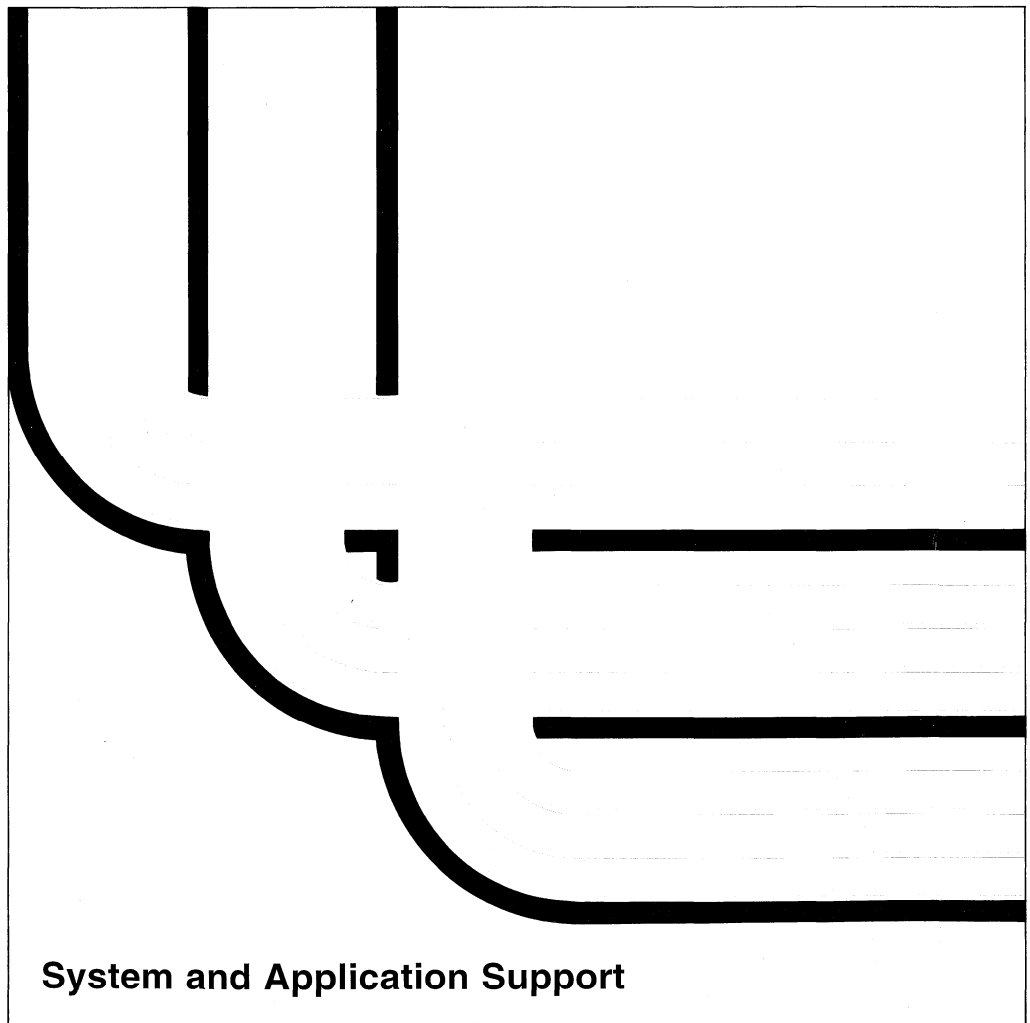


Device Configuration Guide

Version 2





Application System/400

SC41-8106-02

Device Configuration Guide

Version 2

Take Note!

Before using this information and the product it supports, be sure to read the general information under "Notices" on page vii.

Third Edition (November 1993)

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Changes or additions to the text are indicated by a vertical line (|) to the left of the change or addition. Refer to the "Summary of Changes" on page xi for a summary of changes made to the Operating System/400 and how they are described in this publication.

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About This Guide

This guide describes how to configure devices on the AS/400 system. This includes information on how to configure the following:

- Local work station controllers (including twinaxial controllers)
- Tape controllers
- Locally attached devices (including twinaxial devices)

This guide also describes concepts related to configuration tasks.

Before performing the configuration tasks in Part 2 of this manual, you must first complete the planning tasks in Chapter 1, "Planning for Configuration." You must also have the Operating System/400 (OS/400*) licensed program and any licensed programs you ordered already installed.

If you are using double-byte character set (DBCS) support on your system (for Chinese, Japanese, or Korean languages), see Appendix A, "Configuration of Double-Byte Character Set Devices," before you perform your system configuration. Then go to Chapter 2, "Learning about Configuration," to learn about the configuration tasks.

If you are attaching a device to your system and the device is not documented in this publication, you must configure it as a device with characteristics similar to the ones documented in this guide.

Any mention of the Autocall programming enhancement is a reference to Request for Price Quotation (RPQ) 843567 on the 9406 System Unit, and RPQ 843568 on the 9404 System Unit.

| This guide does not contain information on how to use application program interfaces (APIs) for device configuration descriptions. The following APIs are available:

- | QDCRLIND Retrieve line description
- | QDCRCTL D Retrieve controller description
- | QDCRDEVD Retrieve device description
- | QDCLCFGD List configuration descriptions
- | QDCRCFGS Retrieve configuration status

| For more information on these APIs, go to the *System Programmer's Interface Reference*, SC41-8223.

This guide does not contain information on how to configure devices attached to the ASCII work station controller. For information on configuring ASCII work station devices, go to the *ASCII Work Station Reference and Example*, SA41-9922.

This guide does not contain information on how to configure 5250 and 3270 remote work station communications. For information on configuring 5250 and 3270 remote work station communications, go to the *Communications: Remote Work Station Guide*, SC41-0002.

This guide does not contain information on how to configure disk units or auxiliary storage pools. For information on performing these configuration tasks, go to the *Advanced Backup and Recovery Guide*, SC41-8079.

This guide does not contain information on how to configure the following OS/400 communications support:

- Integrated services digital network (ISDN) networks
- | • Distributed data interface (DDI) networks
- | • Frame relay (FR) networks
- Token-ring networks
- Ethernet local area networks
- Synchronous data link control (SDLC) and X.25 lines
- | • Frame relay (FR) lines
- | • Distributed data interface (DDI) lines
- | • ISDN Data Link Control (IDLC) lines
- Asynchronous communications and binary synchronous communications (BSC)
- Communications controllers
- Communications devices
- Remote work station controllers
- Remote devices (display stations and printers)

For information on how to configure the items listed above, go to the *Communications: Operating System/400* Communications Configuration Reference*, SC41-0001. For a list of additional publications regarding OS/400 communications

support, see the “Configuring Communications” section of the Bibliography.

This guide does not contain information on how to configure the following personal computer support:

- Twinaxial data link control (TDLC) communications
- Local area network communications
- Synchronous data link control (SDLC) and X.25 communications
- Asynchronous communications
- Remote 5394 communications
- ISDN data link control communications

For information on how to configure the items listed above, go to the *PC Support/400: DOS Installation and Administration Guide*, SC41-0006, or the *PC Support/400: OS/2 Installation and Administration Guide*, SC41-0007.

Note: Users of the Personal System/55 should go to the *PC Support/400: DOS Installation and Administration Guide (PS/55)*, SC41-0008, or the *PC Support/400: OS/2 Installation and Administration Guide (PS/55)*, SC41-0009, for information specific to their personal computer.

You may need to refer to other IBM manuals for more specific information about a particular topic. The *Publications Guide*, GC41-9678, provides information on all the manuals in the AS/400 library.

