

# Connectivity

# 4

## Overview

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This chapter contains information that describes the hardware components and connections used to connect a Lucent™ INTUITY™ system and a MERLIN LEGEND® or MERLIN MAGIX™ Communication system. This chapter includes:

- Configuration descriptions that explain each of the components required to establish a link
- Wiring diagrams that show the different hardware, physical connections, and cables used for connection



### NOTE:

The numbers in the wiring diagrams do not show the order of connection. Follow the written instructions to make the connections.

Read the information in this chapter *before* you attempt to connect the components.

## Purpose

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The purpose of this chapter is to provide instructions to connect the Lucent INTUITY System, the MERLIN LEGEND/MAGIX Communications System, and other adjuncts.

## Lucent INTUITY System Connections

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Use the information and diagrams in this section to connect or verify the connections for the Lucent INTUITY system with a MERLIN LEGEND/MAGIX switch.



### CAUTION:

See “MERLIN LEGEND and MERLIN MAGIX Voice Port Requirements” in Chapter 1, “Switch Integration Overview,” and follow the carrier restrictions when cabling to the MERLIN LEGEND Communications system.

## Tip/Ring Connections

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To connect to tip/ring circuit cards (AYC10, AYC29, or AYC30):

- Use an 885A adapter to connect to RJ11C connections, or
- Connect to a type-104B connecting block

### Connect Tip/Ring Circuit Cards Using an 885A Adapter

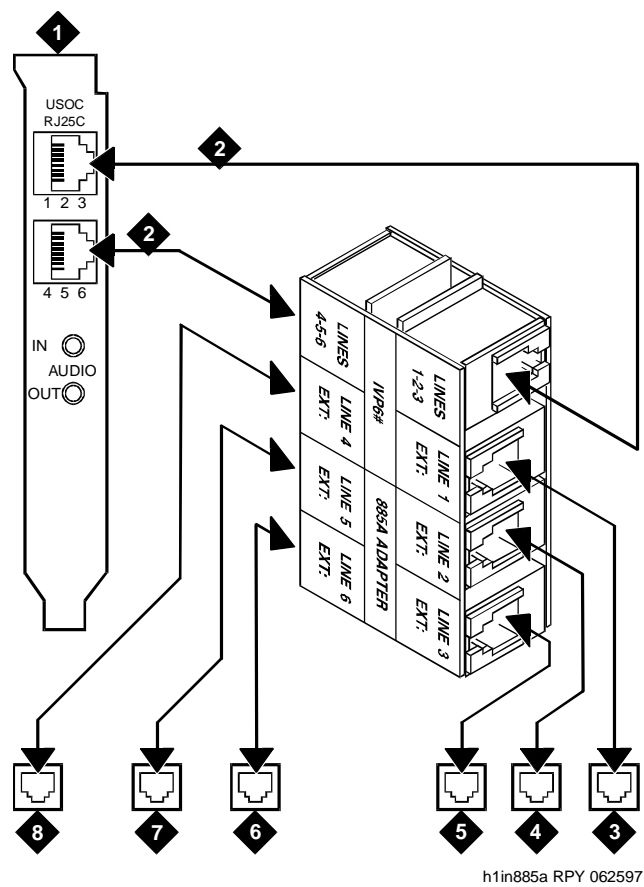
Connect tip/ring circuit cards using an 885A adapter as follows:

1. Make sure that the line pairs were run individually (RJ11C).
2. Use a type-885A adapter to consolidate the six individual line pairs into three pairs in each of two cables ([Figure 4-1](#)).
3. Remove the protective coating paper from the adhesive strip on the back of the 885A adapter and attach the 885A adapter in a convenient place.
4. Use the supplied 6-conductor modular cables between the IVC6 circuit card and the adapter.
5. Use the supplied 2- or 4-conductor modular cables between the adapter and the RJ11C modular jacks.
6. Label the connections in the space provided on the 885A adapter.



### NOTE:

The label on the 885A adapter refers to an IVP6. This should be interpreted as an IVC6 (AYC10, AYC29, or AYC30).



- |  |                         |
|--|-------------------------|
| 1. IVC6 or NGTR (AYC10, AYC29, or AYC30) | 5. D2R-29: RJ11C Line 3 |
| 2. D6AM-87 Cord                          | 6. D2R-29: RJ11C Line 6 |
| 3. D2R-29: RJ11C Line 1                  | 7. D2R-29: RJ11C Line 5 |
| 4. D2R-29: RJ11C Line 2                  | 8. D2R-29: RJ11C Line 4 |

**Figure 4-1. Connecting Tip/Ring Circuit Cards Using an 885A Adaptor**

## Connecting Serial Ports

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The Lucent INTUITY system communicates with various devices through serial ports. Serial ports are required for:

- MERLIN LEGEND/MAGIX administration
- Remote maintenance modem
- Call Accounting System (optional)
- Customer administration terminal(s) (optional)

Only MERLIN LEGEND/MAGIX administration and the remote maintenance modem must be connected to specific ports. Make any other connections to available ports. The Lucent INTUITY system has two built-in ports, COM1 and COM2. COM2 is reserved for remote maintenance use and can not support any other use. If two or more devices are required, include a multi-port serial card in the configuration.

### NOTE:

Serial port 1 (COM1) is no longer used for administration of the MERLIN LEGEND/MAGIX system on INTUITY AUDIX R5.0 and later versions. SPM is not supported on R5.0 and later loads.

- Built-in serial port 1 (COM1, tty00) is used for administering the MERLIN LEGEND/MAGIX system.
- Built-in serial port 2 (COM2, tty01) is used for the remote maintenance modem or the remote maintenance board (RMB). The port is reserved for the use of remote maintenance and cannot be used for any other purpose.
- Add-on serial ports (ttyaa through ttyah) on a multi-port serial card are used for the second and subsequent device(s).
- The preferred order of connection of the devices is:
  - MERLIN LEGEND/MAGIX administration
  - Remote maintenance modem
  - Call Accounting System (SMDR) (optional)
  - Customer remote access terminals or modems (optional)

If the MERLIN LEGEND/MAGIX system is within 15 meters (50 feet) of the Lucent INTUITY system, and both systems share the same power outlet, a direct connection can be made between the MERLIN LEGEND/MAGIX administration and optional SMDR ports and the Lucent INTUITY system ports.

If the MERLIN LEGEND/MAGIX system is farther than 15 meters (50 feet) from the Lucent INTUITY system, or both systems do not share the same power outlet, data cables from the MERLIN LEGEND/MAGIX system administration ports and optional SMDR ports to the Lucent INTUITY system ports have to be extended with

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*Lucent INTUITY System Connections*

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Z3A2 ADU cable drivers. Two Z3A2 ADU interface units are required for each cable, one at each end.

The remote maintenance modem must be collocated with the Lucent INTUITY system and must be connected to serial port 2.

Optional customer access terminals may be collocated with the Lucent INTUITY system processor and directly connected to the next available serial port, or one or more modems may be connected to the next available serial port(s) for dial-in access.

