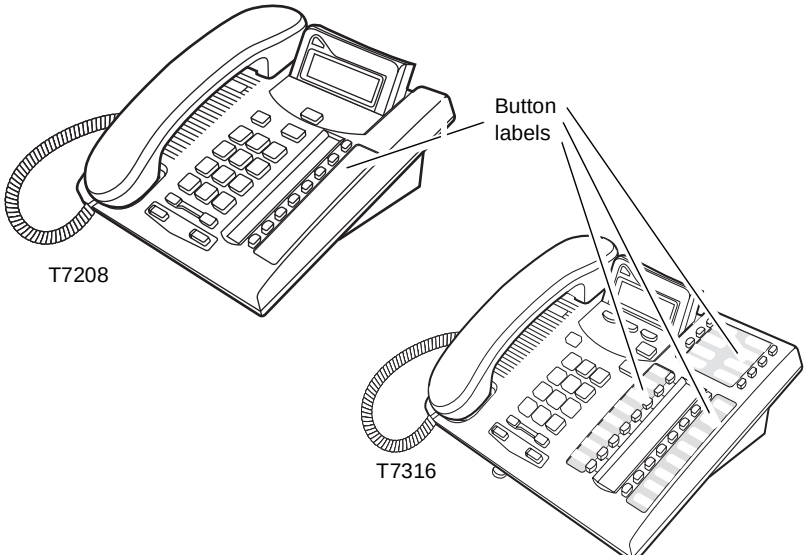
Applying button labelling

Before you apply button labels, use the Button Inquiry feature ([↩] [*] [0]) to verify the button functions, and to avoid activating features as you put the labels onto the buttons. For more information refer to *Finding out what a button does using Button Inquiry* on page 124.

Business Series Terminals

The T3100 has only one feature button. The picture below shows the location of the labels for the T7208 and T7316 sets.

Business Series Terminal button label locations



Norstar button caps

The Norstar M-series sets have two types of button caps:

- **Unlabeled, clear button caps** with appropriate green or grey paper for line numbers, telephone numbers, and features
- **Pre-printed, colored button caps** in green or grey

Some examples of pre-printed button caps

Green caps	Grey caps
Line 1	Last No.
Handsfree Mute	Speed Dial

Tips - To make identification of line types easier, use preprinted green button caps for lines that support incoming and outgoing calls. Use clear button caps for target lines that are incoming only.

Default button assignments

During Startup, the Norstar installer chooses one of the available templates. Default features are assigned automatically to the programmable buttons on installed sets. These defaults vary depending on the template you choose, and the style of telephone.

The default features are listed mapped out below.

Tips - Norstar M-series telephones are shipped from the factory with the button caps in place for the Square template.

Please consult your customer service representative to determine the type of template programmed into your system before applying button assignments.

T7316 Business Series Terminal button defaults

The default button assignments for the T7316 Business Series Terminal (BST) depend on the template applied. The exception is the default numbering for the dual memory buttons. Refer to *Using Buttons* on page 16.

Refer to the Programming Record to identify the current button programming for each set or group of sets.

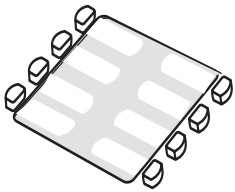
Upper level buttons

Note the button numbering for the upper buttons of this set. They are mapped to the equivalent from the M7310 Norstar set. However, since there is no second level on this set, the button numbers are not consecutive.

These examples show defaults for a system with three-digit internal numbers. The defaults do not actually exist on any telephone, as no telephone has an autodial button for itself. The position that would be taken by the autodial button for itself, is blank.

T7316 BST upper buttons

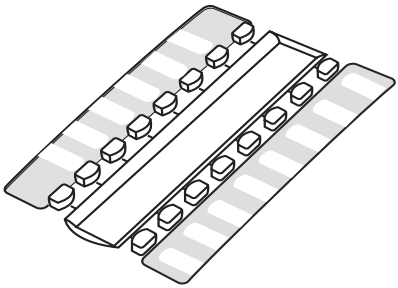
Button 23	Set 227	Button 31	Set 231
Button 25	Set 228	Button 33	Set 232
Button 27	Set 229	Button 24	Set 239
Button 29	Set 230	Button 26	Set 240



T7316 BST lower button assignments

The lower set of buttons on the T7316 are mapped in the following way:

T7316 BST lower buttons

Button #/ Function	Square template	Button #/ Function
11 Set 221		17 Set 224
13 Set 222		19 Set 225
15 Set 223		21 Set 226
01 Line 1		06 Conf/Trans
02 Line 2		07 Last No.
03 Call Fwd		08 Voice Call
04 Pick-Up		09 Intercom
05 Page		10 Intercom

PBX template				Centrex template			
11	Set 221	17	Set 224	11	Set 221	17	Set 224
13	Set 222	19	Set 225	13	Set 222	19	Set 225
15	Set 223	21	Set 226	15	Set 223	21	Set 226
01	DND	06	Conf/Trans	01	Line<xx>	06	Conf/Trans
02	Transfer	07	Last No.	02	Transfer	07	Last No.
03	Call Fwd	08	Voice Call	03	Call Fwd	08	Voice Call
04	Pick-Up	09	Intercom	04	Pick-Up	09	Intercom
05	Page	10	Intercom	05	Link	10	Intercom

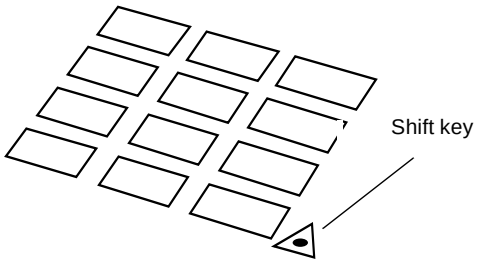
Hybrid template				DID template			
11	Set 221	17	Set 224	11	Set 221	17	Set 224
13	Set 222	19	Set 225	13	Set 222	19	Set 225
15	Set 223	21	Set 226	15	Set 223	21	Set 226
01	Line 1	06	Conf/Trans	01	Line<xx>	06	Conf/Trans
02	Line pool	07	Last No.	02	Transfer	07	Last No.
03	Call Fwd	08	Voice Call	03	Call Fwd	08	Voice Call
04	Pick-Up	09	Intercom	04	Pick-Up	09	Intercom
05	Page	10	Intercom	05	Page	10	Intercom

M7310 telephone button defaults

The default button assignments for the M7310 telephone depend on the template applied. The exception is the default numbering for the dual memory buttons. Refer to*Using Buttons* on page 16.

M7310 dual memory buttons

*12 Set 233	*20 Set 237	*28 Set 241
13 Set 221	21 Set 225	29 Set 229
*14 Set 234	*22 Set 238	*30 Set 242
15 Set 222	23 Set 226	31 Set 230
*16 Set 235	*24 Set 239	*32 Set 243
17 Set 223	25 Set 227	33 Set 231
*18 Set 236	*26 Set 240	*34 Set 244
19 Set 224	27 Set 228	35 Set 232

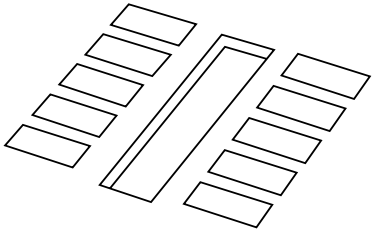


Note: This example shows defaults for a system with three-digit internal numbers. The defaults do not actually exist on any telephone, as no telephone has an autodial button for itself. The position that would be taken by the autodial button for itself, is blank.

* These settings are produced using the shift key, located beside the upper set of buttons.

M7310 lower button assignments

The following tables map the positions for the lower set of buttons for the Norstar M7310 set.

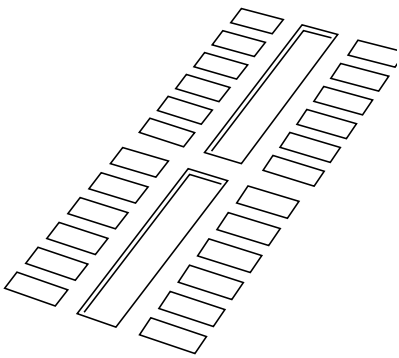
Button #/ Function	Square template	Button #/ Function
01 Line 1		06 Conf/Trans
02 Line 2		07 Last No.
03 Call Fwd		08 Voice Call
04 Pick-Up		09 Intercom
05 Page		10 Intercom

PBX template		Hybrid template	
01 DND	06 Conf/Trans	01 Line 1	06 Conf/Trans
02 Transfer	07 Last No.	02 Line pool	07 Last No.
03 Call Fwd	08 Voice Call	03 Call Fwd	08 Voice Call
04 Pick-Up	09 Intercom	04 Pick-Up	09 Intercom
05 Page	10 Intercom	05 Page	10 Intercom

Centrex template		DID template	
01 Line<xx>	06 Conf/Trans	01 Line<xx>	06 Conf/Trans
02 Transfer	07 Last No.	02 Transfer	07 Last No.
03 Call Fwd	08 Voice Call	03 Call Fwd	08 Voice Call
04 Pick-Up	09 Intercom	04 Pick-Up	09 Intercom
05 Link	10 Intercom	05 Page	10 Intercom

M7324 telephone button defaults

The default button assignments for the M7324 telephone depend on the template applied. Refer to *Using Buttons* on page 16.

Button #/ Function	Square template	Button #/ Function
01 Line 1		13 Call Fwd
02 Line 2		14 Speed Dial
03		15 Last No.
04		16 Saved No.
05		17 Conf/Trans
06		18 Transfer
07		19 DND
08		20 Pick-Up
09		21 Voice Call
10		22 Page
11		23 Intercom
12		24 Intercom

PBX template		Hybrid template	
01	13 Call Fwd	01 Line 1	13 Call Fwd
02	14 Speed Dial	02 Line pool	14 Speed Dial
03	15 Last No.	03	15 Last No.
04	16 Saved No.	04	16 Saved No.
05	17 Conf/Trans	05	17 Conf/Trans
06	18 Transfer	06	18 Transfer
07	19 DND	07	19 DND
08	20 Pick-Up	08	20 Pick-Up
09	21 Voice Call	09	21 Voice Call
10	22 Page	10	22 Page
11	23 Intercom	11	23 Intercom

12	24 Intercom	12	24 Intercom

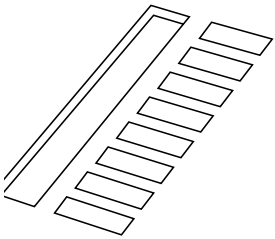
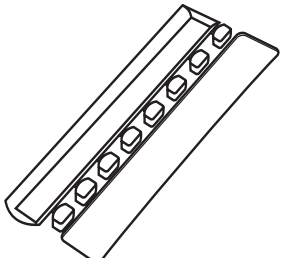
Centrex template		DID template	
01 Line<xx>	13 Call Fwd	Line<xx>	13 Call Fwd
02	14 Speed Dial	Transfer	14 Speed Dial
03	15 Last No.	blank	15 Last No.
04	16 Link	blank	16 Saved No.
05	17 Conf/Trans	blank	17 Conf/Trans
06	18 Transfer	blank	18 Transfer
07	19 DND	blank	19 DND
08	20 Pick-Up	blank	20 Pick-Up
09	21 Voice Call	blank	21 Voice Call
10	22 Page	blank	22 Page
11	23 Intercom	blank	23 Intercom
12	24 Intercom	blank	24 Intercom

M7100 and T7100 button defaults

For all templates, the one programmable button on the M7100 and the T7100 sets is Last No. .

M7208 and T7208 button defaults

The default button assignments for the M7208 and the T7208 sets are the same, depending on which template was applied.

M7208 button set	Square template	T7208 button set
	01 Line 1 02 Line 2 03 Last No. 04 Page 05 Conf/Trans 06 Speed Dial 07 Intercom 08 Intercom	

Centrex template	Hybrid template	PBX template	DID template
01 Line<xx>	01 Line 1	01 Pick-Up	01 Line<xx>
02 Transfer	02 Line pool	02 Transfer	02 Transfer
03 Last No.	03 Last No.	03 Last No.	03 Last No.
04 Link	04 Page	04 Page	04 Page
05 Conf/Trans	05 Conf/Trans	05 Conf/Trans	05 Conf/Trans
06 Speed Dial	06 Speed Dial	06 Speed Dial	06 Speed Dial
07 Intercom	07 Intercom	07 Intercom	07 Intercom
08 Intercom	08 Intercom	08 Intercom	08 Intercom

Tips - The default Page button activates the External Page option ([✆] [6] [2]).

Rules of default button assignment

Line and Intercom buttons are assigned by default templates and can be changed in programming. Handsfree/Mute and answer buttons are not assigned by default. If these features are defined, however, they are automatically assigned to specific buttons, as described on this and the following page. None of these buttons can be assigned to M7100 or T7100 sets, as these sets have only one program button.

The Handsfree/Mute feature appears on the bottom right-hand button or the M7310 set and the bottom button on the M7208 telephone, moving the Intercom button(s) up one position. On the Business Series Terminals, this feature has two buttons, which are located under the numeric dialpad, beneath the volume rocker button.

Each set can have up to eight Intercom buttons. On the M7310, M7324 telephones, these buttons assign to the position above the Handsfree/Mute button at the bottom right-hand position on your telephone. On the T7316 set, these buttons assign to the buttons on the bottom right set of buttons, starting from the bottom button.

On the M7208 and T7208 sets, these buttons assign above the bottom button.

Each telephone can have up to four answer buttons. On the M7310 set, they appear above Intercom buttons in the right column and continue up from the bottom in the left column, replacing the features on those buttons. On the M7208 and T7208 sets, answer buttons appear above the Intercom buttons and below external line buttons in a single column.

External line buttons appear in ascending line order, starting at the top button in the left column of the M7310 Norstar set They also start from the top button on the M7208 and T7208

sets. If more than five external lines are assigned to an M7310 telephone, or more than 12 to an M7324 telephone, assignment continues down the buttons on the right column, erasing the features on those buttons. Line buttons have priority over feature access buttons but not Handsfree/Mute, Intercom, or answer buttons.

Moving line buttons

You can move external lines to different buttons on your telephone to arrange your lines in the way that makes the most sense to you.

You cannot move intercom, answer or Handsfree/Mute buttons onto a CAP module.

1. Press [c] [*] [8] [1].
2. Press the button you want to move the line from.
3. Press the button you want to move the line to.

Displays

`Exchanged`	The two buttons you selected have exchanged position.
`Invalid location`	You have tried to move a line to a button that cannot be used as a line button, such as an intercom button, Handsfree/Mute button, or an answer button.
`Move line from:` `QUIT`	Press the button of the line you want to move. Press [c] or QUIT when you have finished moving lines.
`Move line to:` `QUIT`	Press the button you want to move the line to. Neither of the buttons is erased. The lines, or the line and feature, simply switch places.

Press a line	The button you are trying to move is not a line button. If you are trying to switch a line and a feature, move the line to the feature button and not the feature button to the line.

Changing the type of ring

You can choose one of four distinctive rings for your telephone. This makes it easier to identify your telephone in an open office.

1. Press [feature] [*] [6].
2. Press [1], [2], [3], [4], or NEXT. You hear the selected ring for two seconds.
3. Repeat until you hear the ring you prefer, then press [end] or OK.

Adjusting the Ring volume

Use this feature to adjust the ring volume.

1. Press [feature] [*] [8] [0]. The telephone rings.
2. Press [volume] to adjust the volume; left end for lower and right end for higher.

Hiding the message or calls indication

The display that shows you have messages or callscan be replaced with the current time and date You can retrieve your message and call information by using the display buttons that appear on the second line of the display.

If you are using a telephone with a single-line display, the message or call indication is hidden.

1. Press [✆] [8] [0] [6]. The current time and date appears on the top line of the display.
2. Press MSG or [✆] [6] [5] to see your messages, or press CALLS or [✆] [8] [1] [2] to see your calls.

Restoring the messages and calls indication

Press [✆] [#] [8] [0] [6].

User Preferences

The User Preferences section of programming allows you to program memory buttons, speed dial codes and other settings for any Norstar telephone on the system.

For example, an employee may want to have the Do Not Disturb feature programmed onto a memory button or create a speed dial code. Instead of programming from the each specific set, you can go into programming on the telephone nearest you to make the change.

Using User Preferences

1. Press [✆] [*] [*] [U] [S] [E] [R] ([✆] [*] [*] [8] [7] [3] [7]).
2. Enter your System Coordinator or Basic password (the default passwords are [2] [3] [6] [4] [6] and [2] [2] [7] [4] [2]).

By using aBasic password, it is possible to have someone else do day-to-day upkeep of the telephone programming without giving out access to sensitive programming. See *Using passwords* on page 196.

After you enter the proper password, the display shows you the telephone with the lowest internal number followed by its name (For example, `221:Reception`).

1. Press [Next] to move through all the telephones on the system.
2. Press [Show] when you see the telephone you want to change. The display reads the model number of the telephone at the extension.
   The display shows `Connect set` if no telephone is

connected at that internal number. You cannot make changes if the model is `Other`.

3. Press [Next] to move through all the subheadings in User Preferences.

User Preferences programming is available under the heading `User Prefernces` in `Terminals&Sets` in the main body of programming.

Sub-headings in User Preferences

User prefernces
Model
Button prgrming
User speed dial
Call log opt'ns
Dialing opt'ns
Language
Display cntrst
Ring type
Voice path

Changing button programming

Press [Show] at `Button prgrming`. The display shows the number of buttons on the telephone An example is shown in Displays at the end of this section.

If the telephone has a CAP module, you can press `CAP1` to see the buttons on the module.

