Meridian 1 and Succession Communication Server for Enterprise 1000

DECT

Installation Guide

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Revision history

September 2002

Standard, Release 6.00. This document has been updated to reflect support for Succession Communication Server for Enterprise (CSE) 1000, and for changes in technical content.

June 2001

Standard, Release 5.00. This version introduces information about: DMC8, and OTM DECT Manager. This version excludes retired DMC equipment, associated parts, and DECT Manager (for Windows) in compliance with Product Bulletin PBME484, and Product Bulletin PBCE71. This version introduces a new document title *Meridian/Succession Companion DECT* and the NTP number 553-3601-203.

This version replaces all previous versions.

March 2000

Standard, Release 4.00. This version introduces information about: DECT C4010 handset, C4010 Ex handset, C4020 handset, DECT Manager fill down for MSMN concentrated DCMs, MSMN implementation and operation.

July 1999

Standard, Release 3.00. This version introduces information about: DECT Manager enhancements to the DECT Manager Connections, User Administration, Login Module, System Parameter files, and DMC addressing; the C4610 base station, and the C4010 handset. This version also introduces changes that improve the on-line and printed document. This version arranges the handset subscription chapter in a more logical order.

July 1998

Standard, Release 2.00. This version introduces information about the C4040 handset.

June 1998

Standard, Release 1.00. The first release of the *Meridian Companion DECT Installation Guide.*

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About this document

This document is a global document. Please contact your system supplier or your Nortel Networks representative to verify that the hardware and software described are supported in your area.

How to use this guide

Complete the installation tasks in sequence. Start at the first page and proceed through the procedures until the end of this guide is reached.

Target audience

The DECT Installation Guide provides information for installers, site maintenance personnel, and administrators.

Identifying Nortel Networks PBX systems

The following systems are referred to in this guide as large systems:

- Option 51
- Option 61
- Option 71
- Option 81
- Option 51C
- Option 61C
- Option 81C

The following systems are referred to as small systems:

- Option 11
- Option 11E

- Option 11C
- Option 11C Mini
- Succession Communication Server for Enterprise 1000

CAUTION: Data loss

This symbol alerts you to a procedure that can result in a loss of data.

CAUTION: Electrostatic sensitive device

This symbol alerts you to a procedure that can result in equipment damage due to ElectroStatic Discharge (ESD).

DANGER: Electric shock

This symbol alerts you to the risk of serious injury, or death, caused by an electric shock.

DANGER: Serious injury

This symbol alerts you to the risk of serious injury, or death, caused by an immediate hazard.

Hardware installation introduction

Introduction

This chapter contains information on the following topics:

Before you begin. 13
Unpack and examine the equipment. 14

Reference list

The following are the references in this section:

- *DECT Provisioning Records* (553-3601-102)

Before you begin

Before the DECT system is installed, the following tasks must be completed:

- the site survey
- the deployment
- the installation of the house wiring for base stations

Before the DECT system is installed, the following information and materials are required:

- site work order
- list of equipment to be installed, showing quantities
- *DECT Provisioning Records* (553-3601-102)
- a marked-up floor plan
- a volt/ohm meter

- hand tools and hardware, such as
  - screwdrivers and pliers
  - spanners and socket wrenches
  - drill and drill bits
  - screws and screw anchors
  - punch-down tools for MDF and RJ-45 surface mount jacks
  - cable continuity checking equipment

Unpack and examine the equipment

Complete the following steps:

Table 1
Unpack and examine the equipment

Step	Action
1	Check the items shipped for discrepancies against the list of equipment required for the installation.
	If any items are missing, take the action that is appropriate for this situation.
2	Carefully unpack and examine the equipment for damage.
	If any items are missing, take the action that is appropriate for this situation.

Note: Store the equipment containers away from the installation area. Use the containers to return damaged equipment.

Install base station

Contents

This chapter contains information on the following topics:

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Connect the external housing wiring to the MDF. 32

Reference list

The following are the references in this section:

- *System Installation Procedures* (553-3001-210)

DECT base station rules

Be aware of the following rules:

- DC powered Meridian systems input voltage of at least –48 volts is required for maximum base station line length.
- One hundred ohms is the maximum line length for a C4610 high traffic base station. If the line measurement approaches 100 ohms, use an external power supply.
- If the exact location is not accessible, mount the base station as close as possible to the location in the site survey.

- Mount the base station in a vertical position, not horizontally, on a ceiling.
- Lead the base station cable directly away from the base station. Surplus cable can cause base station malfunctions.
- Place the base station where it is unlikely to be damaged. For example, a base station in a warehouse must be placed where it cannot be damaged by a forklift truck.
- Surrounding objects must not affect the base station. For example, a base station in a car park needs to be placed higher than any vehicle parked next to it.
- The minimum distance between two base stations must be greater than two meters.
- Do not mount base stations on large concrete or stone columns, air ducts or large metal objects.
- The external base station is powered from the line connection and does not require a mains connection.
- Use the external housing kit to mount any base station out-of-doors.
- Use the external housing kit for any base station subject to conductive pollution or dust that could become conductive due to condensation.

Compatibility

The C4600, C4610, and C4610E base stations are compatible with all DECT, Meridian 1, and Succession CSE 1000 software releases. The base stations are backward compatible.

C4610E base station

The C4610E 12-channel base station has an adaptor to support an external antenna. The external antenna increases the operating distance between the base station and the DECT handset. Nortel Networks recommends the use of a Huber & Suhner dual-planar directional antenna. Directional antennas are suitable for use in places such as large halls, outside parking lots, and between buildings. See Figure 1 on page 17.

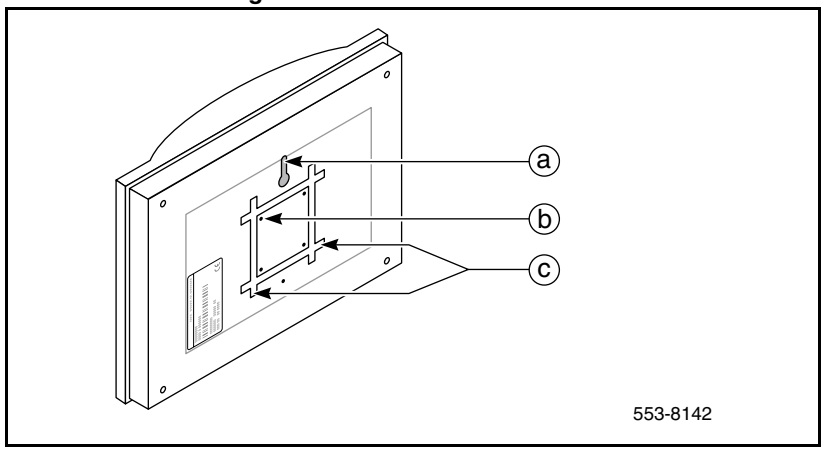
Note: The Huber & Suhner 8.0dBi and 10.5dBi antenna packages were tested with the C4610E base station. Other third-party directional antenna are available, but have not been tested with this base station.

Figure 1
A Huber & Suhner dual-planar directional antenna

Install C4600, C4610, and C4610E base stations

Consult the work order and marked-up floor plan to determine the position of the base station, then perform the steps in Table 2 on page 19:

Figure 2
Base station mounting details



a. screw mounting slot

b. screw and cable tie retaining washer hole

c. cable tie grooves

Table 2
Install C4600, C4610, and C4610E base station

Step	Action
1	Locate the base station mounting position.
2	Install the base station mounting screw.
	If required, drill the holes for a screw anchor and install the anchor.
3	Fasten the base station on the wall or a building protrusion.
	Hang the base station on the screw or use cable ties to mount the base station. Insert the cable ties in the vertical or horizontal grooves on the back of the base station. Secure the cable ties to the base station with the retaining washers and screws provided. Fasten the cable ties to the building protrusion.
4	If installing the C4610E base station, install the external antenna according to the manufacturer's instructions.

Install Base Station wiring to the MDF

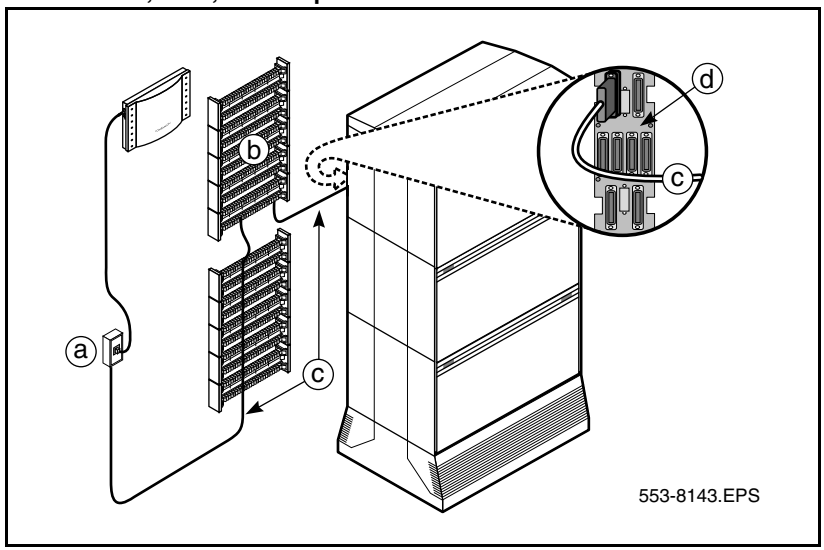
Consult the work order and marked-up floor plan to determine the base station to MDF connections, then follow the steps in Table 3 on page 21.

CAUTION: Service interruption

For maximum line length before signal degradation occurs, use UTP Cat 5 cabling between the base station and the shelf or cabinet. If the line length exceeds 100 ohms for the 4610 base station, an external power supply must be used.

The maximum distance when using external power with UTP Cat 5 cabling is approximately 1.7 km.

Figure 3
Base station, MDF, and I/O panel details



a. RJ-45 single surface mount jack

b. MDF

c. recommended UTP Cat 5 cable

d. IPE shelf I/O connector panel

Table 3
Install Base Station wiring to the MDF

Step	Action
1	Connect one end of the NTCW10 cable into the base station RJ-45 jack.
	Use the supplied cable.
2	Install the RJ-45 single surface mount jack.
	Use the NTCW10 cable length to measure the location of the RJ-45 surface mount jack.
3	Connect a UTP3/UTP5 cable from the MDF house side to the RJ-45 surface mount jack.
	Table 4 on page 22 shows the RJ-45 plug/socket to MDF connections. For DMC8s type NTCW00AB and NTCW01AB connect from base station 1 to base station 8. **Note:** To support base stations 5, 6, 7, and 8 on NT8D37 (AA and DC) IPE modules requires 24 tip and ring pair backplane to I/O panel connections. To re-cable NT8D37 from 16 pair to 24 pair, see *System Installation Procedures* (553-3001-210), Appendix C.
4	Connect the free end of the NTCW10 cable into the RJ-45 surface mount jack.
	END

Note: The BIX tip and ring connections shown in Table 4 on page 22 correspond to standard BIX designation. The first pair are labeled T0 and R0. See *System Installation Procedures* (553-3001-210), section *Planning and Designating the MDF*.

Figure 4
RJ-45 plug/socket connections to base station 1 MDF

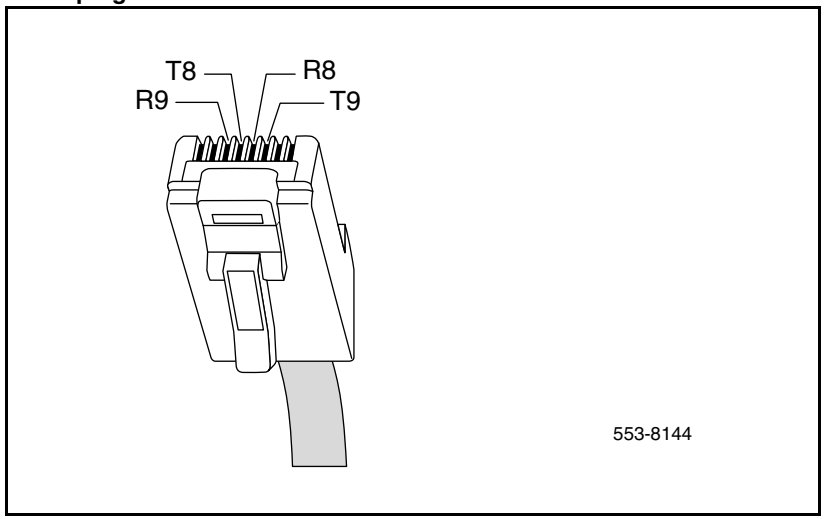


Table 4
Base station RJ-45 to BIX MDF connections (Part 1 of 2)

Base station number	RJ-45 pin out of the plug and socket	MDF connection
Base station 1	4	T8
Base station 1	5	R8
Base station 1	6	T9
Base station 1	3	R9
Base station 2	4	T10
Base station 2	5	R10
Base station 2	6	T11
Base station 2	3	R11
Base station 3	4	T12
Base station 3	5	R12
Base station 3	6	T13

Table 4
Base station RJ-45 to BIX MDF connections (Part 2 of 2)

Base station number	RJ-45 pin out of the plug and socket	MDF connection
Base station 3	3	R13
Base station 4	4	T14
Base station 4	5	R14
Base station 4	6	T15
Base station 4	3	R15
Base station 5	4	T16
Base station 5	5	R16
Base station 5	6	T17
Base station 5	3	R17
Base station 6	4	T18
Base station 6	5	R18
Base station 6	6	T19
Base station 6	3	R19
Base station 7	4	T20
Base station 7	5	R20
Base station 7	6	T21
Base station 7	3	R21
Base station 8	4	T22
Base station 8	5	R22
Base station 8	6	T23
Base station 8	3	R23

Install the base station external power supply

For the C4600, C4610, and C4610E base stations, an external power supply must be installed if the UTP Cat 5 line resistance exceeds 100 ohms.

Figure 5
C4610 base station external power

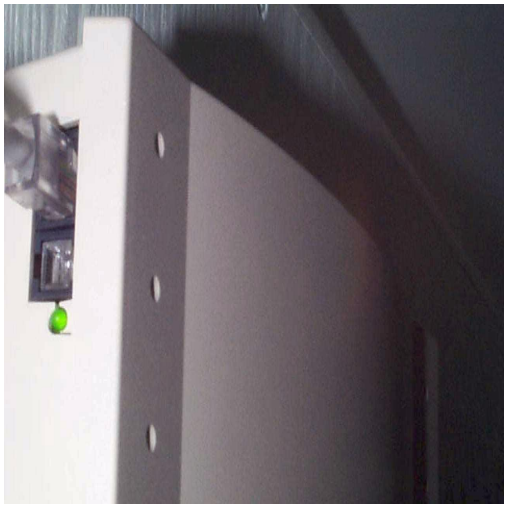


Figure 6
C4610E external power and external antenna connectors

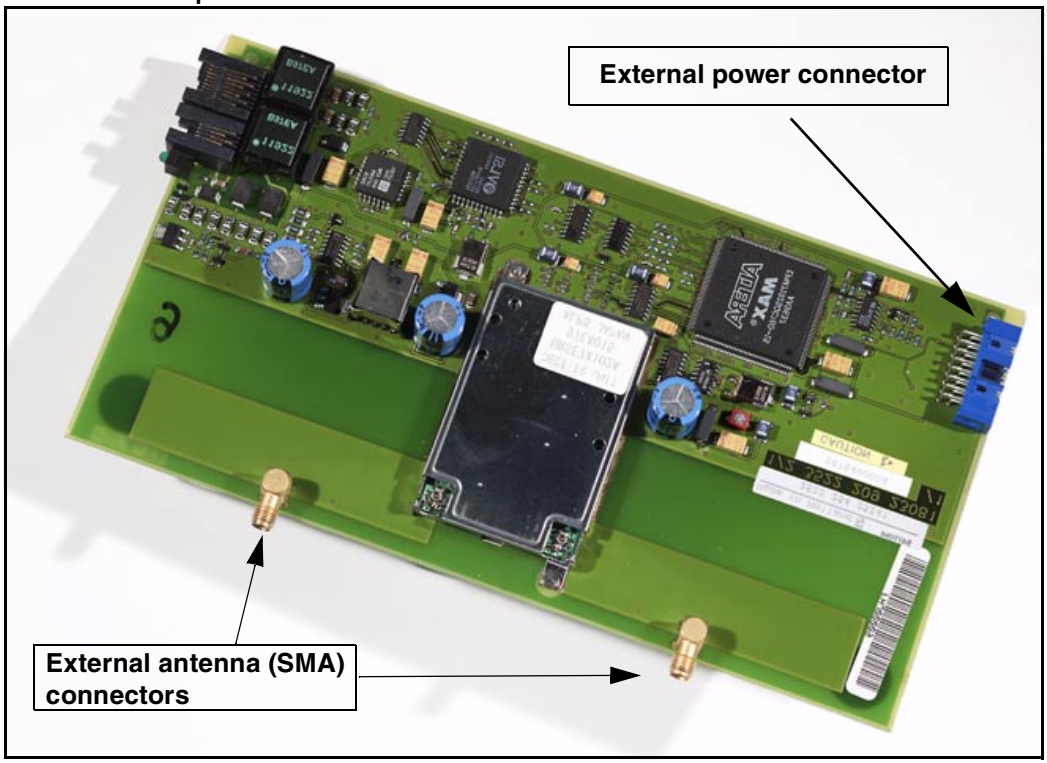


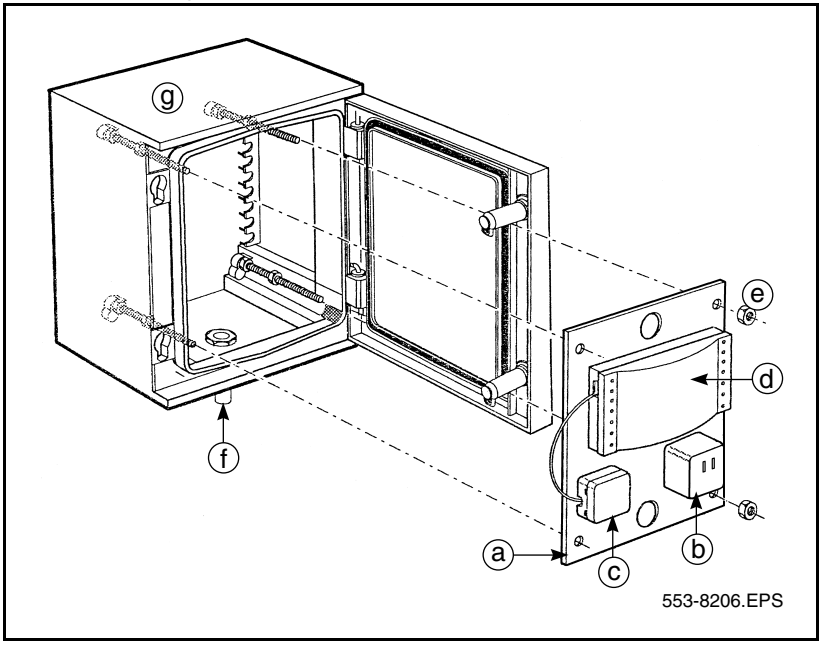
Table 5
Install the C4610 base station external power supply

Step	Action
1	Remove the plastic stopper from the C4610 base station power socket.
	The power socket is located next to the yellow LED.
2	Plug the external power supply jack into the C4610 base station power socket.
3	Connect the external power supply to the ac mains outlet.

Install base station in the external housing

Consult the work order, then perform the steps in Table 7 on page 31:

Figure 7
External housing details



a. component mounting plate

b. power transformer (not used)

c. cable connecting box

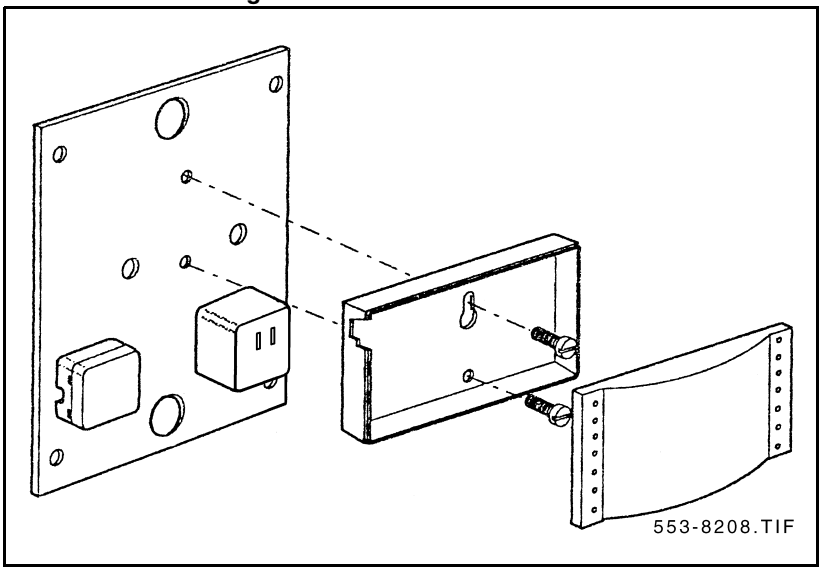
d. base station

e. plate retaining nuts

f. cable outlet

g. external housing cabinet

Figure 8
Base station mounting details



CAUTION: Equipment damage

The following procedure requires the removal of the base station cover. The circuit board is attached to the base station cover. Do not damage the circuit board or bend the two antennas on the bottom of the circuit board.

Table 6
Install the base station in the external housing

Step	Action
1	Open the external housing cover.
	Insert the external housing key and turn clockwise.
2	Remove the base station mounting plate.
	Unscrew the four nuts securing the plate and pull the plate from the cabinet.
3	Remove the base station cover. See the preceding caution note on page 28.
	Carefully pry one corner of the cover from the base station, then the other corner.
4	Remove the base station lower screw hole cover.
	Push the screw hole cover out of the base station.
5	Mount the base station to the housing plate.
	Affix with the screws as shown in Figure 8.
6	Replace the base station cover.
	Snap the cover in place.
7	Connect the connecting box cable to the base station.
	Snap the connecting box cable into the base station RJ-45 connector. Lead the cable away from the base station for optimal performance of the antennas.
8	Replace the base station mounting plate.
	Secure the plate with the four nuts.
	END

Attach the external housing to a wall

Consult the work order and marked-up floor plan to determine the position of the base station external housing, then perform the following steps:

Figure 9
External housing mounting lugs

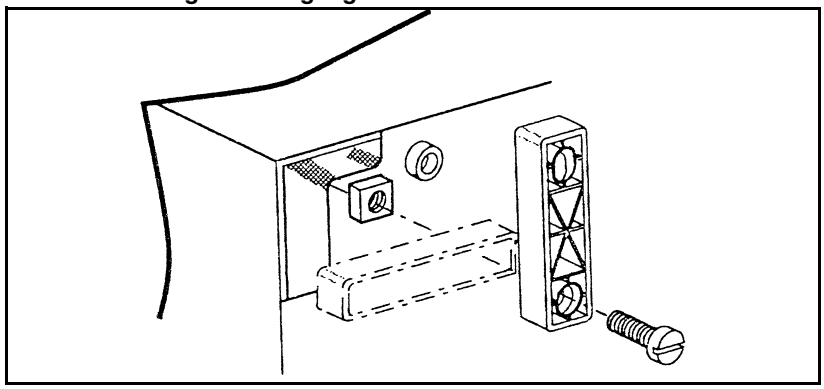
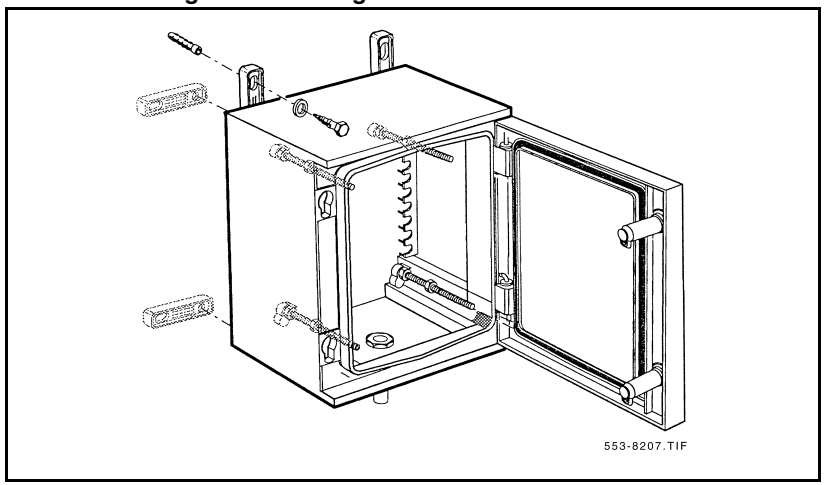


Figure 10
External housing wall mounting



DANGER: Electric shock

Do not drill into electrical wires that are embedded in the wall.

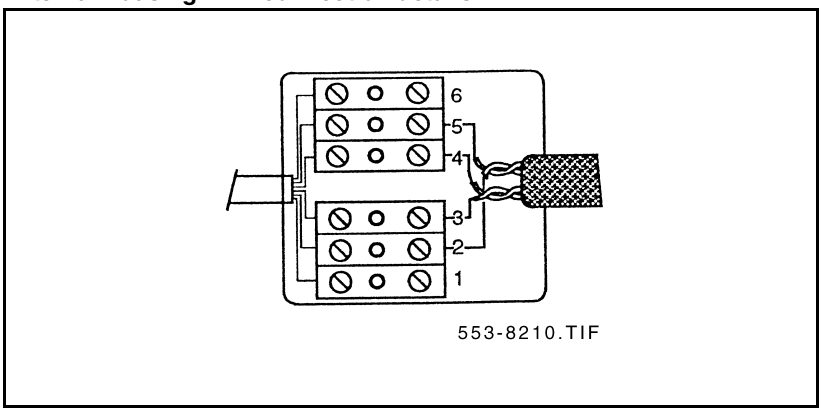
Table 7
Attach the external housing to a wall

Step	Action
1	Choose the vertical or horizontal mounting position.
	See Figure 9 on page 30 for details. Reposition mounting lugs if necessary.
2	Drill mounting holes in the wall.
	Use the drilling jig to align the holes.
3	Mount the external housing to the wall.
	See Figure 10 on page 30 for details. Use the screws, and appropriate inserts, to fasten the housing to the wall.
	END

Connect the external housing wiring to the MDF

Consult the work order, then perform the steps in Table 8:

Figure 11
External housing MDF connection details



Note: The BIX tip and ring connections shown in Table 9 on page 33 correspond to standard BIX designation. The first pair are labelled T0 and R0. See *System Installation Procedures* (553-3001-210), section *Planning and Designating the MDF*.

Table 8
Connect the external housing wiring to the MDF (Part 1 of 2)

Step	Action
1	Lead the building cable into the external housing.
	Route the cable through the cable outlet in the external housing.

Table 8
Connect the external housing wiring to the MDF (Part 2 of 2)

Step	Action
2	Secure the cable in the connecting box.
	Use a cable tie-wrap.
3	Connect the external housing wiring from the connecting box to the MDF.
	Note: See Figure 11 on page 32 and Table 9 on page 33 for wiring connections. For DMC8 types NTCW00AB and NTCW01AB, connect from base station 1 to base station 8. **Note:** To support base stations 5, 6, 7, and 8 on NT8D37 (AA and DC) IPE modules requires 24 tip and ring pair backplane to I/O panel connections. To re-cable NT8D37 from 16 pair to 24 pair, see *System Installation Procedures* (553-3001-210), Appendix C.
	END

Table 9
External housing base station to BIX MDF connections (Part 1 of 2)

External housing base station number	External housing connector box pin number	MDF connection
Base station 1	3	T8
Base station 1	4	R8
Base station 1	2	T9
Base station 1	5	R9
Base station 2	3	T10
Base station 2	4	R10
Base station 2	2	T11
Base station 2	5	R11
Base station 3	3	T12

Table 9
External housing base station to BIX MDF connections (Part 2 of 2)

External housing base station number	External housing connector box pin number	MDF connection
Base station 3	4	R12
Base station 3	2	T13
Base station 3	5	R13
Base station 4	3	T14
Base station 4	4	R14
Base station 4	2	T15
Base station 5	4	T16
Base station 5	5	R16
Base station 5	6	T17
Base station 5	3	R17
Base station 6	4	T18
Base station 6	5	R18
Base station 6	6	T19
Base station 6	3	R19
Base station 7	4	T20
Base station 7	5	R20
Base station 7	6	T21
Base station 7	3	R21
Base station 8	4	T22
Base station 8	5	R22
Base station 8	6	T23
Base station 8	3	R23

Install additional IPE shelves or small system cabinets

Contents

This chapter contains information on the following topics:

Install additional IPE modules. 36
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Install IPE module wiring to the MDF. 41
Install small system cabinet wiring to the MDF. 45

Reference list

The following are the references in this section:

- *Option 11C Planning and Installation* (553-3021-210)
- *System Installation Procedures* (553-3001-210)
- *Option 11C Mini Planning and Installation* (553-3021-209)
- Succession CSE 1000 – *Installation and Configuration Guide* (553-3023-210)

Install additional IPE modules

Consult the work order and marked-up floor plan to determine if additional IPE modules are required, then perform the steps in Table 10:

Note: If unfamiliar with this process, refer to *System Installation Procedures* (553-3001-210).

Table 10
Install additional IPE modules (Part 1 of 2)

Step	Action
1	Remove the IPE module front and rear covers.
	Remove the covers from the module on which the DECT module will sit.
2	Remove the air grills.
	Release the air grill tabs or Southco® fasteners and lift the air grill off.
3	Remove the top cap.
	Loosen and remove the three front and rear top cap bolts. Lift off top cap.
4	Unfasten the column LED.
	Remove the LED bracket bolts.
5	Remove the I/O back panel cover.
	Unlock the four Southco fasteners.
6	Disconnect the column LED.
	Unlock LED wiring connector latches on the module backplane. Detach the LED wiring connector.
7	Disconnect the thermal sensor connector.
	Unlock the sensor connector latches on the 36 pin orange/brown colored connector, located to the left of the LED connector. Unplug the sensor connector.
8	Remove the EMI perf panel.
	Lift directly up.

Table 10
Install additional IPE modules (Part 2 of 2)

Step	Action
9	Place the new module on top of the column.
	Keep hands and fingers out from under the module when placing the module on top of the equipment column.
10	Connect the new module wiring.
	Install the sensor connector of the new module into the vertical connector housing of the module below.
11	Secure the new module.
	Insert the five bolts and lock washers into the base of the new module. Tighten the bolts into the original module.
12	Attach the power cable.
	Connect the ribbon cable of the new module to J2 of the module below.
13	Re-install the EMI perf panel and the LED.
	Install the LED connector and the sensor connector on the new module.
14	Replace the air grills and covers.
	Reverse the procedure for steps 1 to 4.

Install additional small system cabinets

Consult the work order and marked-up floor plan to determine if additional small system cabinets are required, then perform the following steps:

Note: If not familiar with this process, refer to *Option 11C Planning and Installation* (553-3021-210).

CAUTION: Electrostatic sensitive device

Wear a properly connected antistatic wrist strap to handle circuit cards. Only touch the edges. Do not touch the contacts or components. Set the cards on a protective antistatic bag. If an antistatic bag is not available, hand-hold the card, or set it in a card cage unseated from the connectors.

Table 11
Install additional small system cabinets (Part 1 of 3)

Step	Action
1	Mount the expansion cabinet.
	For a wall mount, draw a level line, rest the bottom of mounting bracket on the line, screw the mounting bracket to the wall. Hang the cabinet on the mounting bracket. Fasten the bottom of the cabinet to the wall. For a floor mount, install the cabinet on the pedestal. Position the cabinet according to the equipment layout plan.
2	Remove the drip tray.
	Slide drip tray outward.
3	Install ground wire.
	As a minimum, use #6AWG ground wire. Tag the main ground connection at the ground source to ensure it is not accidently discontinued. Test the ground.
4	Install the power supply.
	Wear the anti-static wrist strap. Turn power supply circuit breaker to OFF. Check the option switches on the power supply.

Table 11
Install additional small system cabinets (Part 2 of 3)

Step	Action
5	Install the fiber routing guide.
	Mount the guide in the area below the circuit cards and secure with the existing screws.
6	Connect the fiber optic cable or copper cable as applicable.
	For the A0618443 cable, remove the two plugs on the Fiber Receiver card. Connect the cable to the card so the “V” shaped groove is facing inward. For the glass fiber optic cable, remove the plug on one connector on the card, and the cap on the cable. Insert the connector and secure with a half turn clockwise. Wind the excess cable on the storage device.
7	Insert the circuit cards in the expansion cabinet.
	Refer to “Install DMC8-Es” Table 22 on page 58 and the work order for card placement.
8	Install or expand the MDF cross-connect terminal.
	Consult the marked-up floor plan for the MDF addition location.
9	Install cables from the cabinet to the MDF cross-connect.
	Consult the marked-up floor plan for the cable location.
10	Install PFTU and SDI cable if required.
	Consult the marked-up floor plan for the cable location.
11	Replace the expansion cabinet drip tray.
	Slide the drip tray inward.
12	Remove the main cabinet cover and drip tray.
	Undo the catches on the main cabinet and slide the drip tray outward.
13	Install a Fiber Routing guide in the main cabinet, if required.
	The Fiber Routing guide is secured to the under side of the bottom card rail and uses the screws to the left of the CPU card label and under the card 2 label.
14	Turn the power supply circuit breaker to OFF.

Table 11
Install additional small system cabinets (Part 3 of 3)

Step	Action
15	Unseat the NTDK20 SSC card and install a Fiber Expansion daughterboard.
	Connect the Fiber Expansion daughterboard to the connector “Fiber 1” if this is the first expansion cabinet, or to “Fiber 2” if this is the second expansion cabinet.
16	Connect the fiber optic cable to the Fiber Expansion daughterboard.
	For the A0618443 cable, remove the two plugs on the Fiber Receiver card. Connect the cable to the card so the “V” shaped groove is facing inward. For the glass fiber optic cable, remove the plug on one connector on the card and the cap on the cable. Insert the connector and secure with a half turn clockwise. Wind the excess cable on the storage device.
17	Re-seat the NTDK20 SCC card.
18	Route the fiber optic cable through the Fiber Routing Guide.
19	Set the circuit breaker in the main cabinet to ON.
	The system reloads. Check time and date using LD 2.
20	Re-install the drip tray in the main cabinet.
21	Re-install the main cabinet cover.

END

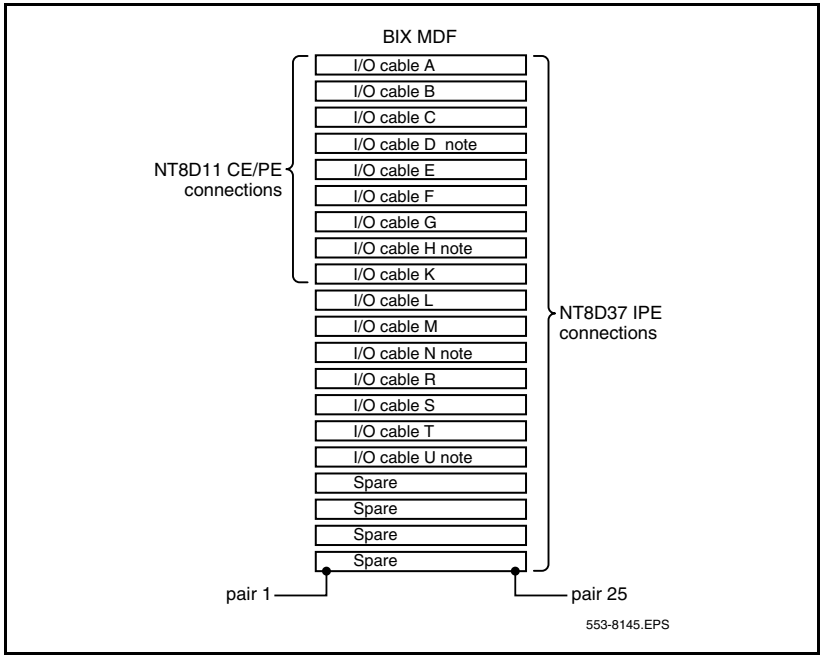
Install IPE module wiring to the MDF

Consult the work order to determine the layout of the module I/O panel to MDF cabling route, then perform the steps in Table 12 on page 43.

CAUTION: Service interruption

The existing MDF cabling can be used; however, UTP Cat 5 – NTCW15, NTCW16, or NTCW17 MDF to PBX cabling is recommended, as it provides a greater line length before signal degradation occurs.

Figure 12
IPE I/O cable to BIX MDF termination



Note: In NT8D11AC or NT8D11DC CE/PE and NT8D37AC or NT8D37DC IPE modules, these BIX connectors are not used. However, they are used in the NT8D11BC or NT8D11EC CE/PE and NT8D37BA or NT8D37 EC IPE modules.