### **Connecting Administration Ports Within 15 Meters (50 Feet), Same Power Outlet**

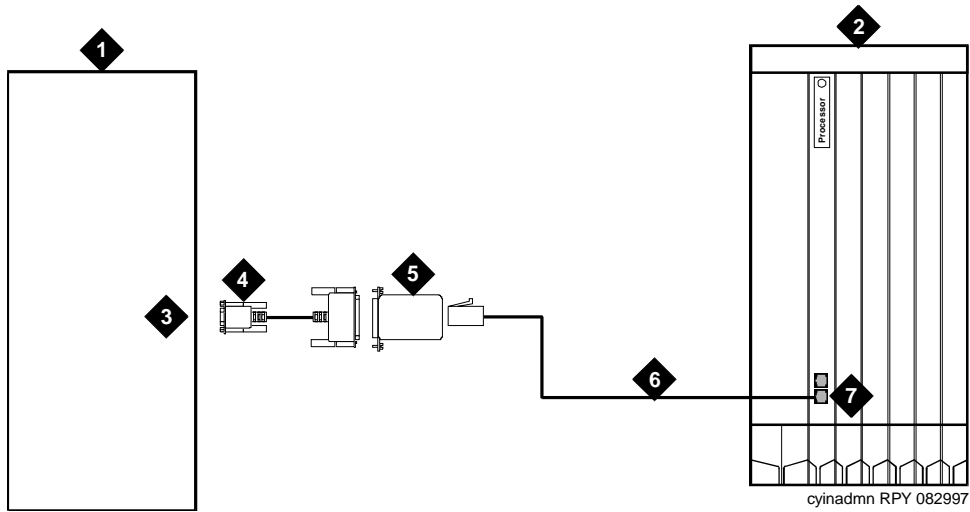
This method is used only when the MERLIN LEGEND/MAGIX system and the Lucent INTUITY system are located within (15 meters) 50 feet of each other and share the same power outlet.

The following parts are required:

- DB-9S to DB-25P adapter
- 355AF adaptor
- D8W-87 modular cord

See [Figure 4-2](#). Connect the MERLIN LEGEND/MAGIX Communications System Admin port and the Lucent INTUITY system Serial Port 1 (COM1) by following these steps:

1. Connect one end of a D8W-87 modular cord to the Admin (lower) jack of the MERLIN LEGEND/MAGIX Communications System.
2. Connect the other end of the D8W-87 modular cord to a 355AF adapter.
3. Connect to the 355AF adapter to the 25-pin end of the DB-9S-to-DB-25P adapter and then connect the 9-pin end of that adapter to port COM1 (tty00).



- |  |   |
|--|---|
| 1. Lucent INTUITY System                     | 5. 355AF Adapter                                  |
| 2. MERLIN LEGEND/MAGIX Communications System | 6. D8W-87 Modular Cord (Maximum Distance 50 Feet) |
| 3. COM1 Port                                 | 7. ADMIN Port                                     |
| 4. DB-9S to DB-25P Adapter                   |   |

**Figure 4-2. Connecting Admin Ports Between Systems within 50 Feet that Share Same Power Outlet**

**Connecting Administration Ports  
More Than 15 Meters (50 Feet)  
with a Different Power Outlet**

This method is used only when the MERLIN LEGEND/MAGIX system and the Lucent INTUITY system are more than 15 meters (50 feet) apart or do not share the same power outlet ([Figure 4-3](#)).

**NOTE:**  
The MERLIN LEGEND/MAGIX system does not support out-of-building operation of the Lucent INTUITY system.

The following parts are required:

- DB-9S to DB-25P adapter
- 355AF adapter
- Three D8W-87 modular cords
- M7-U87 crossover cable
- Two (2) Z3A2 ADUs

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- Two M8AJ-87 cables
- D8AM-87 modular crossover cable
- Two (2) 400B2 adapters
- Two (2) D6AP-87 modular cords
- Two (2) 248B adapters
- Two (2) 2012D power transformers



**NOTE:**

The combination of a Z3A2 ADU and an M8AJ-87 cable is equivalent to a Z3A4 ADU. You must order both pieces (one of each).

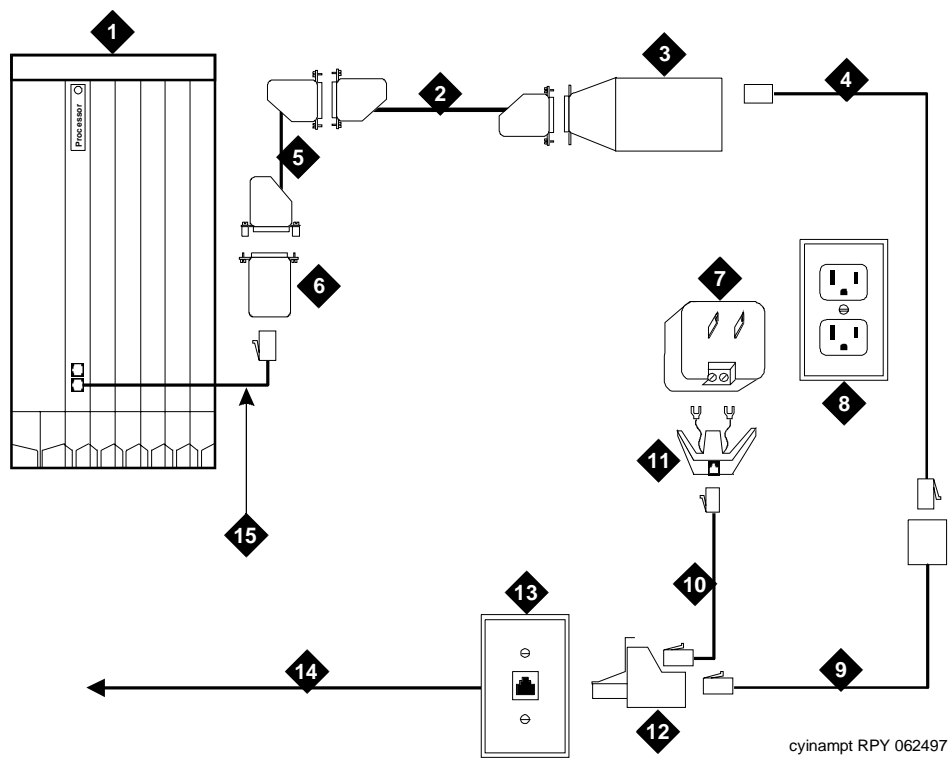


**NOTE:**

Inside wire must be 4-pair, suitable for data; type-3 UTP data cable or better.

See [Figure 4-3](#). Connect the MERLIN LEGEND/MAGIX Communications System Admin port and the Lucent INTUITY system serial port 1 (COM1) by following these steps:

1. Connect one end of a D8W-87 modular cord to the Admin (lower) modular jack on the MERLIN LEGEND/MAGIX Communications System.
2. Connect the other end of the D8W-87 modular cord to a 355AF adapter.
3. Connect the 355AF adapter to one end of an M7-U87 crossover cable.
4. Connect the other end of the M7-U87 crossover cable to the matching end of an M8AJ-87 cable.
5. Connect the other end of the M8AJ-87 cable to the matching connector on a Z3A2 ADU.
6. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on the Z3A2 ADU.
7. Connect the other end of the D8W-87 modular cord to the modular jack end of a D8AM-87 crossover cord.
8. Connect the modular plug end of the D8AM-87 crossover cord to the matching modular jack on a 400B2 adapter.
9. Plug the 400B2 adapter into the wall jack leading to the Lucent INTUITY system site.
10. Connect one end of a D6AP-87 modular cord to the 400B2 adapter.
11. Mount a 248B adapter to a 2012D power transformer.
12. Connect the other end of the D6AP-87 modular cord to the 248B adapter.
13. Plug the 2012D power transformer into an AC power outlet.