Press [Next] to move through all the buttons on the telephone. Refer to *Default button assignments* on page 129 for button number mapping for each type of Business Series Terminal and Norstar series telephones.

Use the display buttons to change the programming for a button.

Note: User Preferences programming cannot change the buttons that are used by lines, intercom, and the handsfree feature.

The display buttons used in button programming.

CANCL	Moves you out of a setting without making any changes to it.
CLR	Erases the button.
TEL#	Programs the key as an autodial number for an internal or an external number. If it is an external autodial number, you must choose a line, line pool, or the routing table for the call to use.
CHANGE	Used when you are setting up an external autodial number. Press CHANGE until you see the type of line or pool you want the number to use.
FEATR	Press to store a feature code on the button.
FIND	Locates a specific button on a telephone by entering its number. Button numbers are shown in the illustrations.
LIST	Takes you to a list of feature codes. Press Next to move through the list and press OK when you see the feature you want to program on the button.

Changing User Speed Dial

1. Press Show at User Speed Dial. The display shows the number of speed dial codes that are available.
2. Press Next to see the first speed dial code (71).
3. Press Next to move through all the speed dial codes.
4. Press Show at the code you want to change.
5. Press CHANGE and enter the telephone number the same way you would dial it on the telephone.

6. Press OK.
7. Press Next and choose the line (or enter a code for a line pool) the speed dial code should use.

Use the line pool code to select a particular line pool for use with Speed Dial. If you select Use routing tbl, a line or pool is chosen by the routing programming according to the initial digits in the number.

The route you choose for a User Speed Dial code must be one that the telephone can use. For example, if the telephone does not have access to Line Pool B and you use that pool code with the speed dial code, the code does not work.

To change a system speed dial code, see *Adding or changing a system speed dial* on page 29.

Changing Call Log options

1. Press Show at Call log opt'ns....
2. Press CHANGE until you see the option you want to use. See *Call Log options* on page 117.

Changing how calls are dialed

1. Press Show at Dialing opt'ns....
2. Press CHANGE until you see the option you want to use.

Descriptions for dialing options are found on the *Telephone Feature Card*, or see *Changing how you dial your calls* on page 68.

Changing the language used on the display

Press CHANGE at Language: until you see the language you want to use. See*Changing the language on the display* on page 125.

Making the display lighter or darker

Press CHANGE at Display cntrst until you see the value you want to use.

The display contrast on the telephone you are using for the programming session does not change when you are programming another telephone.

Changing the ring type

At Ring type:, press CHANGE until you see the option you want to use.

Descriptions for ringing options are found on the *Telephone Feature Card* or in *Changing the type of ring* on page 139.

Displays

10+24 buttons FIND	There are ten memory buttons and twelve dual memory buttons on the telephone you are viewing. Press Next to begin looking at what's on each button.
B01:L06:Line 001 FIND	A line appears on the button. You cannot store a feature or number on it.
B02:#Reply Msg... CLR TEL# FEATR	A feature is stored on this button. Press Show to see the feature code. A full list of names and codes for features is included in the index.
Code:F#65... CLR TEL# FEATR	Shows the feature code stored on a button. Press Show to see the button number and feature name.

B03:160455512... CLR TEL# FEATR	The button has a telephone number stored on it. Press Show to see the rest of the number.
Externl tel #... CLR TEL# FEATR	The autodial is an external number. Press Show to see what line or pool the call is programmed to go out on.
Internl tel #... CLR TEL# FEATR	The autodial is an internal number. Press Show to see more information.
B04:Intercom... FIND	The button is used for intercom. Press Show to see more information about the button. You cannot store a feature or number on it.
B05:Ansr 93 FIND	The button is used for an Answer DN. You cannot store a feature or number on it.
B06:Blank button CLR TEL# FEATR	Either nothing is stored on the button or you have just cleared the button by pressing CLR.
B10:Handsfree FIND	The button is occupied by the Handsfree feature. You cannot store a feature or number on it.

For other displays, see *Common feature displays* on page 227.

Programming Hunt Groups

The Hunt Groups feature allows a group of Norstar sets to be called by a single directory number ensuring that calls are easily routed to the appropriate group.

The Incoming Line Group (ILG) functionality is now accomplished through the Hunt Group feature. When upgrading from a pre-Modular ICS 4.0 system to a Modular ICS 5.0 system, any lines previously belonging to an ILG are not automatically converted to broadcast Hunt Groups. You must go in and program them to the new feature. Please refer to *Assigning or unassigning lines to a group* on page 151.

Hunt Groups are used in situations where a group of people performing the same task are required to answer a number of related phone queries. Some typical uses of Hunt Groups are:

- a sales department answering questions on product prices or availability
- a support department answering questions concerning the operation of a product
- an emergency department answering calls for help.

Hunt Groups can be used to route calls to a support service such as a Help Line for a software company. Specialists dealing with Product A can be in one group, and specialists dealing with Product B can be in another group. Incoming calls hunt for the next available set in the group. If no set is available, the call can be placed in a queue or routed to an overflow set.

The Hunt Groups subheading in system programming is the area where programming changes are made to the following:

- members of a group
- member position in a group
- what lines are assigned to a group
- how incoming calls are distributed
- how long the system looks for available members
- where a call goes if all members are busy

Note: Videophones should not be programmed as members of a Hunt Group. Hunt Groups allow one B channel connection at a time and videophones use two B channels.

Features affected by Hunt Groups include:

- Call Forward All Calls
- Call Forward No Answer
- Call Forward on Busy
- Group Pickup
- Transfer via Hold
- Priority Call
- Line Redirection
- Page Zones
- Voice Call

Adding or removing members from a group

Members of the group can be any Norstaror Business Series Terminal set, ISDN terminal, or portables. A Norstar set can be in more than one Hunt Group but is considered a member in each Hunt Group, increasing the total number of members in the system.

There can be only one appearance of the same Hunt Group on a set. Hunt Group DNs cannot be members of other Hunt Groups. A DN can be associated with a member of a Hunt Group and is called a member DN.

Consult your customer service representative to determine your Hunt Group number range.

1. Place the appropriate programming overlay on your programming set.
2. Press [Feature] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `System prgrming`.
5. Press [Show]. The display shows `Hunt groups`.
6. Press [Show]. The display shows `Show group`.
7. Enter the Hunt Group number you want to program (1-30).
8. Press [Show]. The display shows `Member DNs:`. (There are no member DNs if none are programmed.)
9. Press [Show]. The display shows the group members.
10. Press `ADD` to add a member or press `REMOVE` to remove a member from the group.

11. Press ☎ to exit or [Next] to continue programming.

Moving members of a group

Member order within a Hunt Group is important. The member order determines how a call is routed through a Hunt Group

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press ↻ * * 2 6 6 3 4 4 (CONFIG). The display shows `Password:`.
3. Press 2 3 6 4 6 (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `System prgrming`.
5. Press [Show]. The display shows `Hunt groups`.
6. Press [Show]. The display shows `Show group`.
7. Enter the Hunt Group number you want to program (1-30).
8. Press [Show]. The display shows `Member DNs:`.
9. Press [Show]. The display shows the members for that group.
10. Press MOVE to move an existing member to another place within the Hunt Group. The display shows the member number followed by an arrow.
11. Enter the new position number for the extension.
12. Press ☎ to exit or [Next] to continue programming.

Assigning or unassigning lines to a group

Configure the prime set for a Hunt Group line to None to avoid delayed ring transfer of external Hunt Group calls to the prime set before the Hunt Group can receive the call.

A line can be assigned to only one group.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [ ] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `System prgrming`.
5. Press [Show]. The display shows `Hunt groups`.
6. Press [Show]. The display shows `Show group`.
7. Enter the Hunt Group number you want to program (1-30).
8. Press [Show]. The display shows `Member DNs:`.
9. Press [Next]. The display shows `Line assignment`.
10. Press [Show]. The display shows `Show line:`.
11. Enter the line number you want to program or press SCAN to go to the first line assigned to this group, or press LIST to go to the first line in the system.
12. Press CHANGE to program the line as `Unassigned` or `Assigned`.
    `*HGnn*` means the line is assigned to another Hunt Group.
13. Press [ ] to exit or [Next] to continue programming.

Setting the distribution mode

There are three modes of call distribution:

- **Broadcast**—rings each set in the group simultaneously. Calls are handled one at a time; other calls are queued. As soon as a call is picked up, the call next in the queue is presented to the Hunt Group without having to wait for queue time-out.

  In Broadcast mode, a single incoming call rings simultaneously at all the sets in a group. This way, all receptionists in the group can share the load of answering large volumes of calls. All sets automatically display the calling line identification (CLID), if available. A familiar example is a fund-raising campaign where a group of operators are waiting to take each call as it comes in.

- **Sequential**—starts the call at the first set in the Hunt Group and distribution is complete when the first free set has been found. Simultaneous calls can be presented. Distribution is order based.

  In Sequential mode, you can program your top salesperson to be the first member of the group to receive incoming calls.

- **Rotary**—the call starts at the set after the one which answered the last call. Distribution is complete when the next free set has been found. Simultaneous calls can be presented. Distribution is order based.

  In Rotary mode, you can ensure that all your helpline people are receiving calls on an equal basis, rather than one person receiving the majority of calls. The call rings at one set at a time in a round robin fashion.

If a Hunt Group has available members but nobody answers the call, the call is routed through the Hunt Group list until either someone answers the call or the queue time-out occurs. In the latter case, the call is routed to the overflow position. Once a call goes to the overflow position it is no longer a Hunt Group call.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [✆] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `System prgrming`.
5. Press [Show]. The display shows `Hunt groups`.
6. Press [Show]. The display shows `Show group`.
7. Enter the Hunt Group number you want to program (1-30).
8. Press [Show]. The display shows `Member DNs:`.
9. Press [Next] until the display shows `Mode`.
10. Press CHANGE to set the mode: `Sequential`, `Rotary`, `Broadcast`.
11. Press [↶] to exit or [Next] to continue programming.

Setting the hunt delay

This setting allows you to program the number of rings the system permits at a Hunt Group set before moving on to the next set in the Hunt Group.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [e] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `System prgrming`.
5. Press [Show]. The display shows `Hunt groups`.
6. Press [Show]. The display shows `Show group`.
7. Enter the Hunt Group number you want to program (1-30).
8. Press [Show]. The display shows `Member DNs:`.
9. Press [Next] until the display shows `Hunt delay`.
10. Press CHANGE to select the setting: `1, 2, 3, 4, 5, 6, 7, 8, 9, 10`.
11. Press [↩] to exit or [Next] to continue programming.

Programming busy line setting

A Hunt Group is considered busy if one of two scenarios exists:

- all of its members are being presented an incoming Hunt Group call
- all of its members are active on a Hunt Group call

There are three routing options if all members are busy:

- **BusyTone**—the caller gets a busy tone (PRI lines only)
- **Overflow**—the call is routed to an overflow position. If the overflow DN is the hunt group DN for that same hunt group, the overflow option will not appear.
- **Queue**—the call stays in the system for a period of time. Within this period of time, the call is presented to an member if one becomes available. When the time-out occurs, the call is presented to an overflow position

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [e] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `System prgrming`.
5. Press [Show]. The display shows `Hunt groups`.
6. Press [Show]. The display shows `Show group`.
7. Enter the Hunt Group number you want to program (1-30).
8. Press [Show]. The display shows `Member DNs:`.
9. Press [Next] until the display shows `If busy:`.
10. Press [CHANGE] to set the mode: `BusyTone`, `Overflow`, `Queue`.
11. Press [↩] to exit or [Next] to continue programming.

Programming the queue time-out

This setting allows you to program the number of seconds a call remains in the Hunt Group queue before it is routed to the overflow position.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [⊘] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `System prgrming`.
5. Press [Show]. The display shows `Hunt groups`.
6. Press [Show]. The display shows `Show group`.
7. Enter the Hunt Group number you want to program (1-30).
8. Press [Show]. The display shows `Member DNs:`.
9. Press [Next] until the display shows `Q Timeout:`.
10. Press CHANGE to set the queue time-out: `15, 30, 45, 60, 120, 180`.
11. Press [☎] to exit or [Next] to continue programming.

Programming the overflow set

This setting allows you to program the overflow set to which the Hunt Group calls are to be routed. Unless the overflow position is a Hunt Group set, the call ceases to be a Hunt Group call. If the overflow set is a Hunt Group set, the call is treated as a new call and goes to the bottom of the queue.

The overflow set can be a set DN number associated with a voice mailbox.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [✆] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `System prgrming`.
5. Press [Show]. The display shows `Hunt groups`.
6. Press [Show]. The display shows `Show group`.
7. Enter the Hunt Group number you want to program (1-30).
8. Press [Show]. The display shows `Member DNs:`.
9. Press [Next] until he display shows `Overflow:`.
10. Press [CHANGE] to change the overflow position.
11. Enter the new overflow position.
12. Press [☎] to exit or [Next] to continue programming.

Setting the name

This setting allows you to program the Hunt Group name, such as Service or Sales. The name can be up to seven characters in length.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [↻] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `System prgrming`.
5. Press [Show]. The display shows `Hunt groups`.
6. Press [Show]. The display shows `Show group`.
7. Enter the Hunt Group number you want to program (1-30).
8. Press [Show]. The display shows `Member DNs:`.
9. Press [Next] until the display shows `Name:`.
10. Press `CHANGE`.
11. Use the dialpad to enter the name of the Hunt Group.
12. Press [Next] to store the name.
13. Press [☎] to exit or [Next] to continue programming.

Using the Hospitality features

This section describes the Hospitality Services feature which is used to administer room and alarm services in small to medium-sized facilities such as hostels, motels, or hospitals.

There are three types of sets that make up this type of system:

Common set—this telephone can be found in the lobby, office, or common area, and is not associated with a room. This type of set cannot access all of the features.

Room set—this telephone resides in a specific room and can be used by both guests and cleaning staff to set alarms or indicate room condition. Up to five sets can be assigned to the same room number, such as for fax lines, internet dial-up, etc.

Administration set—this telephone must be a two-line display set and is usually configured with a password to allow secure administration of room occupancy and condition services and alarm services.

Hospitality passwords

There are two passwords within the hospitality feature. One provides secure access to the administration set, and one provides secure access to a room condition setting from each room set for housekeeping staff.

Desk pswd

Change this password frequently, to maintain security.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [c] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.

3. Press 2 3 6 4 6 (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `Hospitality`.
1. Press [Show].
2. `Desk pswd:4677` displays.
3. Press `CHANGE`.
4. `New pswd:` displays
5. Enter a new password, then press `OK`.

Cond pswd

Change this password frequently, to maintain security.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press ↻ * * 2 6 6 3 4 4 (CONFIG). The display shows `Password:`.
3. Press 2 3 6 4 6 (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `Hospitality`.
1. Press [Show].
2. Press [Next]
3. `Cond pswd:None` displays.
4. Press `CHANGE`.
5. `New pswd:` displays
6. Enter a new password, then press `OK`.

Room/desk information

There are two aspects to programming room information.

- First you must program specific DNs to a specific room and set up the room occupancy filters, which determine what types of calls can be made from a room set at various states of occupancy.
  Note: You can assign up to five DNs to the same room number.
- Then you need to administer the room occupancy and state of the room.

Programming room information

Use this setting to assign set DNs to a specific room.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [c] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `Hospitality`.
5. At the Hospitality heading, press [Show] until `Room/ desk info` displays.
6. Press [Show]. `Show set: displays`.
7. Enter a room set number or press [LIST] and press [Next] until you find the DN of the set you want to assign to a room.
8. Press [Show]. `Room #:None` displays.

9. Press CHANGE and enter the room number, then press OK to accept the change.
10. Repeat step 6 for all the sets you want to assign.
11. Press Next. `Adm pwd req'd:Y` displays
12. Press CHANGE and choose Y or N, depending on your security requirements.

Call restrns

You can set up call restrictions based on room occupancy states. This setting affects the Room occupancy feature.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press ↻ * * 2 6 6 3 4 4 (CONFIG). The display shows `Password:`.
3. Press 2 3 6 4 6 (ADMIN). The display shows `Terminals&Sets`.
4. Press Next until the display shows `Hospitality`.
5. At the Hospitality heading, press Show until `Call restrns` displays.
6. Press Show. `Vacant:00` displays.
7. Press CHANGE and enter the filter that defines the restrictions for your hospitality system.
   The Restriction Filters section in the *Modular ICS 5.0 Installer Guide* describes how to set up filters.
8. Repeat steps 2 and 3 for the other room occupancy states.

The table below shows an example of a call restrictions setup.

Room Occupancy	Filter	Description
Vacant	11	no calls allowed except 911
Basic	11	no calls allowed except 911 and internal extensions
Mid	12	no calls allowed except 911, 1800, 188 and internal extensions
Full	13	no call restrictions

Service times

You can set the time when occupied rooms change from Service done to Service required. This setting affects the Room condition feature.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [⚙] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `Hospitality`.
5. At the Hospitality heading, press [Show] until `Service time` displays.
6. Press [Show]. `Hour: 00` displays.
7. Press CHANGE and enter the hour (00 to 23).

   If the number is less than 13, the display shows `AM`. Press CHANGE to select `PM`, if required. Press OK to accept.
8. Press [Show]. `Minutes: 00` displays.
9. Press CHANGE and enter the minutes (00 to 59).

Using the room/set programming

This section describes how the room occupancy and room condition settings are used.

Setting dialing filters by room state

1. Press [✆] [8] [7] [9].
2. Enter the Desk admin password if you are prompted for a password.

   The set displays: `Oc of rm#:`.
3. Enter the room number and press OK.