For a list of related publications, see the “Bibliography” on page H-1.

Who Should Use This Guide

This guide is intended for the system operator, the system administrator, or anyone who is responsible for configuring devices on your AS/400 system.

You should read or have access to these manuals before using this guide:

- If you want information on planning for your system, see the *Physical Planning Guide and Reference*, GA41-9571. This manual includes directions for creating your floor plans and filling out your System Information Form.
- If you are migrating from a System/36 or System/38, see the *System/36 to AS/400 Migration Aid User's Guide and Reference*, SC09-1166, or the *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165.
- If you want to configure communications, or want more information about the AS/400 communications support contained in the operating system, see the *Communications: Operating System/400* Communications Configuration Reference*, SC41-0001.

Summary of Changes

| **Separator Program (SEPPGM) Parameter**

| The SEPPGM parameter was added to the following commands:

- | • Change Device Description (Printer) (CHGDEVPRT)
- | • Create Device Description (Printer) (CRTDEVPRT)

| The SEPPGM parameter also appears on the output of the Display Device Description (DSPDEVD) command.

| This new parameter allows users to create and customize their own separator pages through a user exit program.

| **Host Print Transform (TRANSFORM) Parameter**

| The TRANSFORM parameter was added to the following commands:

- | • CHGDEVPRT
- | • CRTDEVPRT

| The TRANSFORM parameter also appears on the output of the DSPDEVD command.

| This new parameter enables you to use the host print transform function. Associated with the host print transform function are these additional parameters:

- | Manufacturer type and model (MFRTYPMDL)
- | Paper source 1 (PPRSRC1)
- | Paper source 2 (PPRSRC2)
- | Envelope source (ENVELOPE)
- | ASCII code page 899 support (ASCII899)

| **Assign at Vary On (ASSIGN) Parameter**

| The ASSIGN parameter was added to the following commands:

- | • Create Device Description (Tape) CRTDEVTAP
- | • Change Device Description (Tape) CHGDEVTAP

| The ASSIGN parameter also appears on the output of the Display Device Description (DSPDEVD) command.

| This new parameter enables you to specify if the 3480 or 3490 tape drive is assigned to the system when the tape drive is varied on.

| **Unload at Vary Off (UNLOAD) Parameter**

| The UNLOAD parameter was added to the following commands:

- | • CHGDEVTAP
- | • CRTDEVTAP

| The UNLOAD parameter also appears on the output of DSPDEVD command.

| This new parameter enables you to specify whether the tape is unloaded or just rewound when the tape drive is varied off.

| **System Configuration List**

| The system configuration list is the same for the 9404 and the 9406 System Units.

| **QPRTDEV System Value**

| Information has been added to Chapter 3, "Using Automatic Configuration," clarifying how automatic configuration uses the QPRTDEV system value.

| **New Devices Supported by the AS/400 System**

- | • 7208 Tape Unit
| Model 12 has been added to this tape unit.
- | • 5427 Printer
| Models 002, 003, and 005 have been added to this family of printers.
- | • 3488 Display Station
| The 3488 family of display stations includes monochrome and colored monitors.
- | • 6054 Workstation Adapter
| Apple work stations can attach to the AS/400 system using the 6054 workstation adapter. For more information on attaching Apple work stations, see the *AS/400 Programmable Workstation Local Attachment for McIntosh*, G325-6086-00.

| **Distributed Data Interface (DDI) Networks**

| New line commands for DDI networks are:

- | • Create Line Description (DDI) (CRTLINDDI)
- | • Change Line Description (DDI) (CHGLINDDI)

| For information on configuring DDI networks, see
| the *Communications: Operating System/400**
| *Communications Configuration Reference*,
| SC41-0001.

| **Frame Relay (FR) Networks**

| New network interface commands for frame relay
| are:

- | • Create Network Interface Description (FR)
| (CRTNWIFR)

- | • Change Network Interface Description (FR)
| (CHGNWIFR)

| New line commands for frame relay are:

- | • Create Line Description (FR) (CRTLINFR)
- | • Change Line Description (FR) (CHGLINFR)

| For information on configuring frame relay net-
| works, see the *Communications: Operating*
| *System/400* Communications Configuration*
| *Reference*, SC41-0001.

| **Printer Font Tables**

| The appendix for printer font tables has been
| removed from this manual. For complete informa-
| tion on printer font tables, see the *Guide to Pro-*
| *gramming for Printing*, SC41-8194.

Part 1. Planning for Configuration

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Chapter 1. Planning for Configuration

Introduction

This chapter is designed to help you plan for device configuration. It is assumed that you have completed your floor plan and your System Information Form (A forms) before you begin the tasks in this chapter. These forms, and instructions for completing them, are located in the *Physical Planning Guide and Reference*.

During device configuration, you create configuration descriptions to define diskette and tape units, and local twinaxial devices on the system. Local twinaxial devices are directly connected to the twinaxial work station controller. For information about configuring ASCII devices, see the *ASCII Work Station Reference and Example*.

Configuration descriptions are the basic building blocks used to configure a system. These descriptions contain a name that you can use to refer to each device, and then a description of each device for the system:

- For local twinaxial devices, you create descriptions for controllers, printers, and display stations.
- For ASCII devices attached to the ASCII work station controller, you create descriptions for controllers, ASCII printers, ASCII display stations, and personal computers. For more information about creating descriptions for ASCII devices, see the *ASCII Work Station Reference and Example*.

Contact your marketing representative if you need additional information about configuration.

Overview

Two types of configuration descriptions are discussed in this chapter:

- **Controller descriptions** include configuration descriptions for local twinaxial work station controllers and tape controllers that reside in the system unit.

- **Device descriptions** include configuration descriptions for display stations, printers, tape units, and diskette units.

The information in the remainder of this chapter helps you complete the forms needed for configuration planning. The forms help you create the configuration descriptions you need to configure your system. These forms are located in Appendix B, "Forms for Planning," of this manual.

Configuration Definitions

Here are some explanations for the configuration terms used throughout this chapter:

- A local **controller** is the circuitry, hardware, or function that coordinates and controls the operating of one or more input/output devices.
 - Local work station controllers are logic cards that are located in the card enclosure and control all twinaxial work stations.
 - Tape controllers are logic cards that are located in the 3422, 3430 Model A01, 3480, and 3490 Tape Units and control both the Model A01 and Model B01 Tape Units attached to the controllers.
- A local **device** is a display station, printer, tape unit, or diskette unit.

Tape and diskette units are removable media devices and are used for applications such as saving and restoring your system and distributing licensed programs. The 3422, 3430, 3480, and 3490 Tape Units require a tape controller. For the 3422 and 3430 Tape Units, a Model B01 must attach to a Model A01 of the same type so that the tape controller in the Model A01 can control the operation of both the Model A01 and the Model B01. Other types of tape units (for example, the 2440, 6343, 6348, 6366, 6368, and 9347 Tape Units) are connected to the storage device controller.

A local twinaxial display station or printer can only be attached to a local twinaxial work station controller.

Automatic Configuration

Automatic configuration defines the local devices and controllers to the system for you. This means that devices attached to your system are available for use as soon as you power them on. You do not have to manually create configuration descriptions for the devices before you can use them.

Note: ASCII and twinaxial controllers, tape devices, diskette devices, and twinaxial devices can all be automatically configured. ASCII display stations and ASCII printers must be manually configured except for one display station that is designated as a console. For more information about manually configuring ASCII devices, see the *ASCII Work Station Reference and Example*.