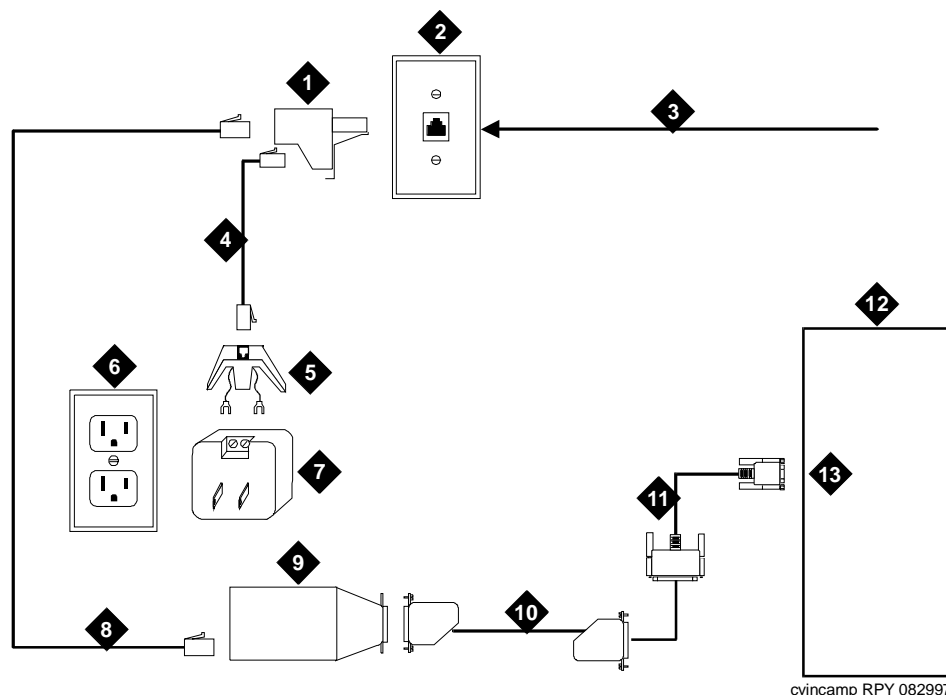
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- |  |   |
|--|---|
| 1. MERLIN LEGEND/MAGIX Communications System | 9. D8AM-87 Crossover Cable  |
| 2. M8AJ-87 Cable                             | 10. D6AP-87 Modular Cord  |
| 3. Z3A2-ADU                                  | 11. 248B Adapter  |
| 4. D8W-87 Modular Cord                       | 12. 400B2 Adapter   |
| 5. M7-U87 Crossover Cable                    | 13. Wall Jack   |
| 6. 355AF Adapter                             | 14. Building Wiring to Lucent INTUITY System Site                         |
| 7. 2012D Power Transformer                   | 15. D8W-87 Modular Cord (Maximum of 50 Feet) Connect to lower Admin jack. |
| 8. AC Power Outlet                           |   |

**Figure 4-3. Connecting Admin Ports More Than 15 Meters (50 Feet) with a Different Power Outlet**

Go to the Lucent INTUITY system site to continue the connection. See [Figure 4-4](#).





- |   |                             |
|---|-----------------------------|
| 1. 400B2 Adapter  | 8. D8W-87 Modular Cord      |
| 2. Wall Jack  | 9. Z3A2-ADU                 |
| 3. Building Wiring from the MERLIN<br>LEGEND/MAGIX Site | 10. M8AJ-87 Cable           |
| 4. D6AP-87 Modular Cord                                 | 11. DB-9S to DB-25P Adapter |
| 5. 248B Adapter   | 12. Lucent INTUITY System   |
| 6. AC Power Outlet                                      | 13. COM1 Port (tty00)       |
| 7. 2012D Power Transformer                              |                             |

**Figure 4-4. Connecting Admin Ports More Than  
15 Meters (50 Feet)/Different Power Outlet**

14. Connect to the Lucent INTUITY system.
  - a. Connect one end of a M8AJ-87 cable to the 25-pin end of the DB-9S to DB-25P adapter.
  - b. Connect the 9-pin end of that adapter to port COM1 (tty00).
15. Connect the other end of the M8AJ-87 cable to the Z3A2 ADU.
16. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on the Z3A2 ADU.
17. Connect the other end of the D8W-87 modular cord to a 400B2 adapter.

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18. Plug the 400B2 adapter into the wall jack from the Communications System site.
19. Connect one end of a D6AP-87 cord to the 400B2 adapter.
20. Mount a 248B adapter on a 2012D power transformer.
21. Connect the other end of the D6AP-87 cord to the 248B adapter.
22. Plug the 2012D power transformer into an AC outlet.

### **Connecting SMDR Ports Within 15 Meters (50 Feet), Same Power Outlet**

This method is used only when the MERLIN LEGEND/MAGIX system and the Lucent INTUITY system are within 15 meters (50 feet) and share the same power outlet.

The following parts are required for connection to the first available port on the multi-port serial card:

- multi-port serial card (if not already installed)
- 6-position, 6-conductor straight-through modular cord (supplied with the multi-port serial card)
- DTE 4/6-to-DB-25P adapter (ordered with PEC 70853)



**NOTE:**

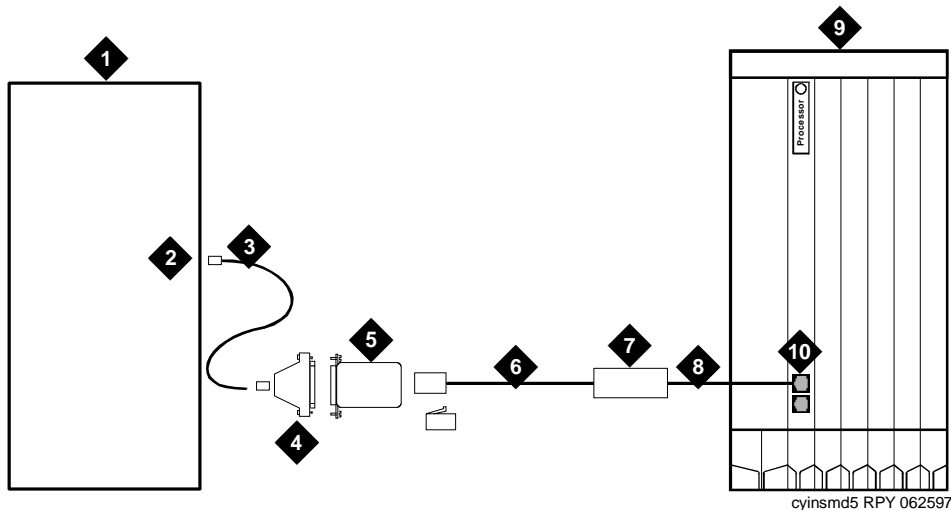
This adapter has slanted sides.

- 355AF adapter
- Z200A EMI filter modular cord

To connect to the first available port on the multi-port serial card, see [Figure 4-5](#). Connect the MERLIN LEGEND/MAGIX Communications System SMDR port and the Lucent INTUITY system port by following these steps:

1. Connect the short end of the Z200A EMI filter modular cord to the SMDR (upper) jack of the MERLIN LEGEND/MAGIX Communications System.
2. Connect the long end of the Z200A EMI filter modular cord to a 355A adapter.
3. Connect the 355A adapter to the 25-pin side of the DTE 4/6-to-DB 25P adapter.
4. Connect one end of the 6-position, 6-conductor modular cord to the DTE 4/6-to-DB 25P adapter.
5. Connect the other end of the modular cord to the first available port on the multi-port serial card.