   The set displays `rrrrr:Vacant`.
4. Press the CHANGE display key and select the required status for the room set.
5. To program other rooms, press the FIND or NEXT display key and return to step 3.
6. Press [☎] to exit.

Note: Setting the room state to Vacant cancels any outstanding alarms.

Setting the room condition

You can use this feature on a room set or administration set to:

- set the room state to service done (`Srvc done`)
- set the room state to Needs service (`Needs srvc`)
- query the state of the room

Using the room set:

1. Press [⊙] [8] [7] [6] on a digital set
   or [Link] [*] [8] [7] [6] on an analog set.
2. At the prompt, set the status of the room.

   Note: You may be required to enter a Room condition password.

   Press [1] to indicate `Set to srv done`.

   Press [2] to indicate `Set to needs srv`.

   The set displays the selected prompt.
3. Press [☎] to exit.

Using the admin set:

1. Press [⊙] [8] [7] [8].
2. Enter the Desk admin password if you are prompted for a password.

   The set displays: `Cd of rm#:`
3. Enter the room number and press OK.

   The set displays `rrrrr:Vacant`.
4. To update the condition, press CHANGE and select the required status.

   To query the condition of other rooms, press the FIND or NEXT displays keys.
5. Press [☎] to exit.

Programming the alarm feature

If you want to allow the room sets to program wake-up alarms, there are a couple of program settings that need to be entered.

1. Place the appropriate programming overlay on the set you are using to do programming.
2. Press [c] [*] [*] [2] [6] [6] [3] [4] [4] (CONFIG). The display shows `Password:`.
3. Press [2] [3] [6] [4] [6] (ADMIN). The display shows `Terminals&Sets`.
4. Press [Next] until the display shows `Hospitality`.
5. At the Hospitality heading, press [Show] until `Alarm` displays.
6. Press [Show]. `Attn attempts:3` displays.
7. Press CHANGE until you find the number you want (1-5).
8. Press [Next]. `Retry intrvl:4` displays.
9. Press CHANGE until you find the number you want (2, 4, 6, or 8).
10. Press [Next]. `Attn duration: 15` displays.
11. Press CHANGE until you find the number of seconds you want (10, 15, 20, 30, 40, 50).
12. Press [Next]. `Time format:12 hr` displays.
13. Press CHANGE to choose either `12hr` or `24hr`.
14. Press [Next]. `Expired alarms` displays.
15. Press [Show]. `Notify set:None` displays.
16. Press CHANGE to enter a set DN to be notified.
17. Press [Next]. `Use tone: N` displays.

18. Press CHANGE to choose either Y (yes) or N (no).
19. Press ☎ to exit or Next to continue programming.

Using the Administration set to control alarms

Only a Hospitality Services set can use this alarm administration feature. This feature is also associated with a room number, and cannot be used on common sets.

Use this feature to:

- query a current or last alarm time set for a room
- assign an alarm time for any room
- change an alarm time for any room
- cancel an pending alarm for any room

To program the alarm, follow these steps:

1. Press ✆ 8 7 7.
2. Enter the Desk admin password if you are prompted for a password.

   The set displays: al of rm#:
3. Enter the room number.
4. Press VIEW. The set displays Alrm: 07:00am OFF:.

   If the alarm time is correct, press the ON/OFF display key.

   If you want to change the time, enter a new four-digit alarm time.

   If the clock uses a 24-hour format, enter an hour between 00 and 23, and minutes between 00 and 59. The set displays: Alarm ON hh:mm

If the clock uses a 12-hour format, enter the time, then when the set displays: `hh:mm AM or PM?`, press AM or PM. The set displays: `Alarm ON hh:mm`.

5. Press ☎ to exit.

Using the alarm

To set an alarm on a digital telephone:

1. Press ✆ 8 7 5. The displays shows `Alrm:07:00 OFF`
2. Do one of the following:

   If the alarm is correct, press ON/OFF. The set displays: `Alrm:07:00am ON`. Press DONE to exit.

   If you need to change the alarm time, press CHG. The set displays: `Enter time:`
3. To enter a new time, do one of the following:

   If the clock uses a 24-hour format, enter an hour between 00 and 23, and minutes between 00 and 59. The set displays: `Alarm ON hh:mm`

   If the clock uses a 12-hour format, enter the time, then when the set displays: `hh:mm AM or PM?`, press AM or PM. The set displays: `Alarm ON hh:mm`.

To set an alarm on an analog set:

1. Press Link * 8 7 5. A tone sounds.
2. Enter a four-digit alarm time:

   If the clock uses a 24-hour format, enter an hour between 00 and 23, and minutes between 00 and 59. A tone sounds.

   If the clock uses a 12-hour format, enter the time, then press * to select am or # to select pm. A tone sounds.

To enter a new time, repeat the above steps and enter a new time. This overwrites the existing entry.

Canceling an alarm

Canceling the alarm time for any set cancels the alarm time for all the sets in the same room.

Digital set: Press [✆] [#] [8] [7] [5].

Analog set: Press [Link] [#] [8] [7] [5].

Turning off an alarm

When the alarm rings, the user can release the ring by doing one of the following, depending on the type of set in the room:

Digital set: Press any button except [☎].

Analog set: Lift and replace the handset.

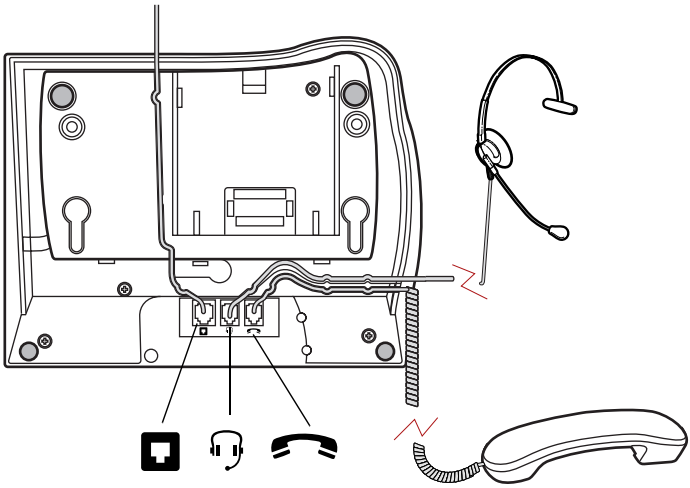
[☎] acts like a snooze alarm and will temporarily disable the alarm for a programmed period. Refer to *Service times* on page 163.

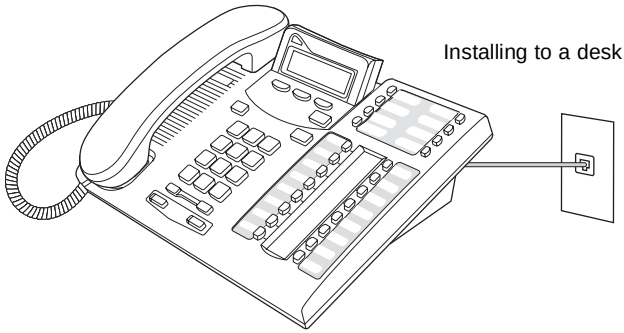
If the user is on a call when the alarm sounds, they can press any button except [☎], which would release the call instead.

Installing Business Series Terminals

If you are connecting a Business Series Terminal for the first time, refer to the following illustrations as a guide.

Installing the Business Series Terminal connections

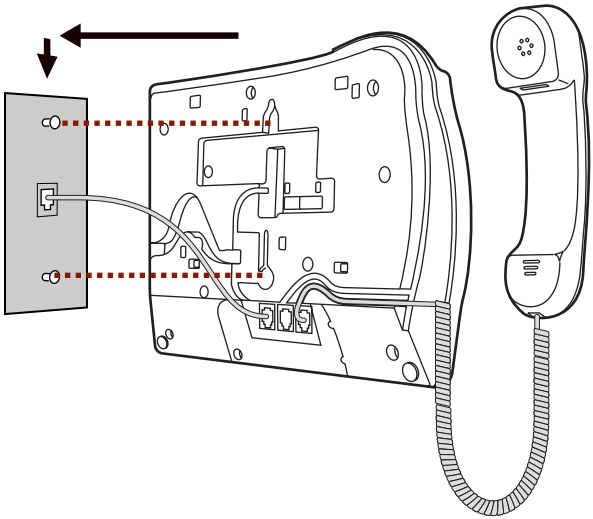




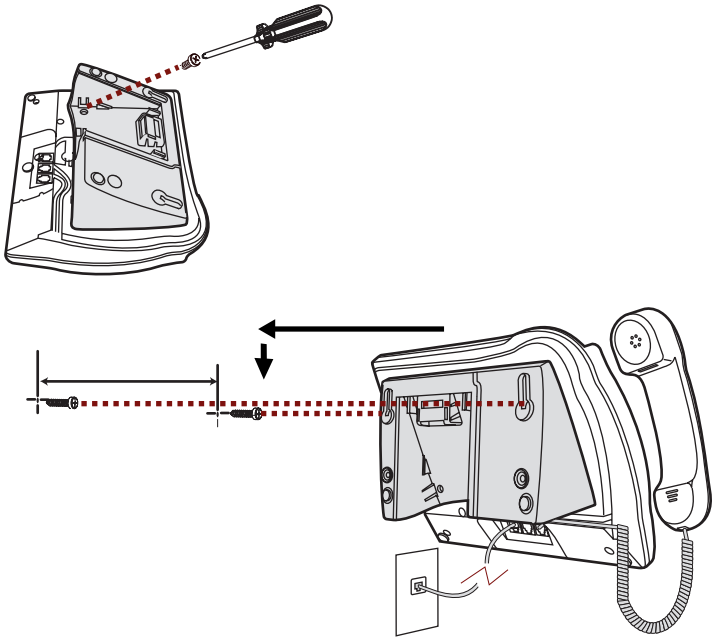
Installing to a desk jack

Mounting a Business Series Terminal on the wall

Installing without the angled base



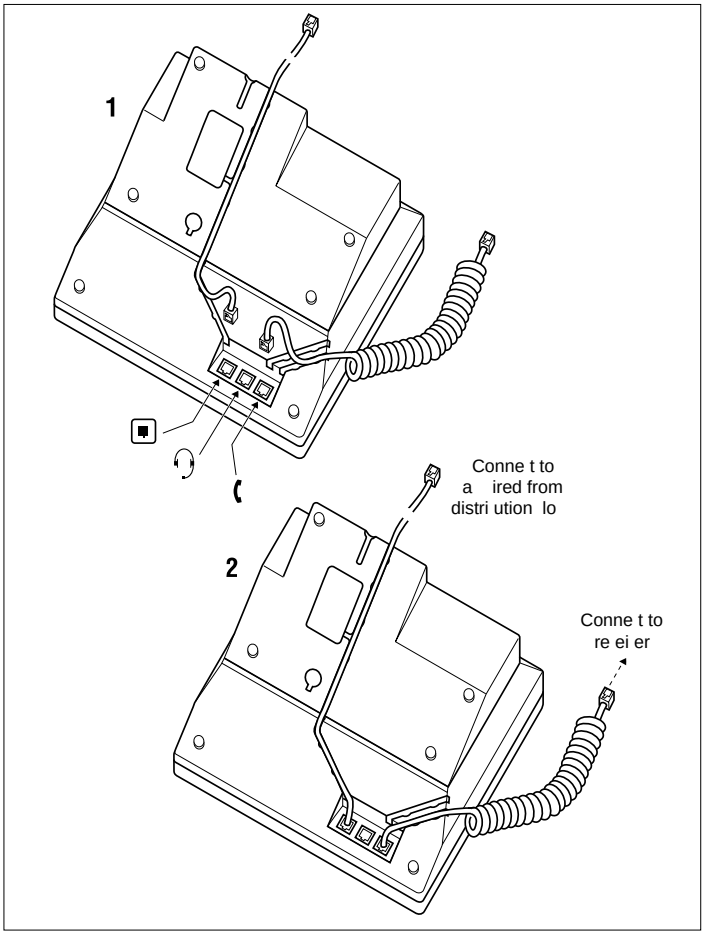
Installing with the angled base



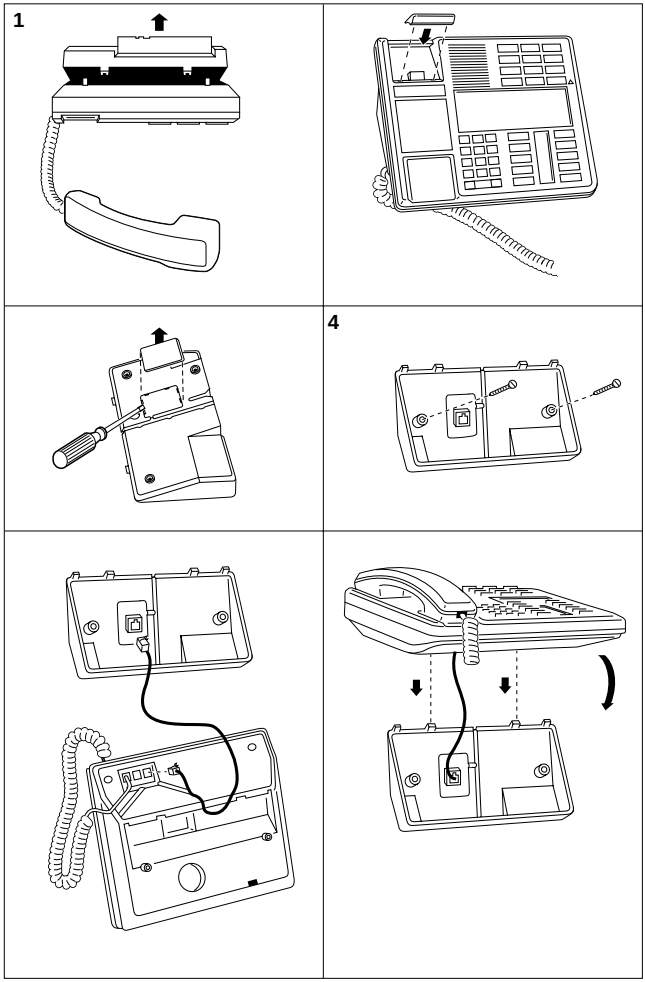
Installing Norstar telephones

If you are connecting a Norstar telephone for the first time, refer to the following illustrations as a guide.

Installing a Norstar telephone



Mounting a Norstar telephone on the wall



Naming a telephone or a line

You can assign names to identify external lines, target lines, and each set. During a call, the name, if programmed, is shown on the telephone display instead of the external line number or internal telephone number of the caller. Step-by-step instructions for adding or changing the name of a telephone or a line are in *Changing the name of a telephone* on page 32.

Telephone names and line names can contain both letters and numbers, but cannot be longer than seven characters. You cannot use the # and * symbols.

Tip - You can give the same name to two or more telephones, or to a telephone and a line in your system. To avoid confusion, avoid such duplication. Use initials, abbreviations, or even nicknames to give each telephone a unique name.

If automatic telephone relocation is turned on, the name and internal number of a telephone are saved if the telephone is moved within your system.

Moving telephones

You may be required by law to report any telephone moves to your local telecommunications carrier or 911 service provider. For further details, consult your local carrier, your local 911 service provider, and/or your local telecommunications service provider.

If automatic telephone relocation is enabled in programming by your installer or customer service representative, you can move your telephone from one Norstar jack to another without losing any of its custom programming. If you want to replace a telephone and cancel the programming, ensure that the relocation setting is off.

Stopping calls from ringing at your telephone: Do Not Disturb (DND)

Stopping calls

Press [✆] [8] [5] to stop calls from ringing at your telephone.

Only priority calls ring at your telephone. A line button flashes when you receive a call, but the call does not ring.

Refusing to answer a call

While you are on a call, you can refuse to answer a second call (including a priority call).

Press [✆] [8] [5] while your telephone is ringing.

Canceling Do Not Disturb

Press [✆] [#] [8] [5].

Displays

`Allow calls`	Your telephone receives calls normally.

Using Do Not Disturb

Once you turn Do Not Disturb on, calls are forwarded to the prime telephone only if there is no other telephone on which the line appears. If there is another telephone that shares the same line, the call may be answered by that person.The Delayed Ring Transfer feature transfers all unanswered calls to the prime telephone after a specified time.

Do Not Disturb prevents voice calls from alerting at your telephone. Voice calls are presented as normal intercom calls

Tip - Norstar sets that are members of a Hunt Group can temporarily leave a Hunt Group by activating this feature. Hunt Group calls arriving while a set is in Do Not Disturb mode are routed to the next member in the Hunt Group. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

Using Background Music

[ ] 8 6

Use this feature to active the optional music feature. You will hear whatever music source is attached to the Modular ICS.

Your installer or service representative makes this feature available to all telephones in programming. You need to supply a music source, such as a radio, and have it attached to your ICS.

In accordance with U.S. copyright law, a license may be required from the American Society of Composers, Authors and Publishers or a similar organization if radio or TV broadcasts are transmitted through the Background Music feature of this telecommunication system.
Northern Telecom Inc. hereby disclaims any liability arising out of the failure to obtain such a license.

Turning Background Music off

The music stops automatically if you make or answer a call.

Or press [ ] # 8 6 to turn it off.

ISDN PRI and BRI

Integrated Services Digital Network (ISDN) technology provides a fast, accurate and reliable means of sending and receiving data, image text and voice information through the telephone system.

By using Primary Rate Interface (PRI) or Basic Rate Interface (BRI), your ISDN service allows for faster transmission speeds and the addition of a variety of powerful business applications, including remote LAN access, videoconferencing, file transfer and Internet access.