Figure 13
IPE I/O cable to Krone MDF termination

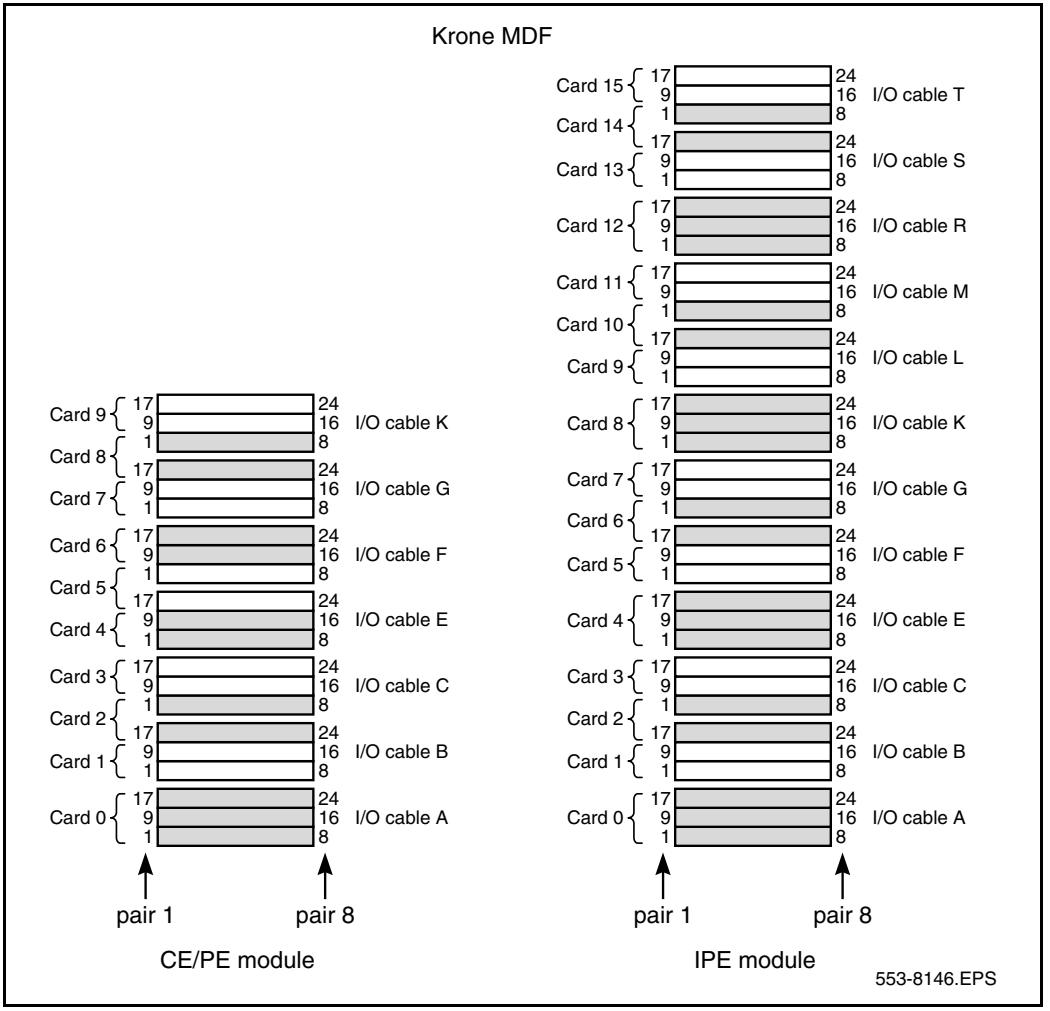


Table 12
Install IPE module wiring to the MDF

Step	Action
1	Identify the UTP Cat 5 twenty-five pair MDF cable.
	Label both ends of the cable with the IPE module number and the I/O panel letter designation.
2	Connect the IPE or cabinet end of the cable.
	Insert the cable's Amphenol® connector into the appropriate I/O panel connector. See Table 13 on page 43.
3	Run the cable to the MDF.
4	Terminate the cable on the MDF.
	For BIX MDF, refer to Figure 12 on page 41 to locate the BIX connectors and Table 13 on page 43 to locate the cable color code. For Krone MDF, refer to Figure 13 on page 42 to locate the Krone connectors and Table 13 to locate the cable color code.
	END

Table 13
Color code for 25 pair cable (Part 1 of 2)

Amphenol pin number	Tip	Ring
	Body/Band	Body/Band
26/1	White/Blue	Blue/White
27/2	White/Orange	Orange/White
28/3	White/Green	Green/White
29/4	White/Brown	Brown/White
30/5	White/Slate	Slate/White
31/6	Red/Blue	Blue/Red

Table 13
Color code for 25 pair cable (Part 2 of 2)

Amphenol pin number	Tip	Ring
	Body/Band	**Body/Band**
32/7	Red/Orange	Orange/Red
33/8	Red/Green	Green/Red
34/9	Red/Brown	Brown/Red
35/10	Red/Slate	Slate/Red
36/11	Black/Blue	Blue/Black
37/12	Black/Orange	Orange/Black
38/13	Black/Green	Green/Black
39/14	Black/Brown	Brown/Black
40/15	Black/Slate	Slate/Black
41/16	Yellow/Blue	Blue/Yellow
42/17	Yellow/Orange	Orange/Yellow
43/18	Yellow/Green	Green/Yellow
44/19	Yellow/Brown	Brown/Yellow
45/20	Yellow/Slate	Slate/Yellow
46/21	Violet/Blue	Blue/Violet
47/22	Violet/Orange	Orange/Violet
48/23	Violet/Green	Green/Violet
49/24	Violet/Brown	Brown/Violet
50/25	Violet/Slate	Slate/Violet

Install small system cabinet wiring to the MDF

Consult the work order to determine the small system cabinet-to-MDF cabling route, then perform the steps in Table 14 on page 46:

Figure 14
Option 11 MDF details

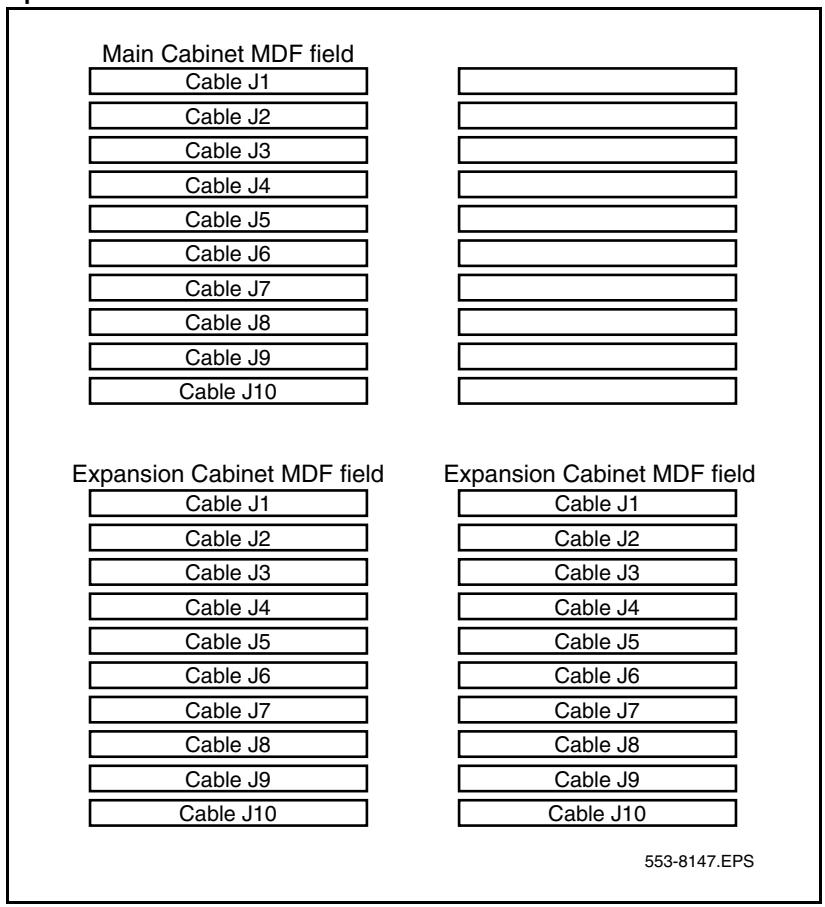


Table 14
Install small system cabinet wiring to the MDF

Step	Action
1	Identify the UTP Cat 5 twenty five pair MDF cable.
	Label both ends of the cable with the cabinet jack number.
2	Connect the cabinet end of the cable.
	Insert the cable's Amphenol connector into the appropriate cabinet connector jack.
3	Run the cable to the MDF.
4	Terminate the cable on the MDF.
	For BIX MDF, refer to Figure 14 on page 45 to locate the BIX connectors and Table 13 on page 43 to locate the cable color code.

END

Install Option 11C Mini expander chassis

For information on installing an Option 11C Mini expander chassis, refer to *Option 11C Mini Planning and Installation* (553-3021-209).

Install Succession CSE 1000 Media Gateway Expansion

For information on installing a Succession CSE 1000 Media Gateway Expansion, refer to Succession CSE 1000 – *Installation and Configuration Guide* (553-3023-210).

Install DMC8 and faceplate cables

Contents

This chapter contains information on the following topics:

Compatibility 49
Cross-connect base stations to the DMC8 positions. 50
Cross-connect base stations to the DMC8 Relay card. 53
Install DMC8 and DMC8-E in an IPE shelf (Option 51C to 81C). 55
Install DMC8-E in Option 11C, Option 11 Mini, or Succession CSE 1000 58
Install faceplate cables and inter-shelf/cabinet cable. 69

Reference list

The following are the references in this section:

- *System Installation Procedures* (553-3001-210)
- *Option 11C Planning and Installation* (553-3021-210)
- *DECT Overview* (553-3601-103)

Compatibility

The NTCW00AB DMC8 and NTCW01AB DMC8-E cards are compatible with the following Meridian 1 software releases:

- Release 23 and later supports basic configuration, CLID and CPND, DECT card addressing within OA&M, 16 users per card.

- Release 24B and later supports 32 users per card.
- Release 25 and later supports MSMN and Concentration.

Cross-connect base stations to the DMC8 positions

Consult the work order to determine the cross-connect details and perform the following steps:

CAUTION: Service interruption

The jumper wire on the MDF must be at least UTP Cat 3. UTP Cat 5 is recommended as it provides a greater line length before signal degradation occurs.

Table 15
Cross-connect base stations to the DMC8 positions

Step	Action
1	Cross-connect from the base station house side connector to the DMC8 equipment side connector.
	Connect a jumper wire from the tip and ring of the house side connector to the tip and ring of the equipment side connector. Refer to Table 16 on page 49 for the tip and ring designators. For DMC8s type NTCW00AB and NTCW01AB, connect from base station 1 to base station 8. **Note:** To support base stations 5, 6, 7, and 8 on NT8D37 (AA and DC) IPE modules, use 24 tip and ring pair backplane to I/O panel connections. To re-cable NT8D37 from 16 pair to 24 pair, see *System Installation Procedures* (553-3001-210), Appendix C.
2	Cross-connect the remaining base stations.
	Repeat step one until all base stations are cross-connected.

Note: The BIX tip and ring connections shown in Table 2 correspond to standard BIX designation. The first pair are labeled T0 and R0. See *System Installation Procedures* (553-3001-210), section *Planning and Designating the MDF*.

Table 16
Base station tip and ring connections (Part 1 of 2)

Base station number	Base station MDF connection	DMC8 MDF connection
Base station 1	T8	T8
Base station 1	R8	R8
Base station 1	T9	T9
Base station 1	R9	R9
Base station 2	T10	T10
Base station 2	R10	R10
Base station 2	T11	T11
Base station 2	R11	R11
Base station 3	T12	T12
Base station 3	R12	R12
Base station 3	T13	T13
Base station 3	R13	R13
Base station 4	T14	T14
Base station 4	R14	R14
Base station 4	T15	T15
Base station 4	R15	R15
Base station 5	T16	T16
Base station 5	R16	R16
Base station 5	T17	T17
Base station 5	R17	R17
Base station 6	T18	T18

Table 16
Base station tip and ring connections (Part 2 of 2)

Base station number	Base station MDF connection	DMC8 MDF connection
Base station 6	R18	R18
Base station 6	T19	T19
Base station 6	R19	R19
Base station 7	T20	T20
Base station 7	R20	R20
Base station 7	T21	T21
Base station 7	R2	R21
Base station 8	T22	T22
Base station 8	R22	R22
Base station 8	T23	T23
Base station 8	R23	R23

Cross-connect base stations to the DMC8 Relay card

Consult the work order to determine the cross-connect details, then perform the steps in Table 18 on page 52.

Figure 17
DMC8 Relay card to base station connections

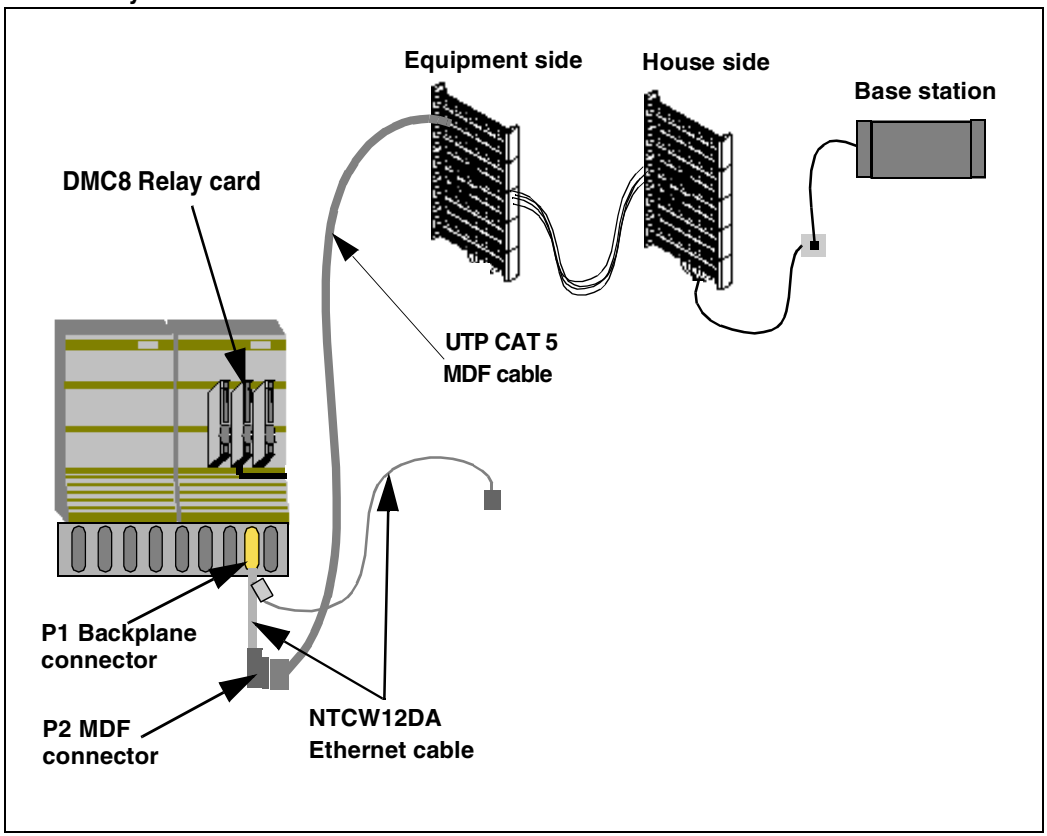


Table 18
Cross-connect base stations to the DMC8 positions

Step	Action
1	Connect the NTCW12DA cable to the DMC8 Relay card.
	Insert P1 into the DMC8 Relay card backplane connector located on the Meridian 1 PBX shelf/module or the Option 11C cabinet.
2	Connect the MDF cable to the NTCW12DA cable.
	Insert the MDF cable connector into P2.
3	Connect the MDF cable to the equipment side MDF cross-connect terminal block.
	See *System Installation Procedures* (553-3001-210) section "Cabling lines and trunks", or *Option 11C Planning and Installation* (553-3021-210), section "Installing and connecting cross-connect terminal to cabinets".
4	Cross-connect from the base station house-side connector to the DMC8 Relay card equipment side connector.
	Connect a jumper wire from the tip and ring of the house-side connector to the tip and ring of the equipment-side connector. Refer to Table 16 on page 49 for the tip and ring designators. For DMC8s, type NTCW00AB and NTCW01AB connect from base station 1 to base station 8. To support base stations 5, 6, 7, and 8 on NT8D37 (AA and DC) IPE modules requires 24 tip and ring pair backplane to I/O panel connections. To re-cable NT8D37 from 16 pair to 24 pair, see *System Installation Procedures* (553-3001-210), Appendix C.
	END

Install DMC8 and DMC8-E in an IPE shelf (Option 51C to 81C)

Refer to the work order and marked-up floor plan to determine the position of the DMC8 and DMC8-E, then perform the steps in Table 20 on page 55.

CAUTION: Electrostatic sensitive device

Wear a properly connected antistatic wrist strap to handle circuit cards. Only touch the edges. Do not touch the contacts or components. Set the cards on a protective antistatic bag, whenever possible. If an antistatic bag is not available, hand-hold the card, or set it in a card cage removed from the connectors.

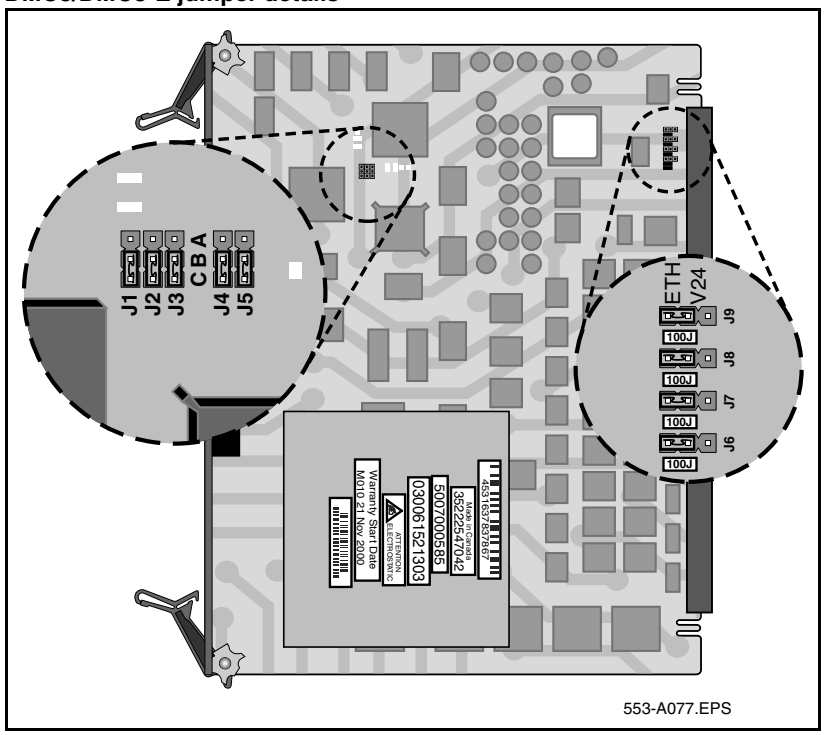
CAUTION: Service interruption

Only install DMC8-Es in slot 8.

Note 1: Install the DMC8s next to each other so the faceplate cables connect to the ports.

Note 2: See *DECT Overview* (553-3601-103), section "System software parameters" for DMC8 and DMC8-E software package compatibility.

Figure 19
DMC8/DMC8-E jumper details



See page 59 for Option 11C card jumper settings.

CAUTION: Service interruption

Ensure that the DMC8/DMC8-E Relay card jumpers J6 to J9 are in the ETH position for operation on a dedicated LAN.

Ensure that the DMC8/DMC8-E Relay card jumpers J6 to J9 are in the V.24 position for operation on a serial connection to the OTM server.

Table 20
Install DMC8 and DMC8-E in an IPE shelf (Option 51C to 81C)

Step	Action
1	Install J1 jumper straps on the DMC8 and the DMC8-Es for Card ID.
	For pre-Release 23 software, strap A B. For post-Release 23 software, and Multi-Site Mobility Networking, strap B C.
2	Install J2 jumper straps on the DMC8 and the DMC8-Es for the system type.
	Strap A B for IPE shelf. (See Table 22 on page 58 for Option 11C settings.)
3	Install J3 jumper straps on the DMC8 and the DMC8-Es for cabinet or IPE shelf number.
	For shelf 0, the lower TN IPE shelf, strap B C. For shelf 1, the higher TN IPE shelf, strap A B.
4	Install J6 to J9 jumper straps on the DMC8 and the DMC8-Es used as the Relay card for either V.24 connection or Ethernet connection.
	For the V.24 connection strap jumpers J6 to J9 to the V24 position. For the Ethernet connection strap jumpers J6 to J9 to the ETH position.
5	Insert DMC8-E(s), if required.
	Place DMC8-E(s) in slot 8. See examples in Figure 18, Figure 19, Figure 20, and Figure 21.
6	Insert DMC(s).
	Place DMC8s in the slots as indicated on the work order. Do not place DMC8s in slot 8. See examples in Figure 18, Figure 19, Figure 20, and Figure 21.

END

Install DMC8-E in Option 11C, Option 11 Mini, or Succession CSE 1000

Consult the work order and marked-up floor plan to determine the position of the DMC8 and DMC8-Es, then perform the steps in Table 22 on page 58.

CAUTION: Electrostatic sensitive device

Wear a properly connected antistatic wrist strap when handling circuit cards. Handle cards by the edges only. Do not touch the contacts or components. Set the cards on a protective antistatic bag, whenever possible. If an antistatic bag is not available, hand-hold the card, or set it in a card cage unseated from the connectors.

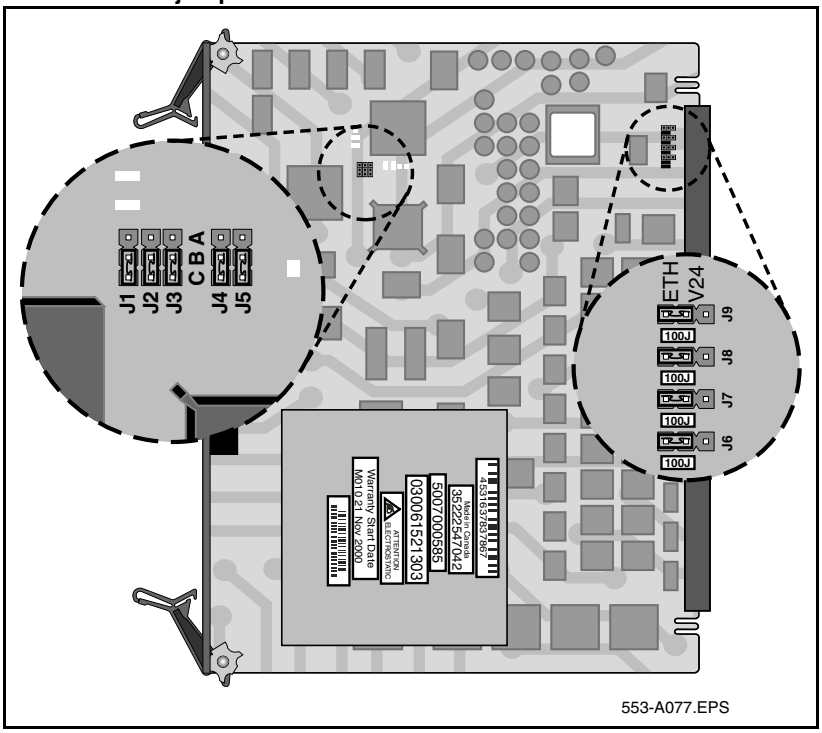
CAUTION: Service interruption

Do not install DMC8-Es into any slot except slots 9, 19, or 29.

Note 1: The DMC8s must be adjacent to each other so the faceplate cables can be connected to the ports.

Note 2: See *DECT Overview* (553-3601-103) section "System software parameters" for DMC8 and DMC8-E software package compatibility.

Figure 21
DMC8/DMC8-E jumper details



See page 56 for Option 51C to 81C card jumper settings.

CAUTION: Service interruption

Ensure that the DMC8/DMC8-E Relay card jumpers J6 to J9 are in the ETH position for operation on a dedicated LAN.

Ensure that the DMC8/DMC8-E Relay card jumpers J6 to J9 are in the V.24 position for operation on a serial connection to the OTM server.

Table 22
Install DMC8-E in an Option 11C cabinet, Option 11C Mini cabinet, Succession CSE 1000 Media Gateway, or Succession CSE 1000 Media Gateway Expansion

Step	Action
1	Install J1 jumper straps on the DMC8 and the DMC8-Es for Card ID.
	For pre Release 23 software strap A B. For post Release 23 software, and Multi-Site Mobility Networking, strap B C.
2	Install J2 jumper straps on the DMC8 and the DMC8-Es for system type.
	Strap B C for Option 11C, 11C Mini, Media Gateway, or Media Gateway Expansion. (See page 56 for Option 51C to 81C settings.)
3	Install J3 jumper straps on the DMC8 and the DMC8-Es for shelf number.
	For the lower TN cabinet, strap B C. For the higher TN cabinet, strap A B.
4	Insert DMC8-E(s), if required.
	Place DMC8-E(s) in slot 9, slot 19 or slot 29. See examples in Figure 22, Figure 23, Figure 24, and Figure 25.
5	Install J6 to J9 jumper straps on the DMC8 and the DMC8-Es used as the Relay card for either V.24 connection or Ethernet connection.
	For the V.24 connection strap jumpers J6 to J9 to the V24 position. For the Ethernet connection strap jumpers J6 to J9 to the ETH position.
6	Insert DMC8(s).
	Place DMC8s in the slots as indicated on the work order. Do not place DMC8s in slot 9, slot 19 or slot 29. See examples in Figure 22, Figure 23, Figure 24, and Figure 25.
	END

Figure 23
Example of a full system housed in two IPE shelves

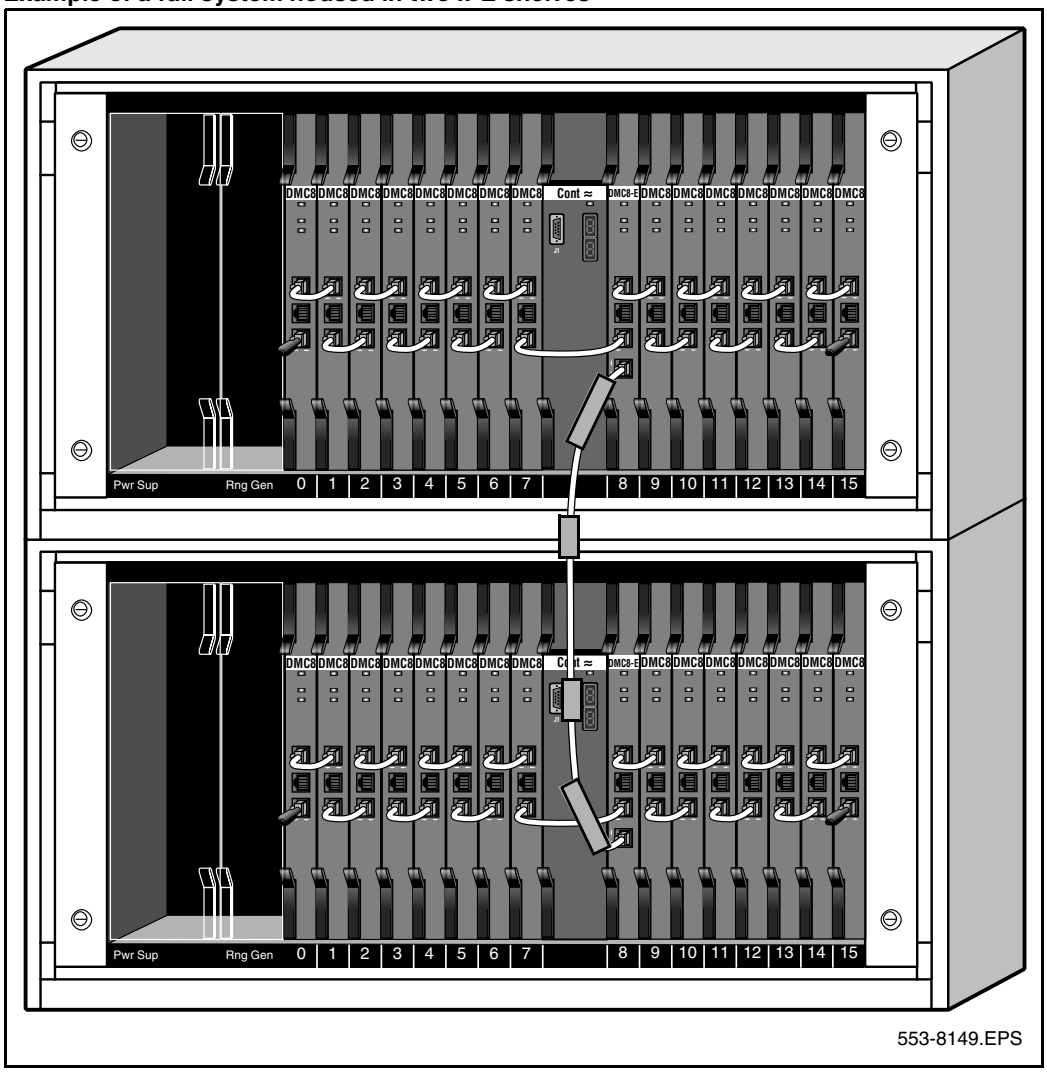


Figure 24
Example of a 16 card system housed in two IPE shelves

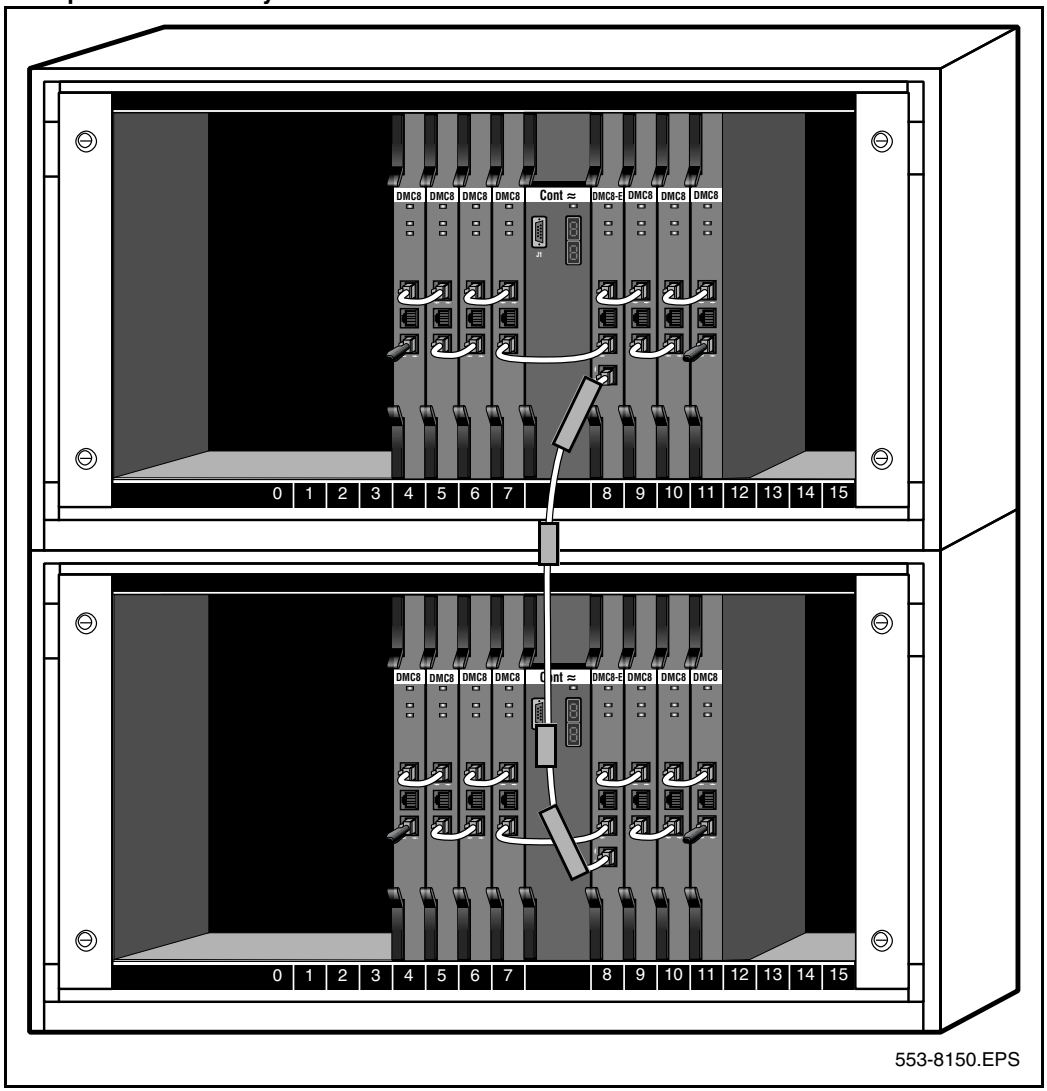


Figure 25
Example of a 17 card system housed in two IPE shelves

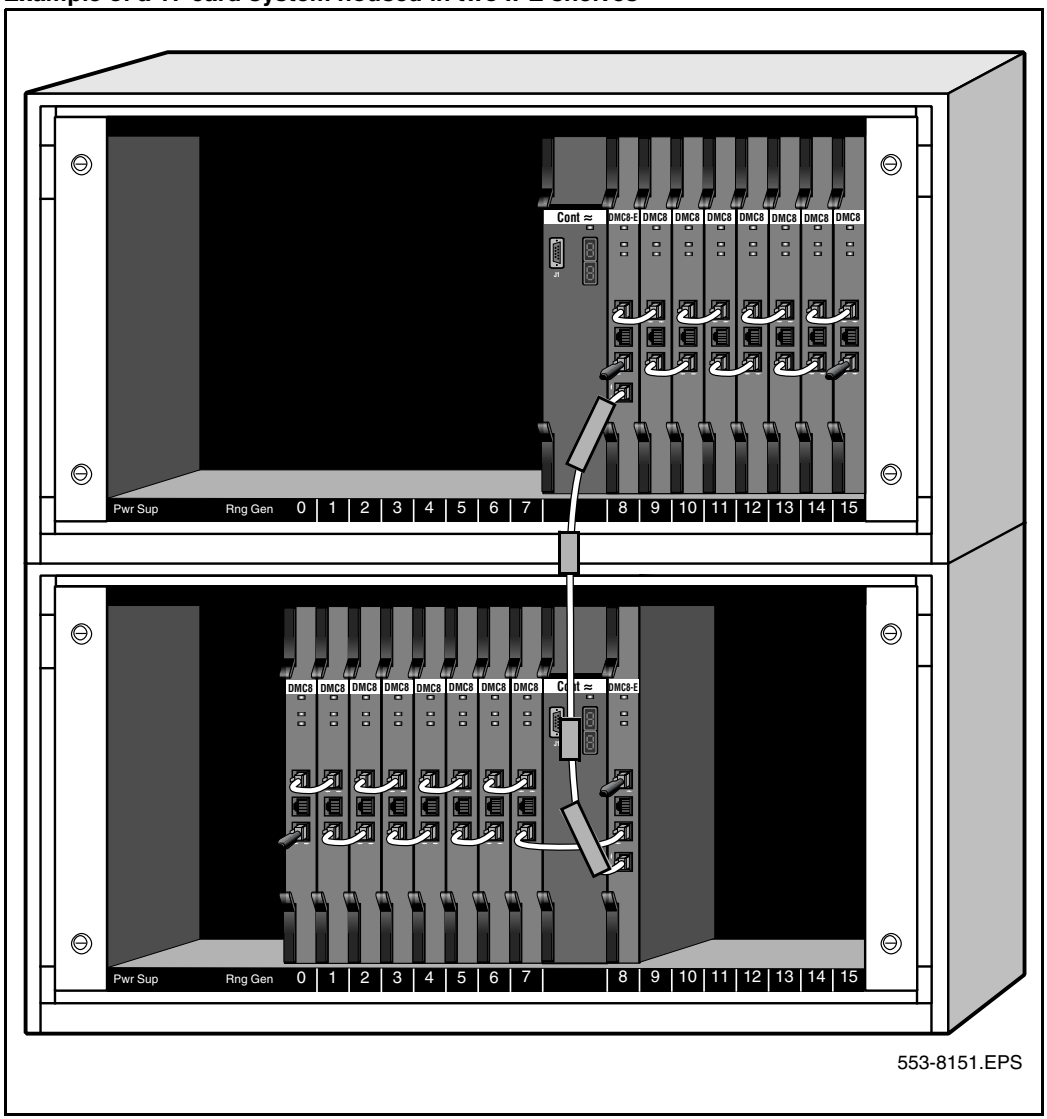
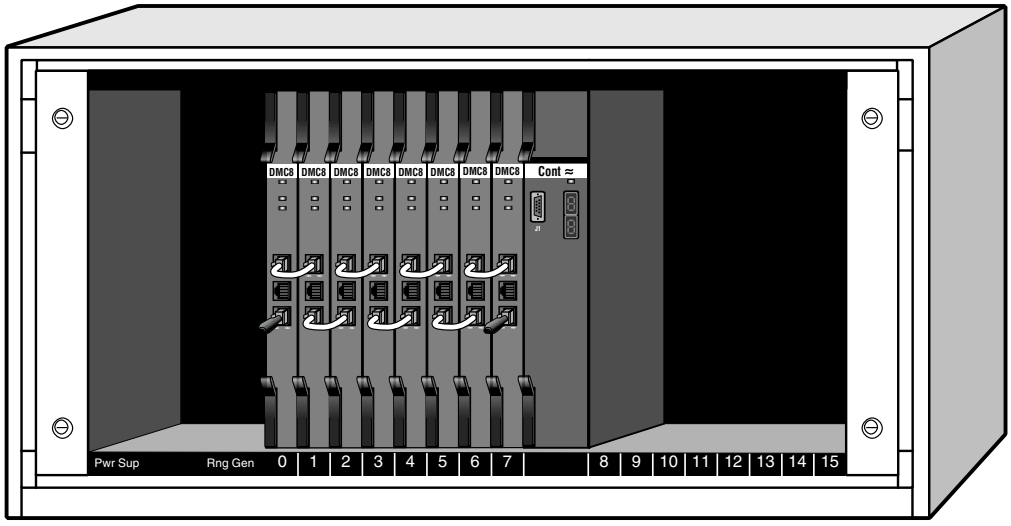


Figure 26
Example of an eight card system housed in one IPE shelf



553-8152.EPS

Figure 27
Example of a full Option 11C system not using a CPU cabinet

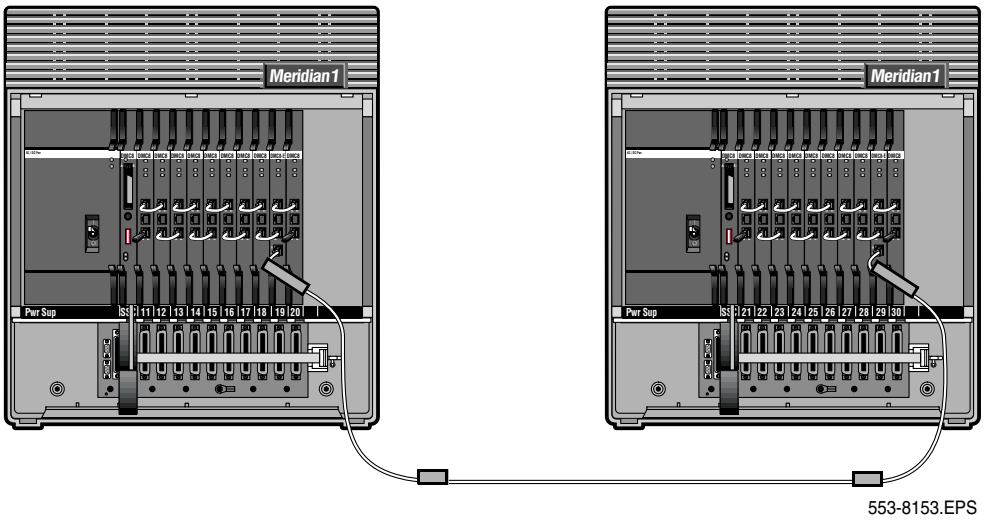


Figure 28
Example of a full Option 11C system using a CPU cabinet

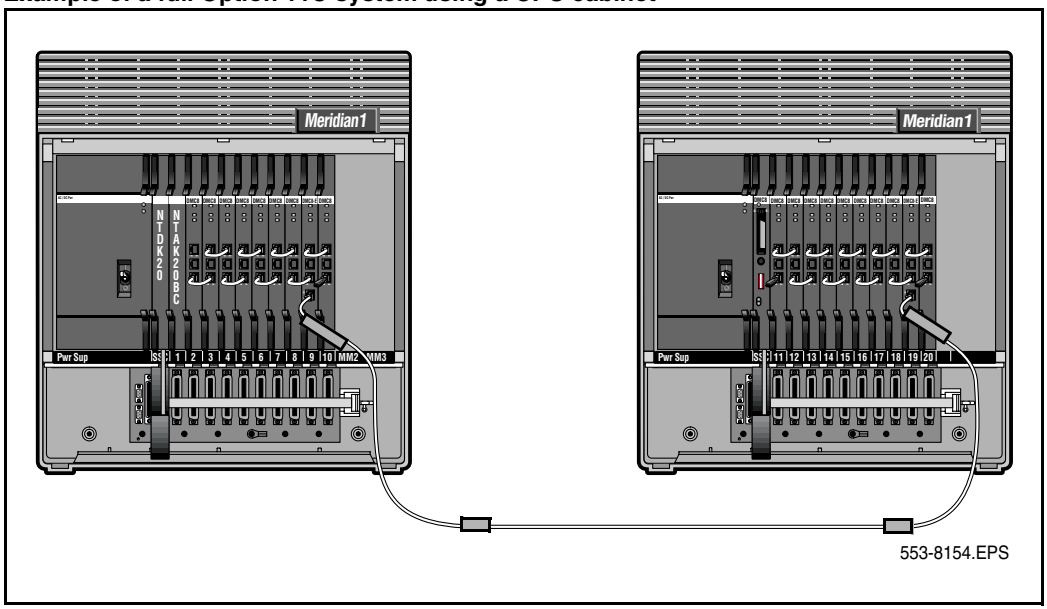


Figure 29
Example of an eight card system in two Option 11C cabinets

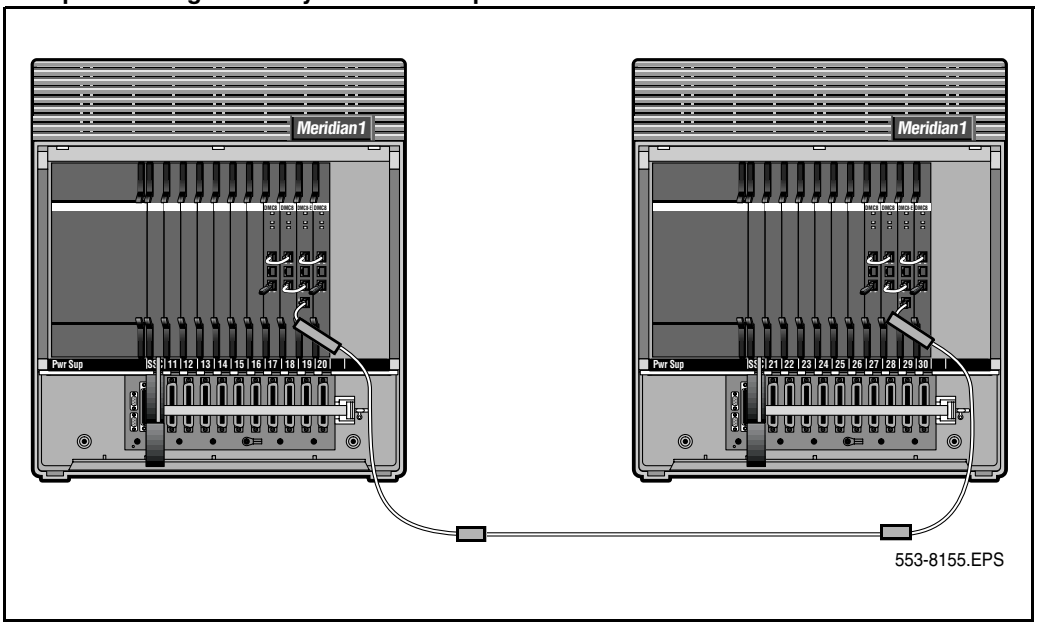
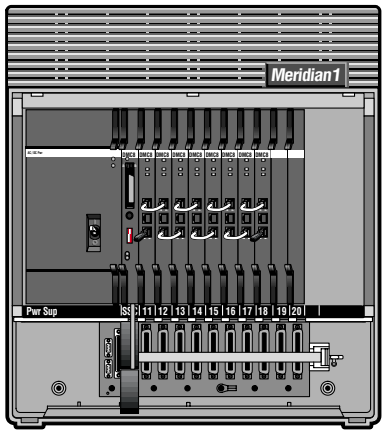


Figure 30
Example of an eight card system in one Option 11C cabinet



Option 11C Mini

For information on installing circuit cards in an Option 11C Mini, refer to *Option 11C Planning and Installation* (553-3021-210).