**NOTE:**  
An SMDR connection to a R5.0 and later load can be connected to serial port 1 (COM 1). A multi-port serial card is not needed on an R5.0 and later load.



- |  |   |
|--|---|
| 1. Lucent INTUITY System                         | 7. Z200A EI Filter (Maximum Distance 15 Meters [50 Feet]) |
| 2. Multi-Port Serial Card (First Available Port) | 8. Short End  |
| 3. 6P6C Modular Cord                             | 9. MERLIN LEGEND/MAGIX Communications System              |
| 4. DTE 4/6 to DB-25P Adapter                     | 10. SMDR Port   |
| 5. 355AF Adapter                                 |   |
| 6. Long End                                      |   |

**Figure 4-5. Connecting SMDR Ports Within 50 Feet and Same Power Outlet (Multi-Port Serial Card)**

**Connecting SMDR Ports  
More Than 15 Meters (50 Feet)  
Different Power Outlets**

This method is used only when the MERLIN LEGEND/MAGIX system and the Lucent INTUITY system are more than 15 meters (50 feet) apart or do not share the same power outlet.

**NOTE:**  
The MERLIN LEGEND/MAGIX system does not support out-of-building operation of the Lucent INTUITY system.

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The following parts are required for connection to the multi-port serial card:

- Multi-port serial card (if needed and not already installed)
- 6-position, 6-conductor straight-through modular cord (supplied with the multi-port serial card)
- DTE 4/6-to-DB-25P adapter (ordered with PEC 70853)



#### NOTE:

This adapter has slanted sides as shown in [Figure 4-7](#).

The following parts are required for either type of connection:

- 355AF adapter
- Z200A EMI filter modular cord
- Two D8W-87 modular cords
- M7-U87 crossover cable
- Two Z3A2 ADUs
- Two M8AJ-87 cable
- D8AM-87 modular crossover cable
- Two 400B2 adapters
- Two D6AP-87 modular cords
- Two 248B adapters
- Two 2012D power transformers



#### NOTE:

The combination of a Z3A2 ADU and an M8AJ-87 cable is equivalent to a Z3A4 ADU. You must order both pieces (one of each for the Admin port, and another of each for the SMDR port).



#### NOTE:

Inside wire must be 4-pair, suitable for data; type-3 UTP data cable or better.

Connect to the first available port on the multi-port serial card.



#### NOTE:

An SMDR connection to a R5.0 and later load can be connected to serial port 1 (COM 1). A multi-port serial card is not needed on an R5.0 and later load.

See [Figure 4-6](#). Connect the MERLIN LEGEND/MAGIX Communications System SMDR port and the Lucent INTUITY system by following these steps:

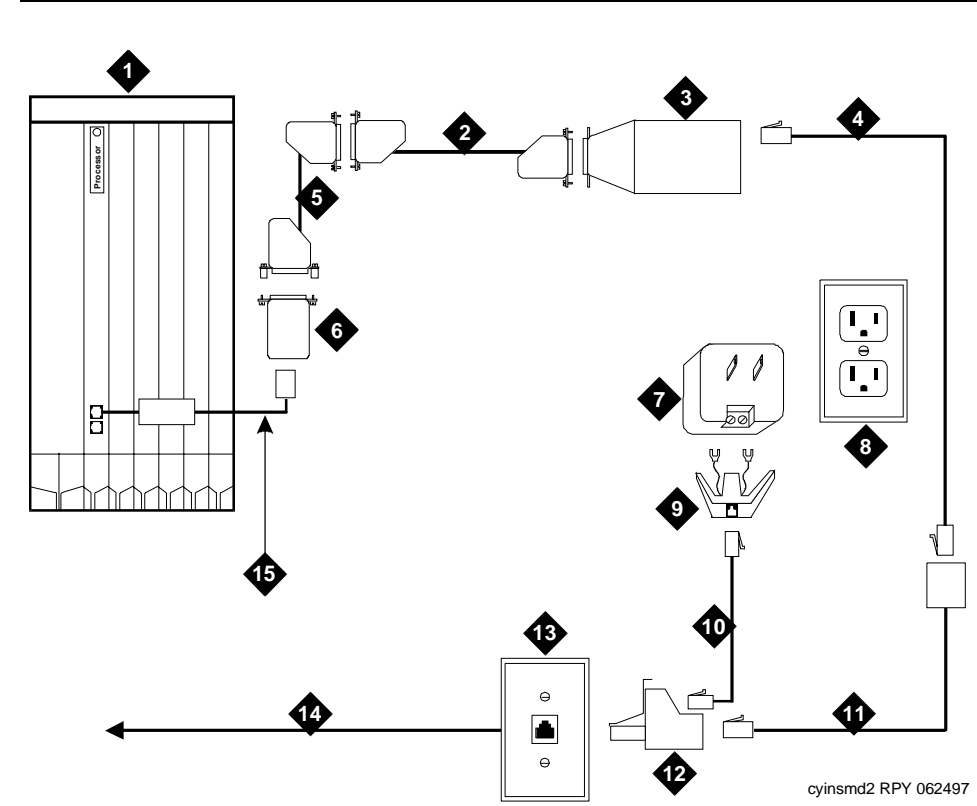
1. Connect the short end of the Z200A EMI filter modular cord to the SMDR (upper) modular jack on the MERLIN LEGEND/MAGIX Communications System.

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2. Connect the long end of the D8W-87 modular cord to a 355AF adapter.
3. Connect the 355AF adapter to one end of an M7-U87 crossover cable.
4. Connect the other end of the M7-U87 crossover cable to the matching end of a M8AJ-87 cable.
5. Connect the other end of the M8AJ-87 cable to the matching connector on a Z3A2 ADU.
6. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on the Z3A2 ADU.
7. Connect the other end of the D8W-87 modular cord to the modular jack end of a D8AM-87 crossover cord.
8. Connect the modular plug end of the D8AM-87 crossover cord to the matching modular jack on a 400B2 adapter.
9. Plug the 400B2 adapter into the wall jack leading to the Lucent INTUITY system site.
10. Connect one end of a D6AP-87 modular cord to the 400B2 adapter.
11. Mount a 248B adapter to a 2012D power transformer.
12. Connect the other end of the D6AP-87 modular cord to the 248B adapter.
13. Plug the 2012D power transformer into an AC power outlet.