Automatic configuration simplifies the configuration process. The names assigned to each device and controller are generated by the system. Automatic configuration uses one of three methods for naming your local controllers and devices. See Table 1-1 for the normal naming convention, the System/36 style naming convention, and the device address naming convention.

Table 1-1. Automatic Configuration Device Names

| Device | Normal Naming | System/36 Style | Device Address |
|--|------------------------|------------------------|------------------------|
| Work station controller | CTL01, CTL02,... | CTL01, CTL02,... | CTL01, CTL02,... |
| Tape controllers (9406 System Unit only) | TAPCTL01, TAPCTL02,... | TAPCTL01, TAPCTL02,... | TAPCTL01, TAPCTL02,... |
| Display stations | DSP01, DSP02, ... | W1, W2, ... | DSP010101... |
| Printers | PRT01, PRT02, ... | P1, P2, ... | PRT010101... |
| Tape units | TAP01, TAP02,... | TC | TAP01, TAP02,... |
| Diskette units | DKT01, DKT02,... | I1 | DKT01, DKT01,... |

If you want to use different names other than those names generated by the system during

automatic configuration, and you want the system to perform your configuration for you, you can use automatic configuration and then use the Rename Object (RNMOBJ) command at a later time to specify the names you want to use. Refer to "Renaming Configuration Descriptions," for additional information about this command.

Automatic configuration is specified at the Set Major Options display after you have performed an initial program load (IPL) of the system. If you use the default value, Yes, on the *Enable automatic configuration* prompt, automatic configuration is done. Refer to Chapter 3, "Using Automatic Configuration" on page 3-1, for more information.

Once you have signed on to your system you can use the Work with Device Descriptions (WRKDEVD) commands to verify the names and locations of your devices. You can then complete your local work station diagrams with the names that are shown.

Local work station controllers, tape unit controllers, tape units, and diskette units can be automatically configured after your initial configuration is completed, but an IPL of the system must occur before the system creates the description for these items.

Automatic configuration also lets you add local twinaxial display stations and printers after your initial configuration is completed, without doing an IPL. When the work station is turned on, the system senses a new device and creates a description for the device and names it with the naming convention being used.

Notes:

1. If you do not use automatic configuration, you cannot take advantage of the automatic addition of a display station, printer, tape unit, diskette unit, or local work station controllers.
2. If you do use automatic configuration, you must choose one of the naming conventions provided by the system and not your own.
3. Automatic configuration can configure all local twinaxial devices if you specify Yes on the *Enable automatic configuration* prompt on the Set Major Options menu. The console is also automatically configured. If you specify No on the *Enable automatic configuration* prompt on

the Set Major Options menu, the console will not be automatically configured.

Naming Controllers and Devices

Do not begin your configuration description names with the letter Q. Names beginning with the letter Q are reserved for use by the system. If you create configuration description names beginning with the letter Q, you may be duplicating names that are already being used. For example, QINCTL is a reserved controller description name for use during OS/400 installation. QINDEV is a reserved device description name that is also used during OS/400 installation.

Names must be no longer than 10 characters. Use an alphabetic character (A through Z, dollar sign \$, pound symbol #, or at symbol @) followed by no more than 9 alphanumeric characters (A through Z, 0 through 9, dollar sign \$, at symbol @, period ., pound symbol #, or underline _).

Lowercase characters (a through z) and many other characters (for example, a plus symbol +, or an asterisk symbol *) can be used for the device name if the characters are enclosed in double quotation marks (" "). Lowercase letters are

allowed only for *NORMAL AS/400 names. The double quotation marks count as characters of the device name. Thus, only 8 additional characters are allowed between the beginning and ending double quotation marks.

Completing the Diagrams for Devices Attached to the Local Twinaxial Work Station Controller

The Local Work Station Diagrams help you understand how the work stations are connected to each other and to the system. Completing this diagram accurately is important because it is used when you set up your work stations and when you define the work stations to the system (configuration time, if you do not use automatic configuration). It will also be used if problem analysis is done for local work station problems. You will need the Local Work Station Diagrams (Forms C1, C2, and C3). These forms are located in Appendix B of this manual. You need one of these diagrams for each port of the twinaxial work station attachments you are using. The following example shows the cable path for the devices connected to a twinaxial work station attachment.

C3 Local Work Station Diagram (IBM Cabling System)

Page Number _____

C2 Local Work Station Diagram (Other)

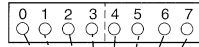
Page Number _____

C1 Local Work Station Diagram (Twinaxial Cabling)

Page Number _____

System _____ Card Address _____
Service for Cabling _____ Work Station Controller Name _____
Telephone Number _____ Location of Twinaxial Work Station Attachment _____

Twinaxial Work Station Attachment Port Numbers



| | |
|---|--|
| Device Name | |
| Device Type, Model | |
| Location | |
| Device Address | |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> | |
| Telephone Number | |

| | |
|---|--|
| Device Name | |
| Device Type, Model | |
| Location | |
| Device Address | |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> | |
| Telephone Number | |

| | |
|---|--|
| Device Name | |
| Device Type, Model | |
| Location | |
| Device Address | |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> | |
| Telephone Number | |

| | |
|---|--|
| Device Name | |
| Device Type, Model | |
| Location | |
| Device Address | |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> | |
| Telephone Number | |

| | |
|---|--|
| Device Name | |
| Device Type, Model | |
| Location | |
| Device Address | |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> | |
| Telephone Number | |

| | |
|---|--|
| Device Name | |
| Device Type, Model | |
| Location | |
| Device Address | |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> | |
| Telephone Number | |

| | |
|---|--|
| Device Name | |
| Device Type, Model | |
| Location | |
| Device Address | |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> | |
| Telephone Number | |

| | |
|---|--|
| Device Name | |
| Device Type, Model | |
| Location | |
| Device Address | |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> | |
| Telephone Number | |

Example

Note: A maximum of 7 work stations can be attached per port on the Twinaxial Work Station Attachment.

Note: You may copy as necessary.

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STEP 1: Read the following information to help you decide which Local Work Station Diagram to copy and use.

- Twinaxial Cabling

Use the Local Work Station Diagram (Twinaxial Cabling), Form C1, if you are using twinaxial cabling. All information for twinaxial cabling should be included with this manual.

- Telephone Twisted-Pair Cabling

Use the Local Work Station Diagram, Form C1, if you have telephone twisted-pair cabling without a terminal multiconnector.

- Telephone Twisted-Pair Cabling with Terminal Multiconnector

Use the Local Work Station Diagram (Other), Form C2, if you are using telephone twisted-pair cabling with a 5299 Model 3 Terminal Multiconnector attached. Record the port number of the multiconnector on the diagram. The *IBM 5299 Terminal Multiconnector Model 3 Planning, Setup, and Maintenance Guide* contains more information.

Note: If you have telephone twisted-pair cabling, you can attach one work station without a terminal multiconnector.

| | |
|--------------------|--------------------------------|
| Description | Multiconnector |
| Device Type, Model | 5299, 3 |
| Location | Accounting |
| | 0 1 2 3 4 5 6 ○ ○ ○ ○ ○ ○ ○ |

| | | |
|----------------------------------|---|---|
| Device Name | PRT01 | |
| Device Type, Model | 4224-1 | |
| Location | Warehouse | |
| Device Address | | |
| Display <input type="checkbox"/> | Printer <input checked="" type="checkbox"/> | 0 |
| Telephone Number | 555-1212 | |

Telephone Twisted-Pair Cabling

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- 5259 Migration Data Link

The 5259 Migration Data Link provides the capability for attaching work stations to two host systems and for transfer of data between these systems. Use the Local Work Station diagram (Other), Form C2, if you are using the 5259 Migration Data Link. The *IBM 5259*

Migration Data Link User's Guide contains more information.