Figure 31
Option 11C MIni main and expander chassis connected with the two NTDK95 and CE-MUX/DS-30SX bus cables

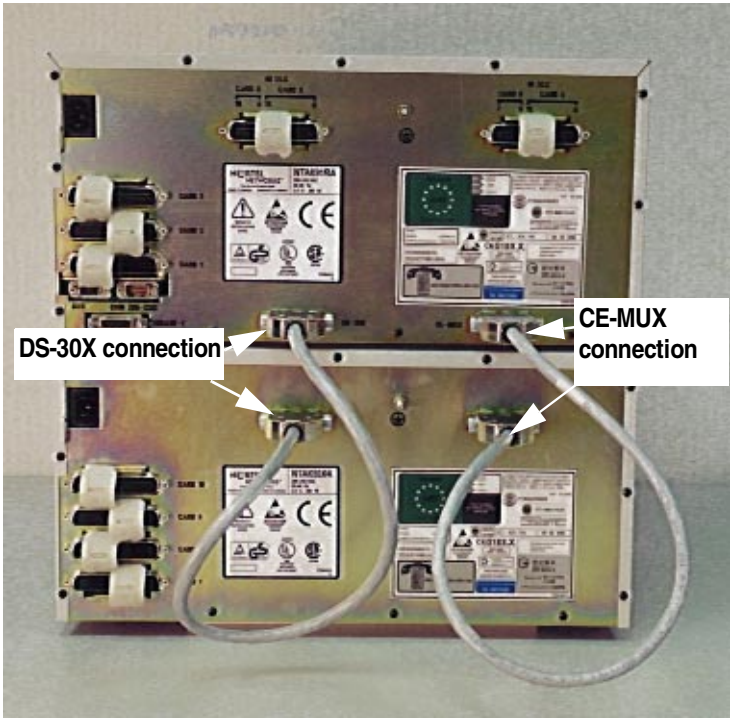
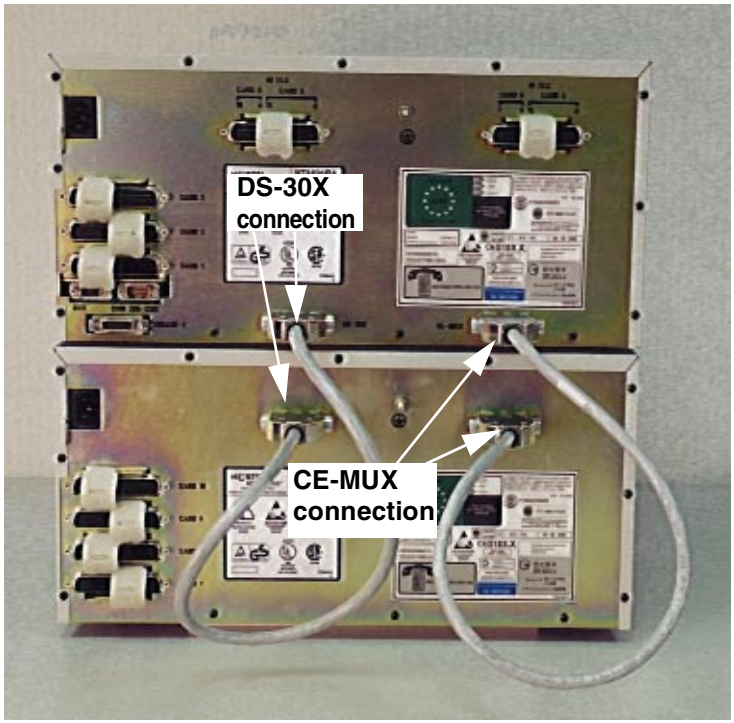


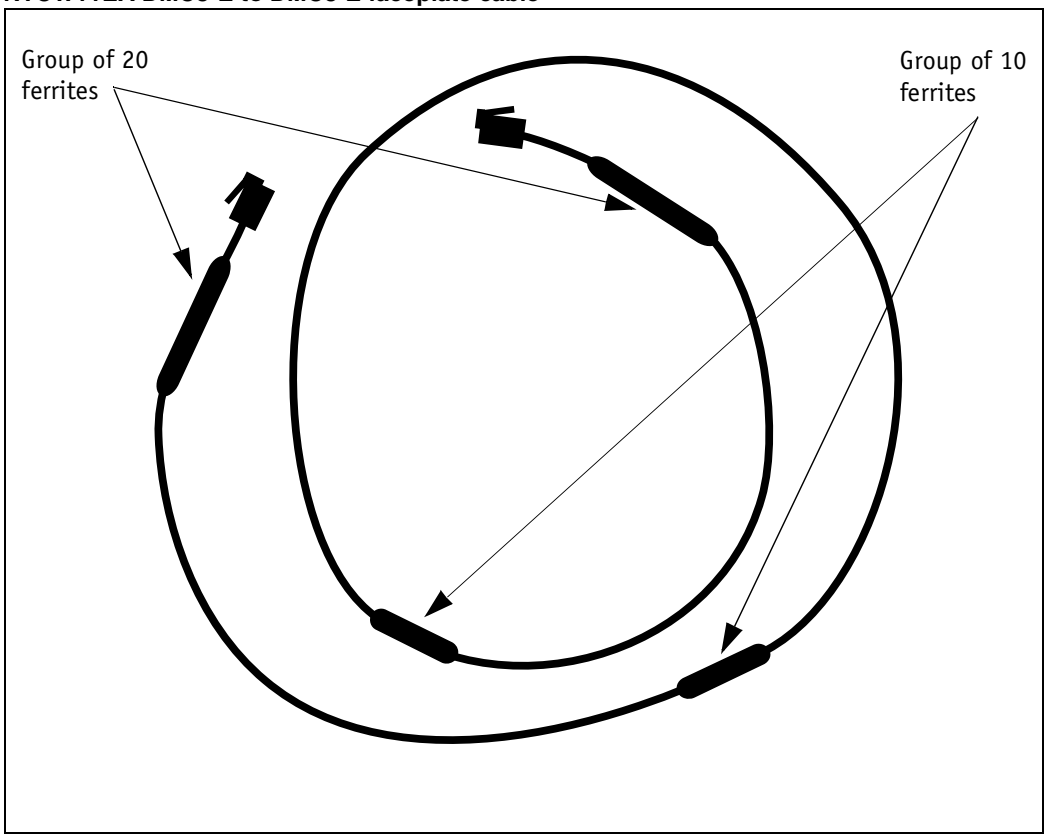
Figure 32
Succession CSE 1000 Media Gateway and Media Gateway Expansion cabling



Install faceplate cables and inter-shelf/cabinet cable

Consult the work order to determine the position of the faceplate cable layout and NTCW11EA DMC8-E to DMC8-E inter-shelf cables, then perform the steps in Table 6 on page 71.

Figure 33
NTCW11EA DMC8-E to DMC8-E faceplate cable



CAUTION
Service Interruption

The NTCW11EA DMC8-E to DMC8-E faceplate cable has four sets of movable ferrites. The position of the ferrites on the cable is important. See Figure 28.

Each end of the cable must have a group of 20 ferrites. One quarter of the distance from each end of the cable must have a group of 10 ferrites. The maximum length of the cable is 1.5 meters, limiting the position of DECT shelves 0 and 1 to adjacent IPE modules or small system cabinets.

Consult the work order to determine the position of the terminator plugs, then perform the following steps:

Table 34
Install faceplate cables and inter-shelf/cabinet cable

Step	Action
1	Connect the DMC8 to DMC8 faceplate cables.
	Arrange the NTCW11AA DMC8 to DMC8 cables so that the DMC8 to DMC8-E cable is connected into the ports shown in Figures 18 to 20.
2	If required, connect the NTCW11BA DMC8 to DMC8-E cable on the IPE shelf. Not required on Option 11C.
	Plug the cable into the lower port of the DMC8 in slot 7. Plug the other end of the cable into the arrow pointing left port of the DMC8-E in slot 8. See Figure 18, Figure 19, and Figure 20.
3	Connect the NTCW11EA DMC8-E to DMC8-E inter-IPE shelf or inter-cabinet cable, if required.
	Plug the DMC8-E to DMC8-E cable into each DMC8-E lower port.
	END

Install OTM DECT application

Contents

This chapter contains information on the following topics:

Ensure the DECT application is on the OTM server. 72
Ensure a Communications Profile is associated with the DECT application. 73
Add a Communications Profile for the DECT application. 75
Add an Ethernet profile. 77

Reference list

The following are the references in this section:

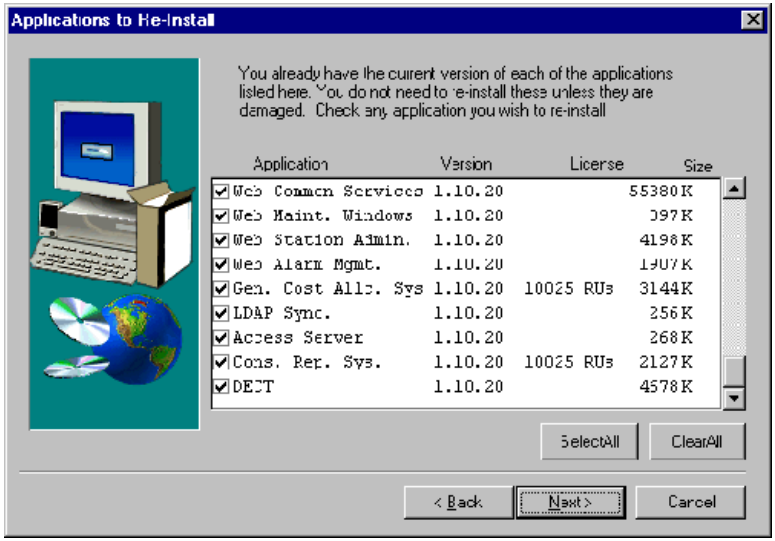
- *Installing and Configuring Optivity Telephony Manager* (553-3001-230)

This Installation Guide assumes that an Optivity Telephony Manager (OTM) server is installed on the PBX.

If the OTM is not installed, follow the instructions in *Installing and Configuring Optivity Telephony Manager* (553-3001-230) to install it.

Ensure the DECT application is on the OTM server

Figure 35
Applications to Re-install



Complete the following steps:

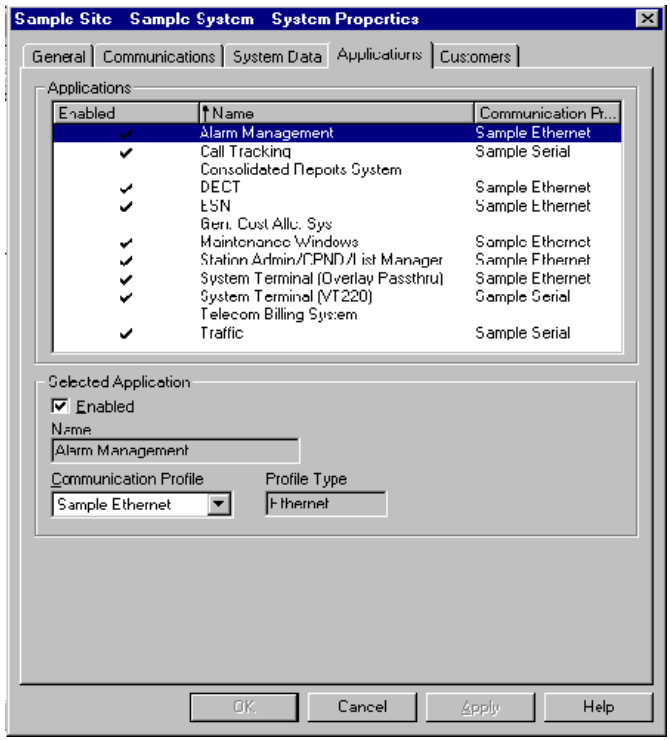
Table 1
Ensure the DECT application is on the OTM server

Step	Action
1	If there is a check in the DECT box in the Applications to Re-install dialog.
	Go to “Configure the DECT system on the OTM server” on page 79.
2	If there is no check in the DECT box in the Applications to Re-install dialog. **Note:** Installation is like any other application.
	Select the check-box and click on the **Next** button.
	END

Ensure a Communications Profile is associated with the DECT application

The DECT application must be associated with a Communications Profile.

Figure 36
Systems Properties – Applications



The following describes the **OK**, **Cancel**, and **Apply** button actions:

- **OK** adds the changes that were made, then returns to the previous screen.
- **Apply** adds the changes and leaves the properties open so that other information can be added to this properties dialog.
- **Cancel** closes the dialog box without adding the changes.

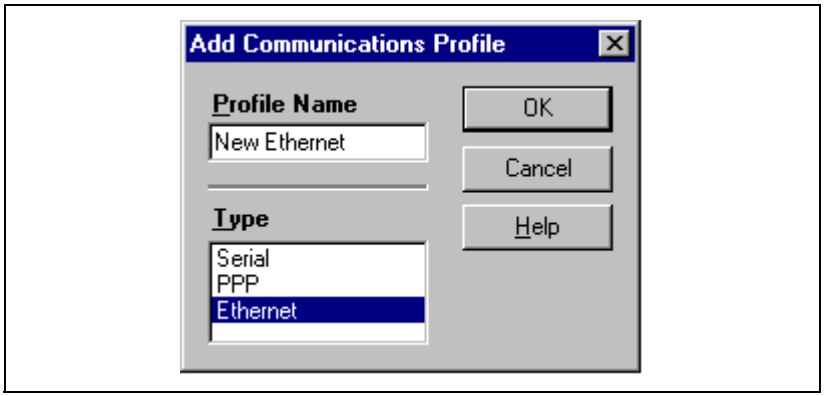
Complete the following steps:

Table 2
Ensure a Communications Profile is associated with the DECT application

Step	Action
1	Open the Systems Properties sheet.
	Choose **Properties** from the OTM Navigator window **File** menu.
2	Select the Applications tab.
	Click on the **Applications** tab.
3	If there is a check in the Enabled column next to DECT in the Name column.
	Go to “Configure the DECT system on the OTM server” on page 79.
4	If there is no check in the Enabled column next to DECT in the Name column.
	Highlight **DECT** in the name column.
5	Select a Communication Profile.
	Choose any entry from the **Communication Profile** drop-down list. **Note:** If there are no entries in the Communication Profile drop-down list, go to “Add a Communications Profile for the DECT application” on page 75.
6	Accept the changes.
	Click the **OK** button.

Add a Communications Profile for the DECT application

Figure 37
Add Communications Profile



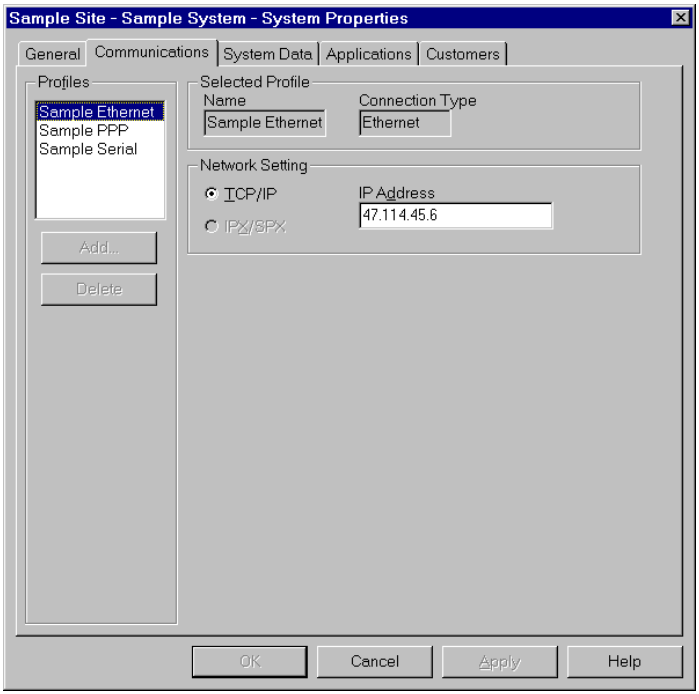
Complete the following steps:

Table 3
Add new Meridian 1 PBX Communications Profile

Step	Action
1	In the Navigator window, select the Sample Site.
	Double click on **Sample Site**.
2	Choose the Properties dialog.
	Click on **Properties** from the **File** menu.
3	Open the **Add Communications Profile** dialog.
	Click on the **Communications** tap and click **Add**.
4	Select a communications type.
	Highlight **Ethernet** in the **Type** box. **Note:** The DECT application does not use the Communications Profile. Unless there is another application that requires a specific Communications Profile, choosing Ethernet is the least complicated profile to implement.
5	Program the Profile Name.
	Enter a **Profile Name**.
6	Accept the changes.
	Click **OK**.
	END

Add an Ethernet profile

Figure 38
System Properties – Communications



Complete the following steps:

Table 4
Add the Meridian 1 PBX Ethernet profile

Step	Action
1	Fill in the communications information for the **Ethernet** profile.
	Enter any IP address. **Note:** Unless there is another application that requires a specific IP address, enter a non-existing address.
2	Accept changes.
	Click **Apply**.
3	Return to configuring a communications profile.
	Go to “Ensure a Communications Profile is associated with the DECT application” on page 73.

Configure the DECT system on the OTM server

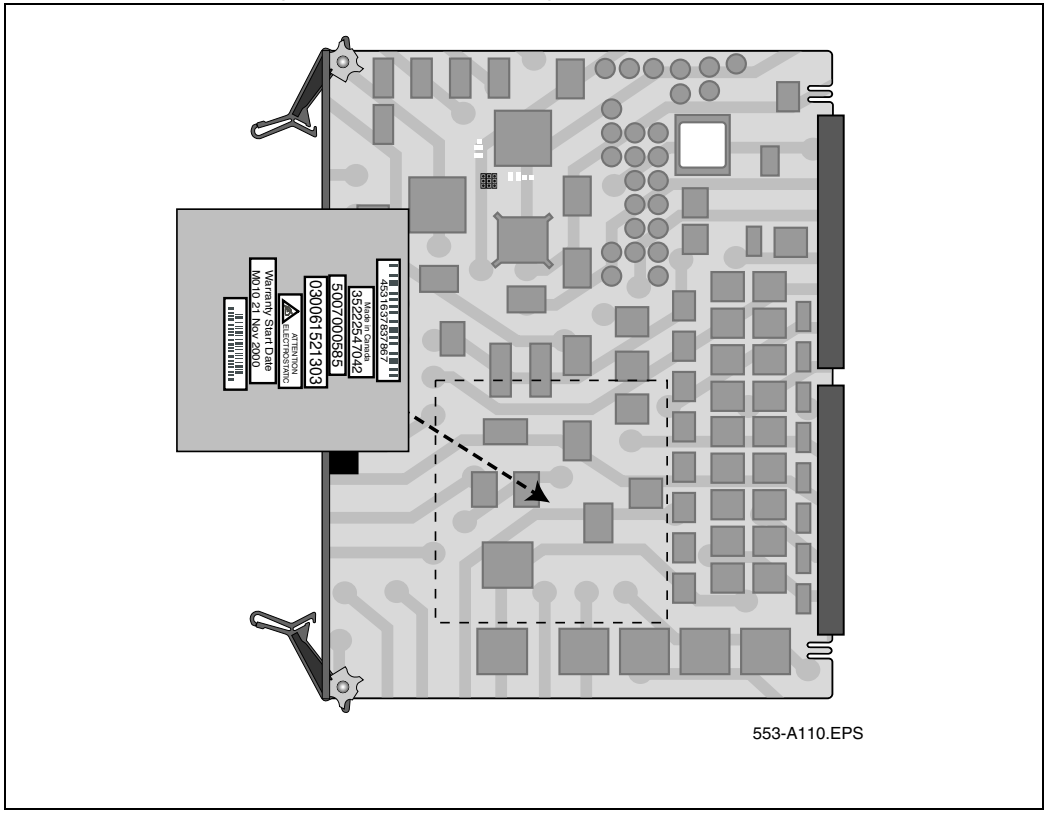
Contents

This chapter contains information on the following topics:

Install the DME on the DMC8 Relay card. 80
Change the DMC8 Relay card default IP address. 81
Connect the DMC8 Relay card to a configuring PC. 81
Reset the DMC8 Relay card default IP address to the LAN IP address. . 84
Connect the DMC8 Relay card to the OTM server. 86
Launch the DECT application. 88
Add the DECT system. 89
Add General System Properties. 89
Set the DECT system IP address to match the DMC8 Relay card. .. 91
Add the upstream manager IP address, if required. 93
Synchronize data with the DECT system. 94
Synchronize DECT PARI and SARI. 97
Synchronize DECT parameters. 98
Synchronize DECT Upstream Manager IP address. 99

Install the DME on the DMC8 Relay card

Figure 39
NTCW25AA DECT Manager Ethernet (DME) daughterboard location



The NTFZ38AA Ethernet Management Connection package is available, containing the following:

- one NTCW25AA DECT Mobility Ethernet (DME) card
- one NTCW12DA DMC8 I/O cable

Table 5
Install the DME on the DMC8 Relay card

Step	Action
1	Unpack the NTCW25AA DECT Manager Ethernet (DME) daughterboard.
	Remove the packing material.
2	Install the DME.
	Carefully position the daughterboard over the four standoff posts and press onto the DMC8 relay card.
	END

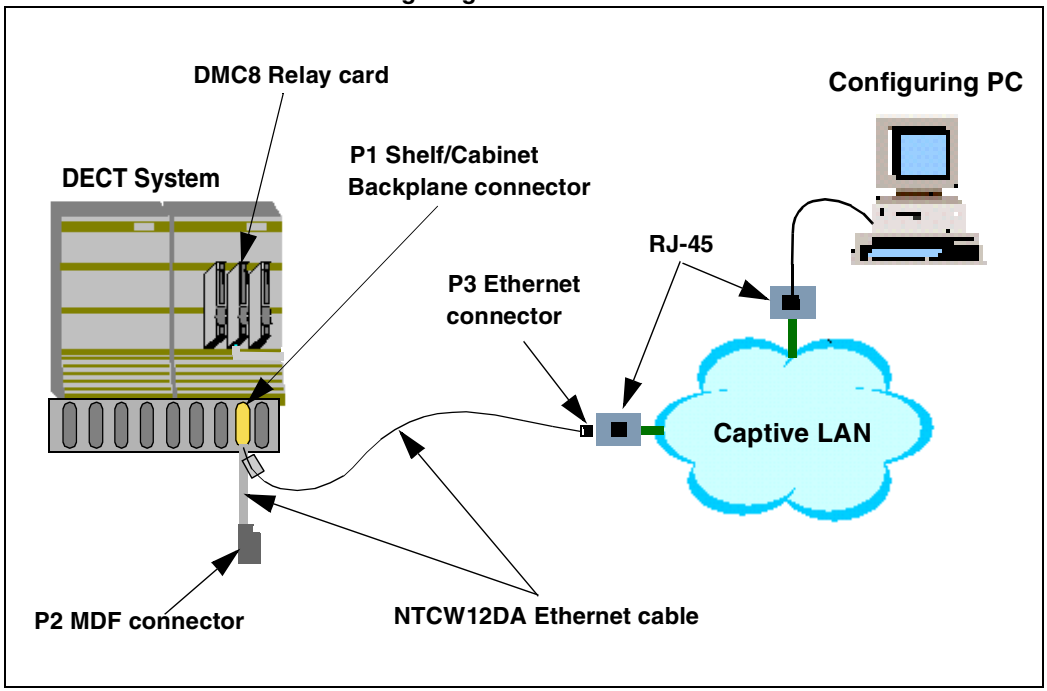
Change the DMC8 Relay card default IP address

Connect the DMC8 Relay card to a configuring PC

CAUTION: Service interruption

The DMC8 is shipped with a default IP address 192.168.1.1. The default address must be changed to conform to the network IP address plan.

Figure 40
NTCW12DA Ethernet cable to configuring PC connections



For information on connecting OTM through a V.24 serial connection, see “Add a V.24 serial connection” on page 135.

Note: The configuring PC can be the OTM server or another PC. If the configuring PC is the OTM server, the Captive LAN shown in Figure 40 will be the OTM Server Dedicated LAN shown in Figure 42 on page 86.

Consult the work order to determine the DMC8 Relay card location, then perform the steps in Table 6 on page 83.

Note: The Relay card can be any of the DMC 8 or DMC8-E cards. Usually, the lowest-numbered card is used.

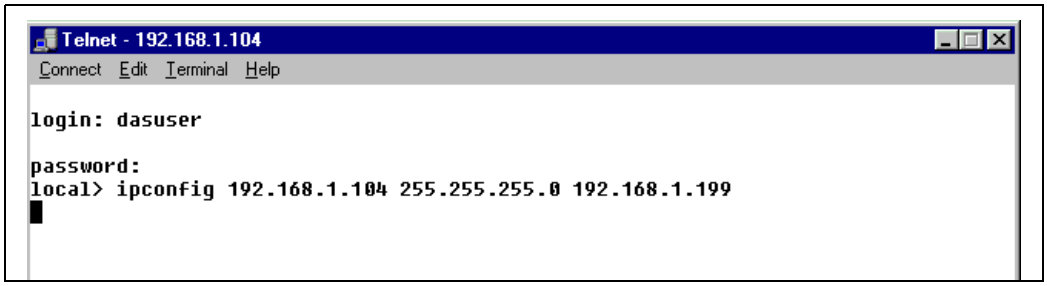
Table 6
Connect the DMC8 Relay card to a configuring PC

Step	Action
1	Connect the NTCW12DA cable to the connector on the backplane of the DMC8 Relay card.
	Insert P1 into the DMC8 Relay card backplane connector located on the Meridian 1 PBX shelf/module or the Option 11C cabinet.
2	If the Configuring PC is on a captive LAN, link the DMC8 Relay card to the Configuring PC.
	Insert P3 into the captive LAN RJ-45 connector.
3	If the Configuring PC is on the OTM server dedicated LAN,
	Insert P3 into the OTM server dedicated LAN RJ-45 connector.See “Connect the DMC8 Relay card to the OTM server” on page 86.
	END

Reset the DMC8 Relay card default IP address to the LAN IP address

The DMC8 Relay card default IP address 192.168.1.1 must be changed to conform to the server network IP address plan.

Figure 41
Telnet 192.168.1.1



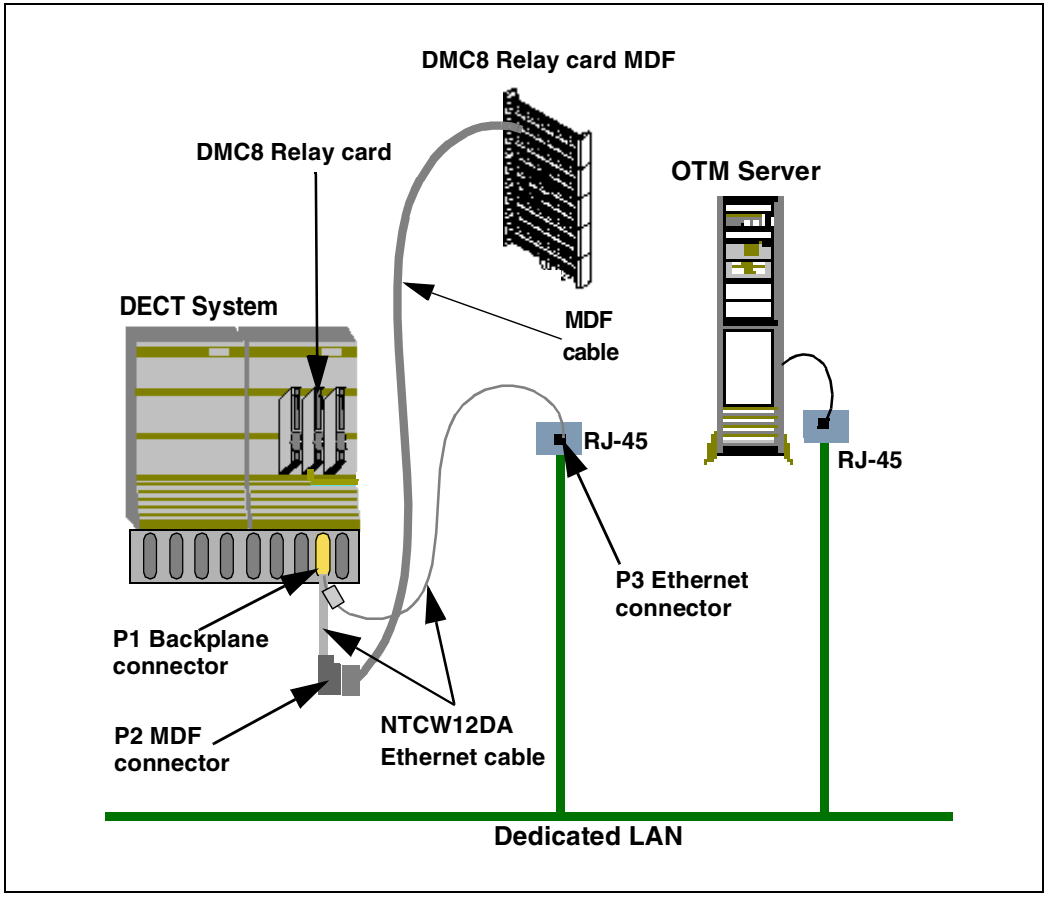
Complete the following steps:

Table 7
Reset the DMC8 Relay card default IP address to the LAN IP address

Step	Action
1	Open the Telnet dialog.
	Click on Start>Accessories>Telnet.
2	Enter user name and password.
	Type user name **dasuser** and password **dasuser**.
3	When the connection prompt **local** appears, change the DMC8 Relay card address.
	Enter the following command: **ipconfig xxx.xxx.xxx.xxx yyy.yyy.yyy.yyy zzz.zzz.zzz.zzz** **xxx.xxx.xxx.xxx** = new IP address of the DMC8 Relay card. **yyy.yyy.yyy.yyy** = subnet mask, usually **255.255.255.0** **zzz.zzz.zzz.zzz** = IP address if this is the gateway for the network. **Note: zzz.zzz.zzz.zzz** should be set to the IP address of the OTM server Ethernet interface. If there are two Ethernet interfaces on the OTM server, **zzz.zzz.zzz.zzz** should be set to the IP address of the interface which is on the same network as the DMC8 Relay card.

Connect the DMC8 Relay card to the OTM server

Figure 42
NTCW12DA Ethernet cable to OTM Server LAN connections



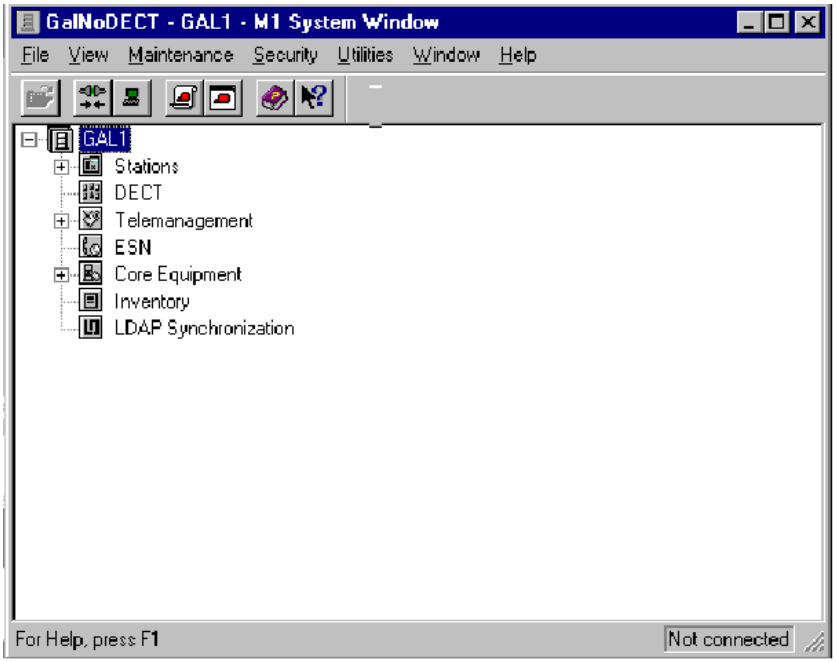
Complete the following steps:

Table 8
Connect the DMC8 Relay card to a Captive LAN

Step	Action
1	If the DMC8 Relay card was configured on a captive LAN, remove the NTCW12DA Ethernet cable from the captive LAN.
	Disconnect P3 from the captive LAN RJ-45 connector.
2	Connect the NTCW12DA cable to the OTM Server Dedicated LAN.
	Insert P3 into the Dedicated LAN RJ-45 connector.
	END

Launch the DECT application

Figure 43
M1 System Window



Complete the following steps:

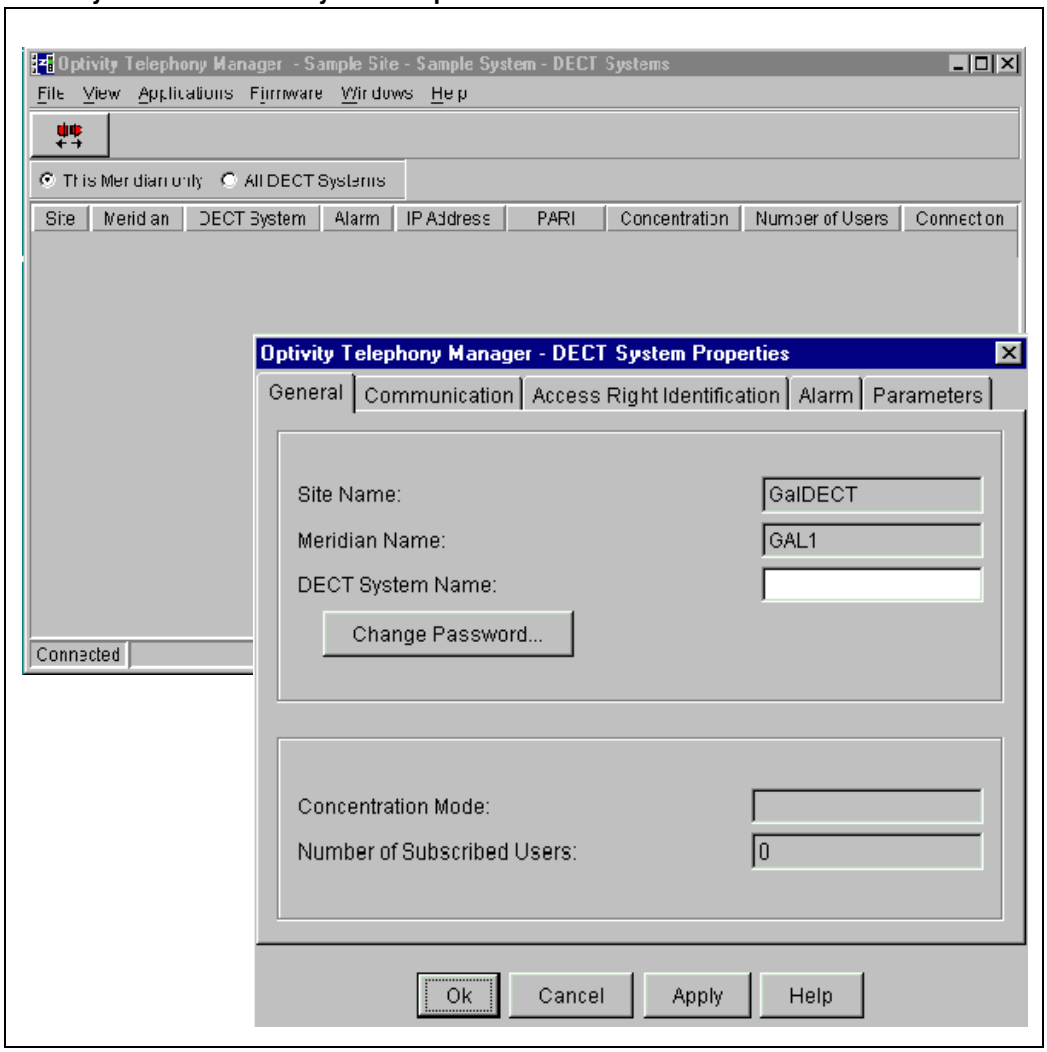
Table 9
Launch the DECT application

Step	Action
1	Launch the DECT application.
	Double click on the DECT icon.
	END

Add the DECT system

Add General System Properties

Figure 44
DECT Systems and DECT System Properties



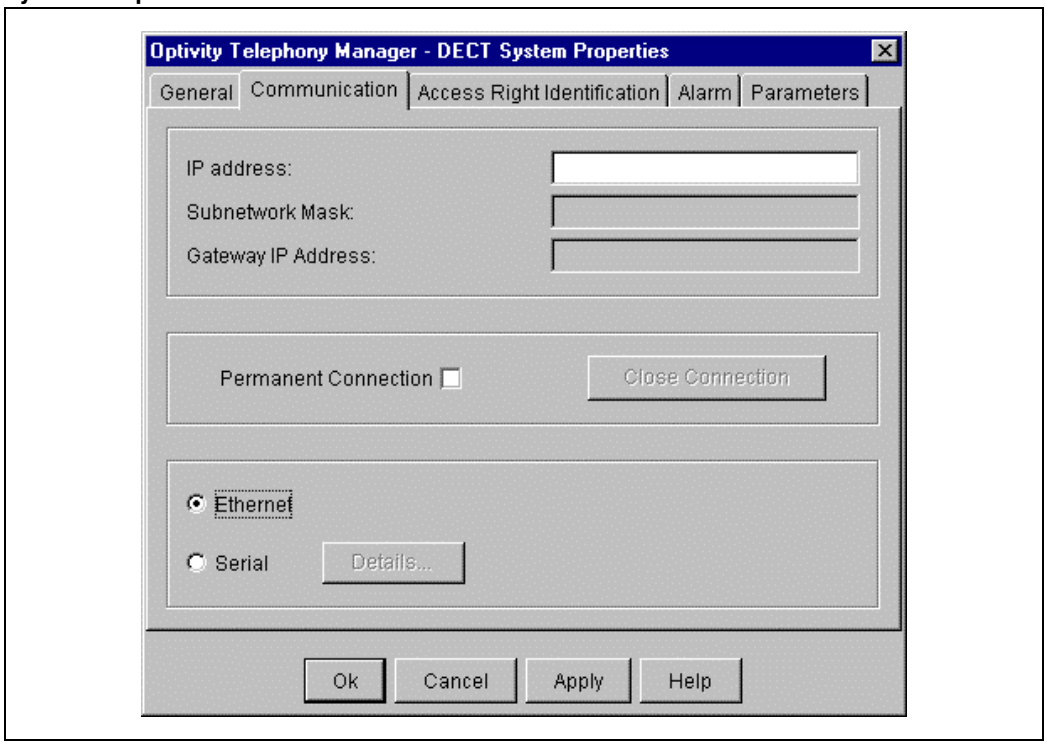
Complete the following steps:

Table 10
Add the DECT system

Step	Action
1	Open the DECT System Properties dialog.
	Pull down **File**>**Properties**.
2	Enter the DECT system name.
	Type the system name in the **DECT System Name** box.
3	Accept the changes.
	Click on the **Apply** button.