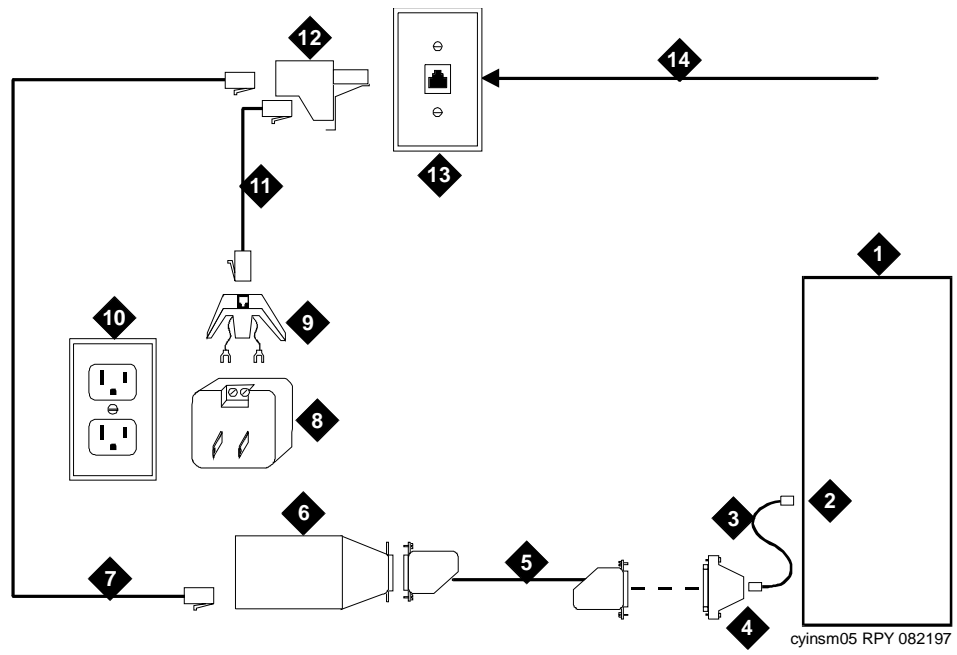


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- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>1. MERLIN LEGEND/MAGIX Communications System</li><li>2. M8AJ-87</li><li>3. Z3A2-ADU</li><li>4. D8W-87</li><li>5. M7-U87 Crossover Cable</li><li>6. 355AF Adapter</li><li>7. 2012D Power Transformer</li><li>8. AC Power Outlet</li><li>9. 248B Adapter</li></ul> | <ul style="list-style-type: none"><li>10. D6AP-87</li><li>11. D8AM-87 Crossover</li><li>12. 400B2 Adapter</li><li>13. Wall Jack</li><li>14. Building Wiring to Lucent INTUITY System Site</li><li>15. Z200A EMI Filter Cord (Maximum Distance 15 Meters [50 Feet])<br/>Connect to upper SMDR jack with the short end toward the MERLIN LEGEND/MAGIXS Communications</li></ul> |
|--|---|

**Figure 4-6. Connecting SMDR Ports More Than 50 Feet/Different Power Outlet**

Go to the Lucent INTUITY system site to continue the connection. See [Figure 4-7](#).



- |   |   |
|---|---|
| 1. Lucent INTUITY System                            | 9. 248B Adapter   |
| 2. Multi-Port Serial Card<br>(First Available Port) | 10. AC Power Outlet   |
| 3. 6P6C Modular Cord                                | 11. D6AP-87   |
| 4. DTE 4/6 to DB-25P Adapter                        | 12. 400B2 Adapter   |
| 5. M8AJ-87  | 13. Wall Jack   |
| 6. Z3A2-ADU   | 14. Building Wiring from the MERLIN<br>LEGEND/MAGIX Communications<br>System Site |
| 7. D8W-87   |   |
| 8. 2012D Power Transformer                          |   |

**Figure 4-7. Connecting SMDR Ports More Than  
50 Feet/Different Power Outlet**

15. Connect to the Lucent INTUITY system to the first available port on the multi-port serial card:
- a. Connect one end of the 6-position, 6-conductor modular cord to the port.
  - b. Connect the other end of the modular cord to the DTE 4/6-to-DB-25P adapter.
  - c. Connect one end of an M8AJ-87 cable to the other end of the DTE 4/6-to-DB-25P adapter.

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16. Connect the other end of the M8AJ-87 cable to the Z3A2 ADU.
17. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on a Z3A2 ADU.
18. Connect the other end of the D8W-87 modular cord to a 400B2 adapter.
19. Plug the 400B2 adapter into the wall jack from the Communications System site.
20. Connect one end of a D6AP-87 cord to the 400B2 adapter.
21. Mount a 248B adapter on a 2012D power transformer.
22. Connect the other end of the D6AP-87 cord to the 248B adapter.
23. Plug the 2012D power transformer into an AC outlet.

## Networking

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The MERLIN LEGEND/MAGIX system supports the Lucent INTUITY low-speed digital networking, TCP/IP Digital Networking and AMIS analog networking as an *optional* application. High-speed digital networking is not supported since the MERLIN LEGEND/MAGIX system does not support the DCP protocol.

There methods for configuring networking with the MERLIN LEGEND/MAGIX system:

- If the MERLIN LEGEND/MAGIX system has DID lines, the Lucent INTUITY low-speed digital networking is connected through the MERLIN LEGEND/MAGIX switch. For incoming calls, outgoing calls can use Legend System Lines.
- If the MERLIN LEGEND/MAGIX system does not have DID lines, the connections use loop start (LS) lines from the central office (CO) and bypass the switch.
- TCP/IP digital networking via an Ethernet LAN card.

AMIS Analog Networking requires no special hardware for connectivity since it uses the voice channels already assigned to voice services. However, traffic configuration rules may require the addition of voice channels to handle the load of AMIS networking.

To support AMIS Analog Networking, the MERLIN LEGEND/MAGIX system must be configured to send incoming calls on external lines directly to INTUITY AUDIX®. Touch-tone codes on the incoming calls identify the calls as AMIS networking and cause proper call handling. Many MERLIN LEGEND/MAGIX customers already do this in order to support an automated attendant.



## Connecting Low-Speed Digital Networking

The following parts are required:

- ACCX circuit card (includes cable and breakout box)
- Modem (Paradyne® COMSPHERE® 3810, 3820, or 3910 includes modular cord and power supply)
- DB-25 M-M cable

See [Figure 4-8](#). Connect the Lucent INTUITY low-speed networking by following these steps:

1. Connect one end of the ACCX cable to the connector on the ACCX card.
2. Connect the other end of the ACCX cable to the matching connector on the break-out box.
3. Connect one end of the DB-25 M-M cable to the connector marked RS-232-CH1 (2, 3, or 4) on the break-out box.
4. Connect the other end of the DB-25 M-M cable to the matching connector on the modem.
5. Connect one end of the modular cord to the jack marked **DIAL** on the modem.
6. If the system does *not* have DID lines, connect the other end of the modular cord to an RJ11C telephone jack wired to a (LS) line from the CO.

If the system has DID lines, connect the other end of the modular cord to a MERLIN LEGEND/MAGIX Tip/Ring port that has an assigned DID number.

### NOTE:

If building wire is used, it must be type 3 UTP or better. The distance limitation is the same as for a station.

7. Connect the power supply connector to the modem.
8. Plug in the power supply.
9. Turn on power for the modem.



- |                             |   |
|-----------------------------|---|
| 1. Lucent INTUITY System    | 8. AC Power Outlet                            |
| 2. ACCX Circuit Card        | 9. With DID, To Tip/Ring Port                 |
| 3. ACCX Cable               | 10. Without DID, To Public Network L/S Line   |
| 4. Networking Breakout Box  | 11. DID Lines To Public Network               |
| 5. DB-25 M-M Cable          | 12. MERLIN LEGEND/MAGIX Communications System |
| 6. Paradyne COMSPHERE Modem |   |
| 7. Wall Jack                |   |

**Figure 4-8. Digital Networking Connections**

## Remote Maintenance

- Remote maintenance modem
- Remote maintenance board (RMB)

## RMB Install

See your installation book to know more about the RMB Install.

### Remote Maintenance Modem Installation

The remote maintenance modem must be connected to serial port 2 (COM2). If serial port 2 (COM2) is already in use, do the following:

1. Move the device (if any) connected to serial port 2 (COM2) to the first available port on the multi-port serial card. See device-specific instructions elsewhere in this chapter.
2. Readminister the application formerly using serial port 2 (COM2) to use the serial port now connected on the multi-port serial card.
3. Connect the remote maintenance modem to serial port 2 (COM2).