Your installer configures your ISDN services and terminal equipment.

ISDN PRI

PRI is economical because separate analog trunks and data circuits are not needed for Direct Inward Dialing (DID), Direct Outward Dialing (DOD), and data transfer.

With PRI there is greater flexibility because B channels can be dynamically reconfigured to accommodate changes in traffic with the Call by Call feature. For more information see *Call by Call service selection for PRI* on page 181.

PRI offers fast information access because channel usage is optimized to allow you the full benefit of available bandwidth and real-time connectivity.

PRI lines are configured as DID lines. Incoming calls on a PRI line can appear on a DID button or on an intercom button depending on how your Norstar set has been configured. Outgoing calls are made from the intercom buttons.

PRI lines can be accessed from all devices such as Norstar sets, Business Series Terminal sets, ISDN sets, and wireless sets.

ISDN PRI features

Selected ISDN network features can be used from a Norstar telephone. Your central office switch (ISDN network) determines which features are available to you.

Network Name Display for PRI

Your Norstar system displays the name of an incoming call when it is available from the service provider. Name information can be displayed on a Norstar set but not on an ISDN terminal. If the Calling Party Name has the status of *private* it may be displayed as `Private name`. If the Calling Party Name is unavailable it may be displayed as `Unknown name`.

Your Norstar system displays the name of the called party on an outgoing call, when it is provided by your service provider.

The Business Name concatenates with the set name on an outgoing call. This can only occur if the Business Name has been programmed.

The available features include:

- Receiving Connected Name
- Receiving Calling Name
- Receiving Redirected Name
- Sending Connected Name
- Sending Calling Party Name

Consult your customer service representative to determine which of these features is compatible with your service provider.

Name and number blocking for PRI

When activated, [feature] 8 1 9 allows you to block the outgoing name and/or number on a per-call basis. Name and number blocking can be used with a Norstar set but not with an ISDN terminal.

Consult your customer service representative to determine whether or not this feature is compatible with your provider.

Emergency 911 Dialing

Modular ICS 5.0 with the ISDN PRI feature is capable of transmitting the telephone number and internal extension number of a calling station dialing 911 to the Public Switched Telephone Network. State and local requirements for support of Emergency 911 Dialing service by Customer Premises Equipment vary. Consult your local telecommunications service provider regarding compliance with applicable laws and regulations.

If transmission of internal extension numbers is not required or desired, then it is recommended that the System Coordinator maintain a site map or location directory that allows emergency personnel to rapidly locate a Norstar set given its DID number. This list should be kept up to date and readily available, and can be included with the Programming Record.

Two-way DID

With PRI, the same lines can be used for receiving direct inward dialing (DID) and for making direct outward dialing (DOD) calls.

The dialing plan determines how calls are routed.

Consult your customer service representative to determine whether or not this feature is compatible with your service provider.

Call by Call service selection for PRI

PRI lines can be dynamically allocated to different service types with the Call by Call feature. PRI lines do not have to be pre-allocated to a given service type.

Call types that may be available, depending on your service provider are:

Public Public calls connect your set with a Central Office (CO). DID and DOD calls are supported.

Private Private calls connect your set with a private network. DID and DOD calls are supported. A private dialing plan may be used.

Tie Tie lines are private incoming and outgoing lines that connect Private Branch Exchanges (PBX) such as Norstar.

FX Foreign Exchange calls connect your Norstar set to a remote CO. It provides the equivalent of local service at the distant exchange.

Outwats Outwats is for outgoing calls. This allows you to originate calls to telephones in a specific geographical area called a zone or band. Typically a flat monthly fee is charged for this service.

Inwats Inwats is a type of long distance service which allows you to receive calls originating within specified areas without a charge to the caller. A toll-free number is assigned to allow for reversed billing.

Consult your customer service representative to determine whether or not this feature is compatible with your provider.

Dialing Plan and PRI

The Dialing Plan supports PRI connectivity to public and private networks. The dialing plan is a collection of features responsible for processing and routing incoming and outgoing calls. All PRI calls must go through a dialing plan.

The Dialing Plan

- allows incoming calls to be routed to sets based on service type and digits received
- allows Enbloc dialing by buffering user-dialed digits until a complete DN has been dialed
- provides the ability to map user-dialed digits to a service type on a Call by Call basis
- allows long distance carrier selection via user-dialed Carrier Access Codes

Depending on the type of dialing plan chosen, you may also need to specify a Private DN length so the system knows when the user has completed dialing.

Refer to the Networking chapter in the*Modular ICS 5.0 Installer Guide* for more details about dialing plans. Consult your customer service representative to determine how your dialing plan is configured.

ISDN BRI

Modular ICS 5.0 supports a maximum of 30 ISDN sets on the system.

The following ISDN services are supported:

- incoming calls
- outgoing calls
- Calling Line Identification Presentation
- Sub-addressing
- bearer capabilities
- teleservices

The Call Forward All Calls feature can be used from ISDN terminals connected to Modular ICS.

Note: Norstar and Business Series Terminal sets can accept voice calls only. Video and data calls do not alert at a Norstar set.

Although an ISDN S-loop or LT-loop can support up to eight devices, the loop has a limit of two B-channels. If both B-channels are in use, other devices on that loop cannot make or receive calls until a B-channel is available, or until both B-channels are available, in the case of a video terminal. Thus, the number of terminals installed must take into account whether you require dedicated access for the terminals on that loop.

Note: Set features, other than Transfer and Call Forward All Calls, are not available to ISDN terminals. In addition, you cannot retrieve a parked call, or reach a Direct-Dial set by using the Direct-Dial digit from an ISDN terminal.

Line access from an ISDN terminal

ISDN terminals do not have line keys or intercom keys as do Norstar telephones and Business Series Terminals. To make an outgoing call from an ISDN terminal, access an external line by entering a line pool code or by using the ARS feature.

ISDN BRI features

Selected ISDN network features can be used from a Norstar telephone. Your central office switch (ISDN network) determines which features are available to you.

Network Name Display for BRI

Your Norstar system displays the name of an incoming call when it is available from the service provider. Name information can be displayed on a Norstar set but not on an ISDN terminal. If the Calling Party Name has the status of *private* it may be displayed as `Private name`. If the Calling Party Name is unavailable it may be displayed as `Unknown name`.

Your Norstar system displays the name of the called party on an outgoing call, when it is provided by your service provider.

As with PRI, your Norstar system sends the Business Name concatenated with the set name on an outgoing call, but only if a Business Name has been entered for the set.

The available features include:

- receiving connected name
- receiving calling name
- receiving redirected name
- sending connected name
- sending calling party name

Consult your customer service representative to determine whether or not this feature is compatible with your service provider.

Name and number blocking for BRI

When activated, [feature] 8 1 9 allows you to block the outgoing name and/or number on a per-call basis. Name and number blocking can be used with a Norstar set but not with an ISDN terminal.

Consult your customer service representative to determine whether or not this feature is compatible with your service provider.

Service provider features

Consult your customer service representative to determine if the new ISDN features are supported with your service provider.

Call Forward

Call Forward allows you to forward your calls to an external telephone number.

1. Select an ISDN line by selecting a line button, a line pool, or the Handsfree button, or by lifting the handset (if an ISDN line is your prime line).
2. Consult your service provider for the appropriate feature code to enter on your dialpad. Listen for three tones followed by dial tone.
3. Enter the internal number of the telephone to which you want your calls forwarded. If the call is answered, stay on the line for at least five seconds to activate the Call Forward feature.

Canceling Call Forward

1. Select an ISDN line by selecting a line button, a line pool, or the Handsfree button, or by lifting the handset (if an ISDN line is your prime line).
2. Consult your service provider for the appropriate feature code to enter on your dialpad. Listen for a series of tones.
3. Press ☎.

Calling the number your calls are forwarded to

1. Select an ISDN line by selecting a line button, a line pool, or the Handsfree button, or by lifting the handset (if an ISDN line is your prime line).
2. Consult your service provider for the appropriate feature code to enter on your dialpad.

Automatic Call Back

If you call a number and it is busy, enter the appropriate feature code designated by your service provider to receive a distinctive ring at your set when the line becomes available for calls.

Automatic Recall

Automatic Recall allows you to automatically dial the number of the last call you received. You may not see the number on the display if the information is not available from your service provider, or you do not have Caller ID as part of your ISDN service.

Consult your service provider for the appropriate feature code to enter on your dialpad.

ISDN BRI terminals

Your Modular ICS allows connection of eight Basic Rate Access loops (four 2B+D channels) that can be used for fully digital connections to ISDN networks and devices. Loops are connections between the ICS and devices or between the ICS and the network.

Each loop provides two separate B-channels that can be used to make two simultaneous voice or data calls, or one data call and one voice call.

ISDN applications for BRI and PRI

ISDN terminal equipment delivers a wide range of powerful business applications:

Videoconferencing and video telephony

Video conferencing offers instant visual and audio contact between distant parties using either studio-based or desktop ISDN terminals.

Desktop conferencing

ISDN allows computer users in distant locations to share and edit any image, data or text file on their own computer screens while they discuss the information.

File transfer

The ISDN network allows you to transfer files containing data, text, images, data, or audio clips, faster and cheaper than with a conventional modem.

Telecommuting

Convenient retrieval, processing and storage of files is possible for the employee working at homeby using ISDN lines to give high-speed access to information resources at the office.

Group 4 fax

ISDN fax applications save money by increasing both transmission speed and the quality of resolution.

Remote LAN access

ISDN provides an affordable and fast means for employees at remote sites (at home or branch offices) to access local area networks (LANs).

Leased line backup

Essential backup for leased linescan be provided using ISDN as required, rather than duplicating costly permanent leased lines.

LAN to LAN bridging

Local area network (LAN) bridge/routers allow flexible interconnection between LANs using ISDN, with charges incurred only when information is actually transmitted.

Internet and database access

The fast call set up and high bandwidth of ISDN are ideal for accessing information services such as the Internet and databases.

Using alternate or scheduled services

There are three types of Services to make your Norstar system handle calls differently on different days and at different times of the day: Ringing service, Restriction service and Routing service.

Each of the three services, and the six schedules available to each service, are customized for you by your installer or customer service representative. They program which telephone is used to turn Services on and off, and display what Services are in use. This is called the cont rol telephone.

Preventing certain calls from being made

Restriction service prevents a user from making certain kinds of calls from a telephone or from lines that are available at the telephone. The restrictions are programmed by your installer or customer service representative.

Making additional telephones ring

Ringing service makes additional telephones ring for incoming calls on external lines. For instance, all incoming external calls can ring at a securitytelephone during the night. Or calls to one attendant can ring at another telephone during lunch. It does not suppress your normal ringing assignment.

Changing the lines used by outgoing calls

Routing service allows you to assign alternate routes to calls. In this way you can take advantage of lower costs available on particular routes on certain days and at certain times. Both the regular and alternate routes are programmed by your installer or customer service representative.

Turning Services on and off

The master control for how different services and their schedules are used by your system is in programming. There are three settings: Manual, Automatic and Off.

- Manual allows you to turn the service on and off at any time from a control telephone using a feature code.
- Automatic allows you to use the preassigned stop and start time for a service. You are able to start and stop the service by entering the appropriate feature code at a control telephone. If you select this setting, you use the start and stop times programmed by your installer or customer service representative.
- Off prevents the service from being activated.
  In the case of restriction settings and routing, this means that the Normal schedule will be in effect.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [↻] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Next] twice.

4. Press [Show] at Services.
5. Press [Next] until you see the Service you want to program.
6. Press [Show] and [Next] until you see the schedule you want to program.
7. Press [Show] and use CHANGE to select the setting that works best for your office: Off, Manual or Automatic.

Each schedule can have its own configuration of a Service which works independently of automatic start and stop times. For example, there may be a version of Restriction service called Night Schedule that prevents anyone from making long distance calls. But calling it Night Schedule does not mean it can only be used with a schedule. You can turn the Night Schedule for Restriction Service on or off as needed any time of the day or night. If you decide to run a service on a schedule, the system uses the start and stop times used for that schedule

An example of how to turn on a Service manually

You may have Ringing service, as your night service, set up to run according to the Night Schedule. You may decide you want that ringing arrangement to come into effect only when it is turned on and off manually.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [⌂] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Next] twice.

4. Press [Show] at `Services`. The display reads `Ringing Service▶`.
5. Press [Show]. The display reads `Sched:Night▶`.
6. Press [Show] and use `CHANGE` to set the Service to `Manual`.

Night Schedule for Ringing Service no longer follows the schedule but can be turned on and off by using the feature code and selecting Night Ringing. See *Turning Services on and off using feature codes* on page 192.

Turning Services on and off using feature codes

The master control for services is in programming. See *Turning Services on and off* on page 190. Day-to-day use of Services is controlled using the following feature codes.

[✆] 8 7 1	Turns on Ringing service. When used at the direct-dial telephone, it activates the alternate direct-dial telephone (extra-dial telephone).
[✆] # 8 7 1	Turns off Ringing service.
[✆] 8 7 2	Turns on Restriction service.
[✆] # 8 7 2	Turns off Restriction service.
[✆] 8 7 3	Turns on Routing service.
[✆] # 8 7 3	Turns off Routing service.

To turn a Service on:

1. Enter the appropriate feature code from a control telephone.
2. For Restriction and Routing service you have to enter the System Coordinator or Basic password.

3. Press NEXT to move through the schedules until the display shows the version of the service you want to be turned on.
4. Press OK to select the setting, or press QUIT to exit the feature without making any changes.

To turn a Service off:

1. Enter the appropriate feature code from a control telephone.
2. For Restriction and Routing service you have to enter the System Coordinator or Basic password.

Do not confuse activating Normal service with canceling a Service.

Setting a Service to Normal is not the same as canceling a Service using a feature code. If you set the Service to Normal, the normal version of a Service overrides any automatic schedule and remains in effect until you manually cancel it. If you cancel the Service, you return to the automatic schedule.

Viewing the active Services on a two-line display

When a Service is active, the control telephone display reads Services ON.

1. Press LIST. The display shows the first active Service and the schedule that is in use.
2. If there are several active Services, press NEXT to see them all.
3. Press EXIT to exit the feature.

Viewing the active Services on a one-line display

1. Press [feature] [8] [7] [0]. The display shows the first active Service.
2. Press [#] to move through the active schedule.
3. Press [end] to exit.

Displays

<Sched> Restr'n EXIT NEXT	You are viewing the active Services. Press [#] or NEXT to see the other active Services. Press [end] or EXIT to quit.
<Sched> Restr'n QUIT OK NEXT	The name of the current Restriction service schedule displays. Press [#] or NEXT to see the other Ringing service schedules. Press [answer] or OK to select the desired schedule.
<Sched> Ringing EXIT NEXT	You are viewing the active Services. Press [#] or NEXT to see the other active Services. Press [end] or EXIT to quit.
<Sched> Ringing QUIT OK NEXT	The name of the current Ringing service schedule displays. Press [#] or NEXT to see the other Ringing service schedules. Press [answer] or OK to select the desired schedule.
<Sched> Routing EXIT NEXT	You are viewing the active Services. Press [#] or NEXT to see the other active Services. Press [end] or EXIT to quit.
<Sched> Routing QUIT OK NEXT	The name of the current Routing service schedule displays. Press [#] or NEXT to see the other Routing service schedules. Press [answer] or OK to select the desired schedule.
<Sched> until * QUIT OK NEXT	Press [answer] or OK to select this schedule, [#] or NEXT to see the next available schedule, or [end] or QUIT to exit. If you select this schedule, it is in effect until the next automatic schedule takes effect.

No services ON	You have entered the Show Services feature code and there is no active Service.
Services ON LIST	There is a Service active in your system. Press * or LIST to view the active Services.

For other displays, see *Common feature displays* on page 227.

Services that have been turned on automatically are indicated by an asterisk (*) before the name on the display. You can neither manually activate nor cancel scheduled services, although you can override them by manually turning on another schedule.

The control telephone can override Services that are turned on and off according to a schedule at any time by entering a Services feature code, and selecting a different schedule. This override remains in effect until it is canceled. If you select a schedule with an asterisk (*), the next automatic service schedule comes into effect at the programmed time.

Direct-dial calls to a direct-dial telephone ring at the extra-dial telephone only when you enter the Ringing service feature code ([✆] [8] [7] [1]) at that direct-dial telephone. Note that only the extra-dial telephone is activated, not the actual Ringing service. This is the case unless that direct-dial telephone is a control telephone. The extra-dial telephone is designated by your installer or customer service representative.

Tip - Norstar provides six service schedules named Night, Lunch, Evening, Sched 4, Sched 5, and Sched 6. Your installer or customer service representative can change these names to suit your business.

Using passwords

Your passwords prevent unauthorized or unintentional changes to your Norstar system. To keep your telephone service secure, distribute the password only to selected personnel or make use of the basic password described below. Record your password in a secure place and change it periodically.

If you forget the administration or basic passwords, you cannot do any programming. Call your customer service representative to assign a new password.

The password is a one to six-digit number. It is advised to make your password at least six digits long for security reasons. If you press CHANGE but do not enter a new password, the existing password is erased. Anyone can then access programming without a password.

The default System Coordinator password is A D M I N, which is the same as 2 3 6 4 6.

One password cannot be a subset of another one. For example, you cannot have 123 and 12345.

Using a Basic password

In addition to a System Coordinator password, there is a Basic password. This allows you to delegate some of the duties of being a system coordinator to someone else without allowing access to sensitive programming.

The default Basic password is B A S I C or 2 2 7 4 2.