Set the DECT system IP address to match the DMC8 Relay card

Figure 45
System Properties – Communication



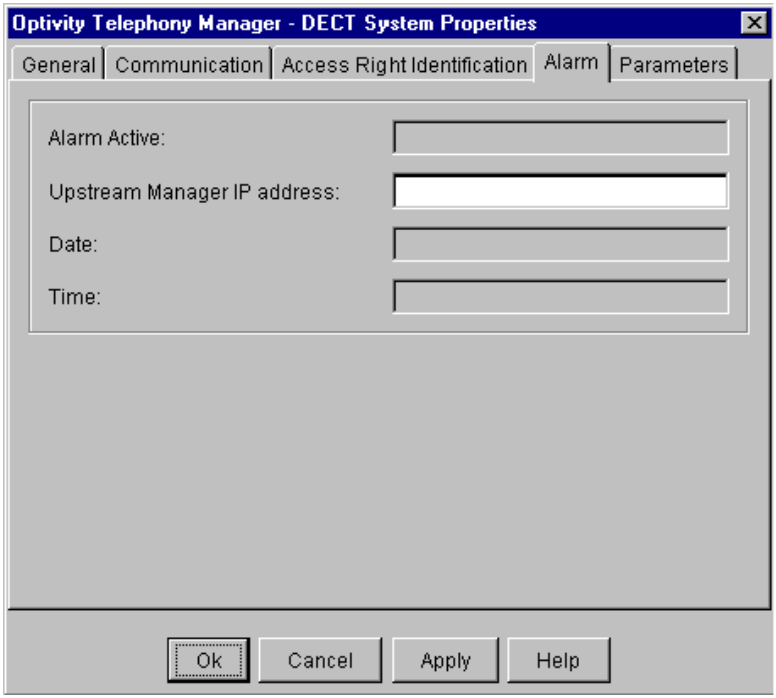
Complete the following steps:

Table 11
Set the IP address of the DMC8 Relay card in the manager

Step	Action
1	Open the Communications dialog.
	Click on the **Communications** tab.
2	Enter the IP address.
	Type the IP address that was entered in Table 7 on page 85.
3	If the communication link is Ethernet, select **Ethernet**.
	Click on the **Ethernet** radio button.
4	If the communication link is Serial, select **Serial**.
	Click on **Serial** radio button, and go to “Add a V.24 serial connection” on page 135.
5	Accept the changes.
	Click on the **OK** button. **Note:** When the OK button or Apply button is clicked at this point, the manager attempts to connect to the DECT system to write the MIB2 system name.
6	If required, program an Upstream Manager.
	Go to page 93.
7	If an Upstream Manager is not required.
	Go to “Synchronize data with the DECT system” on page 94.
	END

Add the upstream manager IP address, if required

Figure 46
System Properties – Alarm



Complete the following steps:

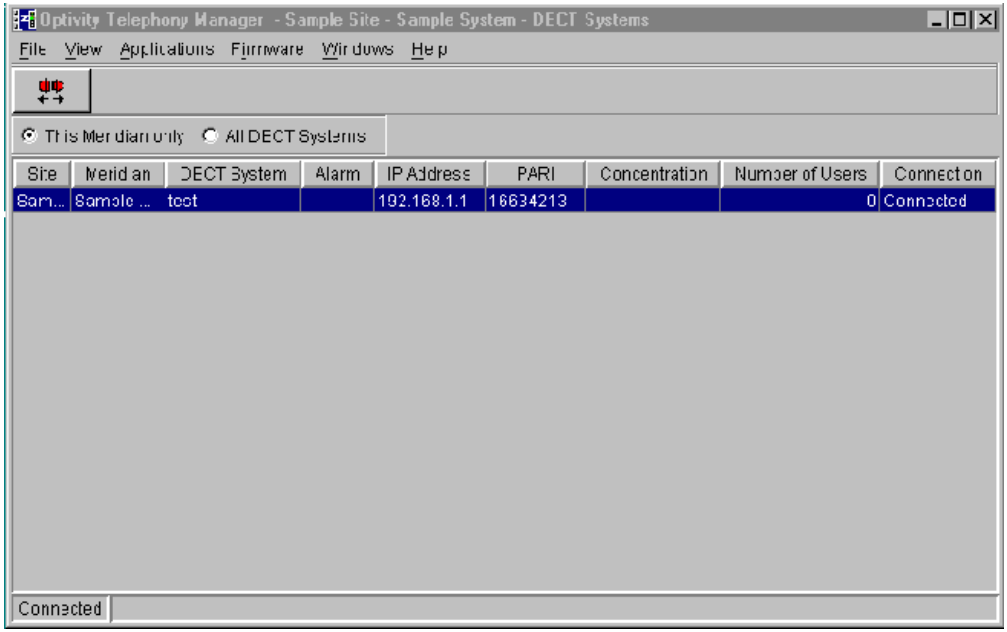
Table 12
Add the upstream IP address, if required

Step	Action
1	Open the DECT System Properties dialog.
	Pull down **File**>**Add**.
2	Open the Alarm dialog.
	Click on the **Alarm** tab.
3	Enter the IP address.
	Type the Upstream manager IP address.
4	Accept the changes.
	Click on the **OK** button.
	END

Synchronize data with the DECT system

When the DECT manager connects to the DECT system, synchronization occurs. Synchronization compares the database on the manager to the database of the DECT system. Database mismatches are flagged by dialogs. The opportunity to change either the DECT system data or the manager data is given.

Figure 47
DECT Systems



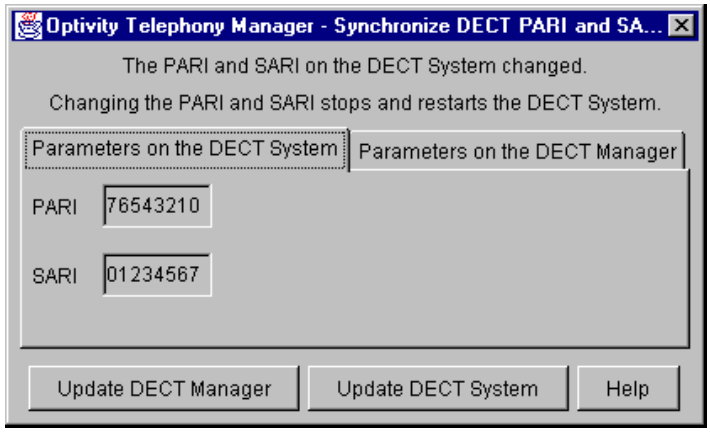
Complete the following steps:

Table 13
Synchronize data with the DECT system

Step	Action
1	If the toolbar icon is **red,** the connection to the DECT system is enabled. Disconnect from the DECT system.
	Double click on the icon, or use **File**>**Disonnect**. Go to “Synchronize DECT PARI and SARI” on page 97.
2	If the toolbar icon is **green**, re-connect to the DECT system
	Double click on the red icon, or use **File**>**Connect.**
	END

Synchronize DECT PARI and SARI

Figure 48
Synchronize DECT PARI and SARI Mismatch dialog



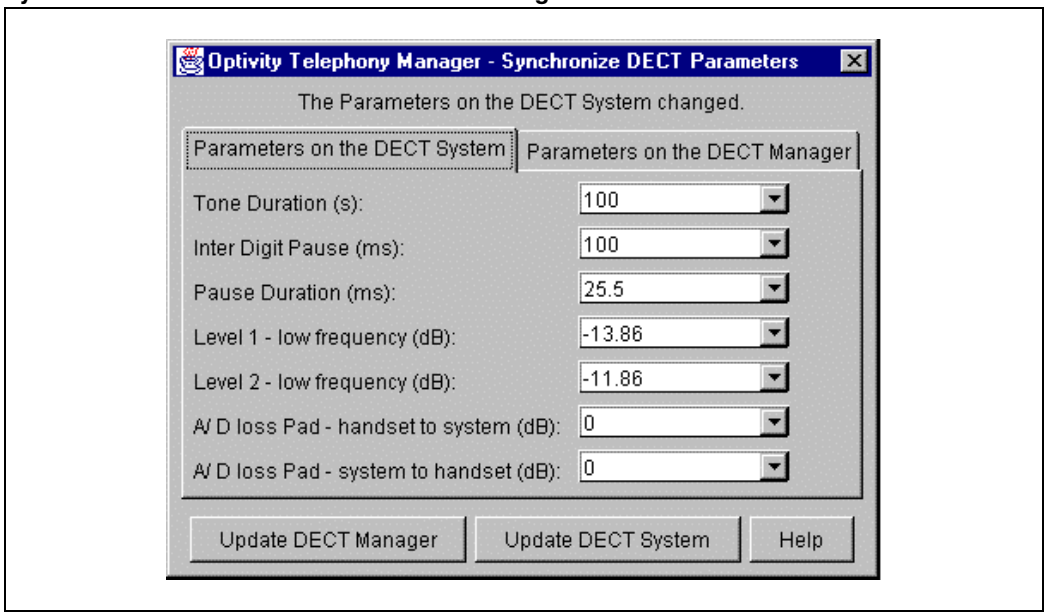
Complete the following step:

Table 14
Synchronize DECT PARI and SARI

Step	Action
1	Store the DECT system PARI SARI parameters in the OTM Manager database.
	Click on the **Update DECT Manager** button.
	END

Synchronize DECT parameters

Figure 49
Synchronize DECT Parameters Mismatch dialog



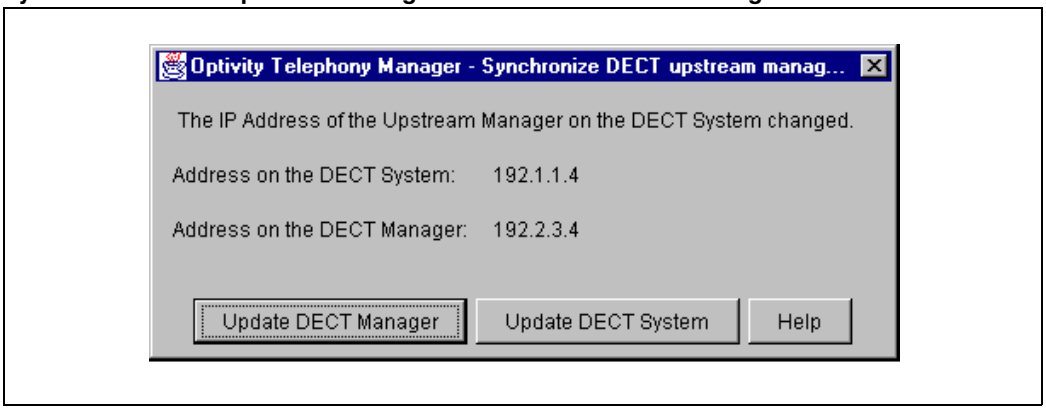
Complete the following step:

Table 15
Synchronize DECT Parameters

Step	Action
1	Store the DECT system DECT Parameters in the OTM Manager database.
	Click on the **Update DECT Manager** button.
	END

Synchronize DECT Upstream Manager IP address

Figure 50
Synchronize DECT Upstream Manager IP address mismatch dialog



Complete the following step:

Table 16
Synchronize DECT Upstream Manager IP address

Step	Action
1	Store the DECT system Upstream Manager IP address in the OTM Manager database.
	Click on the **Update DECT Manager** button.

END

Un-installing DECT Manager – Caution

Before un-installing DECT Manager, read the following information.

CAUTION: Service interruption

When the OTM DECT Manager is un-installed, the Sentinel driver is also un-installed, even if other applications require the driver. Any attempt to launch other OTM systems or applications generates the message

"No dongle attached to the PC."

It is necessary to re-install the Sentinel driver. Download the driver from the internet.
Go to **www.rainbow.com.tech/downloads.html**

In the product drop-down menu, scroll down and select **System Drivers**.

On the System Drivers page, select the **Sentinel System Driver – Driver Only** file and download the zipped file. After download is complete, unzip the file and install the driver.

Configure handsets and retrieve subscription data

Contents

This chapter contains information on the following topics:

Configure non-concentrated handsets on a Meridian 1 PBX. 105
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- Access Add Station dialog. 106
- Add 500 analog standard. 107
- Access features. 108
- Access wireless type. 109
- Select wireless type. 110
- Select DECT wireless set. 111
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Configure concentrated handsets on a Meridian 1 PBX. 113
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- Select Digital Cordless Set. 115
- Select Features. 116
- Select wireless type. 117
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Retrieve subscription data for handsets. 124
- Enable subscription. 126
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Reference list

The following are the references in this section:

- *Using Optivity Telephony Manager* (553-3001-330)
- *DECT Programming and Provisioning Record* (553-3601-250)
- *DECT Operation Administration and Maintenance* (553-3601-301)

Configure non-concentrated handsets on a Meridian 1 PBX

For information about System Administration, see *Using Optivity Telephony Manager* (553-3001-330).

Open Station Administration window

Figure 51
M1 System Window

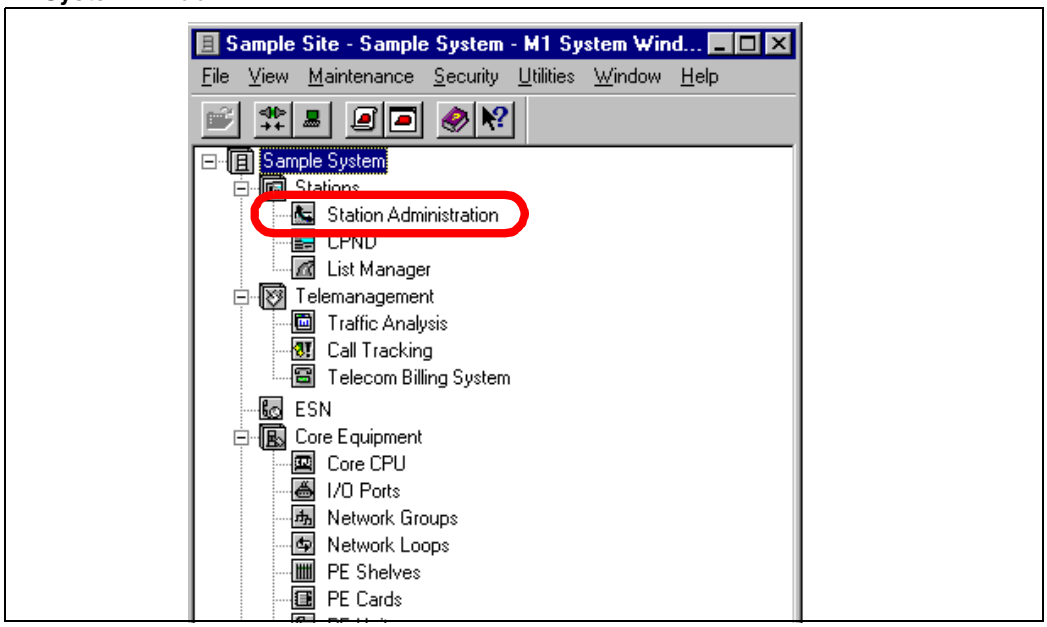
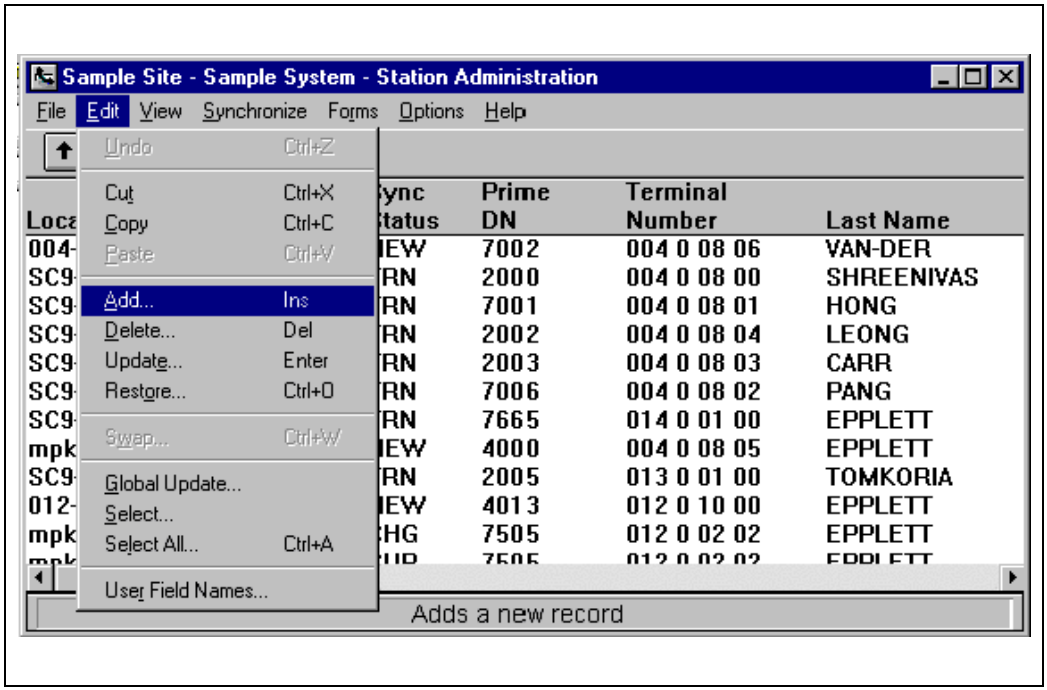


Table 17
Station Administration window

Step	Action
1	Open the Station Administration window.
	Click on **Station Administration** in the M1 System Window.
	END

Access Add Station dialog

Figure 52
Station Administration window



Complete the following step:

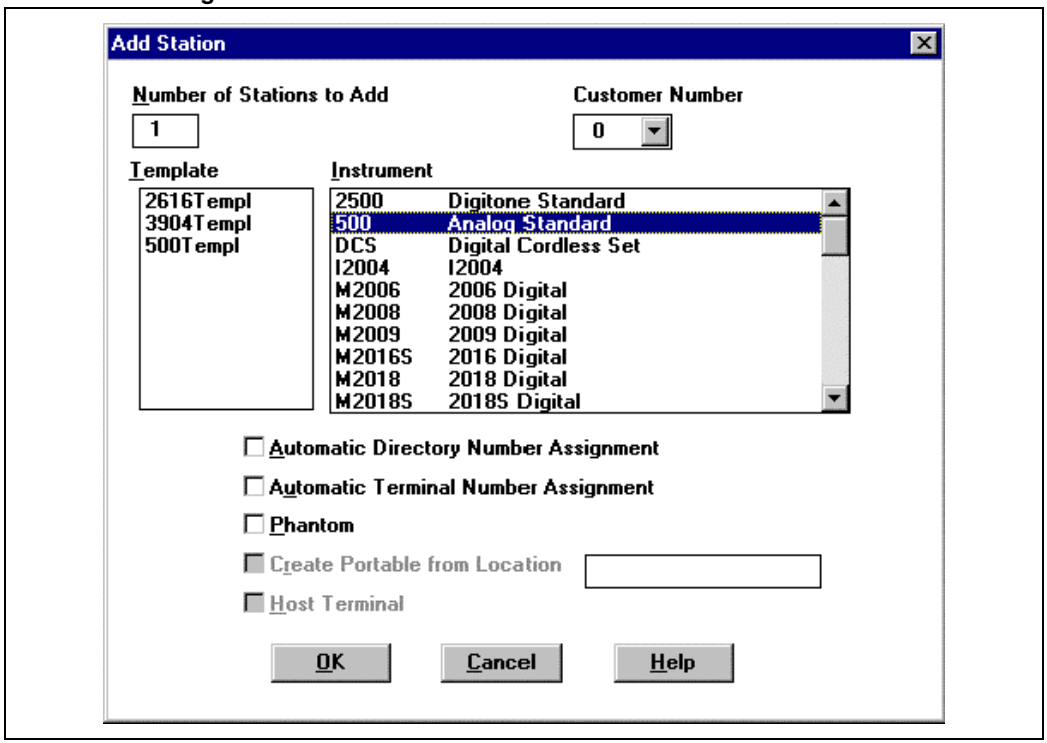
Table 18
Access Add Station dialog

Step	Action
1	Access Add Station dialog.
	From the **Edit** pull-down menu, click on **Add.**

END

Add 500 analog standard

Figure 53
Add Station dialog



Complete the following step:

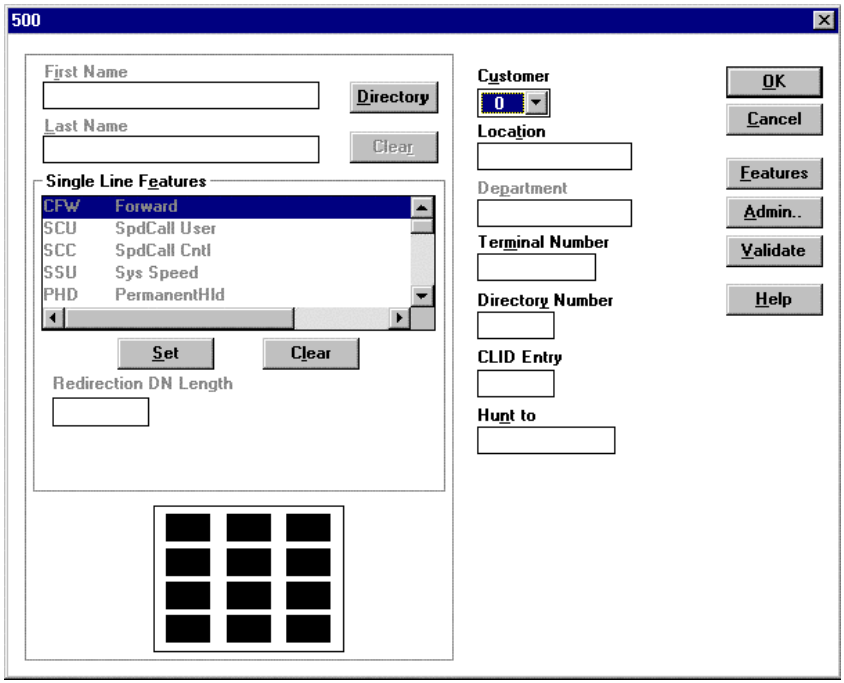
Table 19
Add 500 analog standard

Step	Action
1	Add 500 analog standard.
	Highlight **500 Analog Standard**, and click **OK**.

END

Access features

Figure 54
500 dialog



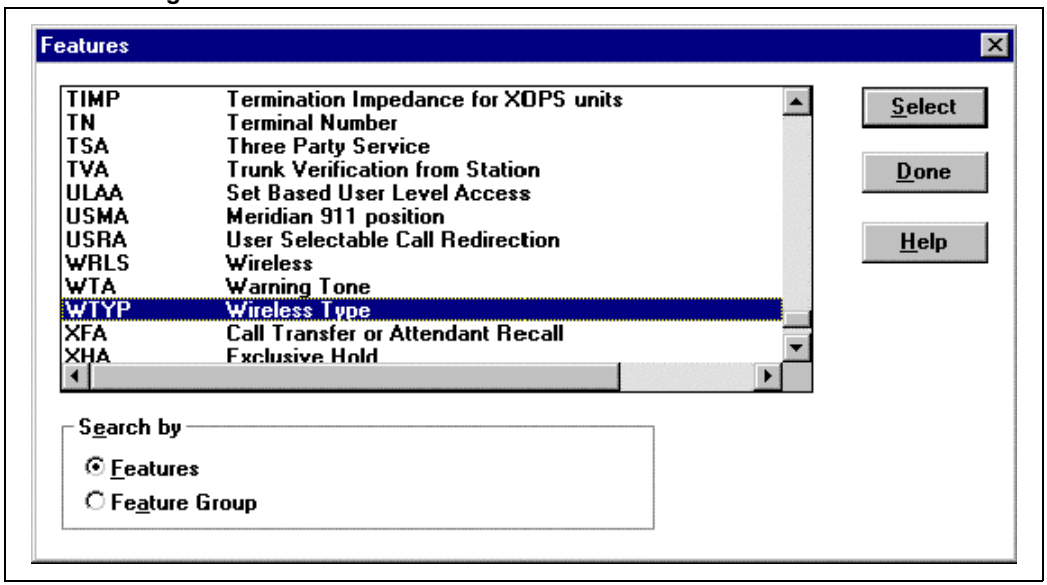
Complete the following step:

Table 20
Access features

Step	Action
1	Access the features.
	Click on the **Features** button.
	END

Access wireless type

Figure 55
Features dialog



Complete the following step:

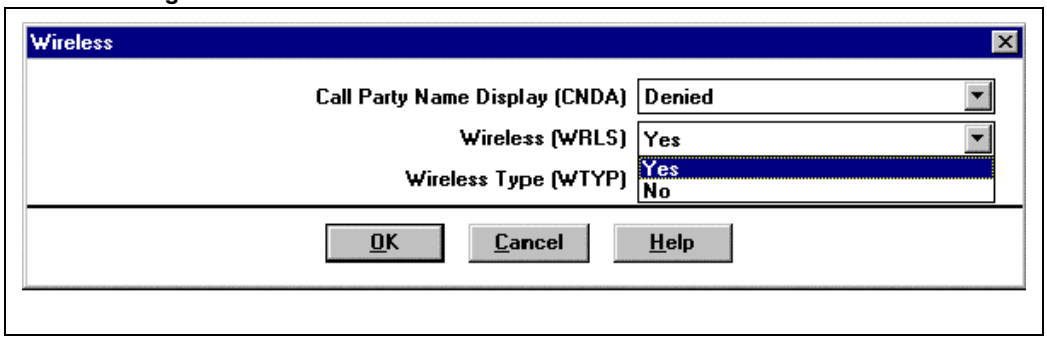
Table 21
Access wireless type

Step	Action
1	Access wireless type.
	Highlight **Wireless Type**, and click on the **Select** button.

END

Select wireless type

Figure 56
Wireless dialog



Complete the following step:

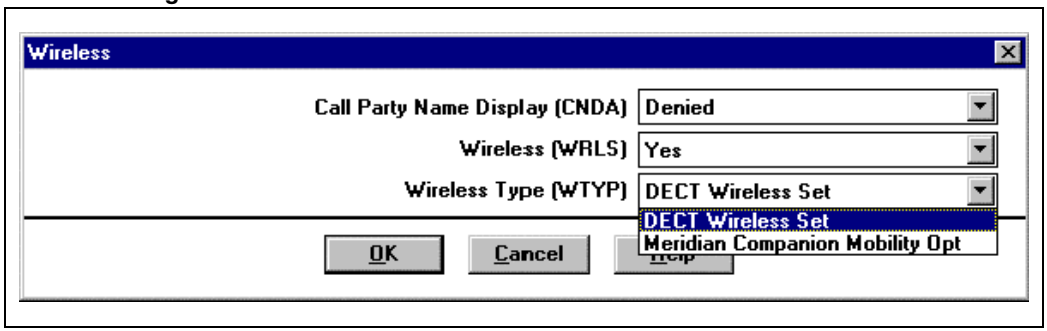
Table 22
Select wireless type

Step	Action
1	Select wireless type.
	From the **Wireless Type (WTYP)** pull-down menu select **YES**.

END

Select DECT wireless set

Figure 57
Wireless dialog



Complete the following step:

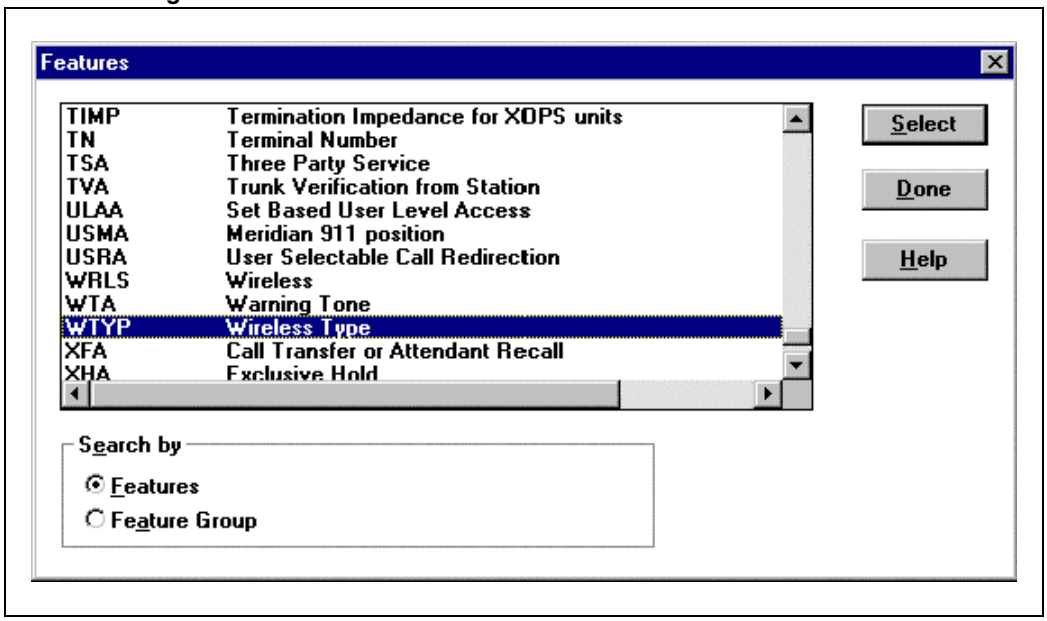
Table 23
Select DECT wireless set

Step	Action
1	Select DECT handset.
	From the **Wireless Type (WTYP)** pull-down menu, click on **DECT Wireless Set**. Click **OK**.

END

Accept changes

Figure 58
Features dialog



Complete the following step:

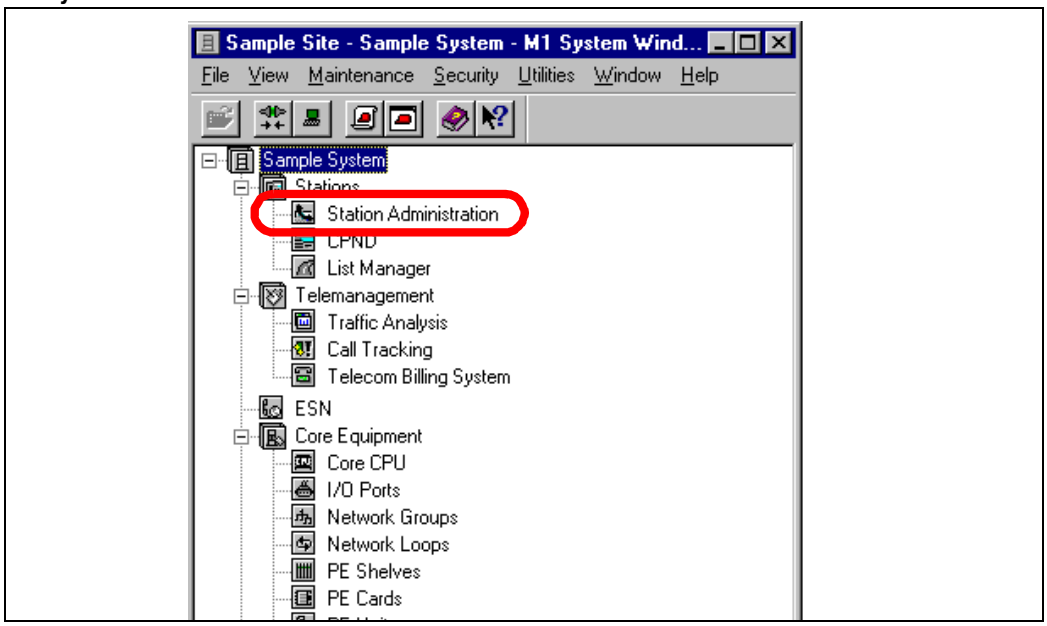
Table 24
Accept changes

Step	Action
1	Accept changes.
	Click on the **Done** button.
	END

Configure concentrated handsets on a Meridian 1 PBX

Open Station Administration window

Figure 59
M1 System Window



Complete the following step:

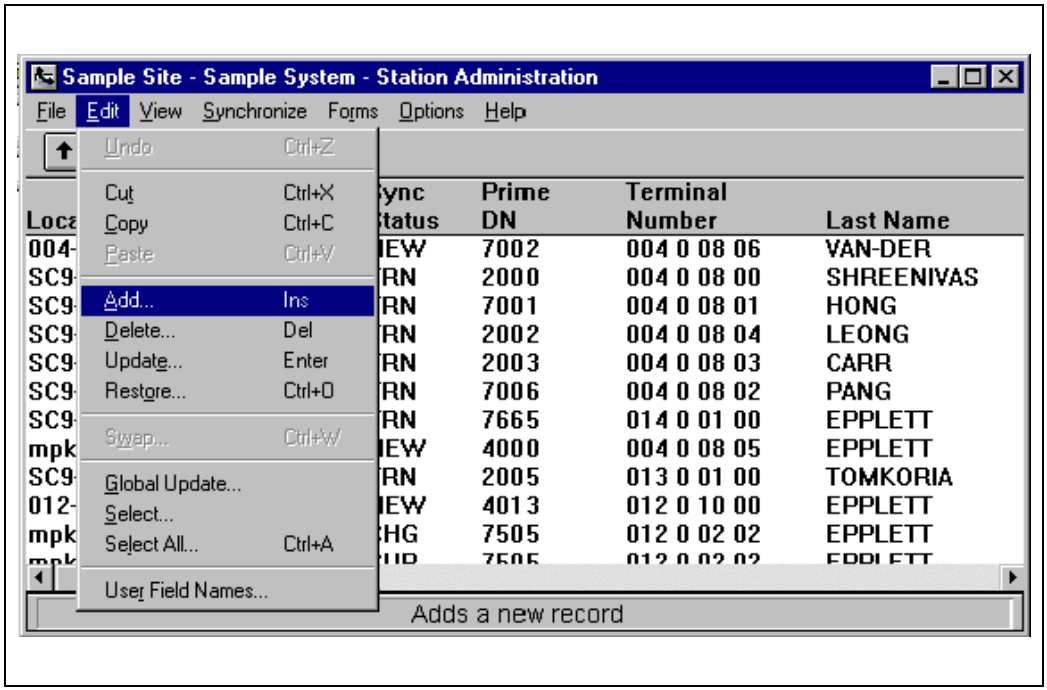
Table 25
Station Administration window

Step	Action
1	Open the Station Administration window.
	Click on **Station Administration** in the Meridian 1 System Window.

END

Access Add Station dialog

Figure 60
Station Administration window



Complete the following step:

Table 26
Access Add Station dialog

Step	Action
1	Access Add Station dialog.
	From the **Edit** pull-down menu, click on **Add.**
	END

Select Digital Cordless Set

Figure 61
Add Station dialog

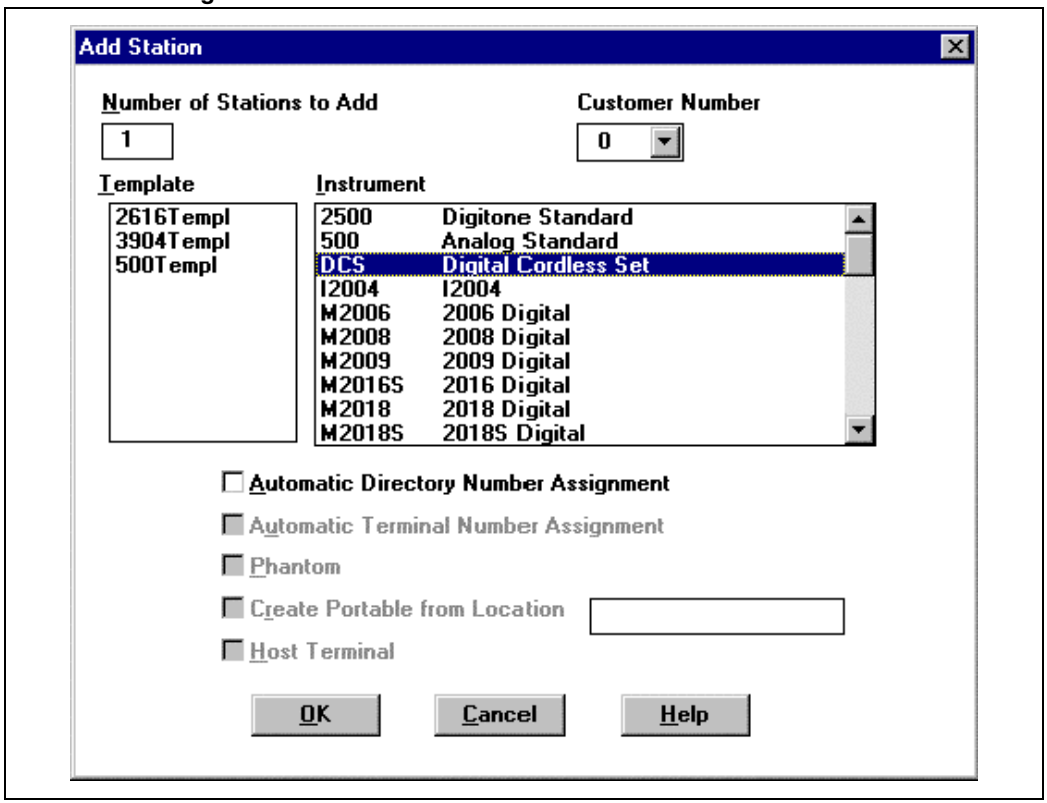


Table 27
Select Digital Cordless Set

Step	Action
1	Select Digital Cordless Set.
	Highlight **DCS**. Click on the **OK** button.
	END

Select Features

Figure 62
DCS dialog

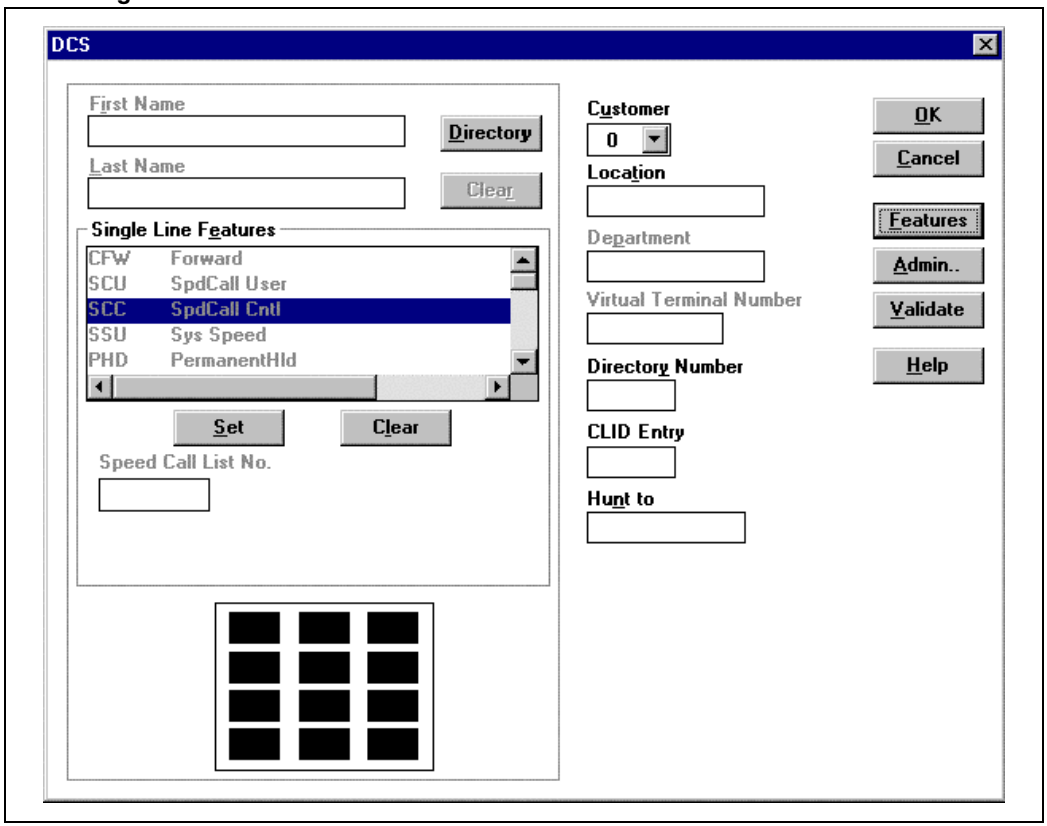


Table 28
Select Features

Step	Action
1	Select the features.
	Click on the **Features** button.