The following parts are required:

- DB-9S-to-DB-25P adapter
- RS-232 M-F cable
- Modem (Paradyne COMSPHERE 3820 or ATT Paradyne 3910, includes modular cord and power supply)

See [Figure 4-9](#). Connect the Lucent INTUITY remote maintenance modem by following these steps:

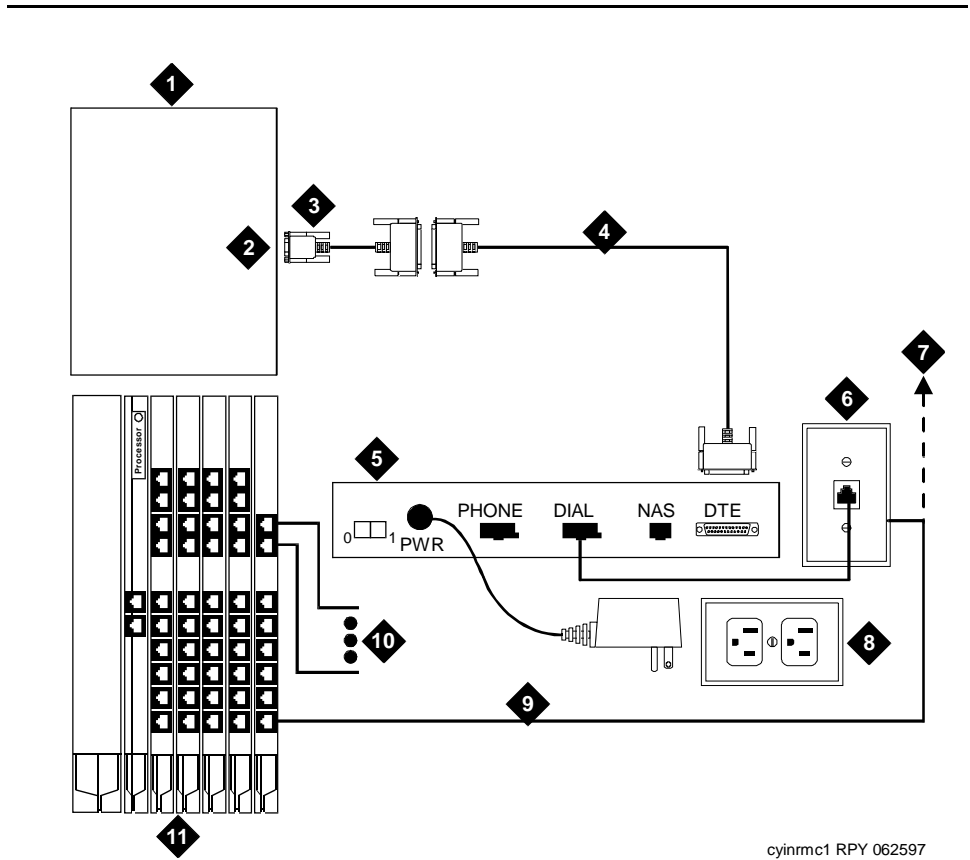
1. Connect the small end of the DB-9S-to-DB-25P adapter to serial port 2 on the MAP/5 series computer or COM2 on the MAP/40 or MAP/100 series computer.
2. Connect the matching end of the DB-25 M-F cable to the large end of the DB-9S to DB-25P adapter.
3. Connect the other end of the DB-25 M-F cable to the matching connector on the modem.
4. Connect one end of the modular cord supplied with the modem to the jack marked **DIAL** on the modem.
5. If the MERLIN LEGEND/MAGIX system does **not** have DID lines, connect the other end of the modular cord to a RJ11C telephone jack wired to a (LS) line from the CO.

If the MERLIN LEGEND/MAGIX system has DID lines, connect the other end of the modular cord to a MERLIN LEGEND/MAGIX Tip/Ring port on an 012 or 016 module (Legend has other Tip/Ring connections) that has an assigned DID number.

#### NOTE:

If building wire is used, it must be type-3 UTP or better. The distance limitation is the same as for a station.

- 6. Connect the power supply connector to the modem.
- 7. Plug in the power supply.
- 8. Turn on power for the modem.



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- |  |   |
|--|---|
| 1. Lucent INTUITY System   | 7. Without DID, To Public Network L/S Line    |
| 2. Serial Port 2 (MAP/5 Series) or COM2 (MAP/40 or MAP/100 Series) | 8. AC Power Outlet                            |
| 3. DB-9S to DB-25P Adapter   | 9. With DID, To Tip/Ring Port                 |
| 4. DB-25 M-F Cable   | 10. DID Lines to Public Network               |
| 5. Paradyne COMSPHERE Modem  | 11. MERLIN LEGEND/MAGIX Communications System |
| 6. Wall Jack   |   |

**Figure 4-9. Remote Maintenance Connections**

## Remote Access

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Local access to the Lucent INTUITY system is provided by the keyboard and monitor of the Lucent INTUITY system. The Multi-User Feature Package and Remote Access is an application for the MERLIN LEGEND/MAGIX INTUITY system. It is sometimes convenient to have terminals located on the system administrator's desk or at other locations. While it is possible to use the "pass through" capability of the MERLIN LEGEND/MAGIX system for remote access, this often requires operator assistance. Remote administration allows system administrators to perform duties at their desks, saving time and trips when the Lucent INTUITY system is not close by.

### NOTE:

Only one subscriber can be logged on to the Lucent INTUITY system at a time unless the Multi-User Feature Package has been installed. With the Multi-User Feature, the Lucent INTUITY system can accommodate up to four simultaneous logins.

### NOTE:

The "pass through" capability is not an option on AUDIX R5.0 and later software loads.

Because the Multi-User Feature Package allows multiple login sessions, it is possible to delegate Lucent INTUITY system administration duties to several people. This not only divides up the work needed to maintain a Lucent INTUITY system, but also gives subscribers and callers several points of contact should a problem occur.

## Dedicated-Line Access

Dedicated-line access can be used when a specific terminal will always be connected to the line, that is, when dial-up access is not required. Dedicated line access is always to the first available port on the multi-port serial card.

Dedicated-line access can be accomplished in the following ways:

- If the terminal is within 15 meters (50 feet) of the Lucent INTUITY system, the terminal can be connected directly to the multi-port serial card using either of the methods shown in [Figure 4-10](#).
- If the terminal is more than 15 meters (50 feet) from the Lucent INTUITY system, it can be connected to the multi-port serial card using ADUs as line extenders.

In all other cases, remote access connections (using dial-up modems) should be used.

## Connecting Dedicated Lines within 15 Meters (50 Feet)

These methods are used only when the Lucent INTUITY system and the terminal are within 15 meters (50 feet).