You can enter the Basic password after the following feature codes:

- [↩] [*] [*] [U] [S] [E] [R] to access User Preferences)
- [↩] [*] [*] [T] [I] [M] [E] to change the system time and date)

Because the Basic password can be used to change the time, you should give it out with care and change it when necessary for example, when an employee leaves the company. If restrictions, routing or other services operate on a schedule, changing the time can allow someone to bypass the programming.

Registration password

The Registration password is used to control the registration of Companion portables to the Norstar system. See the *Modular ICS 5.0 Companion System Coordinator Guide* for more information.

Changing passwords

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [↩] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Next] four times.
4. Press [Show] at `Passwords`.
5. Press [Next] until you see `Progrming pswds ▶`.
6. Press [Show].

7. Press Next until you see the name of the password you want to change.
8. Use Show, CHANGE and the dialpad to enter the new password. Press OK to accept the new password.

You cannot erase or eliminate the ability to program passwords.

Clearing a Call Log password

If an individual has forgotten their Call Log password, you can clear it in programming. The individual can then enter a new password from his or her telephone.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press ↻ * * 2 6 6 3 4 4.
2. Press 2 3 6 4 6 (the default System Coordinator password).
3. Press Next four times.
4. Press Show at Passwords.
5. Press Next until the display reads Call log pswds.
6. Press Show and enter the internal telephone number of the telephone where you want to clear the Call Log password.
7. Press Show, then press CLR to clear the password.

Using special telephones

Direct-dial

You can reach the direct-dial telephone by dialing a single digit. The direct-dial telephone is usually in a central location, such as at the desk of an administrative assistant or attendant. You can have up to five direct-dial telephones for your Norstar system. It is usually theprime telephone or the central answering position (CAP).

The direct-dial telephone can send up to 30 messages and can invoke Services to activate the extra-dial telephone.

You cannot forward calls to a direct-dial telephone that is outside your Norstar system. See *Making changes to Call Forward No Answer* on page 34.

Note: ISDN terminals cannot use the Direct-Dial digit to reach a Direct-Dial set.

Changing the direct-dial telephone assignments

Your installer or customer service representative sets up the direct-dial telephone.

You can change which direct-dial telephone a telephone is assigned to, or assign it no direct-dial telephone.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [Feature] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] at `Terminals&Sets`.

4. Enter the internal number of the telephone you want to program and press [Show]. The display reads `Capabilities`.
5. Press [Show].
6. Press [Next] until the display reads `D-Dial`.
7. Press CHANGE to select `Set1`, `Set2`, `Set3`, `Set4`, `Set5` or `None`.

Any number of telephones can be assigned to call the direct-dial telephone.

Tip - The digit you dial in order to get the direct-dial telephone to ring can be programmed by your installer or customer service representative.

The Norstar system cannot verify that the number you assign as an external direct-dial telephone is valid. Check the number before assigning it as a direct-dial telephone, and call the direct-dial telephone after you've assigned it in order to test it.

Hotline

A hotline telephone calls a preset internal or external telephone number when you pick up the receiver (or press [ ]).

Tip - Label the telephone to inform anyone using it that Hotline is active.

Bypassing a Hotline

Press a line button, or use the Pre-Dial or Automatic Dial feature before you pick up the receiver or press [ ] on a hotline telephone. See the *Telephone Feature Card* or see *Changing how you dial your calls* on page 68.

Making a telephone a hotline telephone

You can set up a telephone as a hotline.

Tip - A Hunt Group set DN can be specified as a Hotline telephone. For more information on Hunt Groups see *Programming Hunt Groups* on page 147.

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [ ] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] at `Terminals&Sets`.
4. Enter the internal number of the telephone you want to program and press [Show]. The display reads `Capabilities`.
5. Press [Show].
6. Press [Next] until the display reads `Hotline`.
7. Press `CHANGE` to select the type of call the hotline makes: `None`, `Intrnl`, or `Extrnl`.

- Internl assigns an internal number.

- External assigns an external number.

  If you select an external number, you can select the line on which the call is made:

  - the prime line
  - an external line
  - a line in a line pool, and a line pool access code
    For this type of line, you must specify the line pool access code.
  - a line selected by the routing table
    For this type of line, the number dialed is treated as a destination code and is routed according to the routing tables.

A prime line, line pool access codes, and access to a line pool can be programmed by your installer or customer service representative.

Control telephone

The control telephone allows you to place the telephones and external lines for which it has responsibility into and out of service schedules. See *Using alternate or scheduled services* on page 189.

Using Set lock

Set lock limits the ways in which you cancustomize your telephone. There are three levels ofSet Lock: Full, Partial, and None. None allows you to access allfeatures on your telephone.

Partial prevents:

- programming autodial buttons
- programming user speed dial numbers
- programming feature buttons
- moving line buttons
- changing the display language
- changing dialing modes (Automatic Dial, Pre-Dial, and Standard Dial)
- using Voice Call Deny
- saving a number with Saved Number Redial

Full, in addition to the restrictions outlined for Partial lock, prevents:

- changing Background Music
- changing Privacy
- changing Do Not Disturb
- using Ring Again
- using Call Forward all calls
- using Send Message
- using Trunk Answer
- activating Services

Changing Set Lock programming for a telephone

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [⌂] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] at `Terminals&Sets` and enter the internal number of the telephone you want to program.
4. Press [Show].
5. Press [Next] until the display reads `Restrictions`.
6. Press [Show] twice.
7. Press [Next] until the display reads `Set lock`.
8. Use `CHANGE` to select one of the three options: `None`, `Partial` and `Full`.

Using an auxiliary ringer

An auxiliary ringer is a separate device that has to be connected to Norstar.

Turning the auxiliary ringer for a telephone on or off

You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [⌂] [*] [*] [2] [6] [6] [3] [4] [4].
2. Press [2] [3] [6] [4] [6] (the default System Coordinator password).
3. Press [Show] at `Terminals&Sets`.
4. Enter the internal number of the telephone you want to program and press [Show]. The display reads `Capabilities`.
5. Press [Show].
6. Press [Next] until the display reads `Aux.ringer`.
7. Use CHANGE to select `Y` (Yes) or `N` (No).

Your installer or customer service representative can program the auxiliary ringer to start ringing for incoming lines as part of Ringing Service.

Using Host System dialing signals

You can access host systems, such as private branch exchanges (PBX) from Norstar by using host system signaling features (known as end-to-end signaling). These features either send a special signal to the host system or allow you to program delays required by host systems in external autodial or speed dial sequences.

Link

[Feature] 7 1

If your Norstar system is connected to a private branch exchange (PBX), you can use a Linksignal to access special features. On some telephones, Link is called FLASH.

The Link signal can be included as part of a longer stored sequence on an external autodial button or in a speed dial code. The Link symbol (F) uses two of the 24 spaces in a dialing sequence.

Preventing a telephone from using Link

Link can be restricted at individual telephones. You need the programming template found at the front of this guide. See *Getting started with Norstar* on page 13 for more information.

1. Press [Feature] * * 2 6 6 3 4 4.
2. Press 2 3 6 4 6 (the default System Coordinator password).
3. Press [Show] and enter the internal number of the telephone you want to program.
4. Press [Show].

5. Press [Next] three times. The display reads `Restrictions`.
6. Press [Show] twice.
7. Press [Next] three times. The display reads `Allow link:`.
8. Press CHANGE to choose `Y` (Yes) or `N` (No).

Tip - If your Norstar system is connected to a private branch exchange (PBX), program Link onto a memory button for one-touch access.

Pause

[c] [7] [8]

The Pause feature enters a 1.5 second delay in a dialing sequence on an external line. This is often required for signaling remote devices, such as answering machines, or when reaching through to PBX features or host systems.

You can program more than one pause in an external autodial or speed dial sequence.

The Pause symbol (`P`) uses one of the 24 spaces in a dialing sequence.

For pulse dialing, [*] inserts a 1.5 second pause into the dialing sequence.

Long Tones

The Long Tones feature allows you to control the length of a tone so that you can signal devices such as fax or answering machines which require tones longer than the standard 120 milliseconds.

1. While on a call, press [Feature] 8 0 8.
2. Press the dialpad buttons to produce the appropriate tones. Each tone sounds for as long as you hold down the button.

Long tones can be used on any call except a conference call. You can use internal lines of the Norstar system to activate a device connected to an analog terminal adapter (ATA) in another area of your office, or external lines to access devices outside the Norstar system.

Displays

`Long Tones:`	At the appropriate time, press any dialpad button. Hold each button down for as long as necessary. Press [Feature] or [Drop] to cancel Long Tones.

Programmed Release

[Feature] * 8 9

The Programmed Release feature performs same function as [Drop] in a programmed dialing sequence. When the system encounters Programmed Release in a dialing sequence, it stops dialing and hangs up the call.

The Programmed Release symbol (▪▪) takes up two of the 24 spaces in a programmed dialing sequence.

The system ignores any digits or commands that follow a Programmed Release in a programmed dialing sequence.

Run/Stop

[↩] [*] [9]

Run/Stop inserts a break point into a sequence of dialed numbers or characters used for automatic dialing. This may be necessary when you are connecting to a PBX or similar host system.

For example, you can call a company with an automated attendant that instructs you to dial the internal number you need. You can program the company number, a Run/Stop, then the internal number on one external autodial button. Press the autodial button once to dial the company number. When you hear the automated attendant, press the autodial button again to dial the internal number.

The Run/Stop symbol (■) uses one of the 24 spaces in an autodial or speed dial sequence.

You can include up to three Run/Stop commands in a dialing string. The system ignores a fourth Run/Stop, and any digits or commands that follow it in a programmed dialing sequence.

Wait for Dial Tone

[↩] [8] [0] [4]

Wait for Dial Tone causes a sequence of numbers to pause until dial tone is present on the line before continuing to dial. This is useful if you must dial a remote system and then wait for dial tone from that system before dialing the rest of your number.

The Wait for Dial Tone symbol (■) uses two of the 24 spaces in an autodial or speed dial sequence.

Displays

`Invalid code`	You have entered a code that can be used only in a programmed autodial or speed dial sequence, not on a call you dial directly. Programmed Release and Run/Stop are for use in programmed dialing sequences only.

Using pulse dialing for a call

If your external telephone lines use pulse dialing, you can temporarily switch to tone dialing by pressing # after selecting the line. Tone dialing allows your Norstar telephone communicate with devices and services that respond to tone signals, such as automatic switchboards, and fax or answering machines.

Using your Norstar system from an external location

You can use the lines and some of the features of a Norstar system from outside the system. You can do this over the public telephone network when you are away from the office, or you can call from another system, over a private network.

An example of how remote access works is a sales representative who spends a lot of time out of the office needs to make long distance calls to the European office. Your Norstar system has a leased line to Europe with reduced transatlantic charges. You provide the sales representative with a Class of Service password that gives access to the transatlantic line. The sales representative can then telephone into the Norstar system from a hotel, enter their Class of Service password, and use the leased transatlantic line to make calls.

Remote users can access Norstar lines, line pools, the page feature, and remote administration, if that features is enabled through Software Keys. The exact facilities available to you through remote access vary depending on how your installer or customer service representative set up your system.

Tip - If the loop start line used for remote access is not supervised, auto-answer does not function and the caller hears ringing instead of a stuttered tone or the system dial tone.

Controlling access to your Norstar system

It is important to maintain thesecurity of your Norstar system by limiting access to authorized users andlimiting those users to the features they need.

Remote users can make long distance calls.

Remember that a remote user can make long distance calls that are charged to your company and can make page announcements in your office.

Direct inward system access (DISA)

Control access to your Norstar system withdirect inward system access (DISA). Access to your Norstar system from the public telephone network should always be controlled with DISA. If your installer or customer service representative programs the line used for remote access to answer a call automatically and wait for a DISA internal number, callers hear a stuttered dial tone and must enter a Class of Service password before they are allowed into the system.

Class of Service (COS)

To control the level of telephone service a remote user can access, your installer can assign a remote filter and remote package to the line used for remote access. The remote filter restricts the numbers that can be dialed on the line, and the remote package restricts the use of line pools and the page feature. To change the restrictions for the line, the user can enter their Class of Service (COS) password when the system answers with DISA, or can dial the DISA internal number and enter their Class of Service password.

Maintaining security

To maintain the security of your system, the following practices are recommended:

- Warn anyone to whom you give the remote access number, to keep it confidential.
- Change Class of Service passwords often.
- Warn anyone to whom you give a Class of Service password, to remember it and not to write it down.
- Remove the Class of Service password of anyone who leaves your company.

Accessing Norstar remotely over the public network

1. Dial the Norstar systemremote access number.
2. When you hear a stuttered dial tone, enter your COS password.
3. Wait for the system dial tone.

To use the system remotely, you must use a telephone with tone dialing to call the system.

Remote access is possible only on lines that your installer or customer service representative programs to auto-answer calls.

To use features on a remote Norstar system, press * followed by the feature code. Even if you are calling from a Norstar system, press * instead of .

In certain situations, you may experience lower volume levels when using Norstar remotely.

Tones

You may hear some of the following tones while accessing Norstar remotely.

Tone	What it means
Busy tone	Dialed a busy line pool access code. You hear system dial tone again after 5 seconds.
Norstar system dial tone	You may use the Norstar remotely.
Fast busy tone	You have done one of the following • Entered an incorrect COS password. Your call is disconnected after five seconds. • Taken too long while entering a COS password. Your call is disconnected after five seconds. • Tried to use a line pool or feature not permitted by your Class of Service. You hear system dial tone again after five seconds. • Dialed a number in the Norstar system which does not exist. Your call is disconnected after five seconds.
Stuttered dial tone	Enter your COS password.

Using Class of Service (COS) passwords

Class of Service passwords permit controlled access to a system's resources both by internal and remote users. When you enter a Class of Service password at a telephone, the restriction filters associated with your Class of Service password apply, rather than the normal restriction filters. Similarly, when a remote user enters a Class of Service password on an incoming auto-answer line, the restriction filters and remote package associated with their Class of Service password apply, rather than the normal restriction filters and remote package. COS passwords are programmed by either your customer service representative or installer.

Users should memorize their COS passwords instead of writing them down. Typically, each user has a separate password. Several users can share a password or one user can have several passwords.

Individual COS passwords should be deleted when an employee leaves the company. Group COS passwords should be changed if one of the group members leaves the company.

Changing your Class of Service

You must enter a Class of Service password each time you want to make a call that is normally restricted on a line or telephone.

To change the restriction filters on a line or telephone:

1. Press [ ] 6 8 .
2. Enter your six-digit COS password.

COS passwords allow you to define individual passwords and determine the restriction filters, and remote package associated with each.

Tip - If you use your Norstar system from outside the office, you may have to enter a Class of Service password to gain access to the system. See *Using your Norstar system from an external location* on page 209.

Displays

	(Blank display) Enter your password. It is not shown on the display.
Invalid Password	You have entered a password that is not programmed into your system.

General System features

The following features are available for the entire Norstar system.

Set profile

Set profile allows you to view but not change the programming settings for each Norstar set. You can access Set Profile from any M7310, M7324, or T7316 set, even while you are on a call.

1. Press [feature] [*] [*] [S] [E] [T].
2. Enter the internal number of the telephone whose programming you want to review.
3. Use BACK, SHOW and NEXT to navigate through the settings.

Line profile

Line profile allows you to view but not change the programming settings for each Norstar line. You can access Line Profile from any M7310, M7324, or T7316 set, even while you are on a call.

1. Press [feature] [*] [*] [L] [I] [N] [E].
2. Enter the number of the line whose programming you want to review.
3. Use BACK, SHOW and NEXT to navigate through the settings.

Pulse or tone dialing

If your external lines use pulse dialing, you can switch temporarily to tone dialing to communicate with devices such as answering machines, to access the features that PBX systems may offer, or to use another Norstar system remotely.

Press [#] while on an active line. Once you hang up, your telephone returns to pulse dialing.

Disconnect supervision

When Disconnect Supervision is assigned to a line, the Norstar system monitors it to detect if an external caller hangs up. This allows the system to release the line for other uses. Your installer or customer service representative assigns disconnect supervision.

Hunt Groups

Your Norstar system allows you to establish Hunt Groups. 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 on Hunt Groups see *Programming Hunt Groups* on page 147.

Internal numbers

Each telephone in the Norstar system has its own internal number. The length of internal numbers in your system can be from two to seven digits on a non-expanded system, and three to seven digits on an expanded system. All numbers in your system are the same length. Your installer or customer service representative sets the length of internal numbers, called the DN length. The default DN length is three.

To find out your internal number, use the Button Inquiry feature ([ ] [*] [0]) on an intercom button. On the M7100 or the T7100 sets, Button Inquiry shows your internal number, followed by the function assigned to your single-memory button.

Line assignment

Any of the lines in your system can be assigned to any of your telephones. Your installer or customer service representative assigns lines to telephones in Configuration programming. Lines can be assigned to appear only, appear and ring, or to ring only.

Usually, only the lines that are appropriate for a particular person appear at their telephone. When a line is assigned to a telephone, it is automatically given a line button on that telephone, if a button is available. The M7100 and the T7100 sets do not have line buttons.

Calls on lines that ring but do not appear at a telephone are presented at an intercom button.

You may be able to answer a call on a line that does not appear or ring at your telephone. To pick up such a call, use Call Pickup, Call Park, or Trunk Answer.

A telephone may have buttons assigned for lines 001 to 003, but have only lines 001 and 002 programmed to ring as well. An incoming call on any of the three lines causes a line button indicator to flash, and the telephone can be used to answer the call. This is especially useful for people who monitor other telephone lines, but want only their own lines to ring.