- Link Protocol Converters

Use the Local Work Station Diagram (Other), Form C2, if you are attaching a 5208 or 5209 Link Protocol Converter. Record the port number for the link protocol converter on the diagram as the device address.

The 5208 Link Protocol Converter has an additional port. Only one of the number 6 ports can be used. The *IBM 5208 ASCII-5250 Link Protocol Converter User's Guide* contains more information.

| | |
|--------------------|--------------------------------|
| Description | LPC |
| Device Type, Model | 5208, 1 |
| Location | Accounting |
| | 0 1 2 3 4 5 6 ○ ○ ○ ○ ○ ○ ○ |

| | | |
|----------------------------------|---|---|
| Device Name | PRT02 | |
| Device Type, Model | 4201-2 | |
| Location | Warehouse | |
| Device Address | | |
| Display <input type="checkbox"/> | Printer <input checked="" type="checkbox"/> | 1 |
| Telephone Number | 555-1212 | |

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The 5209 Link Protocol Converter attaches different devices than the 5208 Link Protocol Converter. The *IBM 5209 3270-5250 Link Protocol Converter User's Guide* contains more information.

- ROLMbridge 5250 Link Protocol Converter

Use the Local Work Station Diagram (Other), Form C2, if you are attaching a ROLMbridge 5250 Link Protocol Converter. Record the port number for the link protocol converter on this diagram as the device address. The *CBXII 8000 Installation Manual*, 300413, contains more information.

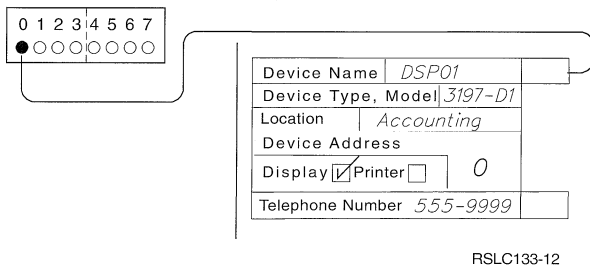
- IBM Cabling System

Use the Local Work Station Diagram (IBM Cabling System), Form C3, if you used the IBM Cabling System. You may need help from an experienced cabling person. The manual, *Using the IBM Cabling System with Communications Products*, provides you with the information about completing this form.

STEP 2: Refer to the appropriate manuals listed in the previous step to understand your attachment and cabling requirements.

STEP 3: On the Local Work Station Diagrams (C1, C2, or C3), fill in the circle representing port 0 of the twinaxial work station attachment.

STEP 4: Draw a line from port 0 of the twinaxial work station attachment to the first work station on the diagram. This is a display station designated as the console on the first twinaxial work station attachment. Otherwise, it can be a display station or printer.



On a 9402 System Unit with the 6143 or 6145 feature (first work station attachment), use the following addresses:

- 0 for the display station attached to the D-shaped connectors on the back of the system unit.
- 1 for the printer attached to the D-shaped connectors on the back of the system unit.

STEP 5: Check the box indicating whether this is a display station or a printer. The plan views you filled out in the *Physical Planning Guide and Reference* should have printer or display station printed on them.

In the following example, you are working with a display station.

| | |
|--|------------|
| Device Name | DSP01 |
| Device Type, Model | 3197-D1 |
| Location | Accounting |
| Device Address | |
| Display <input checked="" type="checkbox"/> Printer <input type="checkbox"/> | 0 |
| Telephone Number | 555-9999 |

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STEP 6: Record the following information about your device.

- Name of the device

Note: If you choose the automatic configuration option, the devices are named for you by the system. Refer to Chapter 3, "Using Automatic Configuration," for information on automatic configuration. For example, if you are using the *NORMAL AS/400 names, your first display station is named DSP01, your next display station is named DSP02, and so on. The system creates the device name for the console display station as DSP01. For automatic configuration of the first printer, use PRT01.

Record the name you would like assigned to this device. Use the rules outlined under "Naming Controllers and Devices" on page 1-3, to assign the name of this device.

- Device type and model number (if it has one)

If this device is a display station, record the display station type and model number; otherwise, go to page 1-8 to record the printer type and model number. The plan views you used for your floor plan have printer or display station printed on them. Refer to the following information to determine the proper display station device type and model number.

Display station type

- Record the device type this display station will be configured as. There are five types of display stations that can be attached and configured on the system: ASCII, twinaxial, twinaxial double-byte character set (DBCS) capable, 3270, and 3270 DBCS capable.

Notes:

1. If you have ASCII display stations connected to the 5208 or ROLMbridge 5250 Link Protocol Converters, use the *5208 ASCII-5250 Link Protocol Converter User's Guide* and the *CBX 8000 Installation Manual* to record the correct device type for these devices.
2. If you have 3270 display stations connected to the 5209 Link Protocol Converter, use the *IBM 5209 3270-5250 Link Protocol Converter User's Guide*.
3. For information about configuring and connecting printers to the 3197 display station, refer to the 3197 display station manuals.

4. If you have display stations connected to the 5259 Migration Data Link, record those device types. If an address is to be used for migration, use a device type of 5292 Model 2

and refer to the *5259 Migration Data Link User's Guide* for more information.

Use the following tables to help you record the correct twinaxial device types.

Table 1-2. Twinaxial Display Stations

| Actual Device Type | Actual Model Number | Configured as Device Type | Configured as Model Number |
|--|--|---------------------------|------------------------------------|
| 3179 | 2 (Color) | 5292 | 1 |
| 3180 | 2 | Same | Same |
| 3196 | A1, A2, B1, B2 | Same | Same |
| 3197 | C1 (Color), C2 (Color), D1, D2, W1, W2 | Same | Same |
| 3197 | D4 | Same | D1 |
| 3476 | EA, EC ¹ , EG ² | Same | Same (Except EG configured as EA.) |
| 3477 | FA, FC, FD, FE, FG, FW | Same | Same |
| 3486 | BA, BG | Same | BA |
| 3487 | HA, HC, HG, HW | Same | Same |
| 3488 with a monochrome monitor | H1 | 3486 | BA |
| 3488 with a monochrome, 132-column monitor | H1 | 3487 | HW |
| 3488 with a color monitor | H1 | 3487 | HC |
| 5251 | 11 | Same | Same |
| 5291 | 1, 2 | Same | Same |
| 5292 | 1 (Color) | Same | Same |
| 5292 | 2 (Graphics) | Same | Same |
| Personal computer or Personal System/2* running 5250 Emulation Program Version 2.10, 2.11, or 2.12 | — ³ | 5291 5292 | 2 2 |
| Personal computer or Personal System/2 running 5250 Emulation Program Version 2.2 | — ³ | 3196 5292 | A2 2 |
| Personal computer or Personal System/2 running PC Support/400 | — ⁴ | 5150 | 1, 2 |
| Personal System/2 running Work Station Emulation Program Version 1 | — ⁵ | 3196 5292 | A2 2 |

1 A 3476 model EC is not an actual 3476 device, it only emulates one. The 3476 model EC is a 6143 or 6145 work station adapter card that emulates either a 3476 model EA or EC.

2 EG is configured as EA.

3 Refer to the *IBM Enhanced 5250 Emulation Program, G570-2221*, for the complete list of actual model numbers.

4 Refer to one of the PC Support/400 installation and administration guides that are listed in the Bibliography for the complete list of actual model numbers.