END

Select wireless type

Figure 63
Features dialog

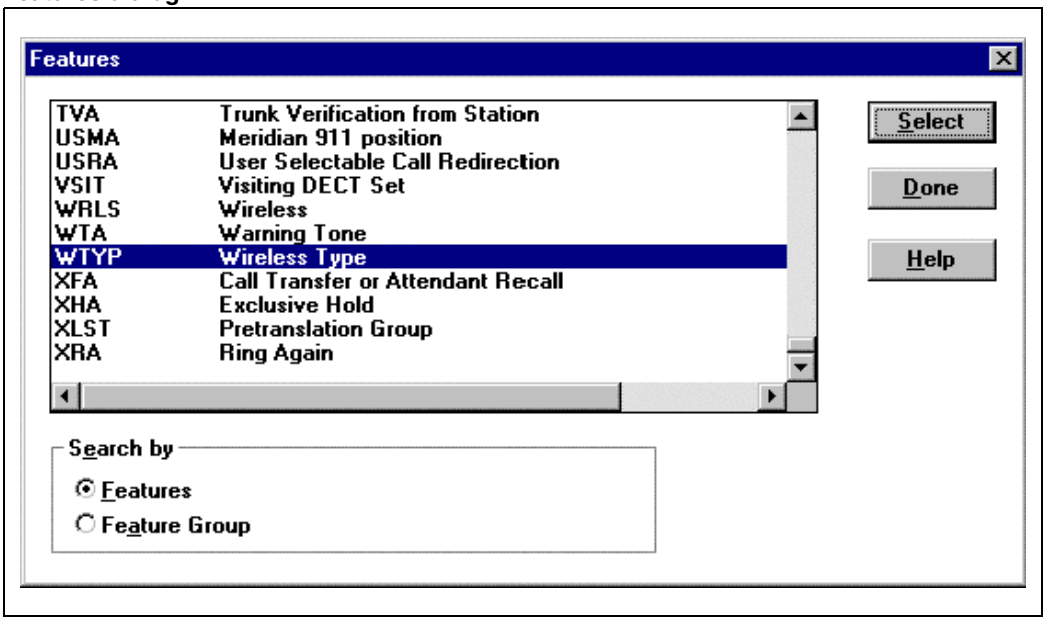


Table 29
Select wireless type

Step	Action
1	Select wireless type.
	Highlight **WTYP**, and click on the **Select** button.

END

Select Visiting DECT SET or local calling only

Figure 64
Wireless dialog

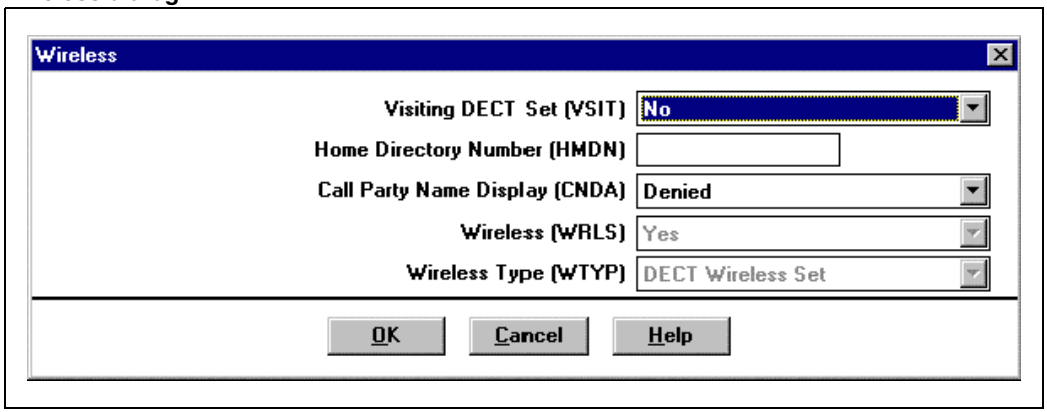


Table 30
Select Visiting DECT Set or local calling only

Step	Action
1	Select **Visiting DECT Set** as **Yes** if the handset is to visit this Meridian 1 PBX. Select **No** if this handset is to be used for local calling only.
	If **Visiting DECT Set** is **Yes**, go to step 2. If this handset is to be used for local calling only, go to step 3.
2	Select a Home DN.
	Enter a DN in the **Home Directory Number (HMDN)** box.
3	If the handset is to be used for local calling only, from the **Visiting DECT Set (VSIT)** list, select **No**.
4	Accept changes.
	Click on the **OK** button.
	END

Select an index

Figure 65
Features dialog

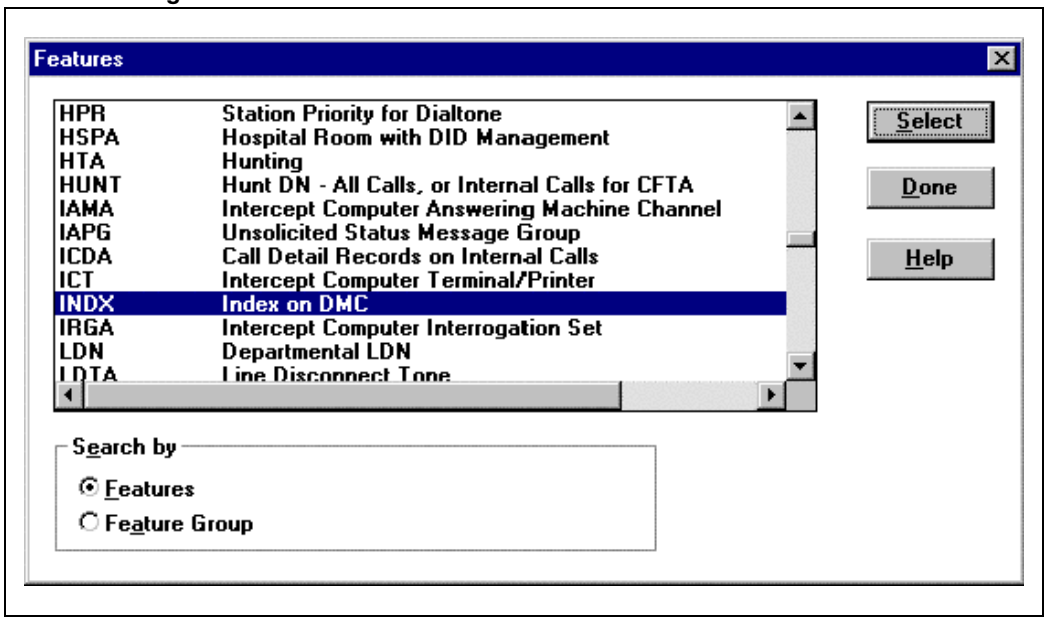


Table 31
Select an index

Step	Action
1	Select an index.
	Highlight **INDX**, and click on the **Select** button.

END

Provision hardware

Figure 66
Hardware Provisioning dialog

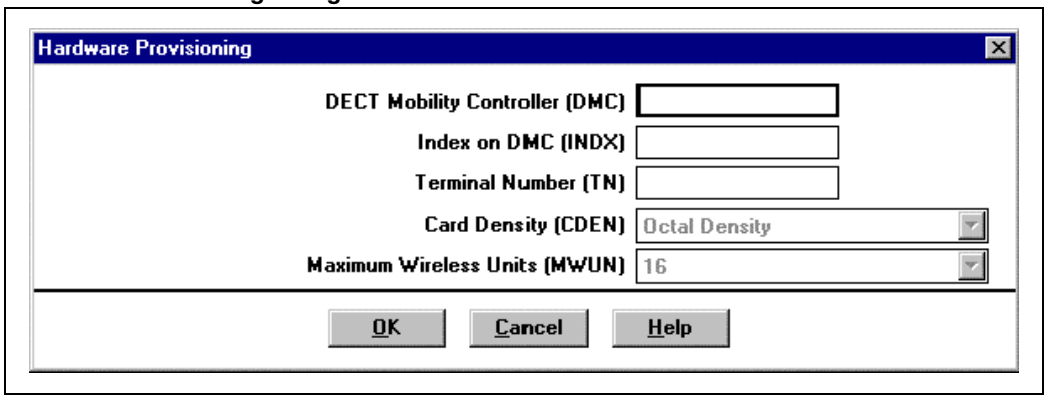


Table 32
Provision hardware

Step	Action
1	Select a DMC TN.
	Enter a TN in the **DECT Mobility Controller (DMC)** box.
2	Select an index.
	Enter an index in the **Index on DMC (INDX)** box. (Index range is 0 to 509.) **Note:** The Terminal Number (TN) is a virtual TN and is selected by the Meridian 1 PBX system.
3	Accept changes.
	Click the **OK** button.

END

Accept changes

Figure 67
Features dialog

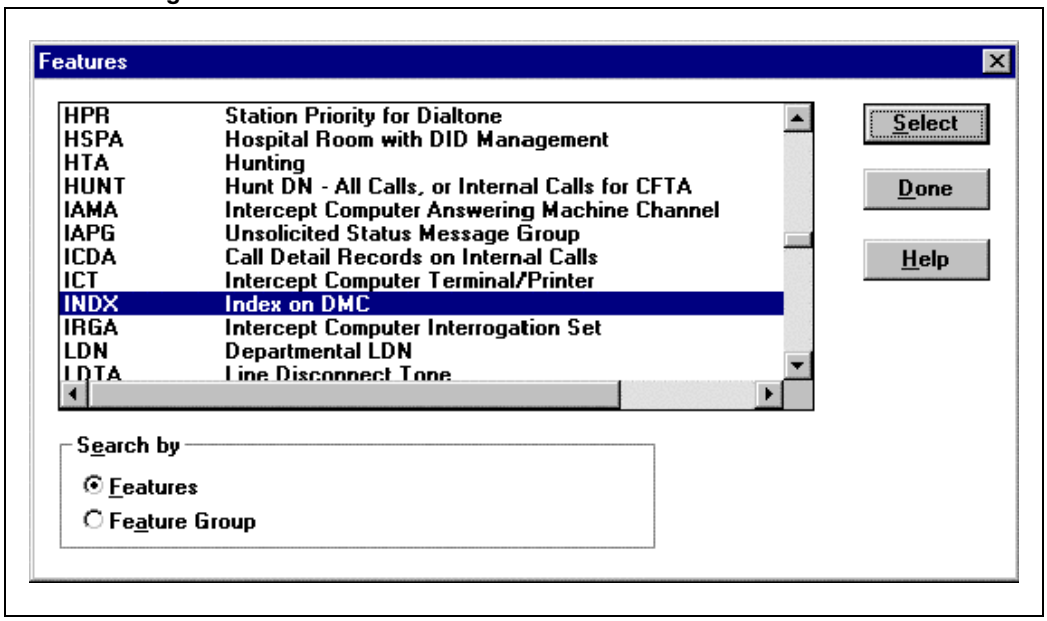


Table 33
Accept changes

Step	Action
1	Accept changes.
	Click on the **Done** button.
	END

Select Single Line Features

Figure 68
500 dialog

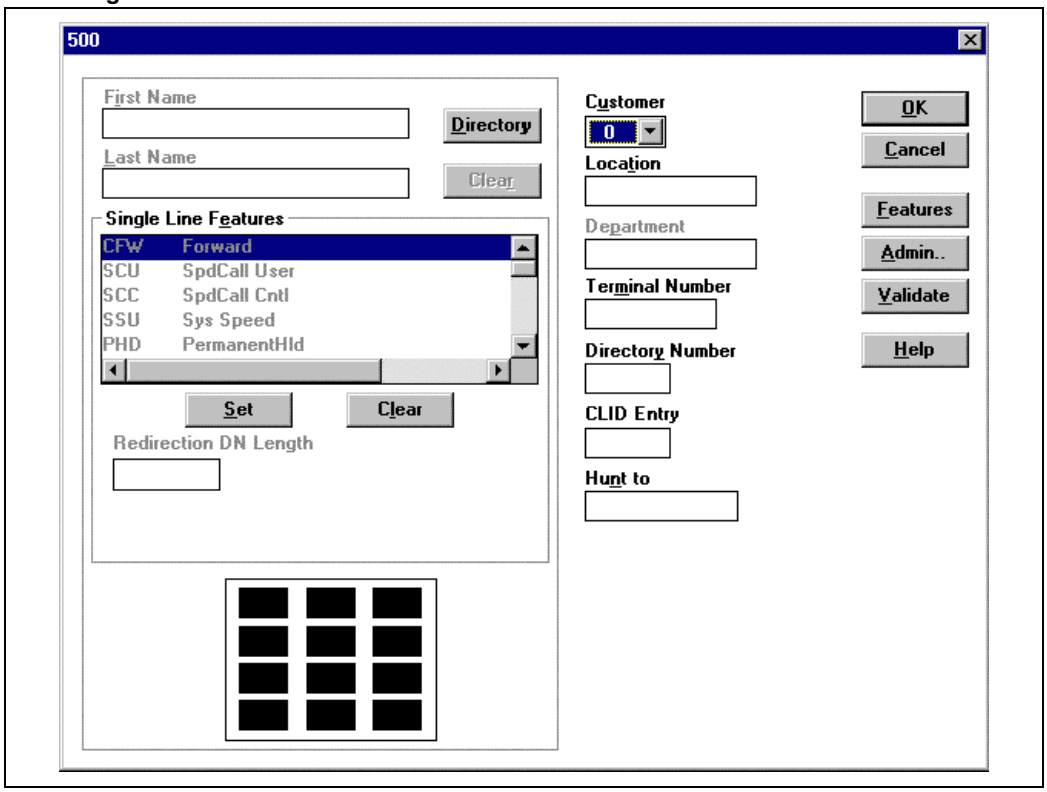


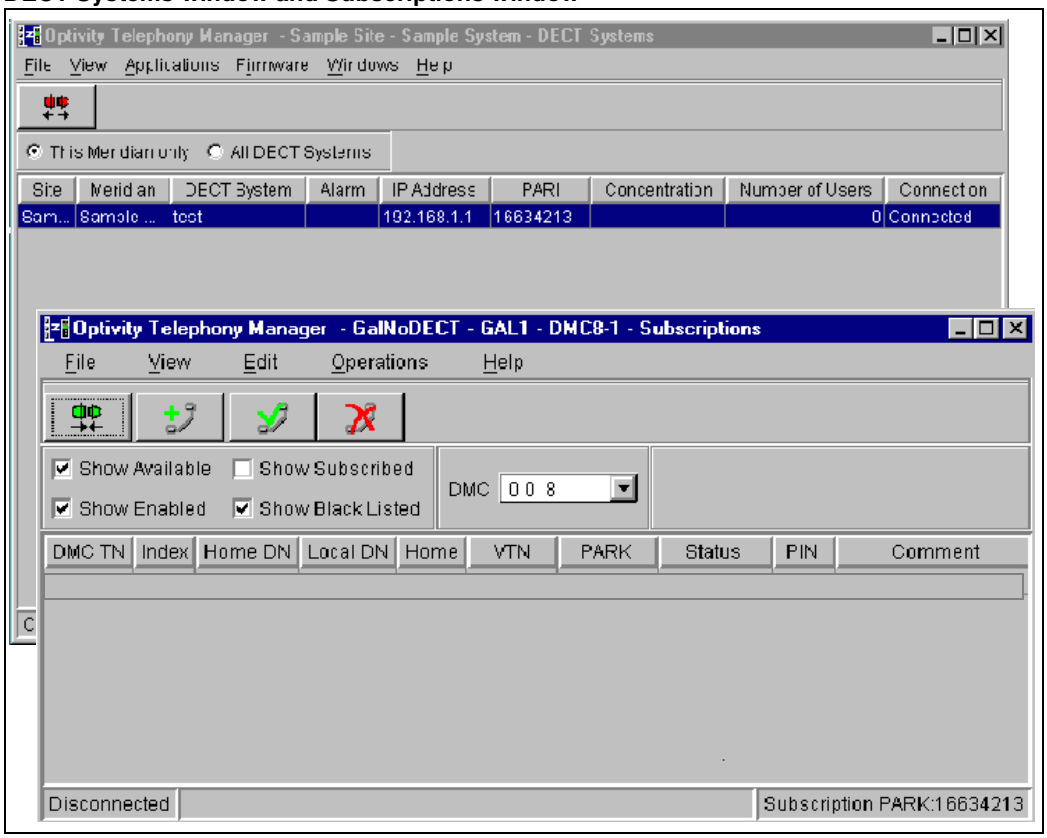
Table 34
Single Line Features

Step	Action
1	For information on other Single Line Features.
	Refer to the OTM Station Administration in *Using Optivity Telephony Manager* (553-3001-330).
	END

Note: Complete the *DECT Programming and Provisioning Record* (553-3601-250).

Retrieve subscription data for handsets

Figure 69
DECT Systems window and Subscriptions window



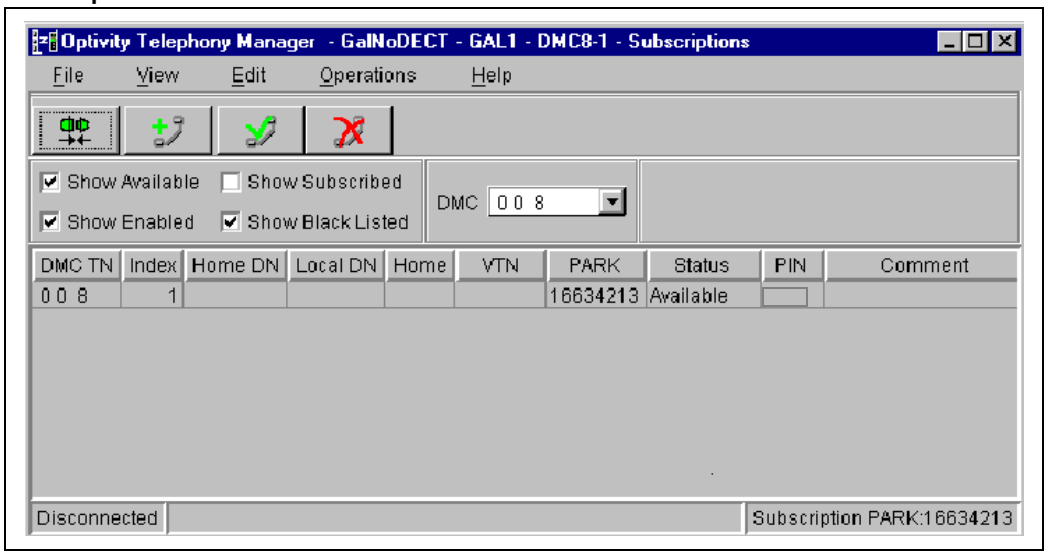
Complete the following steps:

Table 35
Subscribe handsets

Step	Action
1	Launch the Subscriptions window from the DECT Systems window.
	Click on the **Applications** pull-down menu, click on **Subscriptions**.
2	Retrieve the subscription configuration data from the OTM Station Administration database. **Note:** At this point, no handset data appears in the Subscriptions window.
	In the Subscriptions window, click on the **Operations** pull-down menu, click on **Retrieve OTM Configuration**.
3	Open the Configure DECT Subscription dialog. **Note:** At this point, all handsets configured on OTM Station Administration are shown in the Subscriptions window
	Click on the **File** pull-down menu, click on **Add** or click on .
	END

Enable subscription

Figure 70
Subscriptions window



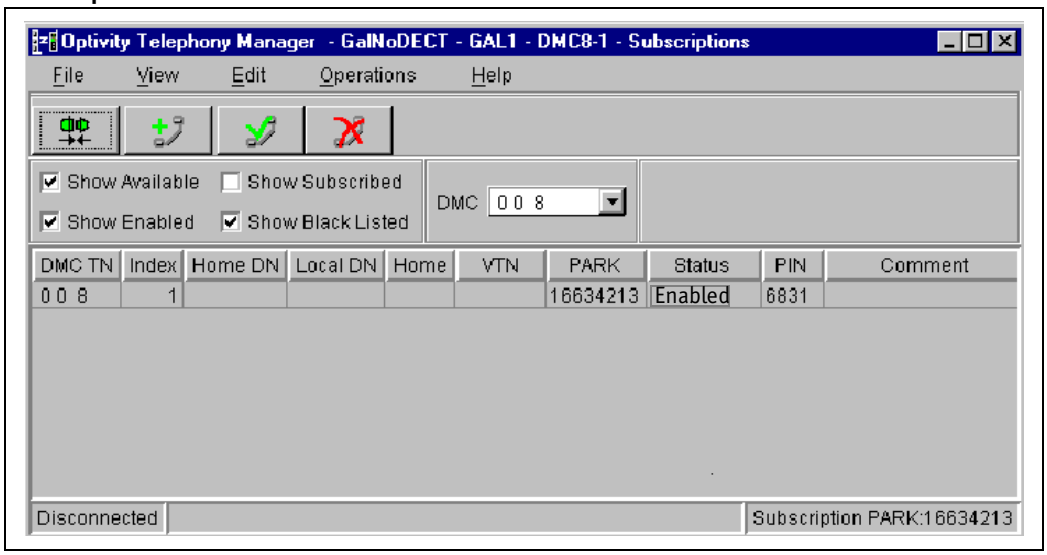
Complete the following steps for each handset:

Table 36
Configure handsets

Step	Action
1	**Note:** At this point, there are no PINs shown in the Subscriptions window. Select a handset from the list.
	Click on one handset in the list to highlight a row.
2	Enable handsets.
	Click on the **Operations** pull-down menu, click on **Enable** or click on .

Activate the PIN on the handsets

Figure 71
Subscriptions window



Complete the following steps:

Table 37
Obtain the PIN

Step	Action
1	**Note:** At this point, in the Subscriptions window, the PINs are shown and the Status is Enabled. Subscribe the DECT handsets.
	See “Handset subscription” on page 128.
	END

Note: When a handset is subscribed, the Subscription window shows the Status column as Subscribed and does not show a PIN.

Handset subscription

For detailed information on subscribing a handset, refer to “DECT system administration” in *DECT Operation Administration and Maintenance* (553-3601-301), or the individual handset’s User Guide.

Base Station Power and Muting

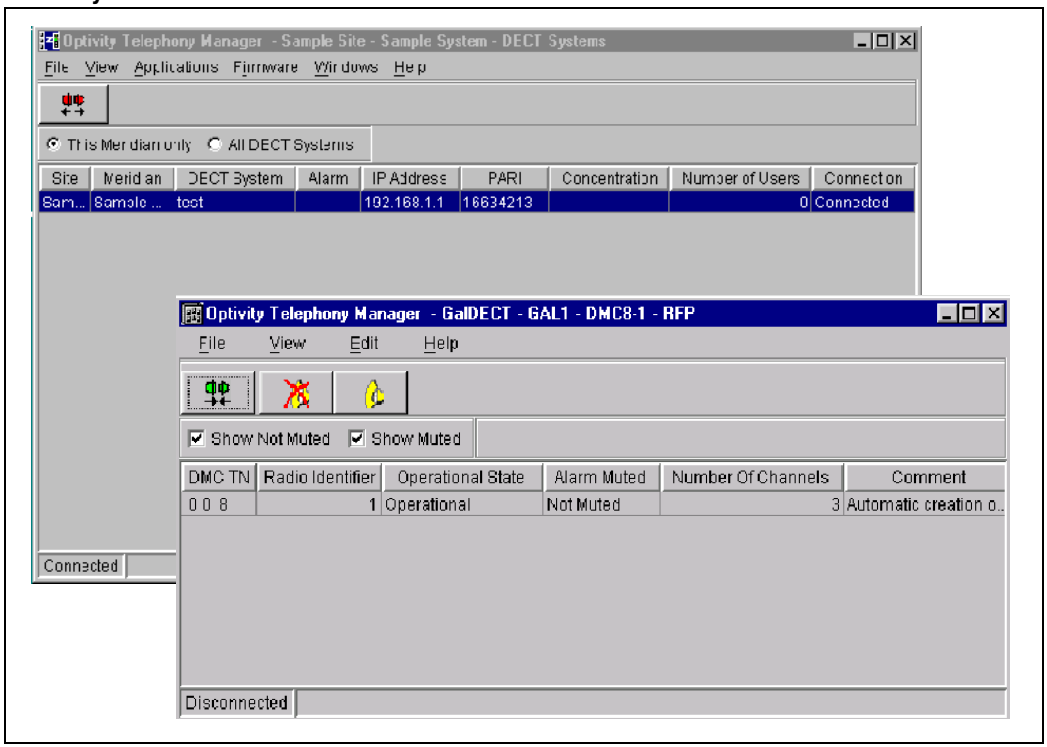
Contents

This chapter contains information on the following topics:

Open RFP window. 130
Set alarm muting, line power, and comments for base stations. 132

Open RFP window

Figure 72
DECT Systems main window and RFP window



Complete the following steps:

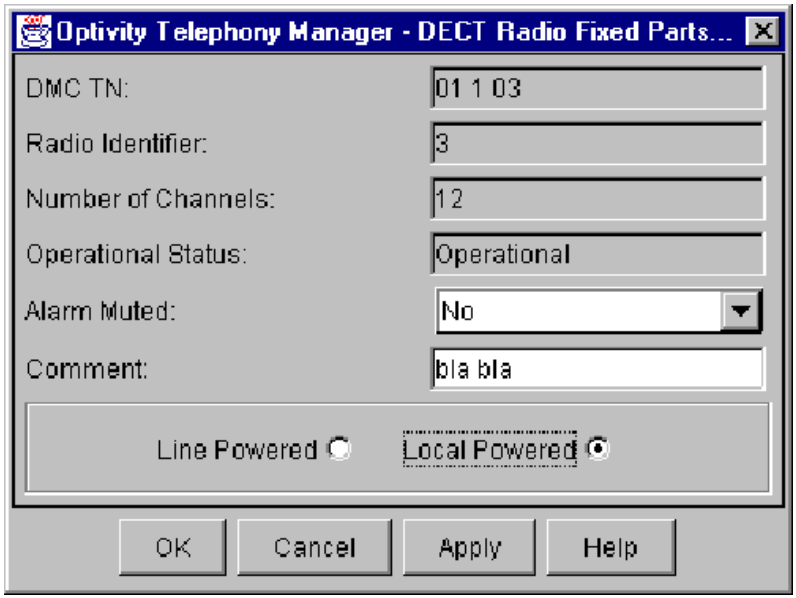
Table 38
Open RFP window

Step	Action
1	Launch the DECT Systems window.
2	Launch the Boards window.
	On the DECT Systems window, click on the **Applications** pull-down menu, click on **Boards**.
3	Select a base station from the list.
	Click on one RFP in the list to highlight a row.
4	Open the Radio Fixed Part properties dialog.
	Click on the **File** pull-down menu, click on **Properties**.

END

Set alarm muting, line power, and comments for base stations

Figure 73
DECT Radio Fixed Parts



Complete the following steps:

Table 39
Set alarm muting, line power, and comments for base stations

Step	Action
1	Set alarm muting. Select **No** to deny alarm muting or **Yes** to allow alarm muting.
	Click on **No** or **Yes**.
2	Enter up to 80 characters for comments.
	Type comments.
3	Select local powered or line powered for the selected base station.
	Click the **Line Powered** or **Local Powered** radio button.
4	Apply the selections.
	Click the **OK** button.

Add a V.24 serial connection

Contents

This chapter contains information on the following topics:

DMC8 to OTM server serial connections 136
Serial connection for Windows 2000. 137
Connect the Relay card to a local OTM server without a modem. 137
Connect the relay card to a remote OTM server with modems. 139
Install a virtual modem on the PC. 142
Configure modem properties. 144
Set modem speed. 146
Set connection preferences. 147
Disable flow control. 149
Configure Remote Access Service (RAS). 150
Set RAS modem and port usage. 152
Configure RAS setup and network. 153
Configure NetBIOS services. 155
Set up and configure a RAS Phone book entry. 157
Open the Dial-up Networking dialog. 157
Set up the phone book entry name. 158
Set up the server dialog. 160
Go to the next dialog. 161
Set up complete. 162
Configure the networking dial-up. 163
Configure the Dial using an entry. 164
Configure the Dial-up server type. 165
Configure IP address. 166
Accept the configuration changes. 167

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Establish a connection to the DECT system. 169
Establish connection complete. 170
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Configure the IP address. 173
Hang-up the RAS connection. 174
V.24 connection using Windows 2000. 175
Dial-up configuration. 175
Modem configuration. 175
Network and dial-up connections configuration. 178
DECT Access System configuration. 189
Error messages. 190
Launch OTM-DECT back-end. 191

Reference list

The following are the references in this section:

- *System Installation Procedures* (553-3001-210)

DMC8 to OTM server serial connections

A DMC8 Relay card-to-OTM server serial connection is required if a DME daughterboard is not present on the relay card. There are two types of serial connections:

- when the relay card and OTM server are *local*, and connected *without* a modem
- when the relay card and OTM server are *remote*, and connected *with* a modem

CAUTION: Service interruption

Ensure that the DMC8/DMC8-E Relay card jumpers J6 to J9 are in the V.24 position for operation on a serial connection to the OTM server.

Serial connection for Windows 2000

For information on how to configure a serial connection using Windows 2000, see "V.24 connection using Windows 2000" on page 175.

Connect the Relay card to a local OTM server without a modem

Figure 74
DMC8 Relay card connection to a local OTM server without a modem

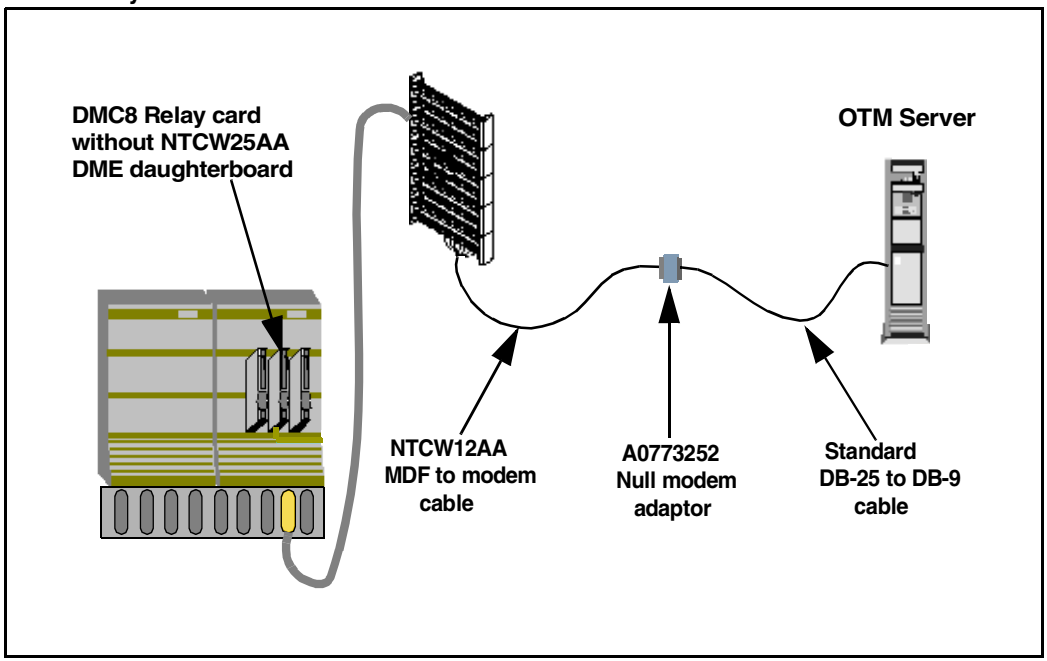


Table 40
Connect the Relay card to a local OTM server

Step	Action
1	Connect the NTCW12AA cable to the DMC8 Relay card MDF connector.
	Refer to Table 41 on page 138 for the NTCW12AA cable tip and ring connections.
2	Choose the OTM server COM port from the work order.
	Connect the DB-9 cable connector into the OTM COM port.
3	Install the null modem plug.
	Connect the DB-25 connector end and the NTCW12AA cable end into the AO773252 null modem adapter.
	END

Note: The BIX tip and ring connections shown in Table 41 on page 138 correspond to standard BIX designation. The first pair are labeled T0 and R0. See *System Installation Procedures* (553-3001-210), section *Planning and Designating the MDF*.

Table 41
NTCW12AA cable to MDF connections

DMC8 Relay card MDF connection	Cable color	DB25 connector pin number	Signal designator
T1	Grey	8	V.24DCD
R2	Yellow	4	V.24RTS
T3	Blue	2	V.24TXD
R3	Red	3	V.24RXD
T4	Pink	7	V.24GND

Connect the relay card to a remote OTM server with modems

Figure 75
DMC8 relay card connection to a remote OTM server

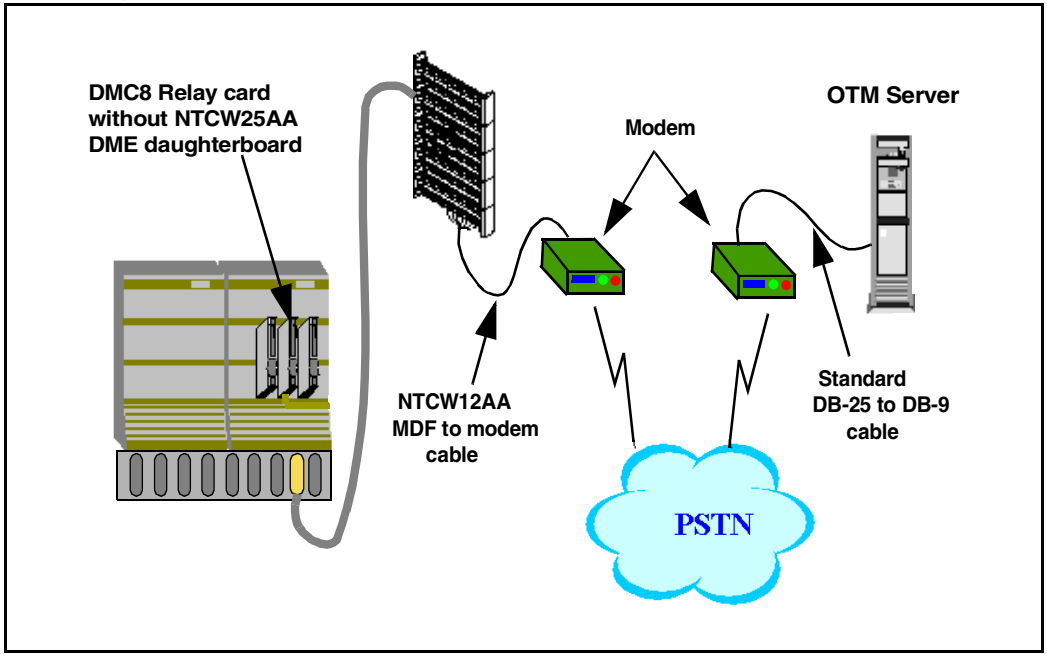


Table 42
Connect the remote OTM server to a modem (Part 1 of 2)

Step	Action
1	Connect the OTM COM port to the modem.
	Connect the DB-9 end of the V.24 cable to the OTM COM port. Connect the DB-25 end of the V.24 cable to the modem.

Table 42
Connect the remote OTM server to a modem (Part 2 of 2)

Step	Action
2	Set up the OTM modem.
	Follow the manufacturers set-up procedures. Set modem as follows: • Line speed = 38400b/s • No parity • 1 stop bit • 8 bit words • No output control • No timer
3	Connect the modem to the Public Switched Telephone Network.
	Plug a teledapt cable into the modem RJ-11 jack. Connect the other end of the teledapt cable to the PSTN.
	END

Table 43
Connect the DMC8 Relay card to a modem (Part 1 of 2)

Step	Action
1	Connect the NTCW12AA cable to the DMC8 Relay card MDF connector.
	Refer to Table 41 on page 138 for the NTCW12AA cable tip and ring connections.
2	Set up the OTM modem.

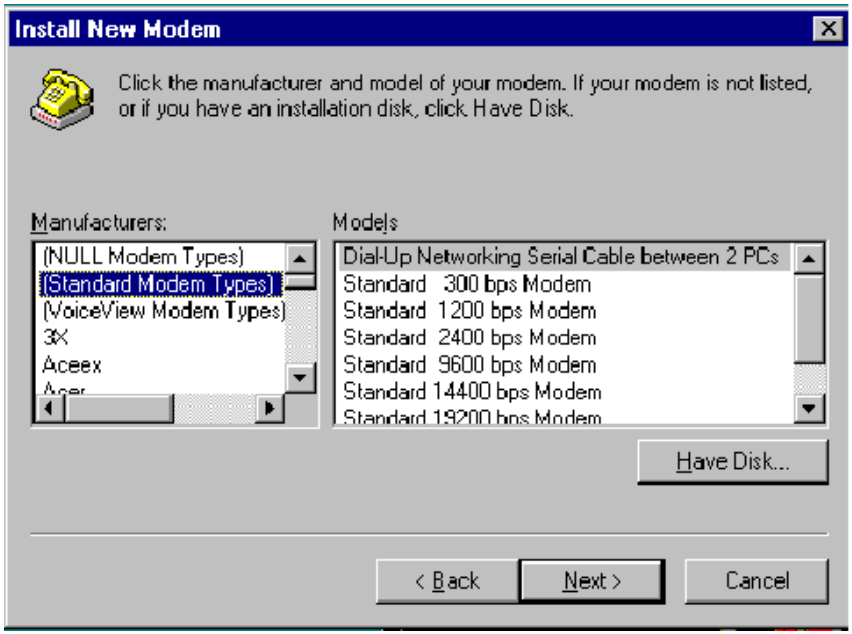
Table 43
Connect the DMC8 Relay card to a modem (Part 2 of 2)

Step	Action
	Follow the manufacturers set-up procedures. Set modem as follows: • Line speed = 38400b/s • No parity • 1 stop bit • 8 bit words • No output control • No timer
3	Connect the NTCW12AA cable to the modem.
4	Connect the OTM modem to the Public Switched Telephone Network (PSTN).
	Plug a teledapt cable into the modem RJ11 jack. Connect the other end of the teledapt cable to the PSTN.
	END

Install a virtual modem on the PC

A virtual modem is required for a local serial connection.