Target line

A target line is used to route a call directly to a particular telephone or group of telephones. Target lines are used only for incoming calls. A single incoming line may provide connections to several different target lines. This allows each person or department in the office to have their own number without having a separate external line for each number.

Tip - The maximum number of target lines available in the fully expanded XC system is 192, and 128 on a DR 3.0 system.

Line pools

A line pool allows each telephone access to external lines from a group (or pool) of external lines. You can access such lines by pressing an intercom button and entering a line pool access code or by pressing a memory button programmed with the line pool feature code and a line pool access code.

Overflow call routing

If a call comes in for a target line that is busy, Norstar routes the call to the prime telephone for that target line. If there is no prime telephone assigned to the target line or if a call cannot be directed to a target line, the call goes to the prime telephone for the external line used.

Overflow routing for incoming calls is used with the Routing Service programmed by your installer. A Service must be active for overflow routing to be in effect. Overflow routing is not available in Normal service.

Tips - When you make a call and the programmed route is busy, you hear the expensive route warning tone and see a display indicating that an expensive route is being used. To avoid using the normal, expensive route, release your call.

Because overflow routing directs calls using different line pools, a call may be affected by different line filters when it is handled by overflow routing.

If you are not sure how the filters are assigned, refer to the *Programming Record* for a description of line filters and for a list of line assignments.

M7100 and T7100 sets

Because these sets do not have line buttons, they work differently from other Norstar telephones.

- Where other telephones can require that you select a line button to answer a call, on thethese sets you simply pick up the receiver.
- Where other telephones require you to select a line button to take a call off hold, you press ⌐ on the these sets.

- Also on these sets, you can answer a second call by pressing . Your active call is put on hold and you are connected to the waiting call. You can have no more than two calls at a time.

There is no Handsfree button on these sets. When applicable, special instructions for the sets are included with each feature description.

Memory buttons

Memory buttons are the buttons with indicators on the M7208, M7310, M7324, T7208, and T7316 sets. The M7310 also has dual buttons without indicators. There is a single memory button, without an indicator, on the M7100 and the T7100 sets.

Memory buttons can be used as answer, autodial, line, and programmed feature buttons. Line, intercom and answer buttons must have indicators.

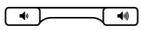
One-line display

The M7100, M7208, T7100 and T7208 sets have a one-line display. Other sets have a second line on the display which shows the functions of the three buttons directly below it. These indicators are known as display buttons.

Some display buttons, such as TRANSFER and ALL, are simply shortcuts which are not available on a one-line display.

Other display buttons, such as OK and SHOW, perform essential functions. For a one-line display telephone, use the following buttons instead of these display buttons.

Substitutes for display buttons

Display button	Dialpad button	Display button	Dialpad button
OK		CANCEL	#
QUIT		VIEW	#
ADD	*	OVERRIDE	#
SHOW	#	BKSP	

All displays listed in this book are shown as they appear on the two-line display.

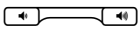
Prime line

Your telephone can be programmed to select an internal or external line or a line pool automatically whenever you lift the receiver or press . This is your prime line.

Private lines

A private line is exclusive to a particular telephone. Calls that are put on hold or left unanswered on a private line cannot be picked up at any telephone except the prime telephone.

Volume bar

The volume bar controls the volume of the receiver, telephone ringer, handsfree speaker, and headset. Press either end of the volume bar  to adjust the volume.

Troubleshooting

Using the alarm telephone

An alarm telephone displays Modular MICS system alarm codes, should they occur. Alarm telephones are Norstar telephones or Business Series Terminals with two lines displays that are specifically assigned by the installer to receive system alarm codes.

Reporting and recording alarm codes

If an alarm message appears on the alarm telephone display:

1. Record the alarm number.
2. Press TIME and record the time displayed.
3. Call your installer or customer service representative and report the alarm code.
4. After speaking to your installer or customer service representative, press CLEAR.

Displays

Alarm: 61-4-2 TIME CLEAR	Report this alarm and the time it occurred to your installer or customer service representative.

Testing the telephone

If you suspect something is wrong with a button, the speaker, the displays, or some other part of the telephone hardware, you can do a quick test to see which part of the telephone is broken.

Tip - Ensure that the function of a button matches its label by pressing [✆] [*] [0] and then the button to see its function.

You can end the telephone testing session anytime by pressing [☎] or [✆] unless you are testing those buttons. The test feature times-out after 30 minutes of no activity.

Testing the telephone display

Use a display test if you suspect that one of the indicators on the telephone is not working.

1. Press [✆] [8] [0] [5]. The display reads `Display test`.
2. Press TEST or [⌣] to go ahead with a display test.
3. Adjust the contrast for the telephone display so you are able to see the test results clearly. Enter a number to change the contrast or press DOWN and UP.
4. Press OK or [⌣] to go ahead with the test.

During the test, the display should be filled with solid, dark blocks and all the indicators next to the buttons on the telephone should be turned on. Any Busy Lamp Field (BLF) or CAP modules that are attached to the telephone should be completely lit. You lose any information that was showing on the BLF before the test started.

Pressing any button ends the test.

Testing the telephone buttons

1. Press [✆] [8] [0] [5], then [#] or NEXT.
2. Press TEST or [⌣] to go ahead with a button test.
3. Press button to see its function. If the button you pressed uses an indicator, it turns on when you test the button.
4. Pressing the [☎] button puts `Rls button` on the display briefly and returns you to the `Button test` display.

Testing the speaker in the telephone handset

The handset test is not available if you have a headset plugged into the telephone.

1. Press [✆] [8] [0] [5], then [#] or NEXT twice. The display reads `Handset test`.
2. Press TEST or [⌣] to go ahead with a handset test.
3. Pick up the handset and listen. Dial tone sounds through the handset at maximum volume. The volume is reset to maximum only while the test is going on.
4. Pressing any button or hanging up ends the test.

Testing the telephone headset

The headset test is not available to telephones that do not have a headset jack or a headset plugged in.

1. Press [✆] [8] [0] [5], then [#] or NEXT until the display reads `Headset test`.
2. Press TEST or [⌣] to go ahead with a headset test.

   You should hear dial tone through the headset. The volume is reset to a default level during the test.
3. Pressing any button ends the test.

Testing the telephone speaker

1. Press [✆] [8] [0] [5], then [#] or NEXT until the display reads `Speaker test`.
2. Press TEST or [⌣] to go ahead with a speaker test.

   A page tone sounds through the telephone speaker at the maximum volume. The volume returns to its previous setting when you end the test.
3. Pressing any button ends the test.

Testing the power supply to a telephone

1. Press [✆] [8] [0] [5], then [#] or NEXT until the display reads `Power test`.
2. Press TEST or [⌣] to go ahead with a power supply test.

You should see all the indicators on the telephone go on and hear ringing at maximum volume. When the test has ended, the display should briefly show `Power OK`.

The test lasts for five seconds or until you press a button.

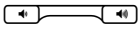
Common feature displays

You may see the following displays when you use a feature.

Access denied	Someone is already using programming, or the feature you are trying to use is not compatible with the configuration of the telephone or line.
Denied in admin	You have tried to use a feature, but you have not been given access to it in administration programming.
Feature timeout	You have taken more than 15 seconds to press a button in response to a display.
Inactive feature	You have entered a feature code that is used by an application program that your system does not have.
Invalid code	You have entered an invalid feature code.
Not available	You have tried to use a feature that is not available in the present setup of your Norstar system.
Set locked	You cannot use the feature you have chosen because your telephone is locked. See *Using Set lock* on page 202.
1234567890123... VIEW→ OK	Press # or press VIEW→ or ←VIEW to view a number that is too long to fit on the display. Press ⌣ or OK when you are finished.
S	This indicates a long distance call. (May be available with Call Display services.)
239>221	You are receiving an internal call from telephone 239 forwarded by telephone 221 or you have an Answer button for telephone 221 and an internal call from 239 is ringing on 221.
221 TRANSFER	You are connected to an internal call. Press TRANSFER to transfer the call.

221 calling	You are receiving a call from telephone 221.
Call 221? YES NO	You have received a Ring Again offer for a call to an internal telephone. Press the flashing internal line button or YES to call the number again. On the M7100 or T7100 set, just lift the receiver. Otherwise, press NO or wait 30 seconds for the Ring Again offer to expire. For an explanation of Ring Again, see *Using Ring Again* on page 72 .
Camped: 221 CALLBACK	The person to whom you camped the call did not answer it. The call has come back to you. Press the line button or CALLBACK to reconnect to the call.
Line001 TRANSFER	You are connected to an external call. Press TRANSFER to transfer the call.
Line001>221	You are receiving an external call forwarded from telephone 221 or you have an answer button for telephone 221 and an external call is ringing on that telephone.
Line001 transfer	The call on line 001 is being transferred to you by someone else in your Norstar system.
Line001 waiting	A camped call is waiting. Press the line button or use Call Queuing to answer the call. Press [ ] if you have an M7100 or T7100 sets.
No calls waiting	You tried to use Call Queuing but no call was ringing at your telephone.
No line selected	There is no call ringing at your telephone. If you have a flashing line button but your telephone is not ringing, press the line button to answer the call on that line.
Not in service	The telephone to which you directed a call is not in service or is otherwise unavailable. The call is returned to your telephone.
Parked call CALLBACK	No one answered the call you parked. The call has come back to you.

Pick up receiver	You have used the Call Queuing feature without picking up the receiver. Auto Handsfree has not been assigned to your telephone. You must use the receiver or [ ] to answer a call.
Priority> 221 BLOCK	You are receiving a priority call. If you are on another call, inform the person you are speaking to that you are about to put the call on hold. Press the flashing line indicator of the priority call or wait until the call connects automatically (eight seconds). The priority call goes through when you hear the next beep. Your active call is placed on Exclusive Hold. It is reconnected automatically when the priority call ends, unless you transfer the priority call, in which case you must press the line button of your original call to reconnect). Use DND ([ ] 8 5) or press BLOCK to reject a priority call.
Release a call	You have no free line buttons on which to receive a call. Release one of your current calls and try again to answer the incoming call.
Use line pool? YES NO	You have received a Ring Again offer for a line pool. Press the flashing internal line button or YES to use the line pool. On the M7100 and T7100 sets, just lift the receiver. Otherwise, press NO or wait 30 seconds for the Ring Again offer to expire.
Hold or release	You cannot program a feature button while you are on a call.
Release calls	You have tried to use a feature while you were on a call or had calls on hold. Release the call or calls, before using the feature.
Line in use	The line is in use. Make the call using normal methods or wait until the line is free.

`No button free`	You have tried to make, receive or pick up a call when no line button was available. Some features require you to have a button free. Releasing calls can free up line buttons.
`Make calls first`	The feature you tried to use requires you to be on an active call at your telephone. This display appears when information about a call has been cleared by a system reset.
`No free lines`	All the lines or line pools available to the telephone are in use. This display appears when you have tried to dial an external number or use a feature that conflicts with the lines, line pools or prime line used by the telephone. This must be corrected by your customer service representative or installer.
`No line selected`	The telephone has been set up to dial an external number on a prime line but the telephone does not have a prime line. This must be corrected by your customer service representative or installer.
`In use:221`	You have tried to program redirection while someone else is programming redirection. Only one person can program line redirection at a time.
`Incoming only`	The line you are trying to use for redirecting calls is for incoming calls only. Choose an outgoing line.
`9_` `QUIT BKSP OK`	Continue entering digits. Press  or BKSP to delete incorrect digits. Press or OK when you are finished.
`Invalid number`	You have entered an invalid line pool code or an invalid destination code.
`Line denied`	You have selected a line that is private to another telephone.
`Restricted call`	The destination you have chosen for line redirection is restricted.

Glossary

A

AbsorbLength: A setting that determines how many of the digits in a destination code will not be dialed by the system. AbsorbLength is assigned under Destination codes in Services.

access code: Different sequences of characters used to gain access to these Norstar features: Line pools, Call park, external lines, Direct-Dial telephone, Auto DN, and DISA DN.

alarm code: A number that appears on the alarm telephone's display, informing you that the ICS has detected a fault in the system.

alarm telephone: A telephone that is designated to receive reports of Norstar system problems. This function is usually assigned to a prime telephone, but this can be changed under Feature settings in System programming.

Analog Terminal Adapter (ATA): A device that permits the connection of analog telecommunication devices such as fax machines, answering machines, and single line telephones to the Norstar system. Programmed defaults for the ATA are automatically assigned by the Norstar system.

ANSI: American National Standards Institute.

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.

Autobumping: [ ] 8 1 5
A feature that determines what the system does with new Call Log items when your Call Log is full. When Autobumping is on, a new log entry causes the oldest entry to be deleted. If Autobumping is off, your Norstar system does not log calls when your log is full.

autodial button: A memory button that, if programmed, provides one-touch dialing of external or internal numbers.

autolog options: [ ] * 8 4
A feature that allows you to select the type of calls that are stored in your Call Log. You can choose to log calls that were not answered by anyone within the system, to log calls that were unanswered at this telephone but answered elsewhere in the system, to log all calls answered and not answered at this telephone, or to not have calls automatically logged.

Automatic Dial: A feature that allows you to dial without having to pick up the receiver or select a line. You must have a prime line to use Automatic Dial. Automatic Dial is assigned under Dialing options in Terminals and Sets programming.

Automatic Handsfree: A feature which automatically activates Handsfree operation when you make or answer a call. Automatic Handsfree is assigned under Handsfree in Terminals and Sets programming.

Automatic Hold: A feature that automatically places an active call on hold when you select another line.Automatic Hold (Full AutoHold) is assigned in Lines programming.

Automatic Privacy: See Privacy.

Automatic Daylight Savings Time: A feature that switches the system to standard or daylight savings time at pre-programmed times. It is turned on or off under Daylight time in System programming.

Automatic Telephone Relocation: A feature that lets a telephone retain its personal and system programming when it is plugged into a different Norstar modular jack. Automatic Telephone Relocation is enabled under Set relocation in System programming.

auxiliary ringer: A separate external telephone ringer or bell which can be programmed to ring when a line or a telephone rings. An auxiliary ringer may be programmed to ring only when the system is in a particular schedule. Programming of an auxiliary ringer is done in Services programming after the feature has been enabled under Capabilities in Terminals and Sets programming.

AWG: American wire gauge.

B

B channel (Bearer channel) An ISDN standard transmission channel used for voice or data transmission.

Base station (XC 3.0 only): 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 Companion Wireless)

Background Music: A feature that lets you hear music from the speaker of your Norstar telephone. It is available only if a music source has been attached to the ICS and the feature has been enabled under Feature settings in System programming.

Basic password: A one- to six-digit password that prevents unauthorized access to the most commonly-used telephone settings. The Basic password can be assigned and changed in Passwords programming.

Basic Rate Interface (BRI): A An ISDN interface which uses two B channels and a D channel (2B+D).

Bearer channel: See B channel.

BERT: See bit error rate test.

bit error rate test: A test that checks the transmission of data across the voice and data channels between the ICS and any Norstar telephone.

busy lamp field (BLF): A device with a liquid crystal display (LCD) panel of indicators that shows the status of up to 24 telephones in the Norstar system. The BLF attaches to the M7310 telephone.

button caps: Interchangeable plastic caps that fit over the buttons of Norstar telephones. They are used to indicate the features programmed onto each programmable memory button. Button caps are either pre-printed or have clear windows that allow you to insert labels.

Button Inquiry: [Feature] [*] [0]
With this feature you can check the function of each programmable button on your Norstar telephone.

C

Call Duration timer: [Feature] [7] [7]
A feature that lets you see how long you spent on your last call or how long you have been on your present call.

Call Forward: [Feature] [4]
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 Forward No Answer: A feature that forwards all calls arriving at your telephone to another designated telephone in your Norstar system after a specific number of rings. Call Forward No Answer is assigned under Capabilities in Terminals and Sets programming.

Call Forward On Busy: A feature that forwards all calls at your telephone to another designated telephone if your telephone is busy. This feature is assigned under Capabilities in Terminals and Sets programming.

Call Forward Override: An automatic system feature that lets you call someone and ask them to stop forwarding their calls to you.

Call Information: [Feature] [8] [1] [1]
Call Information allows you to display information about incoming calls. For external calls, you can display the caller's name, telephone number and the line name. For an internal call, you can display the name of the caller and their internal number. You can obtain information about ringing, answered, or held calls.

Call Information Trunk Cartridge: The Trunk Cartridge that allows you to connect loop start trunks with Call Information capability to the Norstar system.

Call Line Identifier (CLID): A Norstar set that displays the telephone number of the calling party.

Call Log: [Feature] [8] [1] [2]
Enter your Call Log to view a record of incoming calls. The log could contain the following information for each call: sequence number in the Call Log, name and number of caller, long distance indication, indication if the call was answered, time and date of the call, number of repeated calls from the same source, and name of the line that the call came in on. See Autobumping, Autolog options, and Call Log for further information.

Call Park: [Feature] [7] [4]
With this feature you can 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.

Call Park Callback: See Callback.

Call Park prefix: The first digit of the retrieval code of a parked call. This digit cannot conflict with the first digit of any existing DNs, Line Pool access codes, the Direct-dial digit, or the external line access code. The default Call Park prefix digit is "1". It may be set to none, in which case Call Park is disabled. Call Park prefix is assigned under Access codes in System programming.

Call Pickup Directed: [Feature] [7] [6]
A feature that lets you answer a call ringing at any Norstar telephone by entering the internal number of that

telephone before taking the call. Call Pickup Directed is enabled under Feature settings in System programming.

Call Pickup Group: See Pickup Group.