5 Refer to the *IBM System 36/38 Work Station Emulation Program Version 1.0 User's Guide, SC21-9680*, for the complete list of actual model numbers.

Table 1-3. Twinaxial Double-Byte Character Set (DBCS) Capable Display Stations

| Actual Device Type | Actual Model Number | Configured as Device Type | Configured as Model Number |
|--|---------------------|---------------------------|----------------------------|
| Personal System/55 running 5250 PC program, or 5250 work station program | All models | 5555 | B01, C01, G01, G02 |
| Personal System/55 running 5250 PC/2 AD 7561 | All models J61 | 5555 | E01, F01 B01, C01 |
| 5295 | All models | 5555 | B01, C01 |
| InfoWindow* 3477 | J, K, S, T | 5555 | B01, C01 |

Note: Models B01 and E01 are used for monochrome displays. Models C01 and F01 are used for color displays. Models G01 and G02 are used for graphics displays. Model G01 supports monochrome text; Model G02 supports color text.

Each display station must be configured as a twinaxial device and you need to specify the twinaxial device type for configuration. Record the configured-as device type beside what is already written down.

Display station model number

- Record the model number of this display station. The preceding chart contains the model number of the display station and also the configured-as model number. Use the preceding charts to help you record the configured-as model number.

This model number could be different from the one recorded on the local work station diagrams. The system needs the model number for the twinaxial device that the display station is configured as. Record the configured-as model number next to the configured-as device type.

Proceed to step 7 on page 1-10 to continue filling out your C form.

Printer type

- Record the device type that this printer will be configured as. Each printer must be configured on the system as a twinaxial printer. These are the types of printers:

ASCII, twinaxial, twinaxial double-byte character set (DBCS) capable, DBCS display station attached, and 3270.

Notes:

1. If you have ASCII printers attached to the 5208 or the ROLMbridge 5250 Link Protocol Converter, use the *5208 ASCII-5250 Link Protocol Converter User's Guide* or the *CBX 8000 Installation Manual* to record the correct device type.
2. If you have 3270 printers attached to the 5209 Link Protocol Converter, use the *IBM 5209 3270-5250 Link Protocol Converter User's Guide* to record the correct device type. For information about configuring and attaching printers to the 3197 display station, refer to the 3197 display station manuals.
3. If you have printers attached to the 5259 Migration Data Link, record those device types and refer to the *5259 Migration Data Link User's Guide* for more information.

Use the following tables to help you record the correct twinaxial device types.

Table 1-4 (Page 1 of 2). Twinaxial Printers

| Actual Device Type | Actual Model Number | Configured as Device Type | Configured as Model Number |
|--------------------|---------------------|---------------------------|----------------------------|
| 3812 (non-IPDS) | 1, 2 | Same | 1 |
| 3812 (IPDS*) | 2 | *IPDS | 0 |

Table 1-4 (Page 2 of 2). Twinaxial Printers

| Actual Device Type | Actual Model Number | Configured as Device Type | Configured as Model Number |
|--------------------|----------------------------|---------------------------|----------------------------|
| 3816 (non-IPDS) | 1D, 1S | 3812 | 1 |
| 3816 (IPDS) | 1D, 1S | *IPDS | 0 |
| 4028 | AS1 | *IPDS | 0 |
| 4210 | 1 | 4214 | 2 |
| 4214 | 2 | Same | Same |
| 4224 | 101, 102, 1E2, 1E3, 1C2 | *IPDS | 0 |
| 4230 | 102, 111 | *IPDS | 0 |
| 4230 | 101, 152 | 4214 | 2 |
| 4234 | 2 | Same | Same |
| 4234 | 8, 12 | *IPDS | 0 |
| 4245 | T12, T20 | Same | Same |
| 5219 | D01, D02 | Same | D1, D2 |
| 5224 | 1, 2 | Same | Same |
| 5225 | 1, 2, 3, 4 | Same | Same |
| 5256 | 1, 2, 3 | Same | Same |
| 5262 | 1 | 5256 | 1 |
| 6252 | T08, T12 | 6252, 4245 | T08, T12 |
| 6262 | T12, T14, T22 | 4245 | T12 |

Table 1-5. Twinaxial Double-Byte Character Set (DBCS) Capable Printers

| Actual Device Type | Actual Model Number | Configured as Device Type | Configured as Model Number |
|--------------------|--------------------------|---------------------------|----------------------------|
| 5227 | 001, 002, 003, or 005 | 5553 | B01 |
| 5317 | 001 | 5553 | B01 |
| 5327 | 001, 002, 003 | 5553 | B01 |
| 5337 | 001 | 5553 | B01 |
| 5427 | 001, 002, 003, 005 | 5553 | B01 |
| 5583 | 200 | Same | Same |

Table 1-6 (Page 1 of 2). Personal System/55, 5295 and 3477 Attached Printers

| Actual Device Type | Actual Model Number | Configured as Device Type | Configured as Model Number |
|--------------------|---------------------|---------------------------|----------------------------|
| 4208 | 502, 5C2, 5K2 | 5553 | B01 |
| 4216 | 501 | 5553 | B01 |
| 5553 | B01, B02 | Same | B01 |

Table 1-6 (Page 2 of 2). Personal System/55, 5295 and 3477 Attached Printers

| Actual Device Type | Actual Model Number | Configured as Device Type | Configured as Model Number |
|--------------------|------------------------------|---------------------------|----------------------------|
| 5557 | B01 | 5553 | B01 |
| 5563 | B02, H02 | 5553 | B01 |
| 5572 | B01 | 5553 | B01 |
| 5575 | B01, B02, F01, F02 | 5553 | B01 |
| 5577 | B01, F01, F02, G01, HC2, FU2 | 5553 | B01 |
| 5579 | H02 | 5553 | B01 |
| 5582 | P01 | 5553 | B01 |
| 5585 | H01 | 5553 | B01 |
| 5587 | G01, H01 | 5553 | B01 |

This device type could be different from the one recorded on the local work station diagrams. Record the device type that the printer is configured as.

Printer model number

- Record the model number of this printer. Use the preceding charts to help you record the configured-as model number.

This model number could be different than the one recorded on the local work station diagrams. Record the model number that the printer is configured as next to the device type that the device is configured as.

STEP 7: Record the following information about your device.

- Where the device is located

From your floor plan, record where this device is located in your business. For example, record the office located in accounting.

- Address of the device

Record the address number of the device you have already placed on the floor plan. Any number 0 through 6 is valid. Each device must have a different address on the same port. You set the address on the device to this address when it is installed.

Note: On a 9402 System Unit with a 6143 or 6145 feature (first work station attachment), use the following addresses:

- 0 and 1 on port 0 are used for the display station and printer attached to the D-shaped connectors on the back of the system unit.

- 2 through 6 can be used by work stations attached to port 0 of the round barrel connector on the back of the system unit.

- Telephone number nearest to the device

Record the telephone number of the person who is to use this device.

STEP 8: Look at the floor plan and find the next work station that attaches to port 0 on the twinaxial work station attachment.

STEP 9: Transfer the information from the floor plan to the Local Work Station Diagram, as you did before. (Refer to steps 5, 6, and 7.)

STEP 10: Draw the line (cable) that leads from the first display station to the next display station or printer on the same port. The dashed lines on the C1 and C2 diagrams show the possible cabling paths.

Note: If you are using Form C2 and are planning for a 5299 Model 3 Terminal Multiconnector, 5208, 5209, or a 5250 ROLMbridge Link Protocol Converter, you must draw the line (cable) from the next port on the 5299 Model 3, 5208, 5209, or 5250 ROLMbridge Link Protocol Converter to the next display station or printer.