The following parts are required:

- Multi-port serial card (if not already installed)
- 6-position, 6-conductor straight-through modular cord (supplied with the multi-port serial card)
- DCE 4/6-to-DB-25P adapter



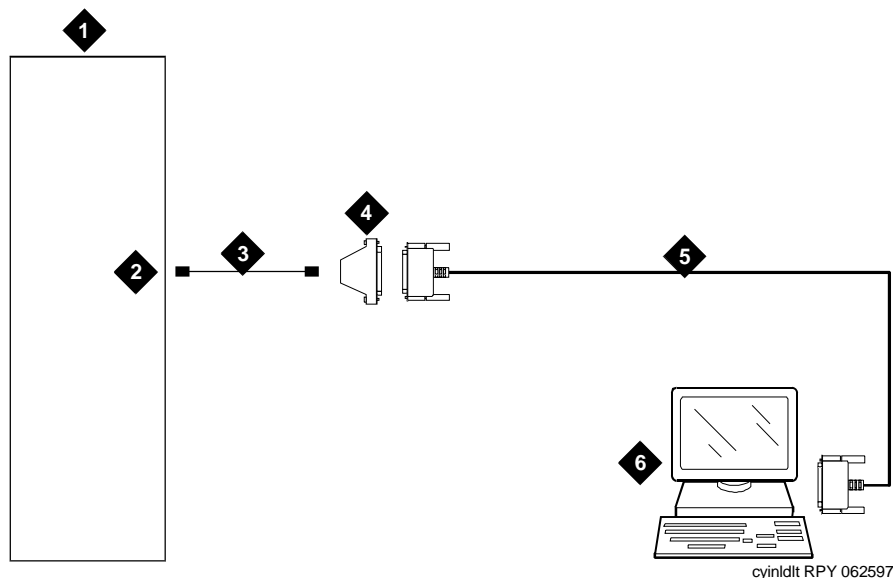
### NOTE:

This adapter has slanted sides as shown in [Figure 4-10](#).

- DB-25 M-F cable

See [Figure 4-10](#). Connect the local terminal by following these steps:

1. Connect one end of the 6-position, 6-conductor modular cord to the first available port on the multi-port serial card.
2. Connect the other end of the modular cord to the DTE-4/6-to-DB-25P adapter.
3. Connect the matching end of the DB-25 M-F cable to the DTE-4/6-to-DB-25P adapter.
4. Connect the other end of the DB-25 M-F cable to the AT&T 715 terminal.



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1. Lucent INTUITY System
2. Multi-Port Serial Card  
(First Available Port)
3. 6P6C Modular Cord

4. DTE 4/6 to DB-25P Adapter
5. DB-25 M-F Cable
6. Lucent 715 Terminal

**Figure 4-10. Local Dedicated Line Terminal Connections**

### **Connecting Dedicated Lines beyond 15 Meters (50 Feet)**

This method is used only when the Lucent INTUITY system and the terminal are more than 15 meters (50 feet) apart.

If the terminal is in a building outside the main building (where the Lucent INTUITY system is located), an ADU and an additional protector must be installed in each building. The ADUs and protectors provide both the Lucent INTUITY system and the terminal protection against exposure to lightning, inadvertent contact with power lines, and power currents induced by nearby power lines. See the installation notes packed with the ADU for more information.

The following parts are required:

- Multi-port serial card (if needed and not already installed)
- 6-position, 6-conductor straight-through modular cord (supplied with the multi-port serial card)

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### Lucent INTUITY System Connections

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- DTE 4/6-to-DB-25P adapter (for connection to multi-port serial card only, ordered with PEC 70853)



#### NOTE:

This adapter has slanted sides as shown in [Figure 4-11](#).

- Two D8W-87 modular cords
- M7-U87 crossover cable
- Two Z3A2 ADUs
- Two M8AJ-87 Cables
- D8AM-87 Modular crossover cable
- Two 400B2 adapters
- Two D6AP-87 modular cords
- Two 248B adapters
- Two 2012D Power Transformers



#### NOTE:

The combination of a Z3A2 ADU and an M8AJ-87 cable is equivalent to a Z3A4 ADU. You must order both pieces (one of each for the Admin port, another of each for the SMDR port).



#### NOTE:

Inside wire must be 4-pair, suitable for data; type-3 UTP data cable or better.



#### NOTE:

Local powering of the Z3A2 ADU is optional.

Connect to the first available port on the multi-port serial card.

See [Figure 4-11](#). Connect the terminal and the Lucent INTUITY system by following these steps:

1. Connect one end of the M7U-87 crossover cable to the terminal.
2. Connect the other end of the M7U-87 cable to the matching end of a M8AJ-87 cable.
3. Connect the other end of the M8AJ-87 cable to the matching connector on a Z3A2 ADU.
4. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on the Z3A2 ADU.
5. Connect the other end of the D8W-87 modular cord to the modular jack end of a D8AM-87 crossover cord.
6. Connect the modular plug end of the D8AM-87 crossover cord to the matching modular jack on a 400B2 adapter.

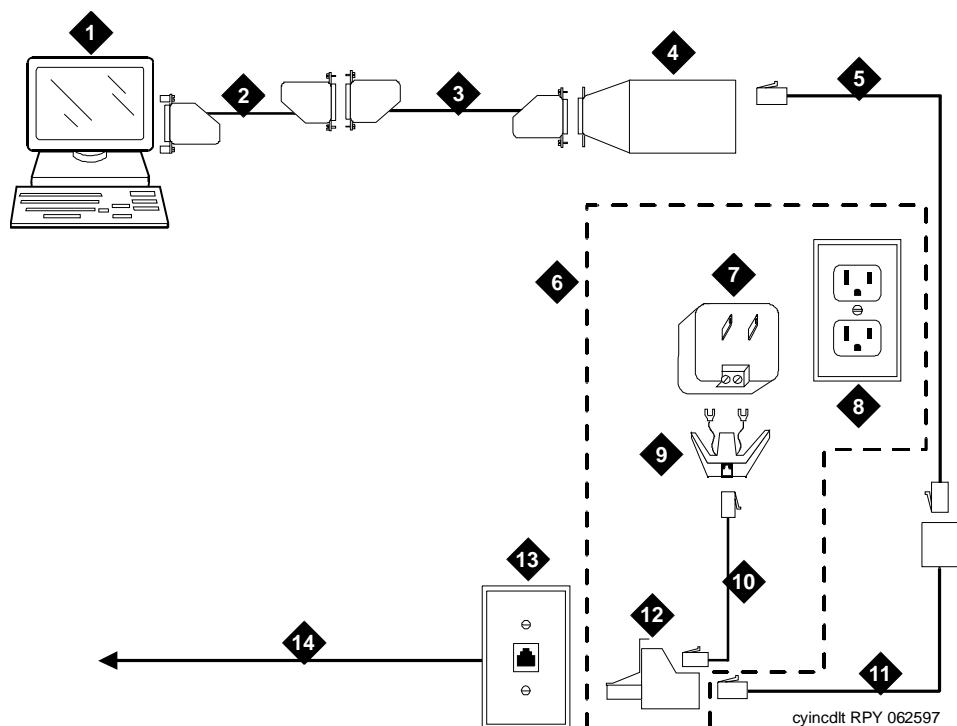


#### 4 Connectivity

##### Lucent INTUITY System Connections

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7. Plug the 400B2 adapter into the wall jack leading to the Lucent INTUITY system site.
8. Connect one end of a D6AP-87 modular cord to the 400B2 adapter.
9. Mount a 248B adapter to a 2012D power transformer.
10. Connect the other end of the D6AP-87 modular cord to the 248B adapter.
11. Plug the 2012D power transformer into an AC power outlet.



- |                            |   |
|----------------------------|---|
| 1. Lucent 715 Terminal     | 9. 248B Adapter                                   |
| 2. M7U-87 Crossover        | 10. D6AP-87 Modular Cord                          |
| 3. M8AJ-87 Cable           | 11. D8AM-87 Crossover Cable                       |
| 4. Z3A2-ADU                | 12. 400B2 Adapter                                 |
| 5. D8W-87 Modular Cord     | 13. Wall Jack                                     |
| 6. Optional Power          | 14. Building Wiring to Lucent INTUITY System Site |
| 7. 2012D Power Transformer |   |
| 8. AC Power Outlet         |   |

**Figure 4-11. Connecting Dedicated Line Terminal More Than 15 Meters (50 Feet): Terminal End**

Figure 4-12.