Figure 76
Install New Modem



Complete the following steps:

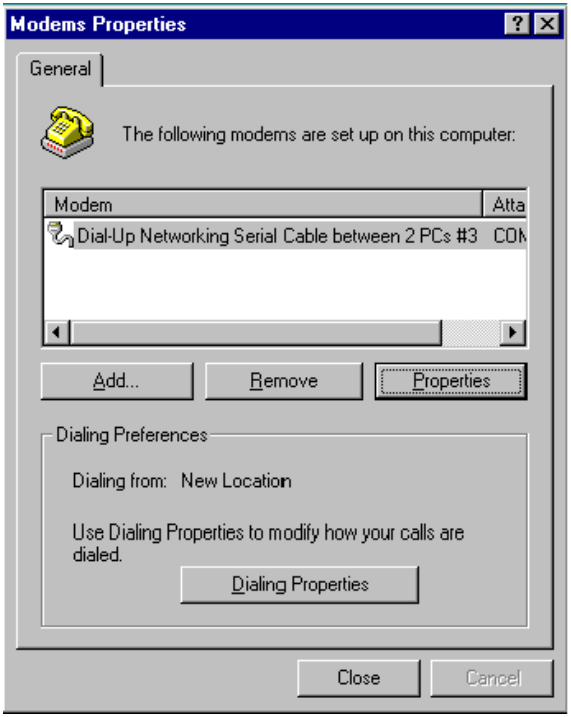
Table 44
Install a modem on the PC

Step	Action
1	Go to Control Panel.
	Click on **Modem**.
2	In the Manufacturers field.
	Select **[Standard Modem Types]**.
3	In the Models field.
	Select **Dial-Up Networking Serial Cable between 2 PCs**.
4	Continue.
	Click on **Next**.

Configure modem properties

The properties must be configured to interface serially to the DECT system.

Figure 77
Modem Properties



Complete the following steps:

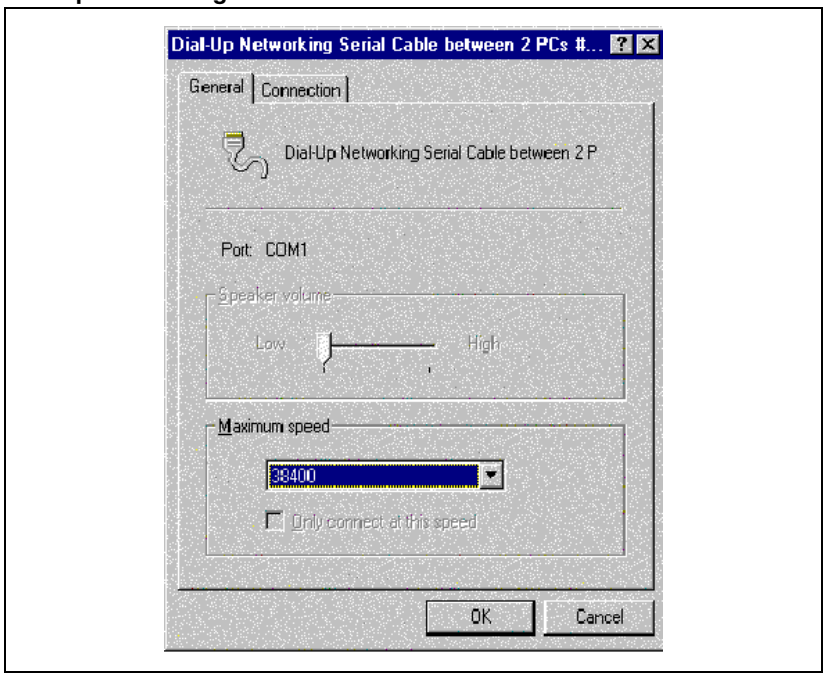
Table 45
Configure modem properties

Step	Action
1	Go to Control Panel.
	Click on **Modem**.
2	Select the modem installed.
	Click on the modem in the list.
3	Open the properties dialog.
	Click the **Properties** button.

END

Set modem speed

Figure 78
Dial-Up Networking Serial Cable between 2PCs #... General tab



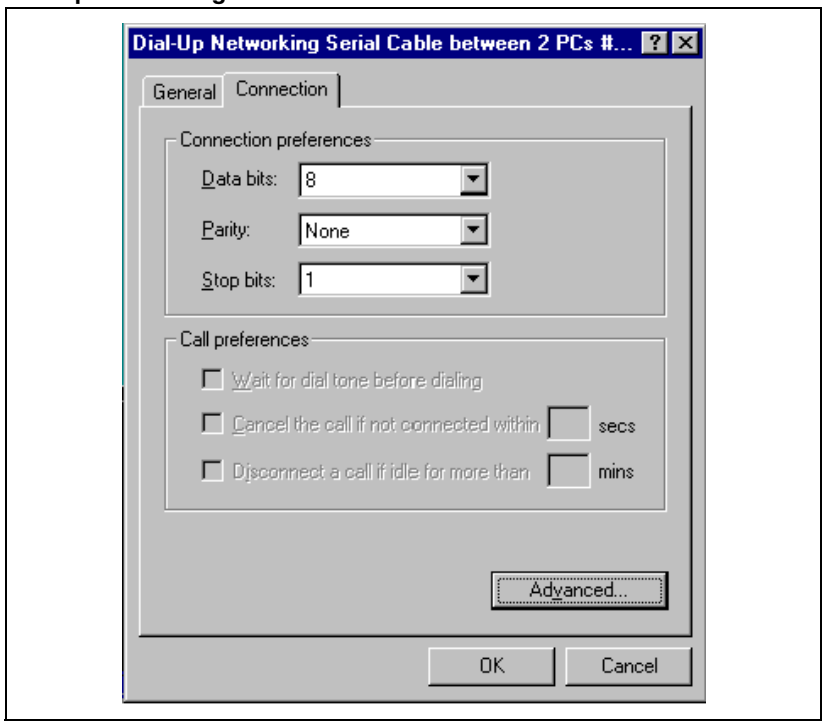
Complete the following steps:

Table 46
Set modem speed

Step	Action
1	Select maximum modem speed.
	Choose **38400**.
2	Apply selection.
	Click **OK**.
	END

Set connection preferences

Figure 79
Dial-Up Networking Serial Cable between 2PCs #... Connection tab



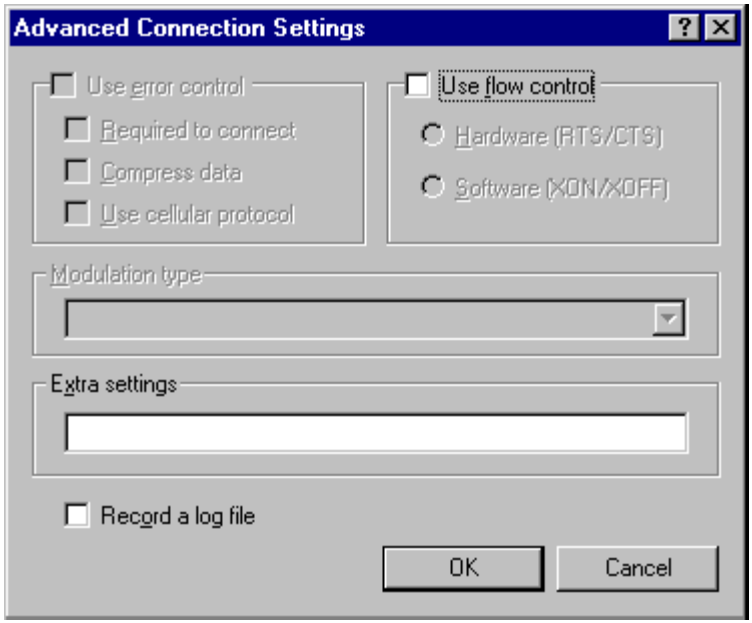
Complete the following steps:

Table 47
Set connection preferences

Step	Action
1	Set Data bits.
	Select **8**.
2	Set Parity.
	Select **None**.
3	Set Stop bits
	Select **1**.
4	Open Advanced dialog.
	Click on the **Advanced** button.

Disable flow control

Figure 80
Advanced Connection Settings



Complete the following step:

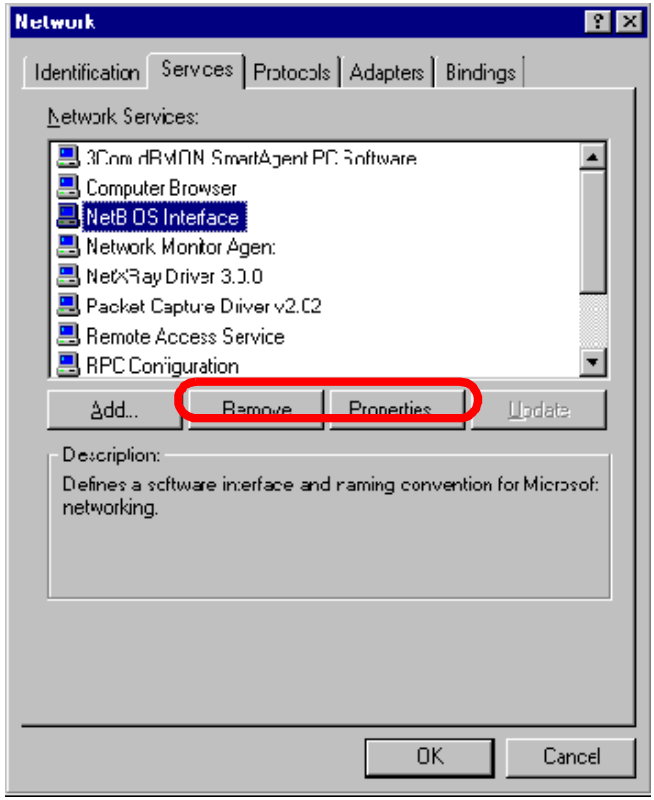
Table 48
Disable flow control

Step	Action
1	Ensure that flow control is disabled.
	Remove check from the **Use flow control** box.

END

Configure Remote Access Service (RAS)

Figure 81
Network – Services



Complete the following steps:

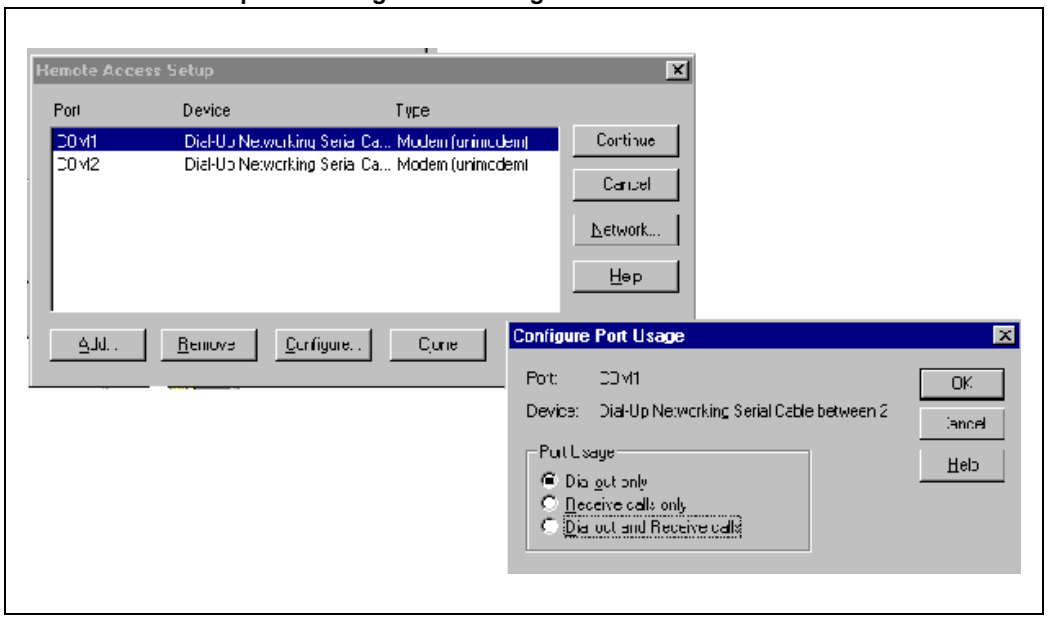
Table 49
Configure Remote Access Service

Step	Action
1	Open the Network property dialog.
	Start> Control Panel> click on the network icon.
2	Select Services.
	Click on Services tab.
3	Select the Remote Access Service.
	Click on **Remote Access Service**.

END

Set RAS modem and port usage

Figure 82
Remote Access Setup and Configure Port Usage



Complete the following steps:

Table 50
Set modem and port usage (Part 1 of 2)

Step	Action
1	Select a modem.
	Highlight a device.
2	Configure.
	Click on the **Configure...** button.

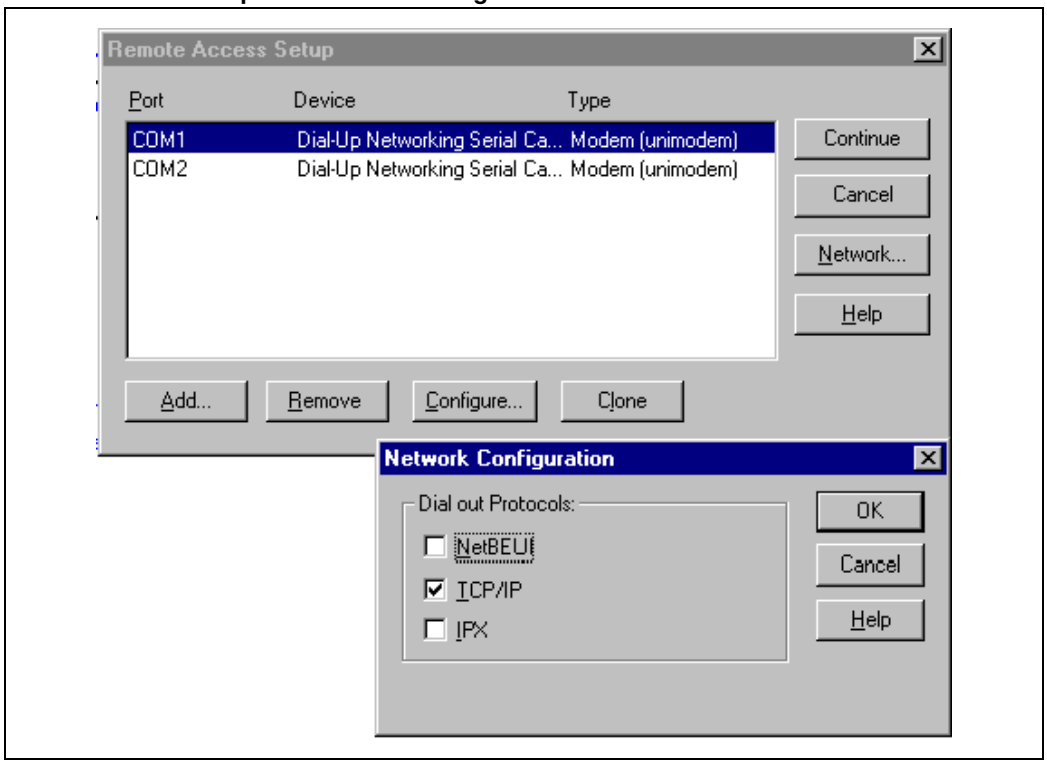
Table 50
Set modem and port usage (Part 2 of 2)

Step	Action
3	Select Port Usage.
	Click on the **Dial out only** radio button.

END

Configure RAS setup and network

Figure 83
Remote Access Setup and Network Configuration



Complete the following steps:

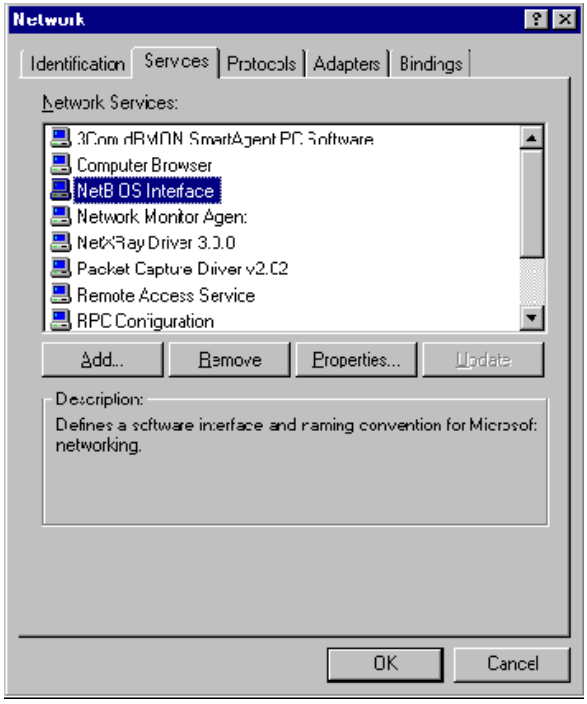
Table 51
Configure Remote Access Service

Step	Action
1	Select a modem.
	Highlight a device.
2	Select Network.
	Click on the **Network** button.
3	Select TCP/IP protocol for this port.
	Click a check in the **TCP/IP** box.

Configure NetBIOS services

The NetBIOS Interface Service must be installed. If this is not done, there will be no PPP protocols configured on the RAS ports.

Figure 84
Network – Services



Complete the following steps:

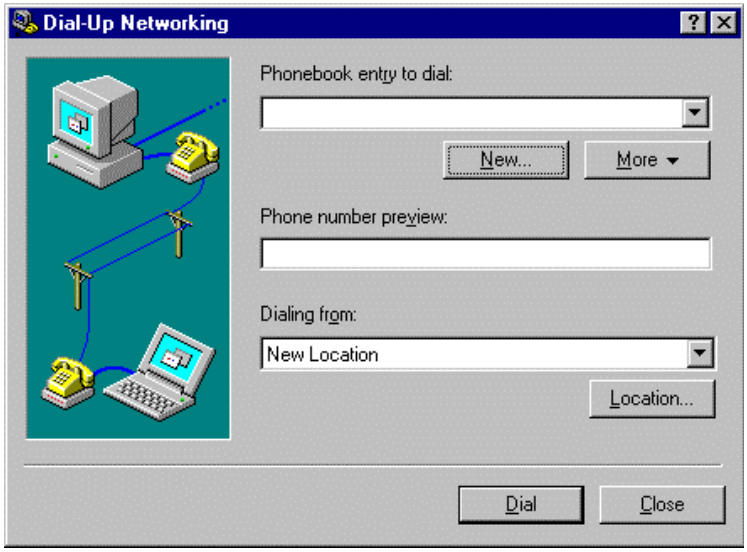
Table 52
Configure Remote Access Service

Step	Action
1	Ensure that the NetBIOS Interface Service is installed.
	Double-click on the Control Panel's Network and Dial-up Connections icon. Right-click on the appropriate connection. Click **Properties**. Click the **Services** tab.
2	Observe if the NetBIOS Interface is on the list of Network Services.
	If the NetBIOS Interface is on the list of Network Services, click **Close.** Go to "Set up and configure a RAS Phone book entry" on page 157**.** If the NetBIOS Interface is not on the list of Network Services, click **Add.** See Figure 84.
3	The Select Network Component appears. Select the required network component.
	Select **Protocol.** Click **Add**
4	The Select Network Protocol window opens. Select the desired protocol.
	Select **NetBIOS Interface.** Click **Install**. Click **Close.**
	END

Set up and configure a RAS Phone book entry

Open the Dial-up Networking dialog

Figure 85
Dial-up Networking dialog



Complete the following steps:

Table 53
Open the Dial-up Networking dialog (Part 1 of 2)

Step	Action
1	Open the Dial-up Networking property dialog on Windows NT.
	Start> **Program**> **Accessories**> **Dial-up Networking**.

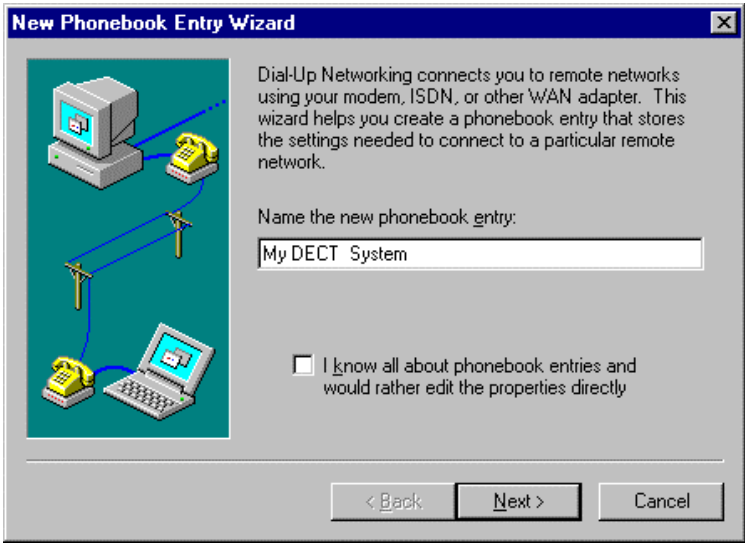
Table 53
Open the Dial-up Networking dialog (Part 2 of 2)

Step	Action
2	Continue.
	Press the **New** button.

END

Set up the phone book entry name

Figure 86
New Phonebook Entry Wizard



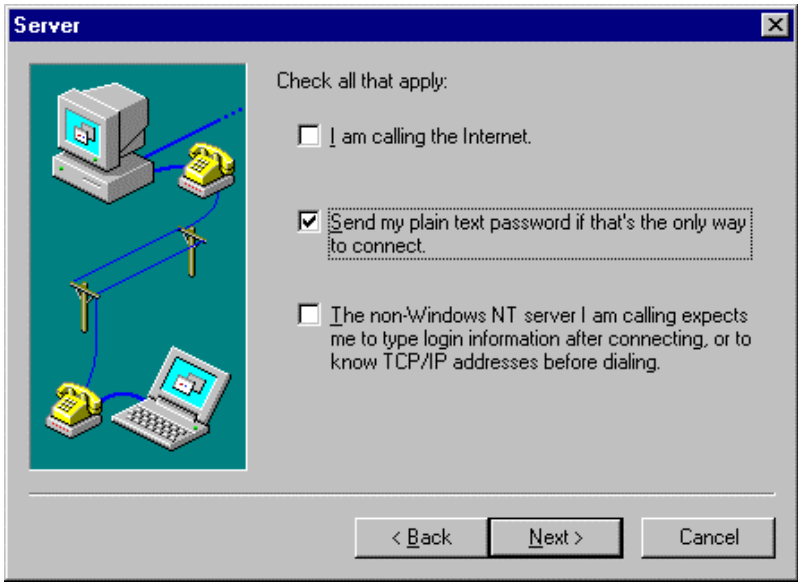
Complete the following steps:

Table 54
Set up the phone book entry name

Step	Action
1	Name the phone book entry.
	Enter the system name.
2	Accept the changes.
	Press the **Next** button.
	END

Set up the server dialog

Figure 87
Server



Complete the following steps:

Table 55
Configure Remote Access Service

Step	Action
1	Set up the server dialog.
	Check the **Send my plain text password...** box.
2	Accept the changes.
	Press the **Next** button.

END

Go to the next dialog

Figure 88
Phone Number

Complete the following step:

Table 56
Go to the next dialog

Step	Action
1	Omit this dialog.
	Press the **Next** button.

END

Set up complete

Figure 89
New Phonebook Entry Wizard

Complete the following step:

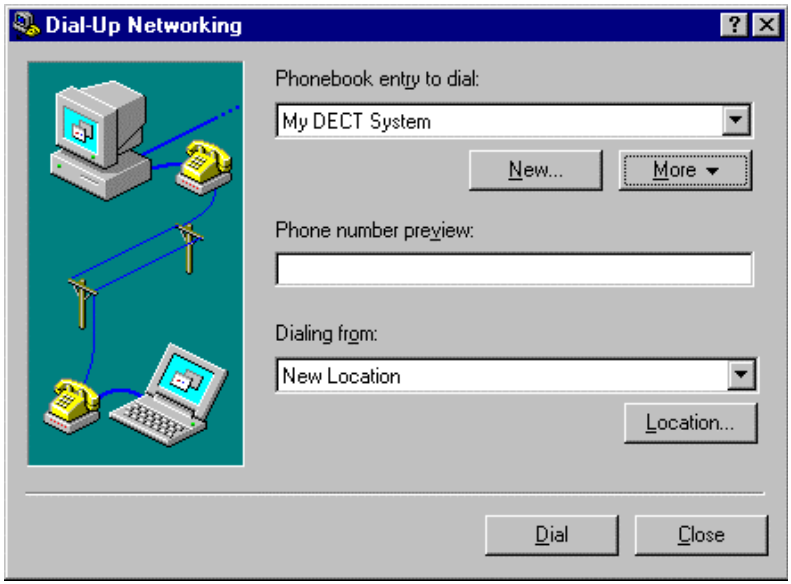
Table 57
Set up complete

Step	Action
1	Complete the set up.
	Press the **Finish** button.

END

Configure the networking dial-up

Figure 90
Dial-Up Networking



Complete the following steps:

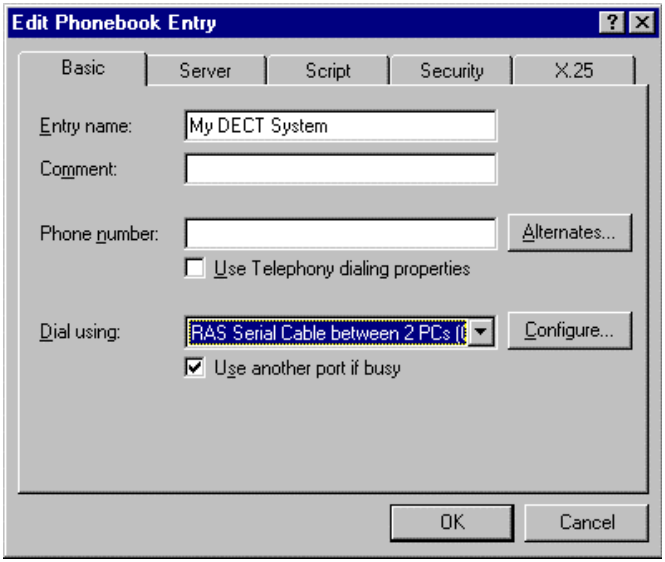
Table 58
Configure the networking dial-up

Step	Action
1	Open the Dial-up Network property dialog on Windows NT.
	Start> **Program**> **Accessories**> **Dial-up Networking**.
2	Select edit phone book.
	Under the **More** drop-down list, select **Edit entry and modem properties**.

END

Configure the Dial using an entry

Figure 91
Edit Phonebook Entry – Basic



Complete the following step:

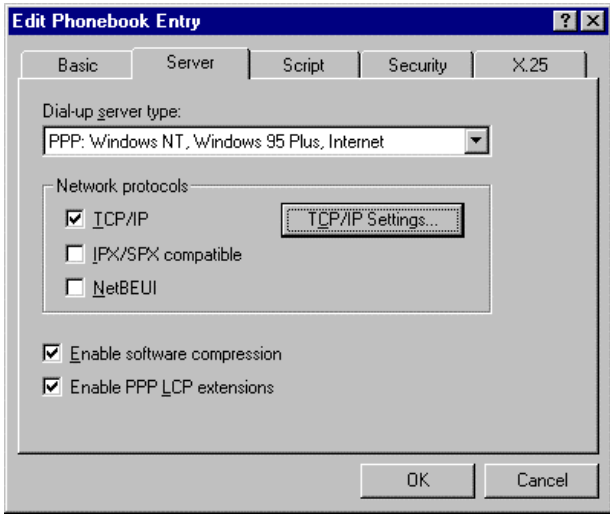
Table 59
Configure the Dial using an entry

Step	Action
1	Configure an entry from the Dial using drop-down list. **Note:** The list shows modems that were previously configured.
	Select an appropriate entry from the Dial using drop-down list.
2	Accept the changes.
	Press the **OK** button.

END

Configure the Dial-up server type

Figure 92
Edit Phonebook Entry – Server



Complete the following steps:

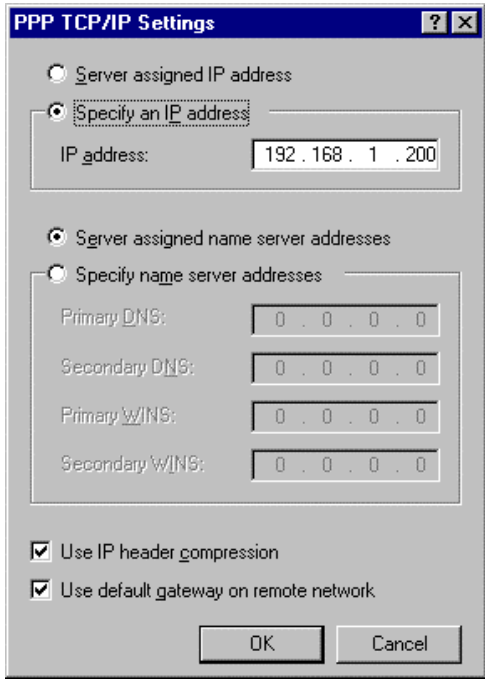
Table 60
Configure the Dial-up server type

Step	Action
1	Configure the Dial-up server type.
	Select **PPP: Windows NT...** and check the boxes shown in Figure 92 on page 165.
2	Open the PPP TCP/IP Settings dialog.
	Press the **TCP/IP** settings button.

END

Configure IP address

Figure 93
PPP TCP/IP Settings



Complete the following steps:

Table 61
Configure IP address (Part 1 of 2)

Step	Action
1	Select the settings.
	Click the **Specify an IP address** and the **Server assigned name server address** radio buttons. Click on both check boxes.

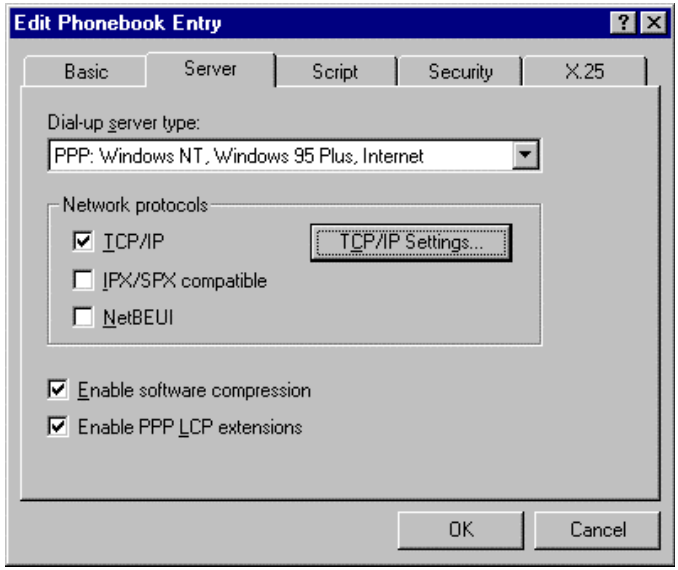
Table 61
Configure IP address (Part 2 of 2)

Step	Action
2	Specify an IP address.
	Enter the IP address.

END

Accept the configuration changes

Figure 94
Services



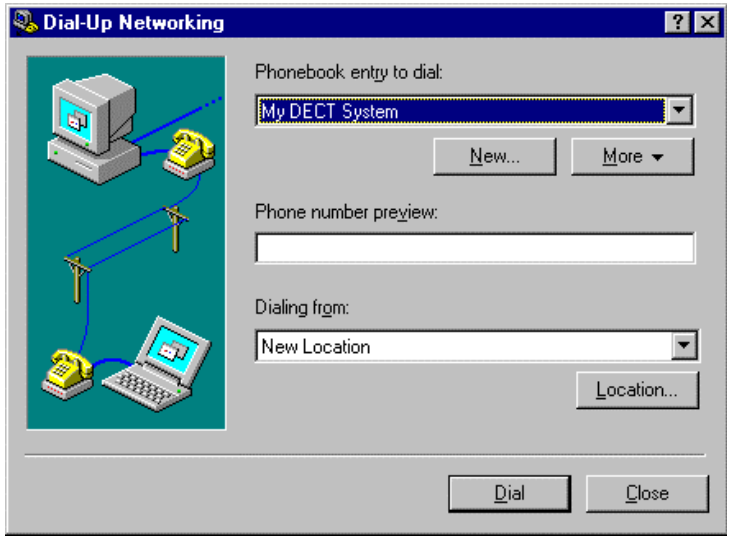
Complete the following step:

Table 62
Accept the configuration changes

Step	Action
1	Accept the configuration changes.
	Press the **OK** button.
	END

Establish the RAS connection

Figure 95
Dial-Up Networking



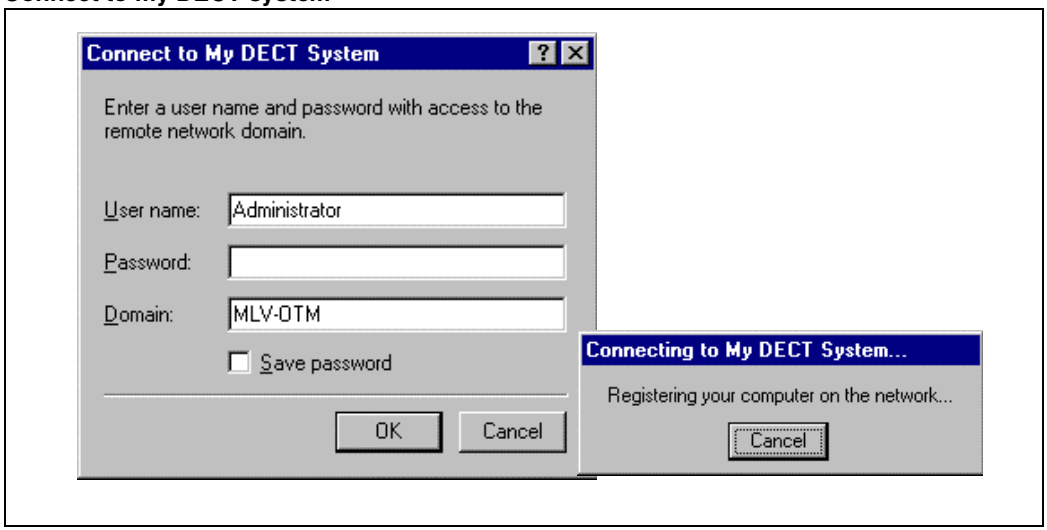
Complete the following steps:

Table 63
Establish the RAS connection

Step	Action
1	Open the Dial-up Network property dialog on Windows NT.
	Start> **Program**> **Accessories**> **Dial-up Networking**.
2	Select the Phonebook entry to dial.
	Highlight the entry.
3	Dial.
	Press the **Dial** button.
	END

Establish a connection to the DECT system

Figure 96
Connect to my DECT system



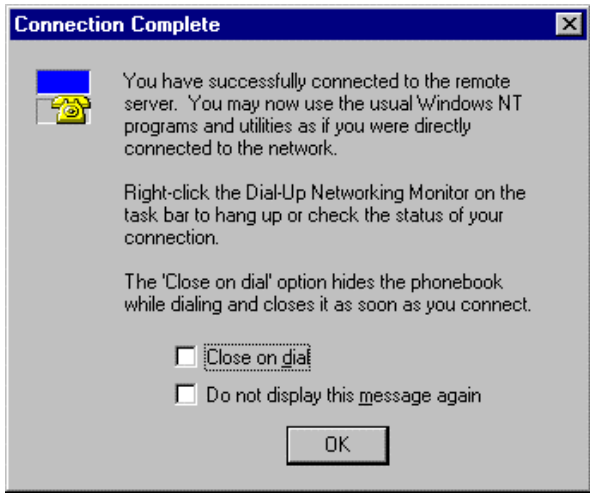
Complete the following step:

Table 64
Establish a connection to the DECT system

Step	Action
1	Establish access. **Note:** No input to this dialog needed.
	Press the **OK** button.
	END

Establish connection complete

Figure 97
Connection Complete



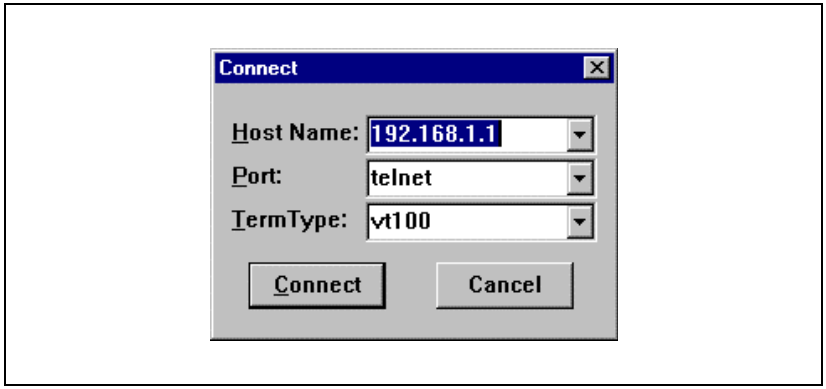
Complete the following step:

Table 65
Establish connection complete

Step	Action
1	Finish.
	Press the **OK** button.
	END

Set the IP address through Telnet

Figure 98
Connect



Complete the following steps:

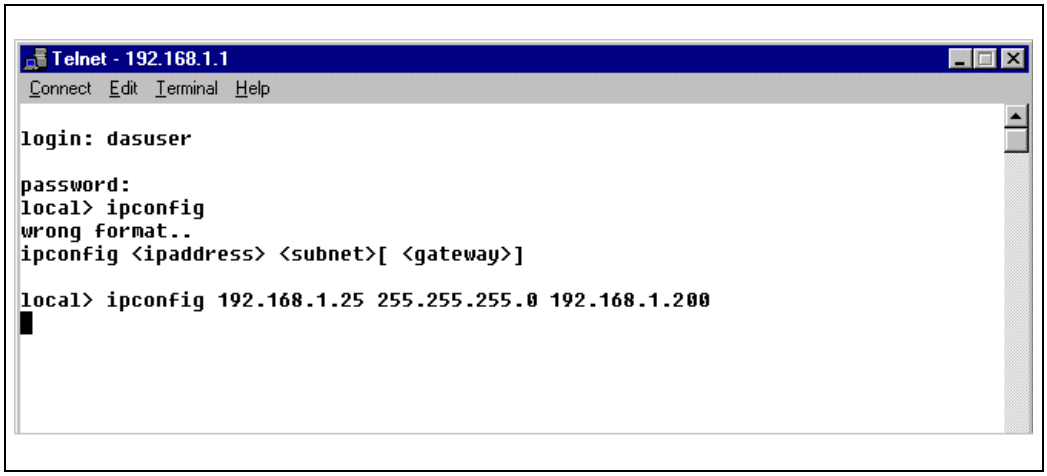
Table 66
Set the IP address through Telnet

Step	Action
1	Open the Dial-up Network property dialog on Windows NT.
	Start> **Program**> **Accessorie**s> **Telnet**.
2	Address the DMC8 Relay card using the card's default IP address.
	Enter 192.168.1.1 in the **Host Name:** box.
3	Connect to the DMC8 Relay card.
	Press the **Connect** button.

END

Configure the IP address

Figure 99
Telnet 192.168.1.1



Complete the following steps:

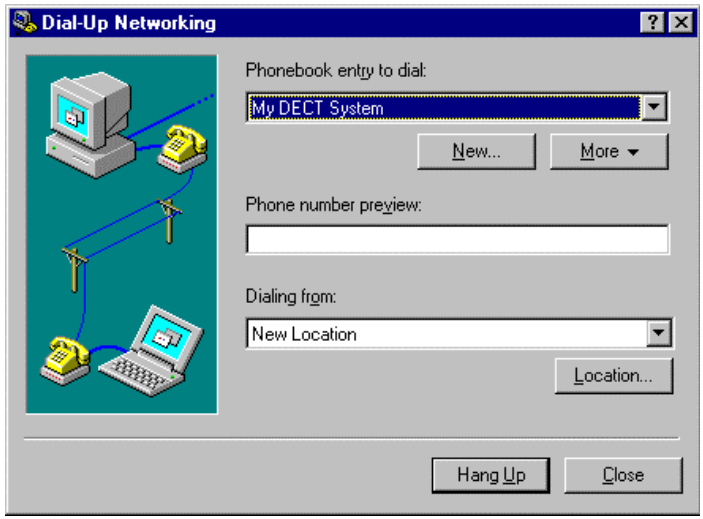
Table 67
Configure the IP address

Step	Action
1	Login.
	Enter **dasuser**.
2	Password.
	Enter **dasuser**.
3	Configure the IP address.
	Use **ipconfig** as shown on the bottom line in Figure 99 on page 173.
4	Disconnect the Telnet connection.
	Click on the close box in the upper right corner.

END

Hang-up the RAS connection

Figure 100
Dial-Up networking



Complete the following steps:

Table 68
Hang up the RAS connection

Step	Action
1	Hang up the RAS connection.
	Click the **Hang Up** button.