STEP 11: Repeat steps 8 through 10 for all the devices that attach to this port.

STEP 12: Use a *pencil* to cross off any unused devices on the diagrams; you might want to add display stations or printers in the future.

STEP 13: Continue recording the information on the Local Work Station Diagrams until all the information for the devices on all ports (depending on the number of ports you are using) has been recorded.

STEP 14: Record the location of the twinaxial work station attachment on the top of the form. If you are going to use a stand to hold the twinaxial work station attachment, record the word *stand* here.

STEP 15: Record the work station controller name. Use the rules under “Naming Controllers and Devices” on page 1-3 to determine the name of the controller.

Note: If you choose the automatic configuration option, the controller is named for you by the system. Refer to Chapter 3, “Using Automatic Configuration,” for information on automatic configuration. For example, if you are using the *NORMAL AS/400 names, your work station controller is named CTL01. The system creates the name of the first controller as CTL01.

STEP 16: Record the system name. Your system is the AS/400* system.

STEP 17: Record the name and telephone number of the company or person who does the cabling for you.

You can get these telephone numbers from your service representative.

STEP 18: Leave the card address blank for now. You will use the *System Configuration List* after your system arrives, to find the card address for the work station controller.

STEP 19: Begin numbering your pages with 1 and record the number on the form as the page number in the top right corner.

Notes:

1. Increase the page number with each new work station controller.
2. You need one of these diagrams for each port of the twinaxial work station attachment you are using.

STEP 20: Repeat these steps to complete work station diagrams for all the local work station controllers you have.

Completing the Local Twinaxial Work Station Controller Index

To summarize the types of cabling and attachments you have chosen for your system, the Local Twinaxial Work Station Controller Index form is provided. Use Form D1 for 9402, 9404, and 9406 System Units. You should complete this form for each local work station controller you have ordered. This form is found in Appendix B of this manual. Use the following example to help you complete your Local Twinaxial Work Station Controller Index.

STEP 1: Make a copy of the D1 form for each twinaxial work station controller you ordered.

STEP 2: Copy the system name, the name and telephone number of the company or person who does the cabling for you, the location of the twinaxial work station attachment, and the work station controller name from your C forms for each twinaxial work station controller.

STEP 3: The possible choices of cabling and attaching your work stations to your system are listed on your form. Record the cabling method you are using under the *Type of Cabling/Attachment* column.

STEP 4: Record the page number of your C forms under *Your Form C Page Number* column.

STEP 5: Leave the card address blank for now. You will use the *System Configuration List*, after your system arrives, to find the card address for the work station controller.

STEP 6: Record the controller type. For the 9406 System Unit, the controller type is 6040, 6050, or 6140. For the 9404 System Unit, the

D1

Local Twinaxial Work Station Controller Index

| | | |
|---------------------------|---|------------------------------------|
| System _____ | Card Address _____ | Work Station Controller Name _____ |
| Service for Cabling _____ | Location of Twinaxial Work Station Attachment _____ | Controller Type <u>6040</u> |
| Telephone Number _____ | | Controller Model <u>1</u> |

Example

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controller type is 6140 or 6050. For the 9402 System Unit, the controller type is 6050, 6140, 2638, or 2661.

Note: For the 9402 System Unit, the first twinaxial work station controller you have will be a 2638 or a 2661. If you have an additional twinaxial work station controller, it will be 6050 or 6140.

STEP 7: Record the controller model. The controller model is 1.

STEP 8: Complete one form for each twinaxial work station controller that you have. Keep these forms with all of the other planning forms. They will be used later for setting up the work stations or performing device configuration.

Completing the 9402 Tape Unit and Diskette Unit Diagram

If you have a 9402 System Unit, you should complete the 9402 Tape Unit and Diskette Unit Diagram (Form E3). There are enough spaces on this form for two tape units and two diskette units. You can connect the second tape unit and the second diskette unit only if you have an expansion unit. The information recorded on Form E3 is needed for creating the configuration descriptions on the system. If you have the 9404 or 9406 System Unit, then go to "Completing the 9404 and 9406 Tape Controller and Tape Unit Diagram" on page 1-13.

E3

9402 Tape Unit and Diskette Unit Diagram

System AS/400 System
 Service Contact _____
 Telephone Number _____

Tape Unit

| | |
|--------------------|------------------|
| Device Name | <u>TAPE01</u> |
| Device Type, Model | <u>6346,0001</u> |

Diskette Unit

| | |
|--------------------|-------------------|
| Device Name | <u>DISKETTE01</u> |
| Device Type, Model | <u>6132,0</u> |

Example

Tape Unit

| | |
|--------------------|------------------|
| Device Name | <u>TAPE02</u> |
| Device Type, Model | <u>6346,0001</u> |

Diskette Unit

| | |
|--------------------|-------------------|
| Device Name | <u>DISKETTE02</u> |
| Device Type, Model | <u>6132,0</u> |

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Tape Units

Follow these steps to complete Form E3 for a tape unit.

STEP 1: Record the device name you would like assigned to this tape unit. Use the rules outlined under "Naming Controllers and Devices" on page 1-3 to assign the name of the tape unit.

Note: If you choose the automatic configuration option, the tape controller is named for you by the system. For example, if you are using the *NORMAL AS/400 names, the system names the first tape unit TAP01. Refer to Chapter 3, "Using Automatic Configuration," for information on automatic configuration.

STEP 2: Record the tape unit type. For the 9402 System Unit, the tape unit types are 6341, 6342, 6343, 7208, or 9348. Check the System Information Form (Form A1, Part 1) for the proper type.

STEP 3: Record the tape unit model. For each tape unit except the 9348, the model number is 1. For the 9348, the model number is 2.

Diskette Units

Follow these steps to complete Form E3 for a diskette unit.

STEP 1: Record the device name you would like assigned to this diskette unit. Use the rules outlined under “Naming Controllers and Devices” on page 1-3 to assign the diskette name.

Note: If you choose the automatic configuration option, the tape controller is named for you by the system. For example, if you are using the *NORMAL AS/400 names, the system names the first diskette unit DKT01. Refer to Chapter 3, “Using Automatic Configuration,” for information on automatic configuration.

STEP 2: Record the device type of the diskette unit. The diskette unit type and model number can be found on the System Information Form (Form A1, Part 1).

STEP 3: Record the diskette unit model. For the 9402 System Unit, the diskette unit model number is 1.

Go to “Where to Go after This Chapter” on page 1-16 to complete planning for your configuration.

Completing the 9404 and 9406 Tape Controller and Tape Unit Diagram

If you have more than one tape unit, you should complete the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1). Form E1 is located in Appendix B of this manual. There are enough spaces on this form for four tape units with controllers and four tape units without controllers. This information is needed for creating the configuration descriptions on the system.

E1

9404 and 9406 Tape Controller and Tape Unit Diagram

System AS/400 System
 Service Contact _____
 Telephone Number _____

Example

Tape Controller

| | |
|------------------------|----------|
| Controller Name | TAPCTL01 |
| Controller Type, Model | 3422,A01 |

Tape Unit with Tape Controller

| | |
|--------------------|----------|
| Controller Name | TAPCTL01 |
| Device Name | TAPE01 |
| Device Type, Model | 3422,A01 |
| Switch Setting | 1 |

Tape Unit without Tape Controller

| | |
|--------------------|-----------|
| Device Name | TAPE03 |
| Device Type, Model | 9347,0001 |

| | |
|------------------------|--|
| Controller Name | |
| Controller Type, Model | |

| | |
|--------------------|----------|
| Controller Name | TAPCTL01 |
| Device Name | TAP02 |
| Device Type, Model | 3422,B01 |
| Switch Setting | 2 |

| | |
|--------------------|-----------|
| Device Name | TAP04 |
| Device Type, Model | 2346,0001 |

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Tape Unit with a Tape Controller

3490

*ANY

Tape Controller: Follow these steps to complete Form E1 for a tape controller.