Call Queuing: [feature] 8 0 1
If you have several calls waiting at your telephone, you can invoke the Call Queuing feature to answer them in order of priority. Priority is given to incoming calls, followed by callback and camped calls.

Callback: If you park, camp, or transfer a call to another telephone and it is not answered there, it will ring again at your telephone. How long the system will wait before Callback occurs is set under Feature settings in System programming.

Camp-on: [feature] 8 2
A feature that lets you reroute a call to a telephone even if all the lines on that telephone are busy. To answer a camped call, use Call Queuing or select a line if the camped call appears on your telephone. Priority is given to queued calls over camped calls.

Camp timeout: The length of a delay before a camped call is returned to the telephone that camped the call. The length of delay is set under Feature settings in System programming.

Central answering position (CAP): An M7324 telephone that has been designated as a CAP under CAP assignment in System programming. The CAP provides backup answering and can be used to monitor the telephones within a Norstar system.

Central answering position (CAP) module: A module connected to an M7324 telephone and provides 48 additional buttons that can be used as autodial buttons or feature buttons. A maximum of two CAP modules can be connected to a single M7324 telephone.

Channel Service Unit (CSU): A device on the Digital Trunk Interface that is the termination point of the T1 lines from the T1 provider. The CSU collects statistics on the quality of the T1 signal. The CSU ensures network compliance with FCC rules and protects the network from harmful signals or voltages.

Class of Service (COS): The set of Norstar features and lines available to the user for a call. The Class of Service for a call is determined by the restriction filters and remote access packages assigned to the telephone in Lines programming. The Class of Service for a call can be changed by entering a six-digit Class of Service password. (Internal users cannot change their access to features with a COS password, only their restriction filters.) Class of Service and Class of Service passwords are assigned in Passwords programming. See Remote Access.

Class of Service password: [feature] 6 8
A six digit code that lets you switch from your current Class of Service to one that lets you dial numbers prohibited by your current Class of Service.

CLID set: See Call Line Identifier (CLID).

cold start: When all system programming is lost. This can happen because you have entered the Startup feature code [feature] * * S T A R T U P, or after a major event (such as an extended power failure).

Combo Cartridge: A cartridge that allows you to connect Trunk Modules and Station Modules to the ICS to expand the system's capacity for trunks

and telephones. Combo Cartridges provide six-port or 12-port expansion and Services functionality with each cartridge. (See also Expansion Cartridge.)

Companion Wireless: 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 portable telephone: Hand-held wireless sets which allow 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: [ ] 3
A feature allows you to establish a three-person call at your Norstar telephone.

contrast adjustment: [ ] * 7
Allows you to set the contrast level of your telephone display.

control telephone: A control telephone can place the lines for which it has responsibility in or out of a Service Mode.

The direct-dial telephone is a control telephone for directing calls to the extra direct-dial telephone. A telephone is made a control telephone and has lines assigned to it in Services programming.

COS: See Class of Service.

cursor: A short horizontal line that appears on the Norstar telephone display to indicate that characters can be entered using the dialpad.

D

D channel (Data channel): An ISDN standard transmission channel which is packet-switched, and is used for call setup, signalling and data transmission.

Data channel: See D channel.

Data Communications Interface (DCI): A Norstar device that lets you attach an RS-232 data device to the Norstar system.

data terminal: A device such as a modem that can be used to transfer data instead of sound over a telephone network. You cannot use Norstar programming to set up such devices. See the documentation that accompanies the device.

date: See Show Time or Time and Date.

defaults: The settings for all Norstar features when the system is first installed. Settings are changed from their defaults in programming. In this manual, default settings are shown in **bold** text.

Delayed Ring Transfer (DRT) to prime: After a specified number of rings, this feature transfers an unanswered call on an external line, to the prime telephone associated with that line. This feature is activated under Feature settings in System programming.

destination code: A two- to seven-digit number that the system interprets and then translates into the digits that you want dialed out. Both the code and its associated dialed digits are assigned under Routing service in Services programming.

DID trunk: See Direct Inward Dial trunks.

DID Trunk Cartridge: The Trunk Cartridge that allows you to connect DID trunks to the Norstar system.

dialing restriction: See Restriction filter.

dialing modes: [ ] [*] [8] [2]
This feature allows you to set the dialing mode of your telephone. Norstar supports three dialing modes: Automatic Dial, Pre-Dial, and Standard Dial. All three modes support on-hook dialing (meaning you can dial a call without picking up the receiver). The special features of the Automatic and Pre-Dial modes are available only when you dial on-hook.

Digital Trunk Interface: The Trunk Cartridge connects digital T1 AND ISDN trunks to the Norstar system.

Direct-dial: A feature that lets you dial a designated telephone in your Norstar system with a single digit. As many as five direct dial sets can be established. Each telephone in the system is assigned to one direct-dial telephone. There is a single, system wide digit for calling the assigned direct-dial telephone of any telephone. Direct-dial telephones are established in System programming. Telephones are assigned to a direct-dial telephone under Capabilities in Terminals and Sets programming.

Direct-dial #: A digit used system-wide to call the Direct-dial telephone. The digit is assigned under Access codes in System programming.

Direct-dial number: The digit used to call the direct-dial telephone.

Direct Inward Dial trunk: Trunks that allow direct inward dialing from the public network to the Norstar system.

Direct inward system access (DISA): The feature that lets remote users dial directly into the Norstar system and use Norstar features. Callers will hear stuttered dial tone and will be required to enter a Class of Service password to gain access to the system. See Remote Access.

directed pickup: See Call Pickup Directed.

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 221.

DISA DN: The received number assigned to the Norstar direct inward system access facility. If a caller dials a number that is assigned to the DISA DN, the caller hears stuttered dial tone and must enter a Class of Service password. Once the password is accepted, the caller hears system dial tone and can use Remote Access features. See Remote Access.

Disconnect Supervision: A setting that enables the Norstar system to detect if an external caller hangs up. Once an external caller hangs up, the Norstar system can disconnect its line. Disconnect Supervision is enabled under Trunk/Line data in Lines programming.

display: A liquid crystal display (LCD) on the Norstar telephone that guides you through feature operation and programming.

display button: The Norstar M7310 telephone and M7324 telephone are each equipped with three buttons located directly beneath the display. During feature operation or programming, some or all of these buttons may be used to provide further options. If an option is available, it is shown in the bottom row of the two row

display, directly above the corresponding display button. Display buttons are represented in this manual as underlined capital, such as OK.

DN: See Directory number.

Do Not Disturb: ✆ 8 5
A feature that stops calls from ringing at your telephone. Only Priority Calls will ring at your telephone. A line button will flash when you receive a call, but the call will not ring

DTMF: See Dual tone multifrequency.

dual tone multifrequency: Two distinct telephone signaling tones used for dialing.

DTI: See Digital Trunk Interface.

E

E&M/DISA Trunk Cartridge: The Trunk Cartridge that allows you to connect E&M trunks to the Norstar system. The E&M Trunk Cartridge also allows DISA access to the system by providing DTMF receivers for auto-answer trunks.

Emergency 911 dialing: The capability to access a public emergency response system by dialing the digits 9-1-1. State and local requirements for support of Emergency 911 DIaling service by Customer Premises Equipment vary. Consult your local telecommunications service provider regarding compliance with applicable laws and regulations.

emergency telephone: A single-line telephone (also referred to as a 500/2500 telephone) that becomes active when there is no power to the ICS.

evening schedule: See Schedules, and Services.

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.

exceptions: See Overrides.

Expansion Cartridge: A cartridge that allows you to connect Trunk Modules and Station Modules to the ICS to expand the system's capacity for trunks and telephones.

There are two Expansion Cartridge: a two-port Expansion Cartridge and a six-port Expansion Cartridge. (See also Combo Cartridge.)

external call: A call to a destination outside the Norstar system.

External Call Forward: See Line Redirection.

external code: The number you dial to get an external line. By default it is 9, but this can be changed under Access codes in System programming. You do not always need an external code. It is primarily to support the M7100 telephone and single line telephones using an Analog Terminal Adapter.

external line: A line on your Norstar telephone used for making calls to destinations outside the Norstar system.

external music source: See Music source.

external paging: A feature you can use to make voice announcements over an externally-mounted loudspeaker connected to the Integrated Communication System. The external speaker is not a Norstar component and must be supplied by the customer.

F

feature button: Many Norstar features are invoked by pressing the Feature button followed by a feature code. The feature button is also used to exit a feature.

Feature Cartridge: A replaceable cartridge containing the Norstar features. The Feature Cartridge is inserted into the ICS.

feature code: A number that is used to activate a particular feature.

Feature programming: [ ] [*] [3]
Allows you to program a feature code onto a memory button.

Forward: See Call Forward.

Full Autohold (on idle line): When this feature is on, if you select an available line, and then do something that selects another line, the first line is put on hold. Full Autohold is enabled under Trunk/Line data in Lines programming.

Full Handsfree: See Handsfree.

G

Ground Start trunk: Ground start trunks offer the same features as loop start trunks, but are used when the local service provider does not support disconnect supervision for the digital loop start trunks. By configuring lines as ground start, the system will be able to recognize when a call is released at the far end. Ground start trunks are provided only by a DTI.

Group Listening: [ ] [8] [0] [2]
A feature that allows you to have others in your office hear a caller through your phone's speaker. The caller hears you only when you speak into the receiver and cannot hear other people in the office.

You can cancel Group Listen for the current call. Group Listen is cancelled automatically when you hang up the Group Listen call.

H

Handsfree:
A feature you can use to make calls without using the telephone receiver. Full Handsfree is activated under Capabilities in Terminals and Sets programming. When it is activated, a Handsfree/Mute button is automatically assigned to the telephone.

Handsfree (HF) Answerback:
When activated, this feature automatically turns on the microphone at a telephone receiving a Voice Call so that the person receiving the call can respond without lifting the receiver. It is activated under Capabilities in Terminals and Sets programming.

Handsfree/Mute button: See Handsfree.

Hardware: A section in programming that shows what equipment has been installed in the ICS. This section is accessed by the installer.

headset: A head-mounted or ear-mounted telephone receiver that is used instead of the hand-held receiver. Headsets are not Norstar components and must be supplied by the customer.

Held (Line) Reminder: A Norstar telephone rings and displays the message `On hold: LINENAM` when an external call has been placed on hold for a certain period of time. The Held Line Reminder feature and Remind delay are set under Ftr settings in System programming.

HF Answerback: See Handsfree Answerback.

Hold button: [ ]
This button is used to suspend calls so that the person using the telephone can perform another task without disconnecting the caller.

Hook Switch Flash: See Link time.

Host system signaling: (Also referred to as end-to-end signaling.) Norstar telephones can access a remote system or dial a number on an alternate carrier by means of host feature activation, such as Link, Pause and Run/Stop.

Hotline: This feature automatically calls a pre-assigned number when the telephone's receiver is lifted or the Handsfree/Mute button is pressed. A Hotline number can be an internal or external number. Hotline is assigned under Capabilities in Terminals and Sets programming.

I

I/C: An abbreviation of intercom.

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.

Installer password: A one-to six-digit password that prevents unauthorized access to programming. The Installer password can be assigned and changed in Passwords programming.

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.

intercom button: A button that provides access to internal lines used for calls within a Norstar system and access to external lines through a line pool or external code. A telephone may be assigned zero to eight Intercom buttons. This is done under Line access in Terminals and Sets programming.

intercom keys: See Intercom button.

internal line: A line on your telephone dedicated to making calls to destinations inside your Norstar system. An internal line may still connect you with an external caller if you use it to access a line pool or to pick up a call using Norstar call handling features such as Call Park or Call Pickup Directed.

internal number: A number (also referred to as a Directory Number or DN) that identifies a Norstar telephone or device.

internal user: Someone using a Norstar telephone within a Norstar system.

ISDN: See integrated services digital network.

ISDN DN: A directory number (DN) used by ISDN terminal equipment connected to the ICS. The system uses a maximum of thirty ISDN DNs.

K

Key service unit (KSU): See ICS.

L

Last Number Redial: [ ] [5]
A feature that allows you to redial the last external number you dialed.

Fixed line:
A telecommunications line between two service points leased from a

communications carrier for private use, usually incurring a monthly service rate. Fixed lines setting is used solely by data modules.

Least cost routing: See Routing service.

line: The complete path of a voice or data connection between one telephone (or other device) and another.

Lines: A programming section that lets you assign settings to each trunk and external line. Lines programming can be done by an installer or a system coordinator plus. A system coordinator can program the name of a line.

Line number: A number that identifies an external line. The total number of lines depends on how many Trunk Modules are installed.

Line Pool: [feature] 6 4
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 part of a line pool under Trunk/ Line data in Lines programming.

Line Redirection: [feature] 8 4
A feature that allows you to redirect all calls on an incoming line to a destination outside the Norstar system. Once a line is redirected it cannot be answered within the Norstar system. The system may be set up to give a brief ring when a call comes in on a redirected line, under Capabilities in Terminals and Sets programming.

This feature differs from Call Forward in two ways. It redirects only external calls (not internal calls) and it redirects calls to destinations outside the system. Call forward redirects calls only to destinations inside the Norstar system. See Call Forward.

Link: [feature] 7 1
If your Norstar system is connected to a Private Branch Exchange (PBX), you can use a Link signal to access special features. The Link signal can also be included as part of a longer stored sequence on an External Autodial button or in a Speed Dial code. The Link symbol (LF) uses two of the 24 spaces in a dialing sequence.

Long Tones: [feature] 8 0 8
A feature that lets you control the length of a tone so that you can signal devices such as fax or answering machines which require tones longer than the standard 120 milliseconds.

Loop Start Trunk Cartridge: The Trunk Cartridge that allows you to connect loop start trunks to the Norstar system.

Lunch schedule: See Schedules, and Services.

M

M7100 telephone: A telephone with a single line display and one programmable memory button without an indicator.

M7208 telephone: A telephone with a single-line display and eight programmable memory buttons with indicators.

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 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.

Maintenance: A type of programming that is used to diagnose and repair problems in the Norstar system. Maintenance requires no programmable settings.

memory buttons: Buttons that can be programmed to dial frequently used features or numbers automatically.

message: A feature that allows you to send a message to another Norstar user. The Message feature also lets you know if you have any messages waiting and maintains a Message Waiting List to keep a record of your internal messages and your (external) voice mail messages.

Modular ICS NVRAM cartridge: A replaceable cartridge containing the Norstar features, commonly known as the Feature cartridge. The ICS NVRAM cartridge is inserted into the ICS.

Modular ICS ROM software cartridge: A PCMCIA cartridge containing the Norstar MICS 5.0 features. The ICS ROM software cartridge is inserted into the Modular ICS NVRAM cartridge.

Module: A component of the Norstar 0X32 key system. Includes the Integrated Communication System, Trunk Module and Station Module.

Module status: A heading in Maintenance programming that shows what types of Trunk Cartridges are connected and whether they're busy, disabled, or malfunctioning.

Move Line buttons:
[ ] [*] [8] [1]
A feature that allows you to move external lines to different buttons on your telephone.

Music source: A radio or other source of music can be connected to the Integrated Communication System to provide music for the Music on Hold and Background Music features. A music source is not part of the Norstar system and must be supplied by the customer.

N

Names: Names can be assigned to System Speed Dial numbers, external lines, telephones, and service schedules. This is done in programming. You can use up to sixteen characters to name a System Speed Dial number, and seven characters to name a telephone, line, or schedule. If a Name has not been assigned, the line number or DN will appear on the display instead of a name.

Network DN: A number supplied by the ISDN network service provider for ISDN terminal equipment.

Night schedule: See Schedules, and Services.

NT1 (Network termination type 1): A device used to connect the U interface of a service provider and the S or T interface (the customer's equipment). The Modular ICS can act as an NT1 when equipped with a BRI-U2 or BRI-U4 Card.

O

On hold: A setting, programmed under Feature settings in System programming, that controls whether external callers hear music, periodic tones, or silence when they are placed on hold.

OPS: Off premise station.

OPX: Off premise set.

overlay: See Programming overlay.

overflow: A setting in Routing Service that allows users to decide what path an outgoing call will take if all the lines used in a particular route are in use when the call is made.

Overrides: One component of a restriction filter. Overrides are numbers you can dial even if they are forbidden by a more general restriction. See Restrictions.

P

Page: [flash] 6 0
A feature you can use to make announcements over the Norstar system. You can make page announcements over the telephone speakers and/or external speakers.

Page Time out: A setting that controls how long a Page Announcement can last. It can be assigned under Feature settings in System programming.

Page zone: An area in the office that receives internal page announcements independently of the rest of the office.

Each page zone is identified by a number. Telephones are assigned to page zones under Capabilities in Terminals and Sets programming.

Park prefix: See Call park prefix.

Park timeout: The time before an unanswered parked call is routed back to the telephone that parked it. Park timeout is under Feature settings in System programming.

Password: A password is a specific sequence of digits that you enter to gain access to Norstar programming, to override dialing restrictions, or to use remote access with DISA.

Passwords: A programming section that lets you assign or change COS passwords, Call log passwords, or any of the programming passwords. Once you access the Passwords section, you can only modify the passwords for your level of programming.

Pause: [flash] 7 8
A feature that enters a 1.5 second delay in a dialing sequence on an external line. This is often required for signaling remote devices, such as answering machines, or when reaching through to PBX features or host systems. The Pause symbol (,) uses one of the 24 spaces in a dialing sequence. For pulse dialing, * inserts a 1.5 second pause into the dialing sequence.

PBX: private branch exchange.

Personal Speed Dial: [flash] * 4
Two-digit codes (71-94) can be programmed to dial external telephone numbers. Personal Speed Dial numbers are programmed for each telephone, and can be used only at the telephone on which they are programmed.

