



Norstar

Modular Plus

**Programming and Feature Card for
ISDN Terminals**

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Norstar programming for ISDN terminals

If you have installed an S-loop, you must assign an extension number to the loop for the terminals to be able to make or receive calls:

- you can assign up to 8 extension numbers to one loop
 - each extension number can be assigned to one loop only
- Norstar uses the extension number assigned to the ISDN device as the terminal address to distinguish that device from other devices.

The range of extension numbers available for S-loops is 477-540 when the system is first installed. If the extension number range has been changed at System Startup, consult the Programming Record to determine the new range. By default, the first 32 (477-508) of these extension numbers are configured as cordless handset extension numbers, and the last 32 (509-540) are configured as ISDN extension numbers.

Assigning or removing ISDN extension numbers

1. Place the programming overlay on any M7310N or M7324N telephone.
2. Press * * 2 6 6 3 4 4 (CONFIG). The display shows **Password:**.
3. Enter (CONFIG). The display shows **Terminals&Extns.**
4. Press until the display shows **Hardware.**
5. Press . The display shows **Show module.**
6. Press . The display shows **Cards on CCU.**
7. Press . The display shows **Cdl-CCU:BRI-ST.**
8. Press . The display shows **Card type:.**
9. Press twice. The display shows **Loop 201.**
10. Press . The display shows **Type:.**
11. Press twice. The display shows **Extns on LP.**
12. Press . The display shows **Assign extns.**
13. Press . The display shows **Show extn#:**.
14. Press **SCAN** or enter an extension number. (You can also press to automatically display the first default ISDN extension number. This is useful if the system numbering plan has been changed at System Startup).
The display shows Availabl, Assigned (assigned to this loop), *Lpnnn* (assigned as the default extension of another loop), or Lpnnn (assigned to another loop).
15. Press **CHANGE** to assign the extension to the loop or to remove it.
16. Press to exit or to continue in programming.

Note: Before changing an S-loop to a T-loop, use the above procedure to remove any extension numbers that have been assigned to the S-loop.

To reassign an extension number registered to a cordless handset, the number must first be de-registered in **System Prgrming/**

Remote access/Companion/Registration. The extension number type of a Portable extension number (477-508) must be changed from Portable to ISDN, under System Programming/Remote access/Change extn type, before it can be assigned to an S-loop.

Although an ISDN S-loop can support up to 8 devices, the loop has a limit of 2 B-channels. An ISDN data or voice terminal uses 1 B-channel for an incoming or outgoing call. An ISDN video terminal uses 2 B-channels for an incoming or outgoing call. If both B-channels are in use, other devices on that loop will not be able to 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 on an S-loop must take into account your need for dedicated line access for the terminals on that loop.

Assigning or removing a loop extension number

After one or more ISDN extension numbers have been assigned to the S-loop, a Loop extension number can be assigned so that calls can be made from terminals with no terminal address on the loop.

Norstar uses the Loop extension number to distinguish the devices on that loop from devices installed on other loops. The Loop extension number associated with the call is also used by Norstar as the Outgoing ID. The Outgoing ID is the number that is displayed on all called terminals.

Choose one extension number assigned to the S-loop to be the Loop extension number.

You can also set the Loop extension number to **None**, if all the ISDN devices on the loop have terminal addresses and do not require a Loop extension number.

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 11. Press twice. The display shows **Extns on LP**.
 12. Press . The display shows **Assign extns**.
 13. Press . The display shows **Loop extn#:**.

14. Press **CHANGE** until the display shows the ISDN extension number you want to assign, or until the display shows **None** if you do not want to assign a Loop extension number.
15. Press **[Ris]** to exit or **[Next]** to continue in programming.

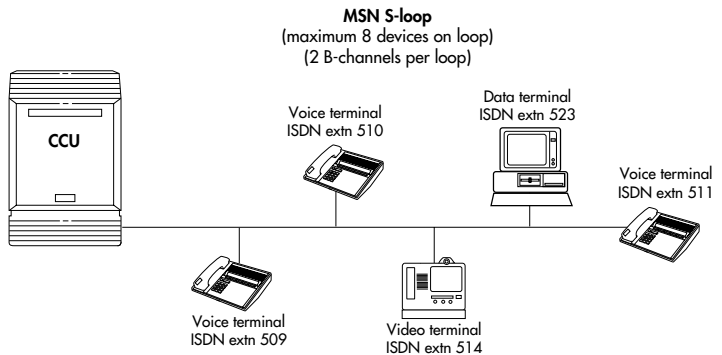
Multiple Subscriber Numbering (MSN)

Norstar supports MSN on ISDN S-loops. For MSN capability, assign an ISDN extension number (default range 509-540) for each of the ISDN devices on the loop, up to a maximum of 8.