STEP 1: Record the controller name you would like assigned to this tape controller. Use the rules outlined in "Naming Controllers and Devices" on page 1-3 to determine the name of the tape controller.

Note: If you choose the automatic configuration option, the tape controller is named for you by the system. For example, if you are using the *NORMAL AS/400 names, the system names the first tape controller TAPCTL01. Refer to Chapter 3, "Using Automatic Configuration," for information on automatic configuration.

STEP 2: Record the type of tape controller from the following list:

| | |
|------|------|
| 3422 | 3480 |
| 3430 | 3490 |

The tape controller type and model number can be found on the System Information Form (Form A1, Part 1).

STEP 3: Record the model number of this tape controller from the following list:

| Type | Model |
|------|----------|
| 3422 | A01 |
| 3430 | A01 |
| 3480 | A11, A22 |

Tape Unit: Follow these steps to complete Form E1 for a tape unit.

STEP 1: Record the name of the controller this tape unit will attach to. Use the same name you just recorded for the tape controller.

STEP 2: Record the device name you would like assigned to this tape unit. Use the rules outlined under "Naming Controllers and Devices" on page 1-3 to assign the tape name.

Note: If you choose the automatic configuration option, the tape unit is named for you by the system. For example, if you are using the *NORMAL AS/400 names, the system names the first tape unit TAP01. Refer to Chapter 3, "Using Automatic Configuration," for information on automatic configuration.

See the example above.

STEP 3: Record the device type of the tape unit from the following list:

| | |
|------|------|
| 3422 | 3480 |
| 3430 | 3490 |

The tape unit device type and model number can be found on the System Information Form (Form A1, Part 1).

STEP 4: Record the model number of this tape unit from the following list:

| Type | Model |
|------|----------|
| 3422 | A01, B01 |
| 3430 | A01, B01 |
| 3480 | B11, B22 |
| 3490 | *ANY |

STEP 5: Record the switch setting of the tape unit. The following settings are allowed:

| Type | Switch Setting |
|------|----------------|
| 3422 | 0-9, A-F |
| 3430 | 0 through 3 |
| 3480 | 0-9, A-F |
| 3490 | 0-9, A-F |

Tape Unit without a Tape Controller

Follow these steps to complete Form E1 for a tape unit without a tape controller.

STEP 1: Record the device name you would like assigned to this tape unit. Use the rules outlined under "Naming Controllers and Devices" on page 1-3 to assign the tape name.

Note: If you choose the automatic configuration option, the tape unit is named for you by the system. For example, if you are using the *NORMAL AS/400 names, the system names the first tape unit TAP01. Refer to Chapter 3, "Using Automatic Configuration," for information on automatic configuration.

See the example on page 1-14.

STEP 2: Record the device type of the tape unit from the following list:

| | |
|------|------|
| 2440 | 6341 |
| 6342 | 6343 |
| 6346 | 6347 |

| | |
|------|------|
| 6348 | 6366 |
| 6368 | 7208 |
| 9346 | 9347 |
| 9348 | |

For the 9404 System Unit, the tape unit types without a controller are 6346, 6347, 6348, 7208, and 9348.

The tape unit type and model number can be found on the System Information Form (Form A1, Part 1).

STEP 3: Record the model number of this tape unit from the following list:

| Type | Model |
|------|------------|
| 2440 | A12 |
| 6341 | 0001 |
| 6342 | 0001 |
| 6343 | 0001 |
| 6346 | 0001 |
| 6347 | 0001 |
| 6348 | 0001 |
| 6366 | 0001 |
| 6368 | 0001 |
| 7208 | 0002, 0012 |
| 9346 | 0001, 0002 |
| 9347 | 0001 |
| 9348 | 0001, 0002 |

Completing the 9404 and 9406 Diskette Unit Diagram

If you have more than one diskette unit, you should complete the 9404 and 9406 Diskette Unit Diagram (Form E2). Form E2 is located in Appendix B of this manual. There are enough spaces on this form for eight diskette units. This information is needed for creating the configuration descriptions on the system.

E2

9404 and 9406 Diskette Unit Diagram

System AS/400 System
Service Contact _____
Telephone Number _____

Example

| | |
|--------------------|-----------|
| Device Name | DSKT01 |
| Device Type, Model | 9331,0001 |

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

| | |
|--------------------|-----------|
| Device Name | DSKT02 |
| Device Type, Model | 9331,0002 |

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

RV2H409-1

Follow these steps to help you complete Form E2 for a diskette unit.

STEP 1: Record the device name you would like assigned to this diskette unit. Use the rules outlined under “Naming Controllers and Devices” on page 1-3 to assign the diskette name.

Note: If you choose the automatic configuration option, the diskette unit is named for you by the system. For example, if you are using the *NORMAL AS/400 names, the system names the first diskette unit DKT01. Refer to Chapter 3, “Using Automatic Configuration,” for information on automatic configuration.

See the example above.

STEP 2: Record the device type (9331) of the diskette unit. The diskette unit type and model number can be found on the System Information Form (Form A1, Part 1).

STEP 3: Record the model number of your 9331 Diskette Unit. Use either a 0001, for the 8-inch drive, or a 0002, for the 5-1/4 inch drive.

Where to Go after This Chapter

You have now completed planning for your configuration. When your system arrives, go to Chapter 2, “Learning about Configuration,” to begin the process of configuring your system.

If you are using double-byte character set (DBCS) support on your system (for Chinese, Japanese, or Korean languages), see Appendix A, “Configuration of Double-Byte Character Set Devices” to learn about the unique configuration aspects that apply only to DBCS devices. Then go to Chapter 2, “Learning about Configuration,” to learn about the configuration tasks.

Part 2. Configuring Your System

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Chapter 2. Learning about Configuration

What Is Configuration

Configuration is the arrangement and description of the hardware and communications support that make up a computer system.

On the AS/400 system, hardware consists of:

- Controllers, display stations, and printers that are attached locally to your system
- Controllers, display stations, and printers that are attached remotely to your system
- Diskette units, tape controllers, and tape units
- Other physical objects attached to your system

Communications support consists of:

- Communications lines
- Communications controllers
- Communications devices

Communications support allows remote sites to communicate with the system.

This guide contains information about configuring:

- Local work station controllers (such as the 6040, 6050, 6140, 2638, and 2661 Twinaxial Controllers)
- Tape controllers (such as the 3422 and 3430 Tape Controllers)
- Devices (display stations, printers, tape units, and diskette units) that attach to the controllers.

In this guide, local twinaxial devices and work station controllers are called local devices and local controllers.

For information on configuring the following Operating System/400* (OS/400*) communications support, see the *OS/400* Communications Configuration Reference*:

- Synchronous data link control (SDLC), ISDN data link control (IDLC), asynchronous communications, and binary synchronous communications (BSC)
- X.25 networks
- Token-ring networks
- Ethernet local area networks

- ISDN networks
- Frame relay networks
- Distributed data interface (DDI) networks
- Communications controllers
- Communications devices

Configuration Descriptions

Through configuration, you tell the system what machines and devices are attached to it so that the system can interact with them. You also use configuration to specify the characteristics for the machines and devices so that they can perform the way you would like them to. In other words, you use configuration to describe each machine or device that is attached to the system. You do this by creating **configuration descriptions**.