END

V.24 connection using Windows 2000

For the OTM-DECT Manager to communicate with the DECT system remotely over Point-to-Point Protocol (PPP), RAS must be configured for dial-out using the appropriate modem. See “Configure Remote Access Service (RAS)” on page 150.

Note 1: The DECT system can also directly communicate over a modem to a remote OTM-DECT Manager.

Note 2: The back-end process must be visible to make a connection. See “Launch OTM-DECT back-end” on page 191 for more information. If the back-end is closed in error, OTM-DECT will not operate.

Dial-up configuration

Configure dial-up on the OTM server using Windows 2000. Perform the following steps:

1. Select the **Control Panel > Phone and Modem Options > Modems** tab.
2. Click **Add**.
3. Click check box **Don’t detect my modem...**. Click **NEXT**.
4. From Manufacturer’s List Type list, select **Standard Modem**.
5. From Model’s list, select **Communications cable between two computers**. Click **Next**.

   Note: Step 5 is required only if there is no Ethernet connection to the DMC8 card.

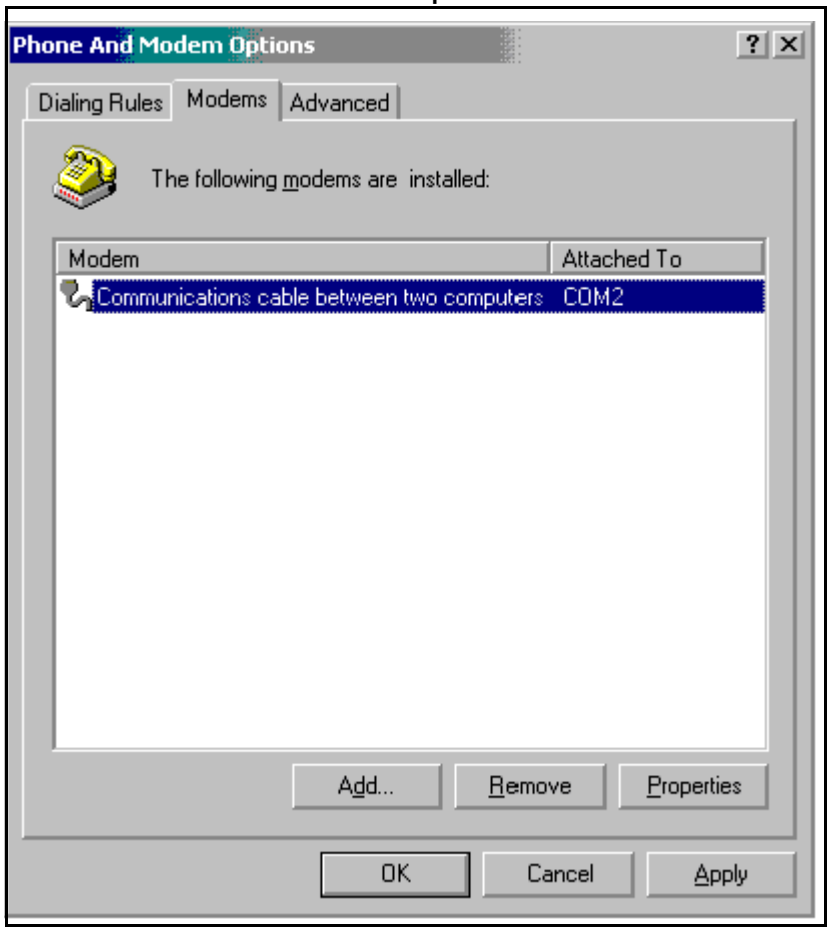
6. Select a COM port supported by the PC. Click **Next**.
7. Click **Finish**.

Modem configuration

Configure the modem properties for serial interface. To configure the modem, perform the following steps:

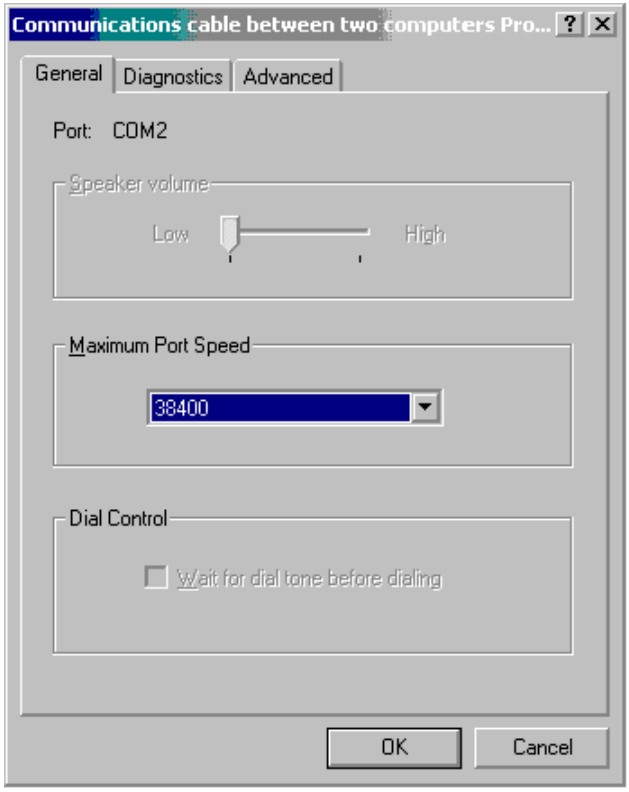
1. Select **Control Panel > Phone and Modem Options> Modems** tab.
2. Select the modem **Communications cable between two computers**. Click **Properties.** See Figure 101 on page 176.

Figure 101
Control Panel > Phone and Modem Options > Modems tab



3 In the **Maximum Port Speed** drop-down menu, select **38400**.
See Figure 102 on page 177.

Figure 102
Modem tab – Properties button



4 Click the **Advanced** tab.

5 Set the **Data** bits to **8**.
Set the **Parity** bits to **None**.
Set the **Stop** bits to **1**.

6 Click **OK**.

Network and dial-up connections configuration

Note: Ensure that the NetBIOS Interface Service is installed; otherwise PPP is not configured on the RAS ports.

To configure network and dial-up connections, perform the following steps:

1. Select **Control Panel > Network and Dial-up Connections**.
2. Click the **Make new connection** icon. The Connection Wizard starts. See Figure 103.

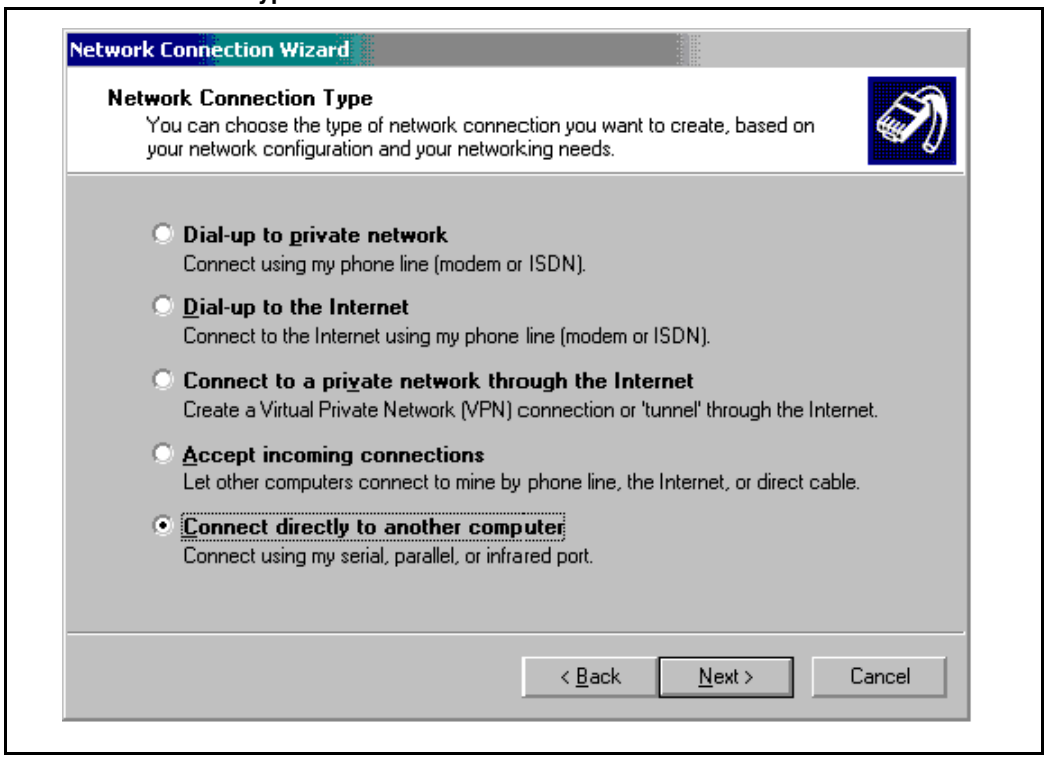
Figure 103
Network Connection Wizard

3 Click **Next.**

4 Click the **Connect directly to another computer** radio button. Click **Next**. See Figure 104 on page 179.

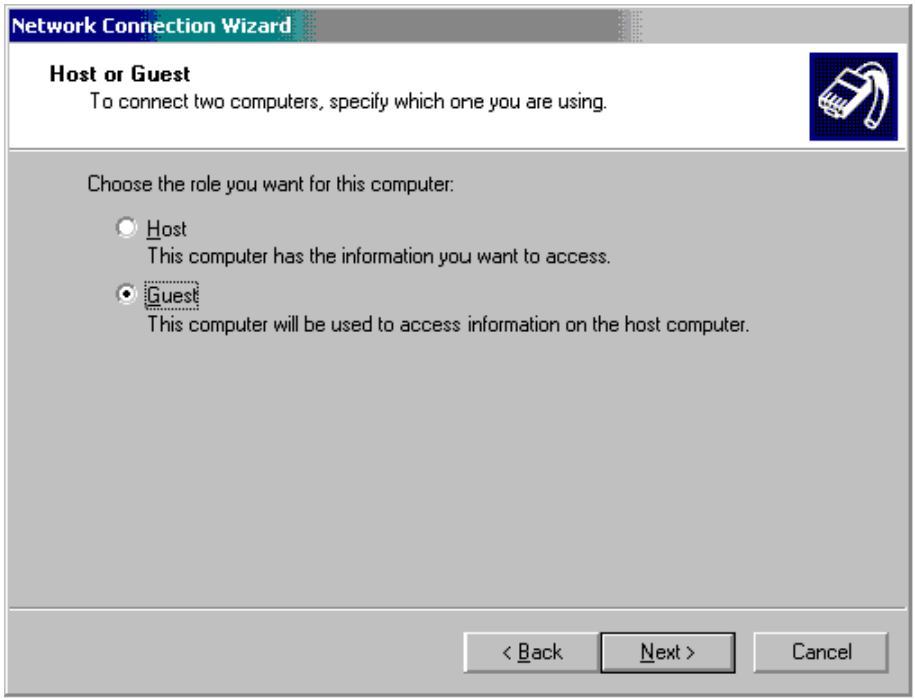
Note: If using a modem connection to the DMC8 card, click the **Dial up to private network** radio button.

Figure 104
Network Connection Type radio buttons



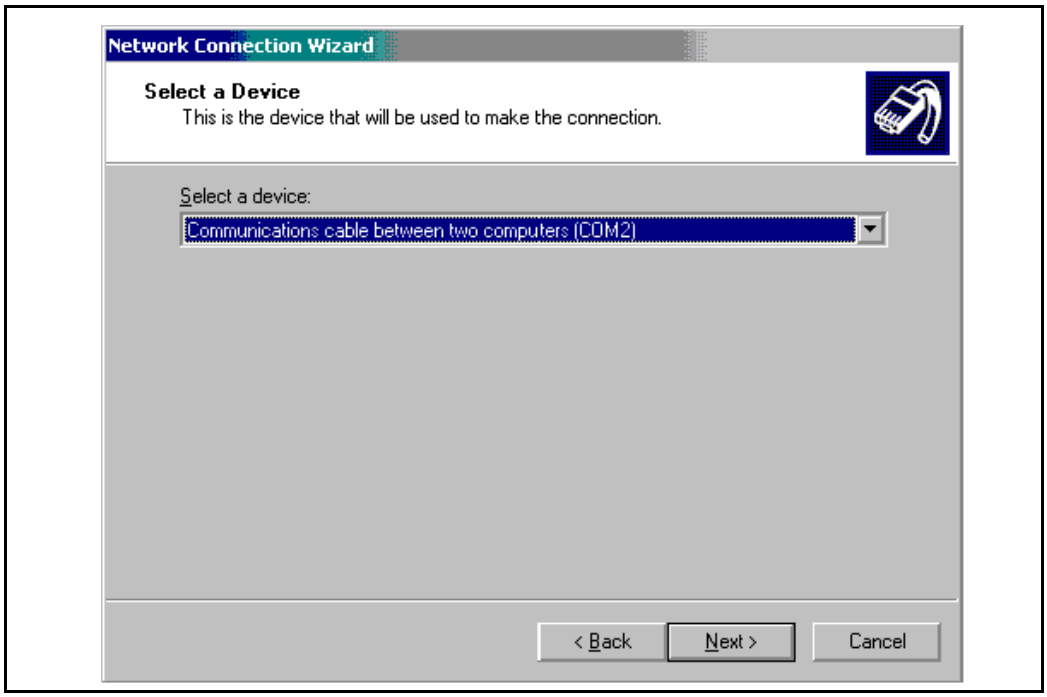
5 Click the **Guest** radio button. Click **Next**. See Figure 105 on page 180.

Figure 105
Host or Guest



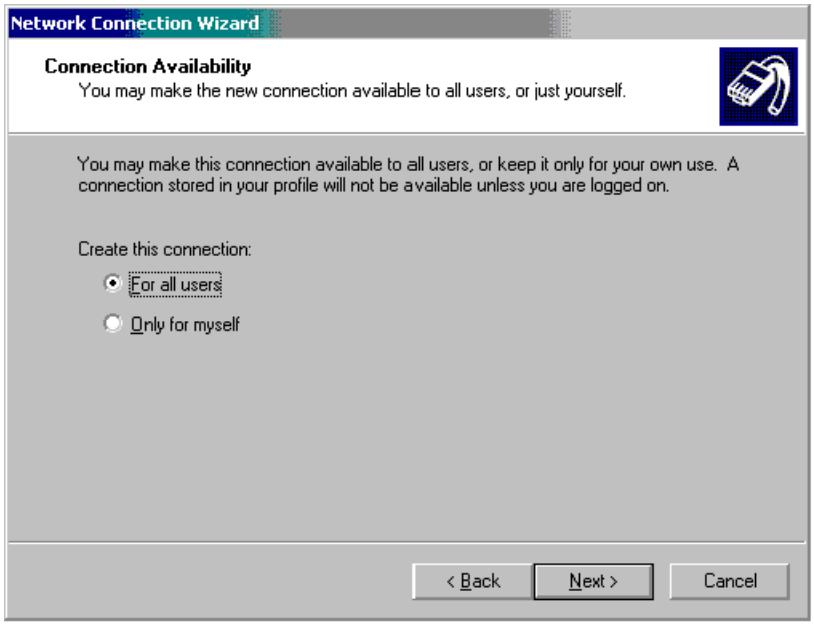
6 From the **Select a Device** drop-down list, select **Communications cable between two computers**. Click **Next**. See Figure 106 on page 181.

Figure 106
Select a Device



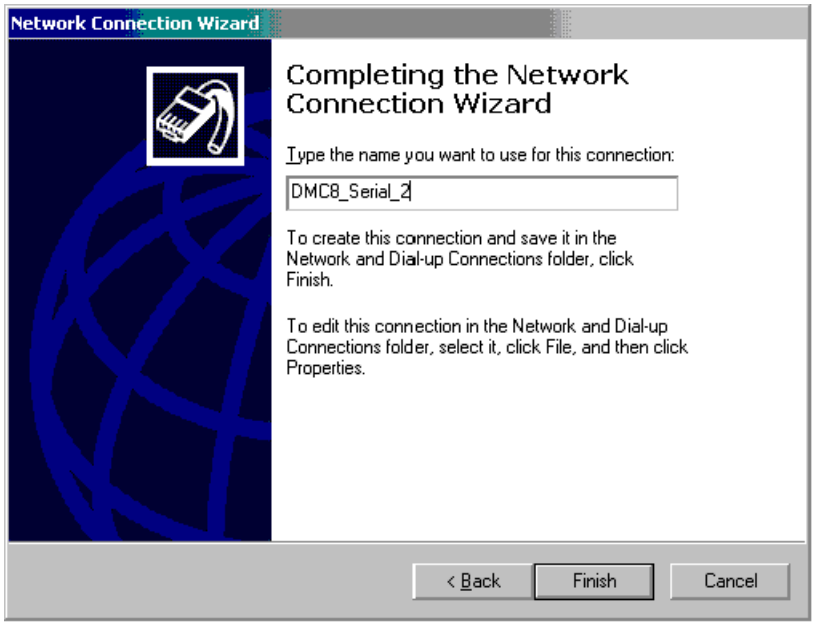
7 Click the **For all users** radio button. Click **Next**. See Figure 107 on page 182.

Figure 107
Connection Availability



8 Type a name for the connection. Click **Finish**.
See Figure 108 on page 183.

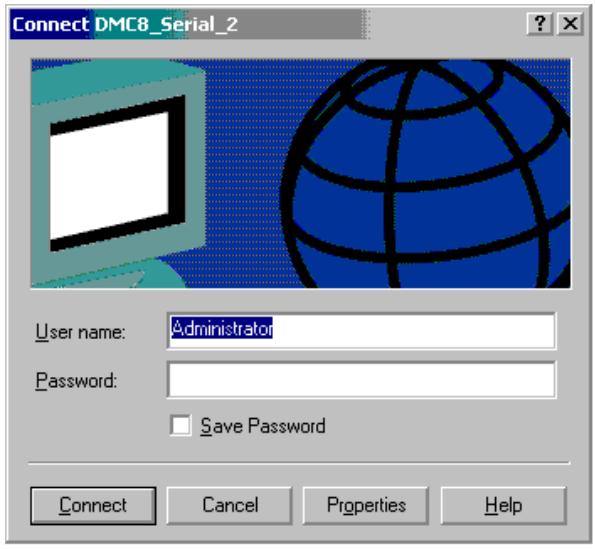
Figure 108
Completing the Network Connection Wizard



A new window appears automatically. The window is titled with the connection name entered earlier. See Figure 109 on page 184.

It is not necessary to enter a user name or password.

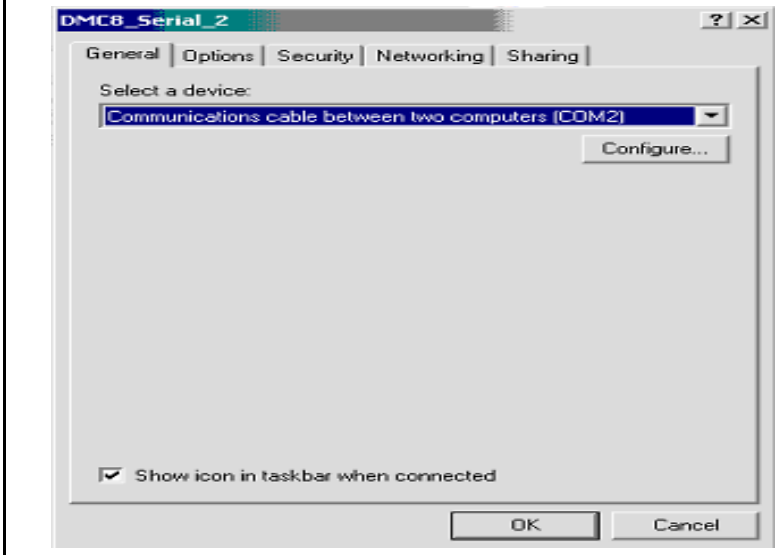
Figure 109
New connection window



9 Click **Properties.** A new window opens.

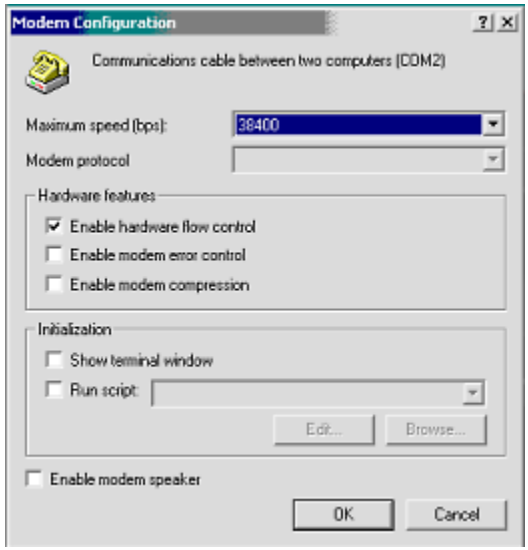
10 Select the **General** tab. Select **Communications cable between two computers (COM2)** from the **Select a device** drop-down menu. See Figure 110 on page 185.

Figure 110
General tab



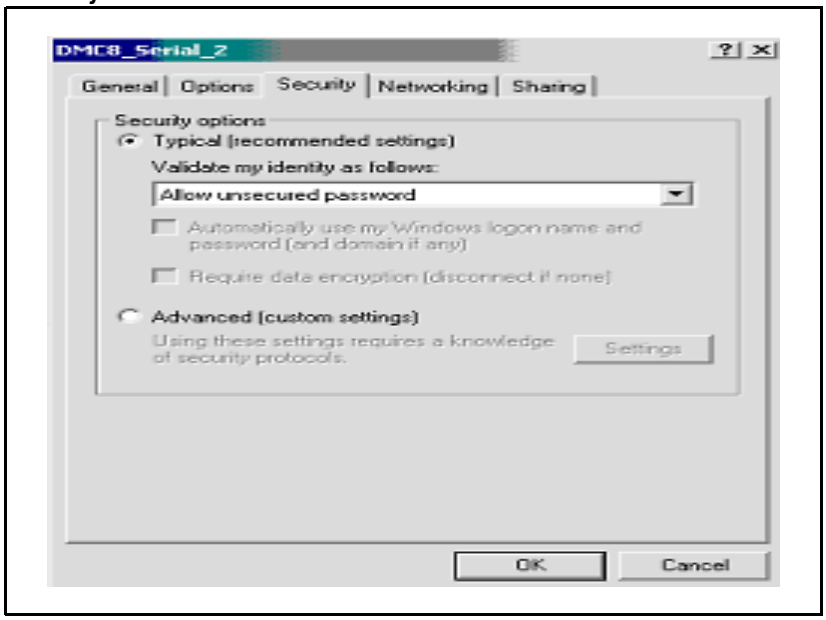
11 Click **Configure**. The Modem Configuration window opens. Ensure that the **Maximum speed (bps)** is 38400 bauds. See Figure 111 on page 186. Click **OK**.

Figure 111
Modem Configuration window



12 Select the **Security** tab. Click the **Security Options – Typical** radio button. Select **Allow unsecured password** from the drop-down menu. Click **OK**. See Figure 112 on page 187.

Figure 112
Security tab



13 Click the **Networking** tab. Select **Internet Protocol (TCP/IP).** Click **Properties**.

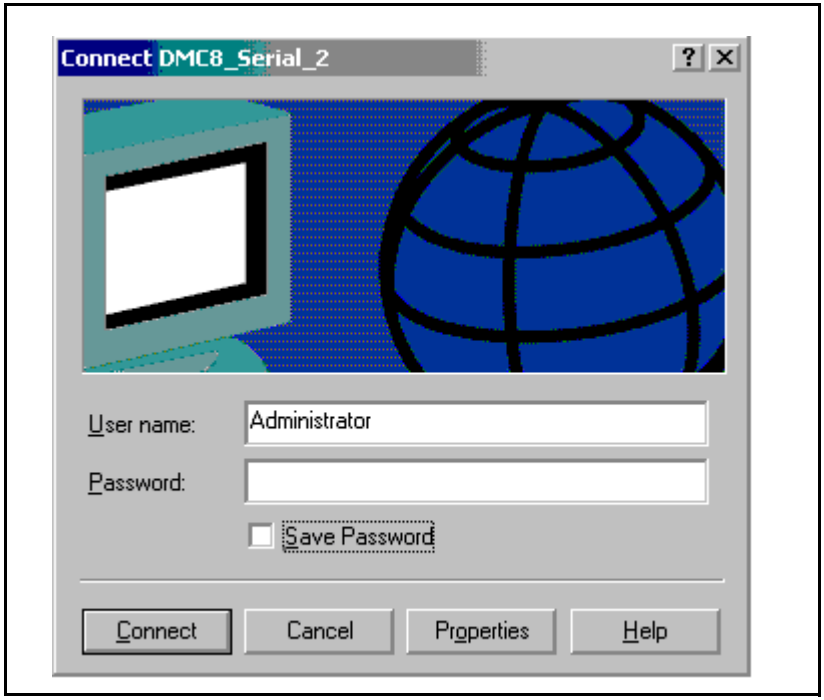
14 Click the radio button for **Use the following IP address**. Enter the IP address of the OTM server.

15 Click **Advanced.** Check all three boxes in the PPP Settings window. Click **OK**.

16 On the **Networking** tab, click **OK.**

17 Click **Connect** in the named dial-up connection window. See Figure 113 on page 188. No password is required.

Figure 113
Connect to the DMC8

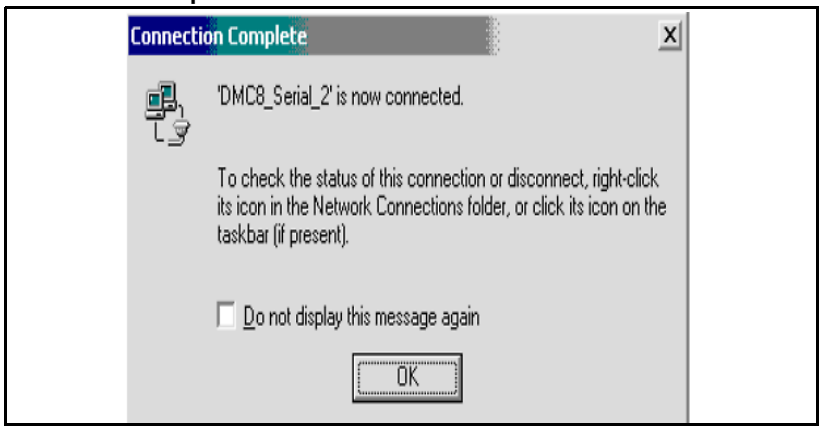


The screen shown in Figure 114 on page 188 appears.

Figure 114
Registering on the network

The screen shown in Figure 115 on page 189 appears when a successful connection has been made.

Figure 115
Connection complete screen



18 Disconnect the connection by following the on-screen instructions. Close the screen.

19 Restart the OTM PC.

DECT Access System configuration

It is necessary to configure the DECT Access System (DAS). Perform the following steps:

1 In OTM-DECT, add a new DAS.

2 Select the **Communications** tab.

3 Enter the IP address of the DMC8 card.

4 Select **Serial** and click **Details**.

5 Select the COM port that DAS uses to connect to the PC.

6 Enter the IP address of the OTM Server in the **OTM Server IP Interface** field.

Note: The IP address of both the DMC8 card and the OTM Server must have the same subnet mask. See Table 69 for an example.

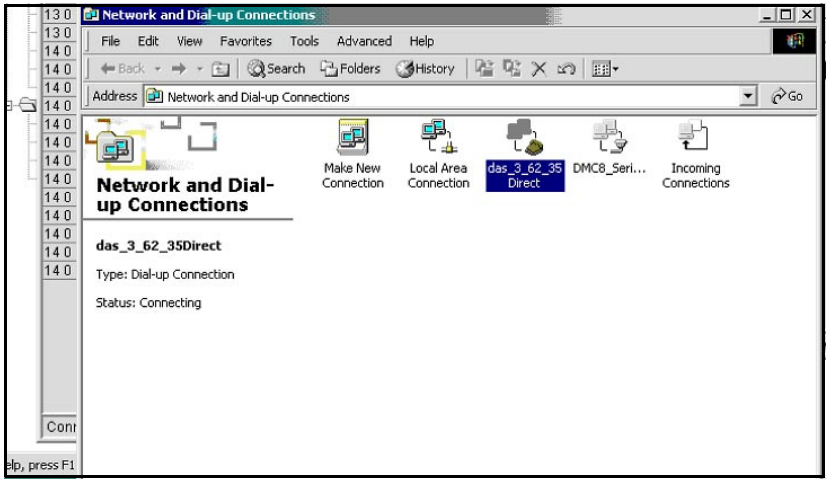
Table 69
Sample IP addresses with the same subnet mask

DMC8 IP address	192.168.100.35
OTM Server IP address	192.168.100.179

Error messages

If the error message (Connection event) shown in Figure 116 on page 190 appears, verify the device manager for COM2 in **Control Panel > System > Hardware > Device Manager > Ports > COM2.**

Figure 116
Connection event



Launch OTM-DECT back-end

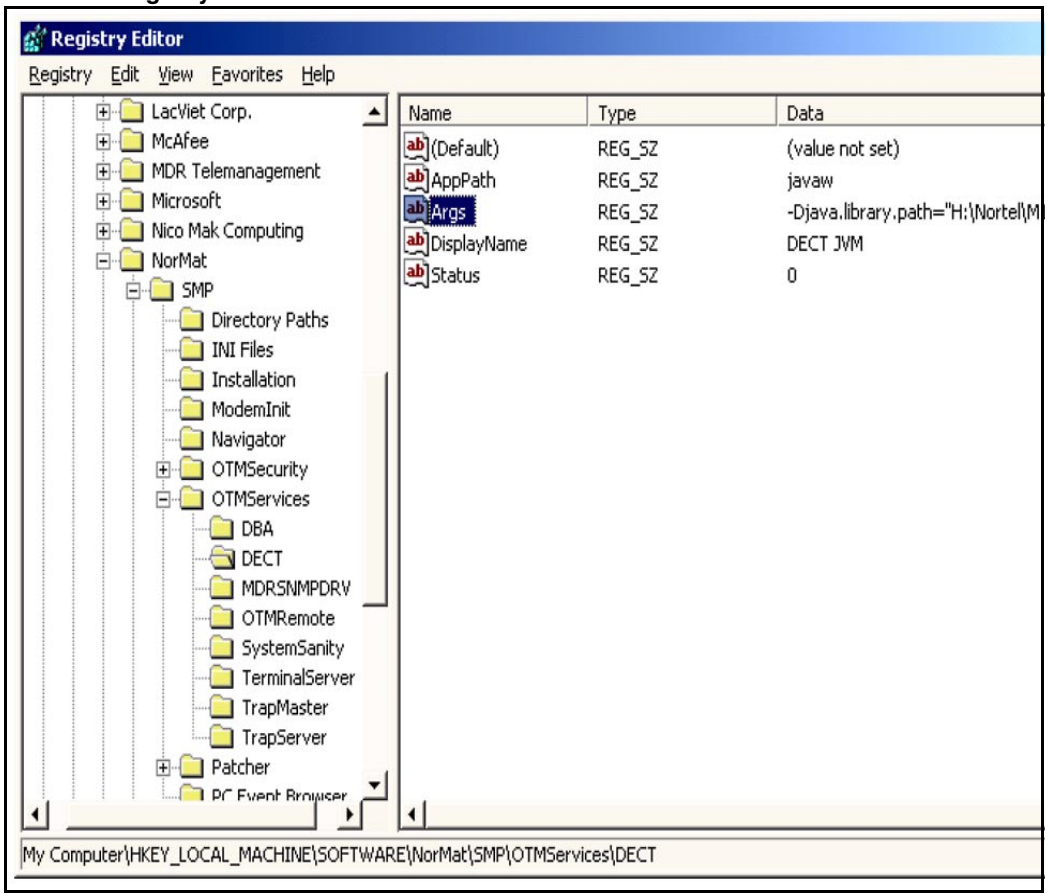
CAUTION
Always ensure the Windows Registry is backed up before opening the Registry and its keys.

To launch the OTM-DECT back-end, perform the following steps:

1 Open the Windows Registry.
Start > Run> regedit

See Figure 117 on page 192.

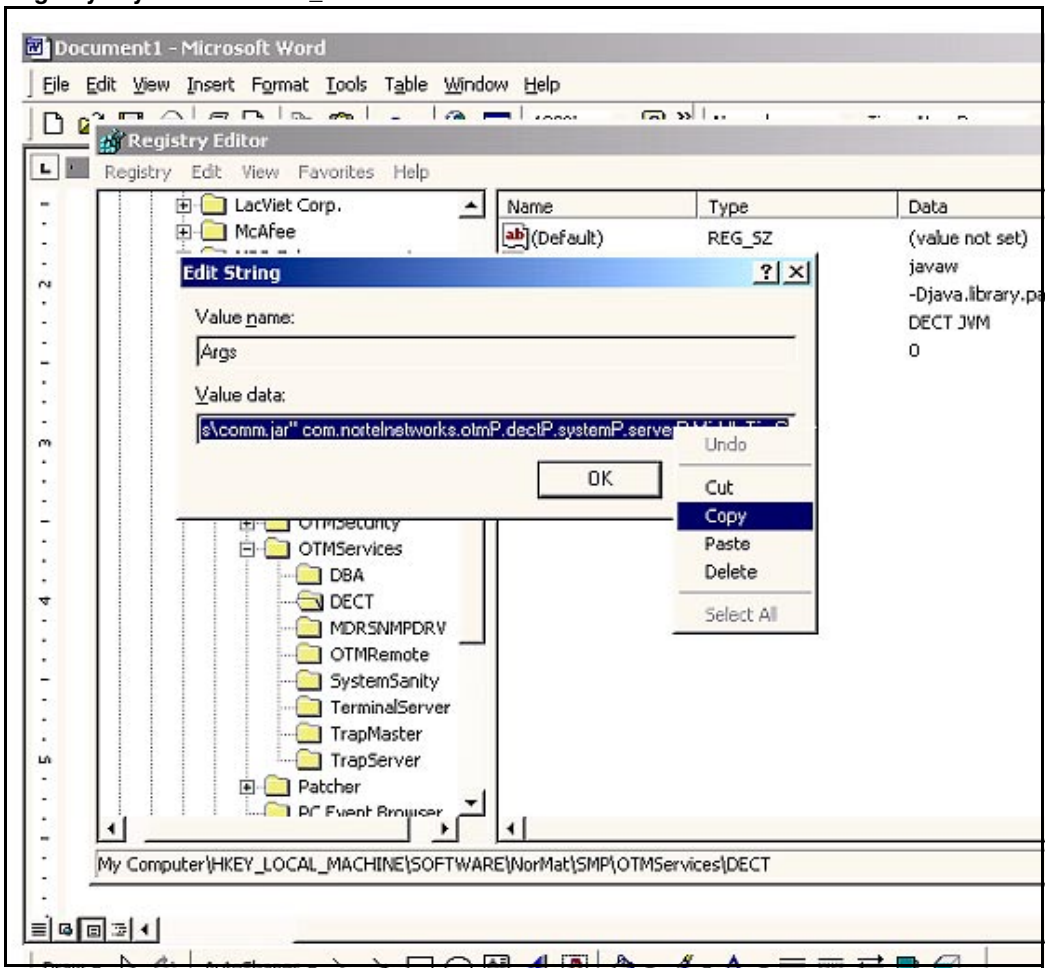
Figure 117
Windows Registry



2 Copy the value of the key **HKEY_LOCAL_MACHINE\SOFTWARE\NorMat\SMP\OTMServices\DECT\Args**

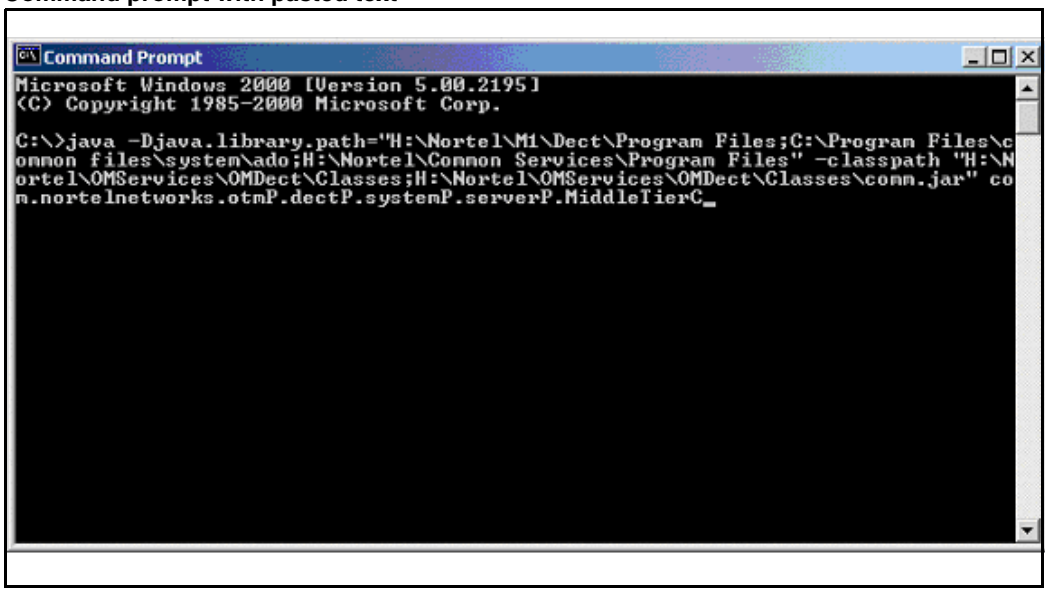
See Figure 118 on page 193.

Figure 118
Registry key HKEY-LOCAL_MACHINE



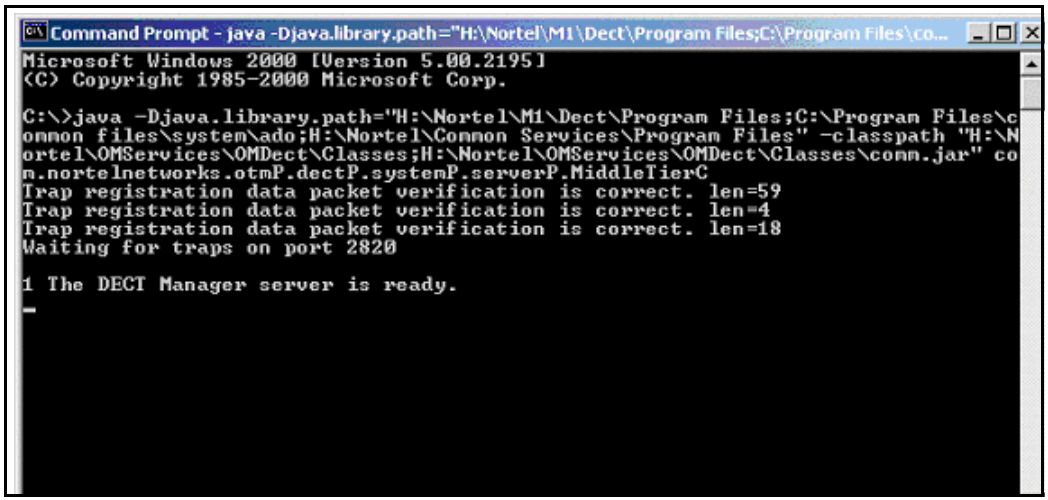
3 Open a command prompt window. At the command prompt, type
java ***paste copied text here***
(At the command prompt, type **java**, press the space bar once, and paste the contents of the clipboard.)
See Figure 119 on page 194.

Figure 119
Command prompt with pasted text



4 Press the **Enter** key.
The OTM-DECT back-end is launched. See Figure 120.

Figure 120
OTM-DECT back-end is launched



Multi-Site Mobility Networking

Contents

This chapter contains information on the following topics:

Feature implementation. 195
Feature operation. 199

Reference list

The following are the references in this section:

- *DECT Installation Guide* (553-3601-203)

Feature implementation

The sequence of actions required to configure this feature are as follows:

1 Configure a phantom superloop using LD 97, if required.

2 Create the new DCS sets in LD 10.

3 Configure the RCFW data in LD 57 and LD 15 for handsets assigned as a visitor.

4 Use the DECT manager to configure sets on the DMC8.

5 Pre-subscribe the visiting handset one time at the MCDN node.

Note: Subscription includes both overlay configuration and DECT Manager configuration. For DECT Manager configuration, see *DECT Installation Guide* (553-3601-203).