- |   |                                      |
|---|--------------------------------------|
| 1. Lucent INTUITY System                            | 9. 2012D Power Transformer           |
| 2. Multi-Port Serial Card<br>(First Available Port) | 10. 248B Adapter                     |
| 3. 6P6C Modular Cord                                | 11. D6AP-87                          |
| 4. DTE 4/6 to DB-25P Adapter                        | 12. 400B2 Adapter                    |
| 5. M8AJ-87 Cable                                    | 13. Optional Power                   |
| 6. Z3A2-ADU   | 14. Wall Jack                        |
| 7. D8W-87 Modular Cord                              | 15. Building Wiring to Terminal Site |
| 8. AC Power Outlet                                  |                                      |

**Figure 4-12. Connecting Dedicated Line Terminal More Than 15 Meters (50 Feet): Lucent INTUITY End**

16. Connect one end of the 6-position, 6-conductor modular cord to the first available port on the multi-port serial card.
17. Connect the other end of the modular cord to the DTE-4/6-to-DB-25P adapter.
18. Connect one end of an M8AJ-87 cable to the DTE-4/6-to-DB-25P adapter.
19. Connect the other end of the M8AJ-87 cable to the Z3A2 ADU.

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### Lucent INTUITY System Connections

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20. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on a Z3A2 ADU.
21. Connect the other end of the D8W-87 modular cord to a 400B2 adapter.
22. Plug the 400B2 adapter into the wall jack from the Communications System site.
23. Connect one end of a D6AP-87 cord to the 400B2 adapter.
24. Mount a 248B adapter on a 2012D power transformer.
25. Connect the other end of the D6AP-87 cord to the 248B adapter.
26. Plug the 2012D power transformer into an AC outlet.

## Remote Access (Dial-Up) Connections

Connect to the first available port on the multi-port serial card.

The following parts are required:

- Multi-Port serial card (if needed and not already installed)
- 6-position, 6-conductor straight-through modular cord (supplied with the multi-port serial card)
- DTE-4/6-to-DB-25P adapter (ordered with PEC 70853)



### NOTE:

This adapter has slanted sides as shown in [Figure 4-13](#).

- Modem (Paradyne COMSPHERE 3820, includes modular cord and power supply)

See [Figure 4-13](#). Connect the Lucent INTUITY remote maintenance modem by following these steps:

1. To connect to the Lucent INTUITY system to the first available port on the multi-port serial card:
  - a. Connect one end of the 6-position, 6-conductor modular cord to the port.
  - b. Connect the other end of the modular cord to the DTE-4/6-to-DB-25P adapter.
2. Connect the other end of the DB-25 M-F cable or the DTE-4/6-to-DB-25P adapter to the matching connector on the modem.
3. Connect one end of the modular cord supplied with the modem to the jack marked **DIAL** on the modem.
4. If the MERLIN LEGEND/MAGIX system does **not** have DID lines, connect the other end of the modular cord to a RJ11C telephone jack wired to a (LS) line from the CO.

**4** Connectivity

*Lucent INTUITY System Connections*

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If the MERLIN LEGEND/MAGIX system has DID lines, connect the other end of the modular cord to a MERLIN LEGEND/MAGIX tip/ring port 012 or 016 that has an assigned DID number.



**NOTE:**

If building wire is used, it must be type-3 UTP or better. The distance limitation is the same as for a station.

5. Connect the power supply connector to the modem.
6. Plug in the power supply.
7. Turn on the power for the modem.

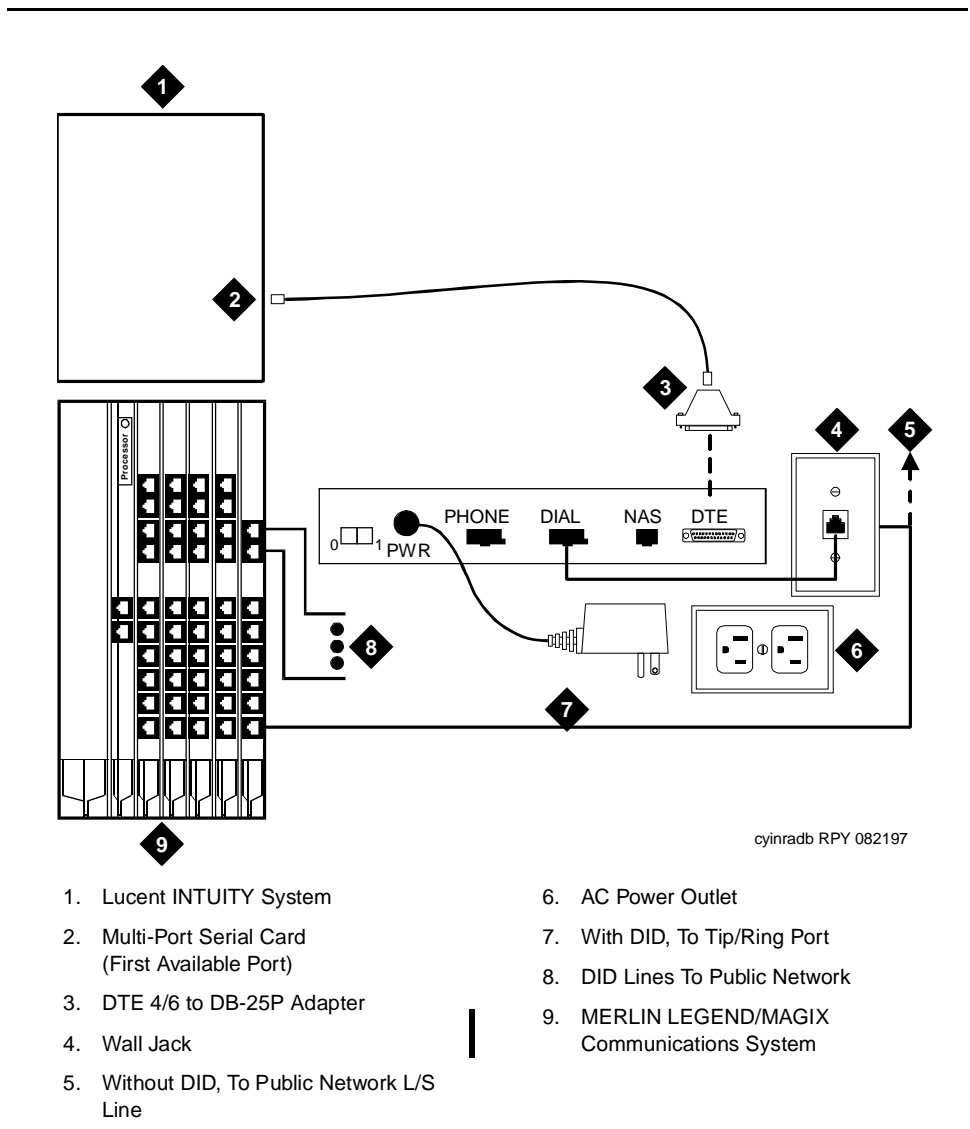


Figure 4-13. Remote Access Dial-Up Connections

|          |  |  |
|----------|--|--|
| <b>4</b> | <b>Connectivity</b>                      |  |
|          | <i>Lucent INTUITY System Connections</i> |  |