Once an ISDN device is installed, programme the terminal to recognise the extension number assigned to it. The extension number is used by Norstar as the terminal address for that device.

The device must accept a terminal address of the same length as the system numbering plan (3 to 7 digits). See the instructions accompanying the device for information on how to programme it to recognize its assigned extension number.

All ISDN terminals on the loop that have not been assigned a specific extension number will ring for any internal or external call made to the S-loop.



Single Extension Numbering

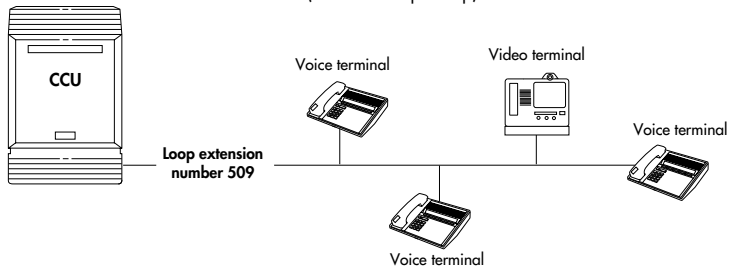
For single extension numbering, assign only one Loop extension number (default range 509-540) for the S-loop.

Once an ISDN device is installed, programme the terminal to recognise the extension number assigned to it. The extension number is used by Norstar as the terminal address for that device.

The device must accept an address of the same length as the system numbering plan (3 to 7 digits). See the instructions accompanying the device for information on how to programme it to recognize its assigned Loop extension number.

All ISDN terminals on the loop that have not been assigned a specific extension number will ring for any internal or external call made to the S-loop.

Single extension numbering (Loop extension number rings all terminals)
(maximum 8 devices on loop)
(2 B-channels per loop)

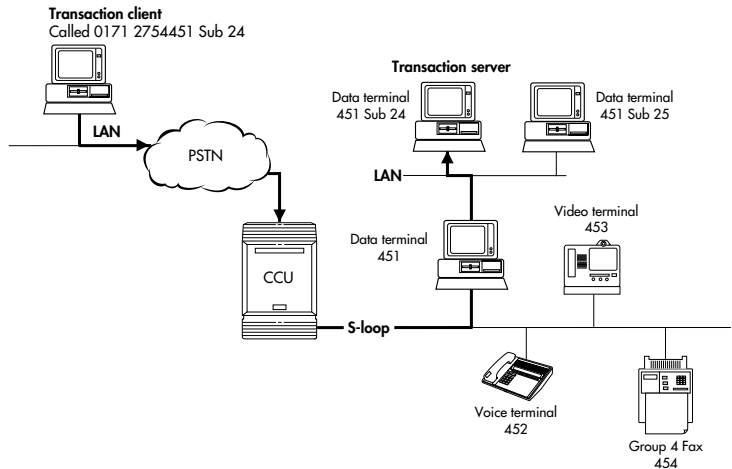


Sub-addressing

Norstar supports sub-addressing on S-loops. This allows you to have one ISDN extension number for several ISDN devices on the loop.

Once an ISDN device is installed, programme the device itself to recognize the sub-addressing number assigned to it. See the instructions accompanying the device for information on how to programme a sub-addressing number.

S-loop with Sub-addressing
(maximum 8 devices on loop)
(2 B-channels per loop)



Norstar features for ISDN Terminals

The Call Forward All Calls and Transfer features can be used from an ISDN terminal connected to Norstar.

On most ISDN terminals you need to press one or more keys to access feature services before you enter the Norstar feature code. To see what keys to press, consult the instructions that came with the ISDN terminal.

IMPORTANT: Although ISDN terminals may have TRANSFER and CALL FORWARD keys or display prompts, these keys will not activate the Norstar feature. Always use the appropriate procedure to activate feature services, then enter the Norstar feature code as described below.

Call Forward All Calls

Using the Call Forward feature

The Call Forward feature lets you forward your calls to another destination within or outside of your Norstar system.

1. Press [*] 4 [*].
2. Enter the number of the extension you want your calls forwarded to, followed by [#].

For external destinations, enter the line pool access code and the number of the telephone you want your calls forwarded to, followed by [#].

3. Press the SEND key, a line key, or lift then replace the handset.

Cancelling Call Forward

1. Press [#] 4 [#].
2. Press the SEND key.

Transfer

Using the Transfer feature

The Transfer feature lets you transfer a call to an internal or external telephone. Depending on how the Installer has programmed your system, you may not be able to transfer a call on one exchange line to another exchange line.

Depending on the type of ISDN terminal, you may have to press a service key to access feature services before using Call Transfer (consult the instructions that came with the terminal).

1. Press [*] 7 0 [*].
2. Enter the number of the extension you want to transfer the call to, followed by [#].
3. Press the SEND key.

Cancelling Transfer

1. Press [#] 7 0 [#].
2. Press the SEND key.