LD 10 – Add/Change DCS data block or data blocks. (Part 1 of 2)

Prompt	Response	Description
REQ:	NEW, NEW 1-255, CHG, ECHG	NEW = Add a Digital Cordless Set NEW X = The generation of new DCS units stop when the maximum Index of 509 is reached on a single DMC8 or VTNs on the system run out or WRLS ISM limits reached. All new DCS must be on the same DMC8. CHG = Allows the DCS configuration to change to another DMC8. All new DCS must be on the same DMC8. ECHG = This command can change either the VSIT response or the HMDN response.
TYPE:	DCS	Digital Cordless Set. Differentiates between analog sets and non-concentrated digital Companion DECT handsets. If TYPE=DCS, the system allocates the next available VTN, and WRLS defaults to YES and WTYP defaults to DECT. If package #350 is included, MWUN defaults to 32. CLS defaults to ERCA, allowing the Enhanced RCFW feature.
TN	l s c u l u	TN on an IPE shelf or Option 11C cabinet. The system provides the Virtual TN for the handset.
CDEN	(4D)	Card Density. Only valid value for IPE is 4D. Normal input is <CR>.
WRLS	YES	WiReLess analog Set - entry defaults to YES with no user input - value cannot be CHG'ed.
WTYP	DECT	Wireless TYPe - entry defaults to DECT with no user input - value cannot be CHG'ed.
MWUN	32	Maximum number of Wireless UNits – entry defaults to 32 with no user input – value cannot be CHG'ed. Note: If MWUN = 32, CDEN automatically changes to 8D, and prints as an 8D unit.
DMC8	l s c c (Opt.11C)	Location of the actual DMC8. Assigns a TN to a DECT Mobility Card located on an IPE shelf or Option 11C cabinet.

LD 10 – Add/Change DCS data block or data blocks. (Part 2 of 2)

INDX	0. 509	DMC8 index to map the Virtual TN to a DMC8 TN. Starting index on DMC8, each unit increments to the next available unit.
VSIT	(NO)/YES	ViSITing DECT set. Determines the difference between a local handset and a visiting handset. VSIT available if the MSMN Package is unrestricted. YES=visiting DECT set. NO=local DECT set.
HMDN	X...X	HoMe Directory Number. Sets the DN as a valid MCDN network DN. NMDN available if VSIT=YES.

LD 10 – Copy DCS data block or data blocks.

Prompt	Response	Description
REQ:	CPY 1 – 32	CPY n = The generation of new units stop when the following occurs: maximum index of 509 is reached on a single DMC8 or VTNs on the system run out or WRLS ISM limits reached. All DCS must be on the same DMC8.
DMC8	l s c l (Opt 11C)	Location of the actual DMC8 to copy on an IPE shelf or Option 11C cabinet.

LD 10 – Remove DCS data block or data blocks.

Prompt	Response	Description
REQ:	OUT 1-255	OUT X = Removing units stops when the maximum index of 509 is reached on a single DMC8. All new DCS must be on the same DMC8.
DMC8	l s c l (Opt 11C)	Location of the actual DMC8 to out on an IPE shelf or Option 11C cabinet.

LD 10 – Convert handset type 500 to DCS

Prompt	Response	Description
REQ	CDCS	Convert Digital Cordless Set – convert from a non-concentrated to a concentrated system after software upgrade. The conversion routine converts the 500 units to DCS units and moves them from the actual TN to a virtual TN.

Note: To convert from concentrated to non-concentrated, OUT all DCS units and re-subscribe the handsets.

The CDCS conversion routine prints each TN as it is moved, in the following format:

```
500 TN l s c 00 = DCS TN L' S' C' Index#.
```

where: L' S' C' = virtual TN

Index# = default of the unit number of the 500 type set.

LD 20 – Print actual DMC8 TN and virtual DMC8 TN list.

Prompt	Response	Description
REQ	PRT	Request.
TYPE	DCS	Digital Cordless Set.
TN	l s c l (Opt 11C)	Terminal Number for actual DMC8 card on an IPE shelf or Option 11C cabinet.
	l' s' c' u' l' u' (Opt 11C)	Virtual Terminal Number on an IPE shelf or Option 11C cabinet.

The print routine outputs the following format:

```
INDX     Index #     VTN lll s cc uu
```

where: Index # = Index number of virtual TN.

lll s cc uu = Virtual TN of unit.

LD 81 – Print DCS features.

Prompt	Response	Description
REQ	LST	Request.
FEAT	VSIT	Feature Request - DECT visitors.
HMDN	Xx / <cr>	HoMe Directory Number. Specify a single HMDN or print all HMDN on system.

The LD 81 output format is as follows:

```
DCS   Cust#   Local DN   TN lll s cc uu   HMDN   Home
DN   Last Activity Date.
```

where:

- Cust# = Customer Number
- Local DN = Local Directory Number of user
- lll s cc uu = TN of unit
- Home DN = Home directory number of user
- Last Activity Date = Last date of service change activity for user

LD 83 – Prints DCS terminal numbers with a unit type of DCS instead of 500.

Feature operation

To activate the MSMN feature, perform the following steps:

1. Turn the handset on within the coverage range of a visited Companion DECT system.
2. Enter the coverage range of a visited Companion DECT system from another Companion DECT system with the handset turned on.

To deactivate the MSMN feature, perform the following steps:

1 turn the handset off within coverage range of the visited Companion DECT system. (The handset must have the DECT Detach feature.)

2 turn the handset on at the home Companion DECT system. (Any CFW related to the handset is cancelled.)

3 enter the coverage range of the home Companion DECT system with the handset on (Any CFW related to the handset is cancelled.)

Appendix A: Upgrade a DECT system to a SNMP managed system

Contents

This section contains information on the following topics:

Backup the DMC4 data with Windows Manager. 203
Upload OTM supporting firmware to the DMC4 Relay card. 205
Close the Windows Manager. 207
Change the DMC4 Relay card default IP address. 208
Connect the DMC4 Relay card to a configuring PC. 208
Reset the DMC4 Relay card to the server IP address. 209
Connect the DMC4 Relay to the OTM server. 210
Add the DECT system. 213
Add General System Properties. 213
Set the DECT system IP address to match the DMC4 Relay card. . . 215
Synchronize data with the DECT system. 217
Confirm the active software package on the DMC4 Relay card. 219
Activate the firmware on all DMC4s. 220
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Introduction

There are two types of managers for DECT systems:

- Windows Manager
- OTM with DECT application

The Windows Manager, a non-SNMP device, is used to manage the first generation of DECT systems. An OTM with a DECT application manages the present generation of DECT systems.

Note: The following terms are used in this appendix:

- The DMC (NTCW00AA) and DMC-E (NTCW01AA) are referred to as DMC4 and DMC4-E
- A DECT system equipped with both DMC4/DMC4-E and DMC8/DMC8-E is referred to as a Mixed DECT system.

An OTM can manage a DMC4/DMC4-E DECT system or a Mixed DECT system.

In a DMC4/DMC4-E DECT system, or a Mixed DECT system managed by an OTM, the DMC's must run SNMP software.

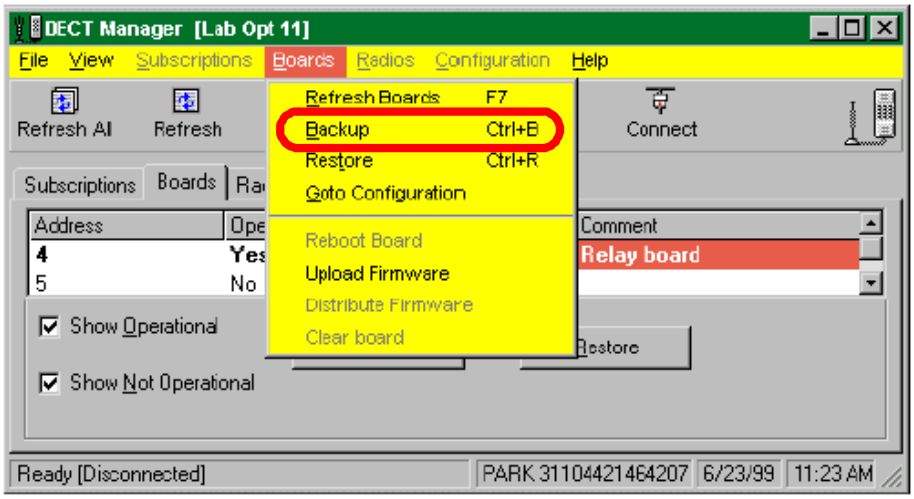
A Mixed DECT system must be managed by an OTM. In a Mixed DECT system, a DMC8/DMC8-E must be the relay card.

In a DMC4/DMC4-E DECT system or a Mixed DECT system managed by an OTM, the DMCs must run 451001xx.dwl software, and the DMC8s/DMC8-Es must run 470001xx.dwl software. If DECT Messaging is used, the DMCs must run 451002xx.dwl software, and the DMC8s/DMC8-Es must run 470002xx.dwl software

Connecting an OTM to a DMC4 Relay card using an Ethernet connection is not supported. Only a V.24 connection can be used.

Backup the DMC4 data with Windows Manager

Figure 121
DECT Manager window



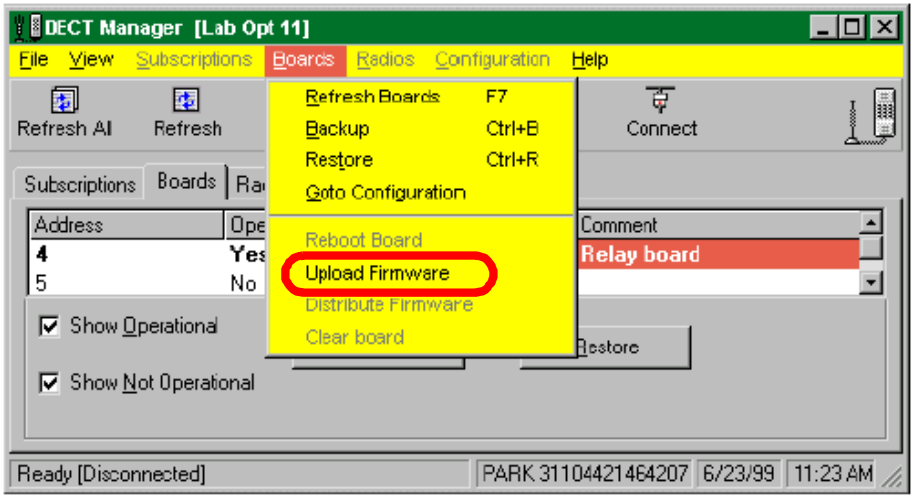
Complete the following steps:

Table 70
Backup the DMC data with Windows Manager

Step	Action
1	Launch the Windows Manager program.
	Double click on the **DECT-Manager** icon.
2	Select the Companion system.
	Highlight the system and click on the **OK** button.
3	Select the Boards tab.
	Place the cursor on the tab and click.
4	Select all DMC4s.
	Highlight all addresses.
5	Backup the DMC4 data.
	Click on the **Backup** button.
6	Close the connection to the relay card.
	From the toolbar, click on the **Connect** icon.

Upload OTM supporting firmware to the DMC4 Relay card

Figure 122
DECT Manager window



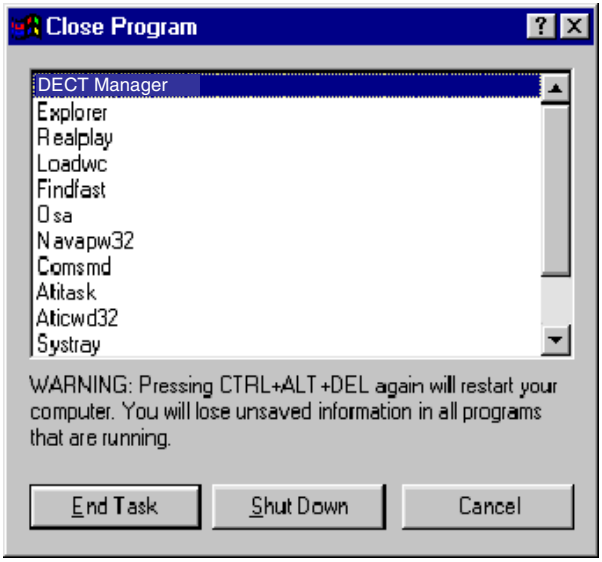
Complete the following steps:

Table 71
Upload OTM supporting firmware to the DMC4 Relay card

Step	Action
1	Load the OTM supporting 451001xx.dwl firmware file on the Windows Manager PC.
2	Select the Companion system.
	Highlight the system and click on the **OK** button.
3	Select the Boards tab.
	Place the cursor on the tab and click.
4	Select the Relay DMC4.
	Highlight the address.
5	Upload the 451001xx.dwl firmware file to the Relay DMC.
	From the **Boards** pull-down menu, click on **Upload firmware**.
	END

Close the Windows Manager

Figure 123
Close Program dialog



Complete the following steps:

Table 72
Close the Windows Manager

Step	Action
1	Open the Close Program dialog.
	Press the **Ctrl** + **Alt** + **Delete** keys.
2	Disable the Windows Manager.
	Select **DECT Manager** and press the **End Task** button.

END

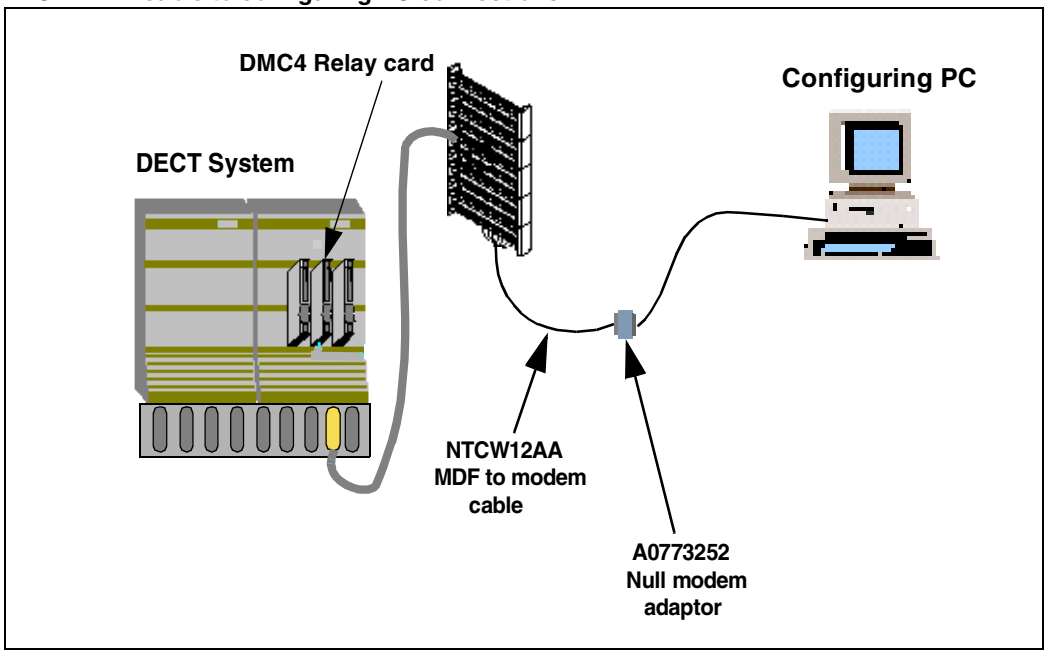
Change the DMC4 Relay card default IP address

Connect the DMC4 Relay card to a configuring PC

CAUTION: Service interruption

The DMC4 address must be changed to conform to the network IP address plan.

Figure 124
NTCW12AA cable to configuring PC connections



Note: The configuring PC can be the OTM server or another PC. If the configuring PC is the OTM server, the Configuring PC shown in Figure 124 will be the OTM Server shown in Figure 126 on page 211.

Table 73
Connect the DMC4 relay card to a configuring PC

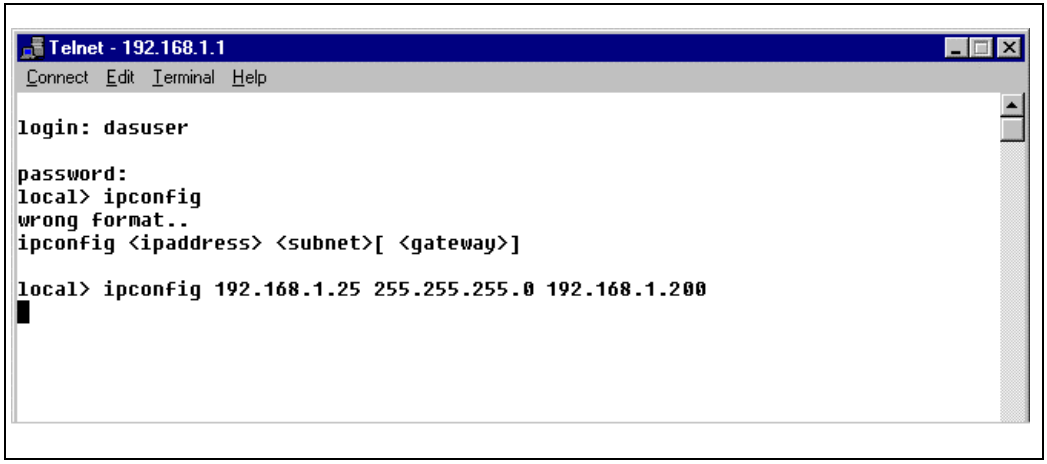
Step	Action
1	Connect the NTCW12AA cable to the Configuring PC.
	Insert the NTCW12AA cable into the A0773252 Null Modem Adaptor and connect to the Configuring PC.

END

Reset the DMC4 Relay card to the server IP address

Change the Relay DMC4 IP address to conform to the server network IP address plan.

Figure 125
Telnet 192.168.1.



Complete the following steps:

Table 74
Reset the Relay DMC4 IP address to the LAN IP address

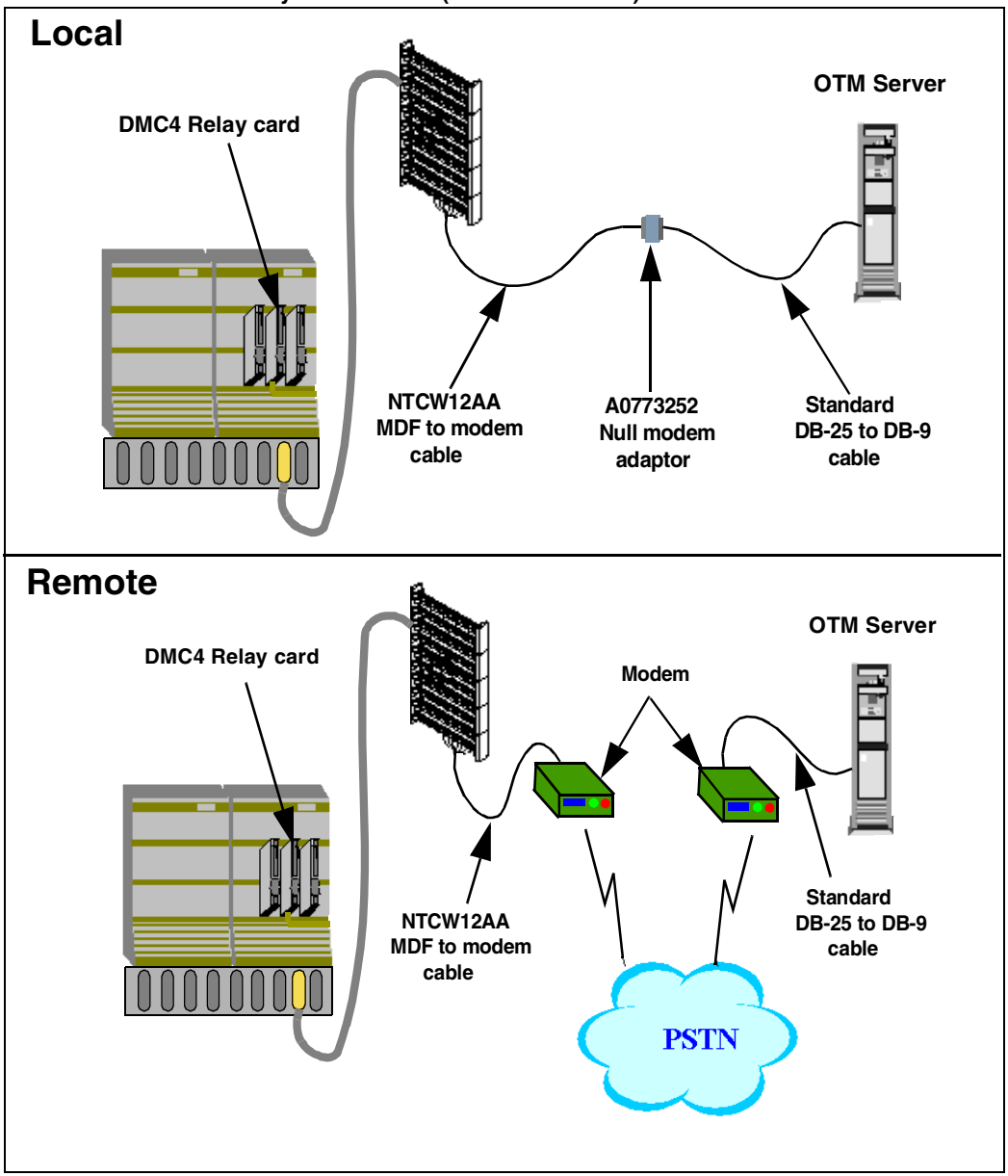
Step	Action
1	Open the Telnet dialog.
	Click on Start>Accessories>Telnet.
2	Enter user name and password.
	Type user name **dasuser** and password **dasuser**.
3	When the connection prompt **local** appears, change the Relay DMC4 card address.
	Enter the following command: **ipconfig xxx.xxx.xxx.xxx yyy.yyy.yyy.yyy zzz.zzz.zzz.zzz** **xxx.xxx.xxx.xxx** = new IP address of the Relay DMC4 card. **yyy.yyy.yyy.yyy** = subnet mask, usually **255.255.255.0** **zzz.zzz.zzz.zzz** = IP address if this is the gateway for the network. **Note: zzz.zzz.zzz.zzz** should be set to the IP address of the OTM server Ethernet interface. If there are two Ethernet interfaces on the OT server, **zzz.zzz.zzz.zzz** should be set to the IP address of the interface, which is on the same network as the DMC4 Relay card.

END

Connect the DMC4 Relay to the OTM server

Connect the OTM server to a DMC4 Relay card using a V.24 connection. Connecting an OTM to a DMC4 Relay card using an Ethernet connection is not supported.

Figure 126
OTM Server to DMC4 relay connections (local and remote)



Complete the following step:

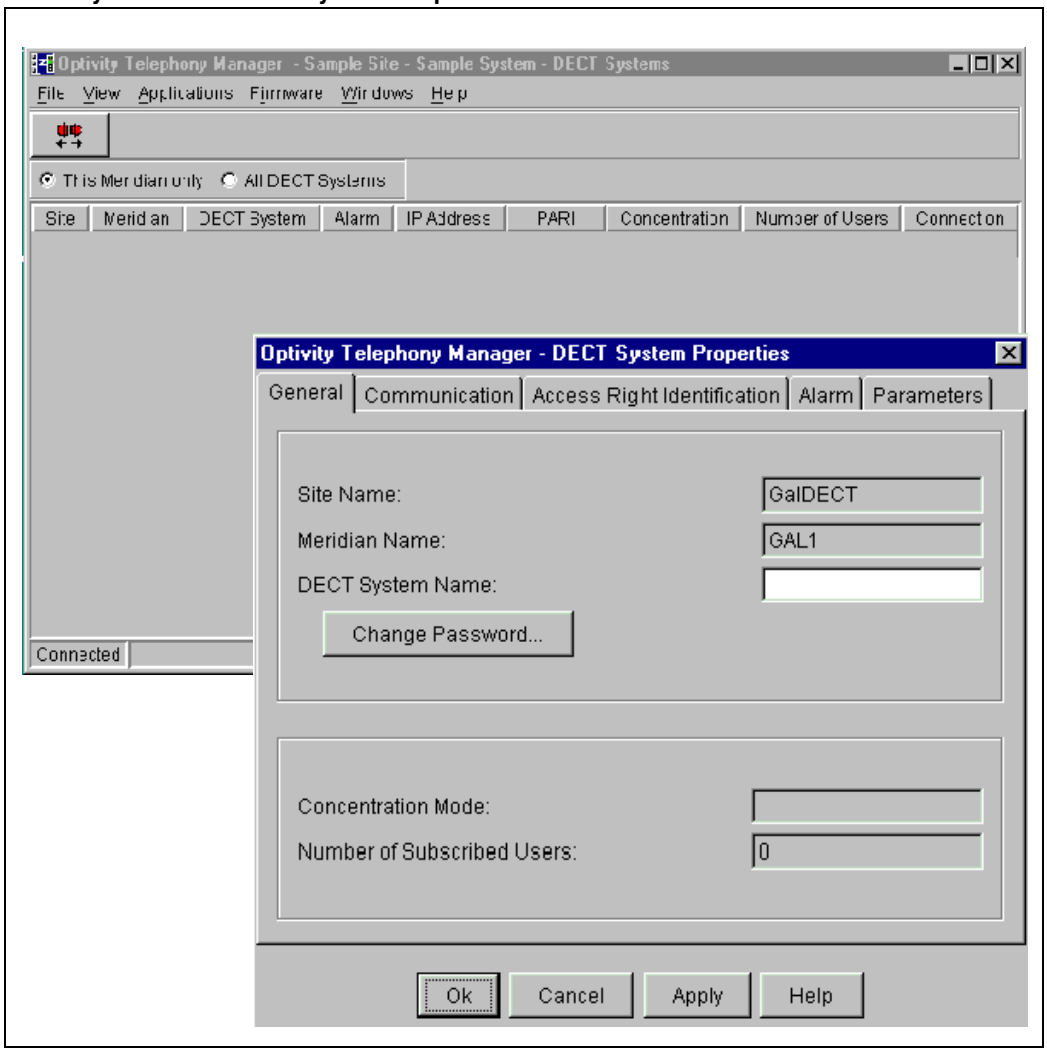
Table 75
Connect the DMC4 Relay to the OTM server

Step	Action
1	Connect the OTM server to the DMC4 Relay card.
	Refer to “Add a V.24 serial connection” on page 135.
	END

Add the DECT system

Add General System Properties

Figure 127
DECT Systems and DECT System Properties



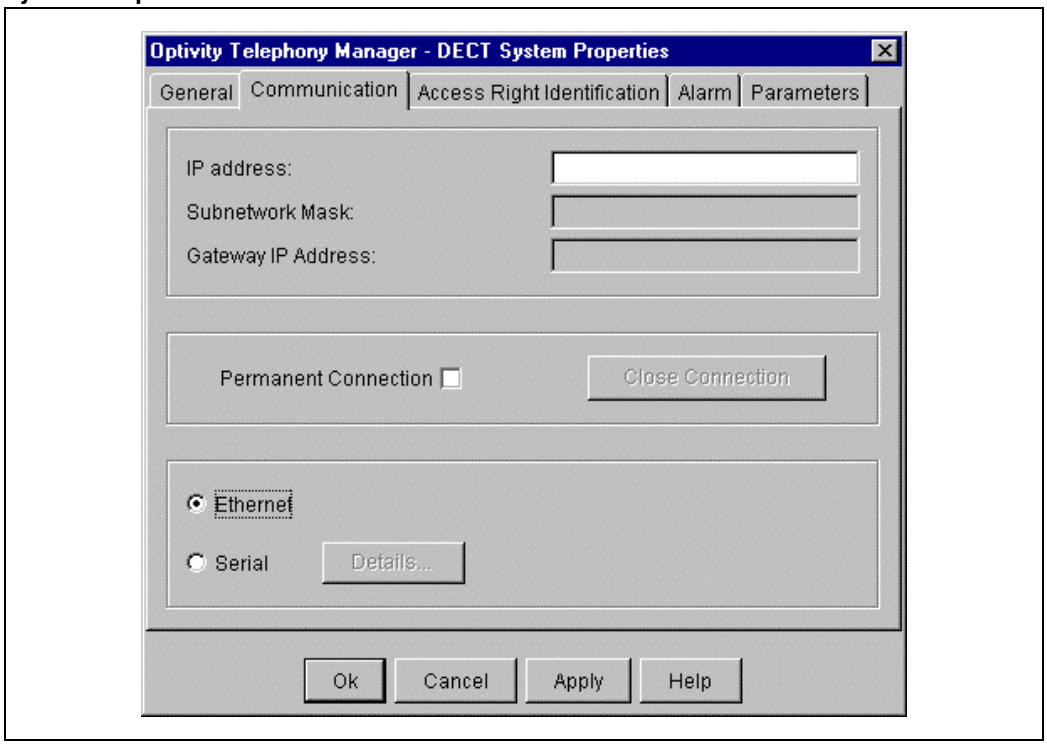
Complete the following steps:

Table 76
Add the DECT system

Step	Action
1	Open the DECT System Properties dialog.
	Pull down **File**>**Add**.
2	Enter the DECT system name.
	Type the system name in the **DECT System Name** box.
3	Accept the changes.
	Click on the **Apply** button.

Set the DECT system IP address to match the DMC4 Relay card

Figure 128
System Properties – Communication



Complete the following steps:

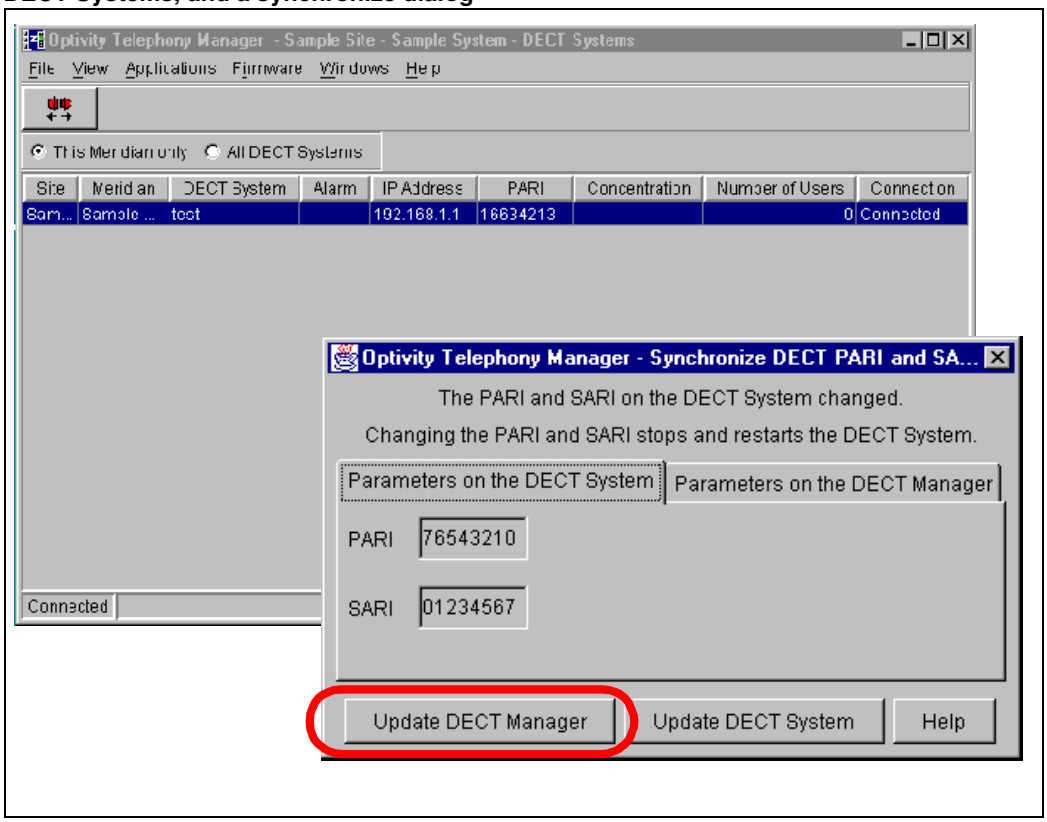
Table 77
Set the IP address of the DMC4 Relay card in the manager

Step	Action
1	Open the Communications dialog.
	Click on the **Communications** tab.
2	Enter the IP address.
	Type the IP address that was entered in Table 74 on page 210.
3	Select **Serial**.
	Click on **Serial** radio button, and go to “Add a V.24 serial connection” on page 135.
4	Accept the changes.
	Click on the **OK** button. **Note:** When the OK button or Apply button is clicked at this point, the manager attempts to connect to the DECT system to write the MIB2 system name.
	END

Synchronize data with the DECT system

When the DECT manager connects to the DECT system, synchronization occurs. The OTM database can be updated with the DECT system data.

Figure 129
DECT Systems, and a synchronize dialog



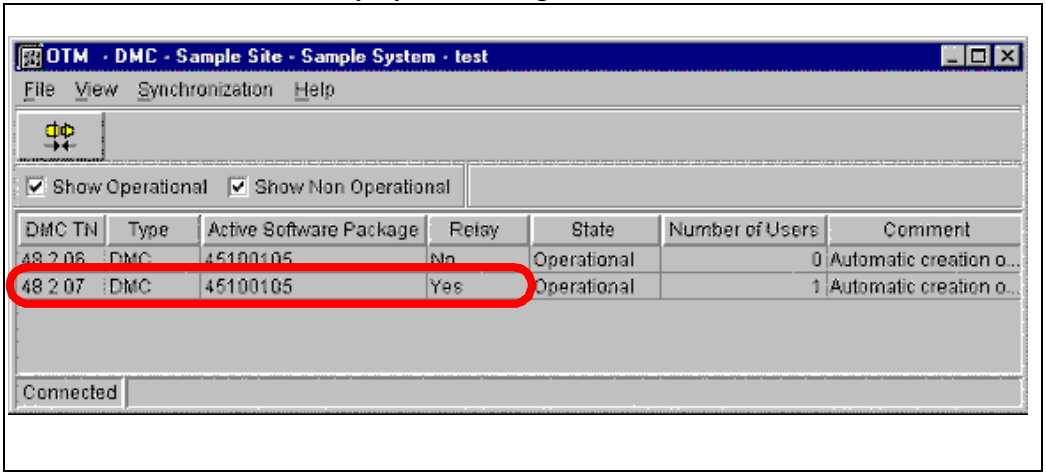
Complete the following steps:

Table 78
Synchronize data with the DECT system

Step	Action
1	If the toolbar icon is **red**, indicating the DECT system connection is enabled, disconnect from the DECT system.
	Double click on the icon, or use **File**>**Disonnect**. Go to step 3.
2	If the toolbar icon is **green**.
	Go to step 3.
3	Re-connect to the DECT system.
	Double click on the red icon, or use **File**>**Connect**.
4	Store the DECT system data in the OTM Manager database.
	Click on the **Update DECT Manager** button on all synchronization dialogs.

Confirm the active software package on the DMC4 Relay card

Figure 130
DMC window and DECT Board properties dialog



Complete the following steps:

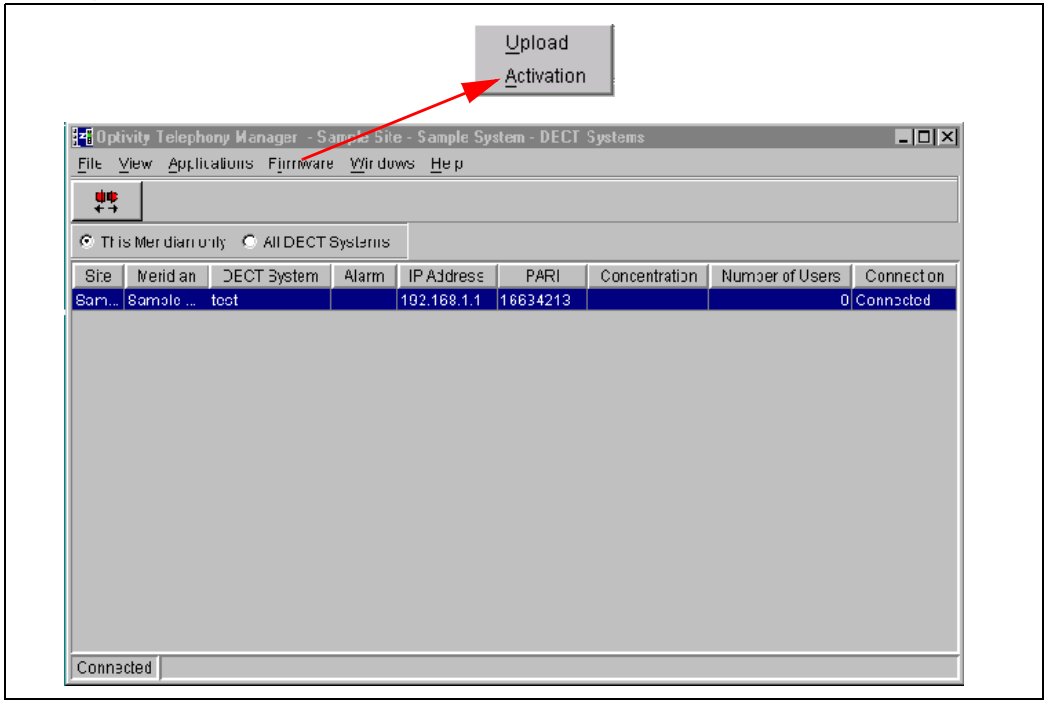
Table 79
Confirm the active software package on the DMC4 Relay card

Step	Action
1	Examine the Active Software Package on the DMC4 relay in the DMC window list.
	Active Software Package must be 451001xx.dwl firmware, the same one that was loaded on page 205.
2	Close the DMC window.
	Click on the close box.

END

Activate the firmware on all DMC4s

Figure 131
DECT Systems window



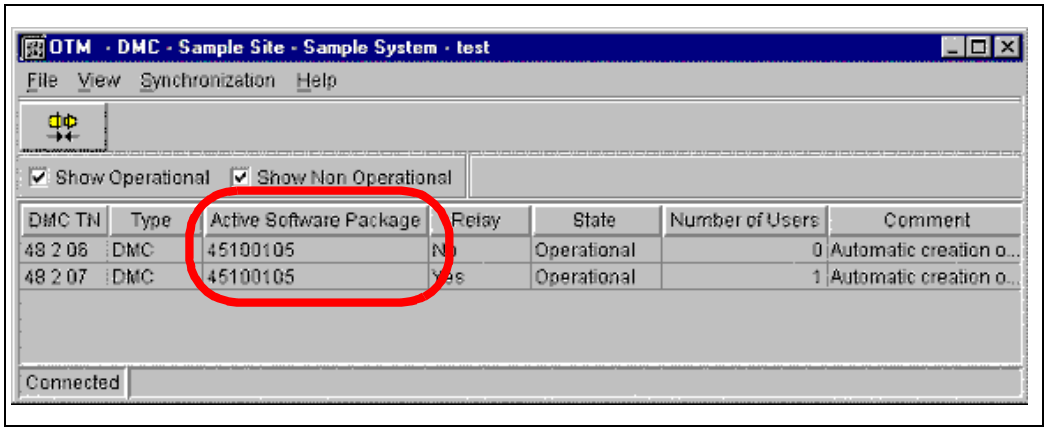
Complete the following step:

Table 80
Activate the firmware on all DMC4s

Step	Action
1	Activate the 451001xx.dwl firmware the same as was loaded on page 205 to all DMC4s.
	From the **Firmware** pull-down menu, click on **Activate**.
	END

Monitor the firmware activation

Figure 132
DMC window



Complete the following step:

Table 81
Monitor the firmware activation

Step	Action
1	Examine the Active Software Package on the DMC4 relay card in the DMC window list.
	Active Software Package must be 451001xx.dwl firmware on all DMCs. See page 205.
	END

DECT

Installation Guide

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