Pickup Group: [flash] 7 5
A telephone can be placed into one of nine call pickup groups. A call ringing at a telephone within a pickup group can be picked up at any other telephone within the same pickup group. A telephone is assigned to a pickup group under Capabilities in Terminals and Sets programming.

Pool: See Line pool.

portable telephone: See Companion portable telephone

Pre-dial: A feature that allows you to enter a number and check it on your telephone display before it is actually dialed. If the number is incorrect, you can edit it. The number is dialed only when you pick up the receiver or select a line.

Primary Rate Interface (PRI): An ISDN interface which uses twenty three B channels and a D channel (23B+D).

Prime line: The 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 under Line access in Terminals and Sets programming.

Prime Set (prime telephone): A telephone that provides backup answering for incoming calls on external lines. The prime telephone for a line will ring for any unanswered calls on that line. A prime telephone is assigned to a line under Trunk/Line data in Lines programming.

Priority Call: [✆] [6] [9]
If you get a busy signal when you call someone in your office, you can interrupt them for an urgent call. This feature is enabled for a telephone under Capabilities in Terminals and Sets programming.

Privacy: This feature determines whether a Norstar user may select a line in use at another telephone and join an established call. Privacy is enabled under Trunk/Line data in Lines programming, but can be turned on and off by users during individual calls.

Private line: See Private to.

Private network: A telephone network consisting of owned or leased telephone lines used to connect different offices of an organization independently of the public network.

Private to: Lets you select the telephone that will use the line exclusively. The line cannot appear on any other telephone, except the prime telephone for that line. Private lines cannot be placed into line pools. Private lines are assigned under Trunk/Line data in Lines programming.

Programmed release:
[✆] [*] [8] [9]
A feature that performs the function of the release button in a programmed dialing sequence.

programming: Setting the way the Norstar system will work. 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 in programming.

public line: An external line that can be assigned to any telephone and to many telephones. A line is assigned as Public under Trunk/Line data in Lines programming.

public network: The regular telephone network that connects most homes and businesses.

Public Safety Answering Point (PSAP): This is the first point of contact a caller reaches after dialling 911.

pulse/tone dialing: An external line setting for pulse or tone dialing. Pulse is the traditional method of dialing used by rotary-dial or push- button single-line telephones. Tone dialing allows telephones to communicate with other devices such as answering machines. Tone dialing is required to access the features that PBX systems may offer or to use another Norstar system remotely.

R

recall: See Link time.

receiver: The handset of a telephone.

receiver card: An abbreviated list of Norstar feature codes that is stored under the telephone receiver. The card is found on a perforated sheet that comes with a Norstar telephone.

Regression Code: Restores the previous system security number so that

previously applied UTAM Activation Codes and Portable Credit Codes can be reentered to restore full system operation. Also required in cases of system recovery. This code cannot be reused.

Remind delay: A feature that causes a telephone to beep and display the message `On hold: LINENAM` when a call has been on hold for a programmable period of time. This period is the Remind delay.

Remote access: The ability to dial into a Norstar system from outside the system and make use of selected Norstar features. The lines, features, and dialing capabilities available to a remote user are determined by the Class of Service. If the remote access line is answered with DISA, the user must enter a Class of Service password to gain access to the Norstar system's features.

remote access dial restriction: See Remote restriction.

Remote capability: A subset of Norstar features that are available to users connected through remote access.

Remote monitoring: A feature that lets an off-site technician with a PC call in and troubleshoot your system through the built-in modem.

Remote paging: This feature allows remote users to use the Norstar paging feature. Access to this feature is governed by the Class of Service for the call. See Remote Access and Class of Service.

Remote restriction: A restriction filter applied to a line in order to control which digits can be dialed during an incoming remote access call. It is the equivalent of a set filter for a remote user.

remote user: Someone who calls into a Norstar system from a telephone outside that system and uses Norstar features or lines. See Remote Access.

Restriction filter: Through a combination of restrictions and overrides, restriction filters prevent certain telephone numbers or feature codes from being dialed. Restriction filters can be applied to lines, sets, specific lines on a set, and to Class of Service passwords. The Norstar system can handle up to 100 restriction filters.

Restriction service: A Services section that allows you to assign alternate dialing filters to lines, telephones, lines on a particular telephone, and alternate remote filters to lines at specified times of the day and on specified days.

restrictions: One component of a Dialing filter. Restrictions are numbers you cannot dial when that dialing filter is in effect. See Exceptions.

Ring Again: [feature] 2
A feature that can be used when you can't get through to someone on your Norstar system because their telephone is busy or there is no answer. Ring Again instructs the Norstar system to inform you when they hang up or next use their telephone.

ring group: A setting under Services that lets you assign a number of different telephones to ring during one of the schedules. Up to 20 ring groups can be programmed by an installer or a system coordinator plus.

ring type: [feature] * 6
A feature that allows you to select one of four distinctive rings for your telephone.

ring volume: [feature] * 8 0
A feature that allows you to set the volume at which your telephone rings.

ringing service: A Services section that allows you to make additional

telephones ring at specified times of the day and on specified days.

Rls button: Ends a call in the same way that hanging up the receiver does. The Release button may also be used to end programming, Maintenance sessions, and feature operations.

Routing: See Routing service.

Routing service: A programming section that allows outgoing calls to be directed automatically based on the numbers a caller dials. For Norstar systems linked in a network, routing can create a transparent or coordinated dialing plan. It can also be used to direct calls to the least expensive lines according to a Services schedule (sometimes called least cost routing).

Run/Stop: [ ] [*] [9]
A feature that creates a break point in a programmed external dialing sequence. When you press a programmed key, the system dials the number up to the run/stop. When you press it again, the system dials the digits following the run/stop.

S

S loop: A type of loop provided by a BRI-ST Card. It connects the ICS to ISDN terminal equipment which uses an S interface.

SAPS: See station auxiliary power supply.

Saved Number Redial:
[ ] [6] [7]
A feature that allows you to save the number of the external call you are on (providing you dialed the call) so that you can call it again later.

Schedules: Any of six different sets of services that can be applied to your Norstar system. A schedule can be activated manually from a control telephone or activated automatically at specified times. See also Services.

Selective line redirection: See Line Redirection.

Service modes See Services.

Service Profile Identifier: See SPID.

Services: A programming section that lets you assign which telephones ring, which restrictions apply, and which call routing is used during any of six different schedules. There are three services: Ringing service, Restriction service and Routing service, all found in Services programming.

set: A telephone.

Set Copy: A programming section that allows you to copy programmable settings from one telephone to another of the same type. Set Copy provides two options: duplicating System Data and User Data, or duplicating System Data only. Set Copy does not provide the same copy capability as COPY, which is more selective of the settings that can be duplicated.

Set filter: See Restriction filter.

Set lock (telephone lock): This feature allows you to limit the number of features that may be used or programmed at a telephone. Full set lock allows very few changes or features, Partial set lock allows some changes and features, and No set lock allows any change to be made and any feature to be used. Set lock is assigned under Capabilities in Terminals and Sets programming.

Set relocation: See Automatic Telephone Relocation.

shift button: A small triangular button beside the dual memory buttons on the upper half of the M7310 telephone. You press the shift button to

store or access features on the top half of the dual memory buttons.

Show Time: [↻] 8 0 3
While on a call, accessing this feature lets you see the current date and time on the Norstar telephone display.

Software keys: A programming section used to enable the optional Remote monitoring feature. One setting provides a System ID, which an installer or system coordinator plus then uses to request three password keys from the Nortel Customer Response Center. Once these three passwords have been entered, the system will permit Remote monitoring.

SPID (Service Profile Identifier): A number that identifies devices connected to an ISDN network. A device may have more than one SPID depending on the number of channels it uses. SPIDs may be used to identify terminal equipment to the ICS, or to the service provider.

Startup programming: When a Norstar system is first installed and powered up, Startup programming must be performed before any programming can be done. Startup initializes the system programming to defaults.

Station: An individual telephone or other Norstar device.

Station Auxiliary Power Supply (SAPS): A device which provides power to a Norstar telephone that is connected more than 300 m (975 ft.) and less than 1200 m (3900 ft.) from the ICS, or to a CAP module.

Station Module: A module that allows you to connect up to 16 additional telephone to your Norstar system.

Station set test:
[↻] 8 0 5
A series of diagnostic tests for these components of a Norstar telephone: display, buttons, handset, speaker, and power.

System coordinator: The person responsible for customizing the Norstar system through programming and for helping co-workers use the Norstar system.

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

System coordinator plus: A system coordinator who also performs technical and maintenance functions for the Norstar system.

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

System coordinator plus programming: A combination of common and installer programming settings. Press [↻] * * C O N F I G, then S C P L U S to access System coordinator plus programming.

System coordinator programming: The programming settings that are most commonly changed once the Norstar system is installed. Press [↻] * * C O N F I G, then A D M I N to access System coordinator programming.

system data: An option in the Set Copy function. System Data refers to

the programmable system settings that apply to all telephones and lines.

System programming: A programming section that lets you assign and maintain certain settings on the Norstar system. System programming is performed by an installer or system coordinator plus.

System speed dial code: A Two-digit code (01 to 70) that can be programmed to dial a telephone number up to 24 digits long. System speed dial codes are programmed for the entire Norstar system under the System Speed programming heading.

System Startup: See Startup programming.

System Startup access code: To begin System Startup, press [✆] [*] [*] [S] [T] [A] [R] [T] [U] [P]. An Installer password is required before Startup programming can begin.

System ID: The System ID (or System Security number) can be accessed on any M7324 or M7310 telephone display by pressing [✆] [*] [*] [S] [Y] [S] [I] [D], or [✆] [*] [*] [7] [9] [7] [4] [3].

T

T1: Digital carrier system or line that carries data at 1.544 Mbps.

T loop: A type of loop provided by a BRI-ST Card. It connects the ICS to an ISDN network using an NT1.

Target lines: Lines used to answer incoming calls only. A target line routes a call according to digits it receives from an incoming trunk. They are referred to by line numbers in the same way as physical lines.

TE: See Terminal equipment.

TEI (Terminal Endpoint Identifier): A digit used to identify devices which are using an ISDN connection for D-channel packet service.

Telco features: A programming section that lets you specify the external telephone numbers that are dialed by the Message feature to retrieve voice messages, or to set up CLASS (CMS) services for lines and sets. Telco features are accessed by an installer or a system coordinator plus.

Terminal Endpoint Identifier: See TEI.

Terminal equipment (TE): A generic term for devices that connect to an ISDN network. Examples of ISDN TE are ISDN telephones, computers equipped with ISDN cards and video terminals.

Terminals and Sets: A programming section that lets you assign and change settings that apply to the telephones and other devices connected to the Norstar system. Terminals and Sets programming is performed by an installer or a system coordinator.

Time and date: A programming section that lets you manually change time or date. The time and date can also be changed by pressing [*] [*] [T] [I] [M] [E] and entering the Basic password or one of the programming passwords.

Transfer: [✆] [7] [0]
A feature that lets you redirect a call to another telephone in your Norstar system, over a network or outside your Norstar system.

Transfer Callback: If a transferred call is not answered after a specific number of rings, the call will return to the telephone that made the transfer.

The number of rings is assigned under Feature settings in System programming. Transfer Callback does not apply to calls transferred externally.

Trunk: The physical connection between the Norstar system and the outside world using either the public telephone system or a private network.

Trunk Answer: [feature] 8 0 0
A feature you can use to answer a call on any line that has an active Ringing service Service Mode, even if that line does not appear on your telephone. Trunk Answer is enabled in Services programming.

Trunk Module: A module that allows you to install additional Trunk Cartridges in your system to provide up to 12 additional trunks.

U

U interface: A two-wire ISDN interface used for both network connections and terminal connections to the ICS.

U-LT: A type of loop provided by a BRI-U2 or BRI-U4 Card. It connects the ICS to ISDN terminal equipment which uses a U interface.

U-NT loop: A type of loop provided by a BRI-U2 or BRI-U4 Card. It connects the ICS to an ISDN network.

Unsupervised line: A line for which disconnect supervision is disabled. If an external caller hangs up, the Norstar system does not detect the disconnection and does not hang up its line. See Disconnect Supervision.

User Data: User Data is an option in the Set Copy feature. User Data refers to the personal settings that are unique to an individual telephone, and are not programmed for the system. User Data is programmed at each telephone.

These settings, for example, include Personal Speed Dial and the assignment of programmable memory buttons.

User Filter: See Restriction filter.

User Preferences: a programming section that lets you assign autodialers, user speed dial codes, display contrast, and other settings to a specific telephone or person. You do not have to program these settings at the person's telephone. User preferences are assigned in Terminals and Sets programming.

User Speed Dial:
[feature] * 4
Two-digit codes (71-94) can be programmed to dial external telephone numbers. User Speed Dial numbers are programmed for each telephone, and can be used only at the telephone on which they are programmed.

V

Voice Call: [feature] 6 6
A feature you can use to make an announcement or begin a conversation through the speaker of another telephone in the Norstar system. The telephone you call will not ring. Instead, the person you call will hear a beep and then your voice. Their telephone will beep periodically to remind them that their microphone is open.

Voice Call deny: [feature] 8 8
A feature that prevents your telephone from receiving Voice Calls.

Voice message center: If you have subscribed to Call Display services you can receive visual Voice Message Waiting Indication, providing your telephone has a display. If you have Voice Message Waiting Indication, you can program the telephone numbers required to access up to five different Voice Message Centers. You can also program which of the five Centers is to be accessed by each specific line.

W

Wait for dial tone: [ ] 8 0 4
A feature that causes of sequence of numbers to pause until dial tone is present on the line before continuing to dial. The Wait for dial tone symbol( ) uses two of the 24 spaces in a dialing sequence. This feature requires a Services or Combo Cartridge.

wireless: See Companion.

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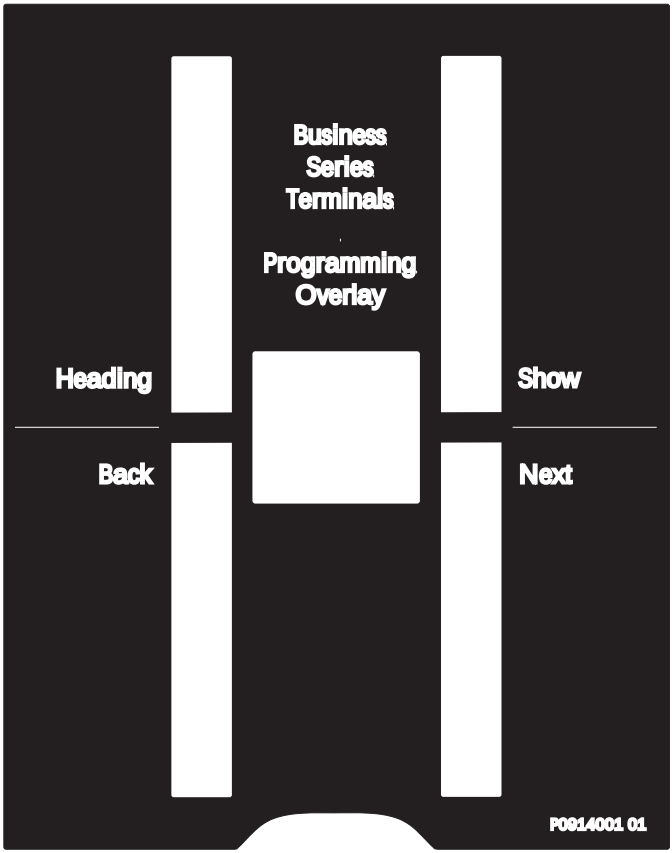
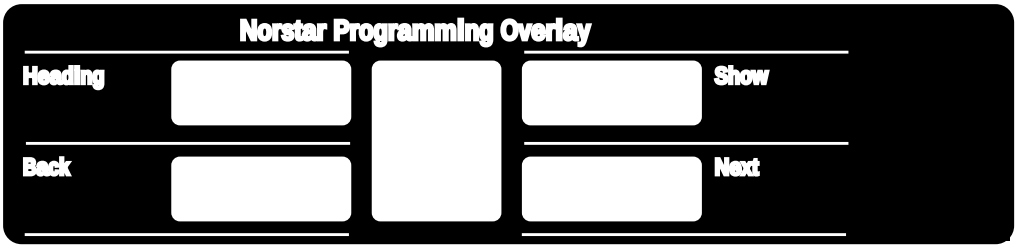
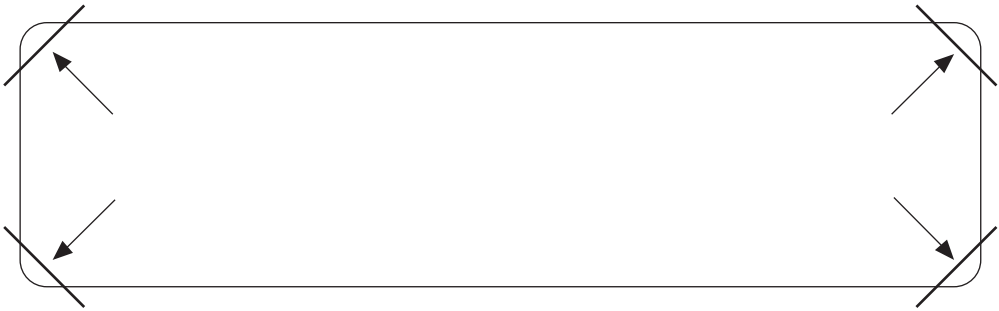
Backup programming overlays







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.