For each piece of hardware and each piece of communications support, you must create a configuration description. Each description specifies characteristics, or attributes, of the item it is describing so that the system knows how to interact with that piece.

For example, for each display station you want to attach to your system, you must create a description that tells the system where the display station is located, the style of keyboard on the display station, and so on.

Types of Communications Configuration Descriptions:

For configuration descriptions that relate to communications, see the *OS/400* Communications Configuration Reference*.

System Resource Names

System resource names are assigned *by the system* to physical hardware attached to the system. These names are automatically assigned and are used by the system to refer to information stored in the system about the physical hardware.

Note: System resource names are not the same as the device description names you chose for your devices in Chapter 1. The system resource names are assigned and used *by the system* to refer to devices. The device description names

are assigned (unless you use automatic configuration) and used *by you* to refer to devices.

Hardware that attaches to the system is given a resource name, including local work station controllers, tape controllers, diskette units, tape units, communications lines, and network interfaces. When you are configuring these items on your system, you need to know what resource name the system has assigned to each object. Information on how to display the system resource name assigned to each object on your system is in Chapter 4, "Preparing for Configuration."

Options for Performing Configuration

You can choose one of two methods for performing your configuration: automatic configuration, or manual configuration using the configuration menus and commands.

Automatic Configuration

Automatic configuration allows you to have your local twinaxial and ASCII work station controllers, tape controllers, and local devices automatically configured. Local devices include the following:

- Tape units
- Diskette units
- Local twinaxial printers
- Local twinaxial display stations
- Other devices emulating 5250 devices

If, when your system is initially set up or when you perform an initial program load (IPL), you do not change the system value for automatic configuration through the IPL options (automatic configuration is on), the system performs all of your local configuration for you. The actual configuration takes place when you perform an IPL and the system and the devices are plugged in and powered on. This makes the local controllers and devices available for use immediately.

If automatic configuration is off, you must create device descriptions for local controllers and devices, including the descriptions for the console controller and display station. During an attended IPL (an IPL with the key in the MANUAL position) the system uses the system-supplied controller and device descriptions. The system uses QCTL

for the controller description and QCONSOLE for the device description until you create configuration descriptions for the console and its controller.

Notes:

1. ASCII *controllers* can be *automatically* configured. However, *devices attached to an ASCII work station controller* must be *manually* configured, except for the console display station. If automatic configuration is on, the console display station is automatically configured, whether it is a twinaxial or an ASCII console display station.
2. If the console display station is an ASCII display station, it must be an IBM ASCII display station. For more information about using an ASCII display station as a console, see the *ASCII Work Station Reference and Example*.

For more information on automatic configuration, see Chapter 3, "Using Automatic Configuration."

Manual Configuration

Configuration menus are designed to lead you step by step through the manual configuration process for the type of configuration you are performing.

Based on the options you select, you are shown a "Work with..." configuration display. One "Work with..." configuration display exists for each type of configuration description. For example, for controller descriptions, use the Work with Controller Descriptions display; for device descriptions, use the Work with Device Descriptions display, and so on.

The "Work with..." configuration displays show a list of the existing configuration descriptions to which you have operational authority. For example, the Work with Controller Descriptions display lists all the controller descriptions that have already been created on your system, including descriptions for all local work station controllers, tape unit controllers, remote work station controllers, and communications controllers. Depending on the menu options you select, the list of controllers on the Work with Controller Descriptions display may only be part of the list, showing the descriptions for a particular type of controller. For example, if you get to the Work

with Controller Descriptions display using the menu option for local work station controllers, only the existing local work station controller descriptions to which you have operational authority are listed on the display. From the “Work with...” configuration displays, you can work with (create, change, copy, delete, display, print) configuration descriptions that already exist on the system. These tasks are discussed in “Configuration Tasks You Can Perform” on page 2-3.

Configuration Tasks You Can Perform

Once you have created an initial configuration for your system, other configuration tasks can be performed at any time. These configuration tasks allow you to continually assess your existing configuration and adapt it for a changing system. Becoming familiar with these tasks allows you to make better decisions about which configuration is best for your system.

The configuration tasks include:

- Creating configuration descriptions
- Changing configuration descriptions
- Copying configuration descriptions
- Deleting configuration descriptions
- Displaying configuration descriptions
- Printing configuration descriptions
- Renaming configuration descriptions
- Working with configuration status
- Retrieving CL source for configuration descriptions
- Printing device addresses

You can perform any of these configuration tasks using the configuration menus and “Work with...” configuration displays.

“Work with...” Configuration Displays

Each of the configuration menus lead to a “Work with...” configuration display. From the “Work with...” configuration displays, you can perform any of the configuration tasks listed above. This is the most convenient method of performing configuration tasks.

Each “Work with...” configuration display contains a list of all the configuration descriptions of a par-

ticular type to which you have operational authority. You can use the list to choose the description with which you would like to work. For example, if you want to change a device description for a local display station, you would go through the configuration menus selecting the options for local display stations. You are shown the Work with Device Descriptions display that contains a list of all the local display stations configured on your system to which you are authorized. The Work with Device Descriptions display might look like this:

```

Work with Device Descriptions                               System: S0000000
Position to . . . . . Starting characters
Type options, press Enter.
 2=Change  3=Copy  4=Delete  5=Display  6=Print  7=Rename
 8=Work with status  9=Retrieve source

Opt Device   Type   Text
- DSP01     3196   Console (system operator office)
- DSP02     3197   Advertising office 2-4325
- DSP03     3180   Secretaries office 2-8745
- DSP04     3196   Accounting office (Peter) 2-8801
- DSP05     3180   Accounting office (Jackie) 2-4596
- DSP06     3180   Jan Jones office 2-5629
- DSP07     5251   Storage room 2-6372
- DSP08     5292   Vice President office 2-0906

Parameters or command                                     More...
***>
F3=Exit  F4=Prompt  F5=Refresh  F6=Create  F9=Retrieve  F12=Cancel
F14=Work with status

```

From this display, you have the option to change, copy, delete, display, rename, or print any of the configuration descriptions listed. Using F6 on this display allows you to create new local display station descriptions.

Hardware Resources

An alternative method of accessing “Work with...” configuration displays is through the use of the Work with Hardware Resources (WRKHDWRSC) command. All locally attached hardware can be displayed, along with the operational status (power on, power off, or detected by the system during the latest IPL), location, resource name, and configuration status. By using this command, and specifying the configuration type, you may create, update, change the status, delete, and display any local configuration object.

For example, if you want to change the configuration description for a work station controller, type:

WRKHDWRSC

and press F4 (Prompt). By entering *LWS for the type, you will be shown a display listing all of the

local work station resources. By selecting option 5 (Work with controller description) next to the controller you wish to work with, the Work with Controller Descriptions display is shown.

```

Work with Controller Descriptions      System: S00000
Position to . . . . . Starting characters
Type options, press Enter.
 2=Change  3=Copy  4=Delete  5=Display  6=Print  7=Rename
 8=Work with status  9=Retrieve source 12=Print device addresses

Opt  Controller  Type  Text
-   QCTL        6040  Controller description created during IPL.

Parameters or command
===>
F3=Exit  F4=Prompt  F5=Refresh  F6=Create  F9=Retrieve  F12=Cancel
F14=Work with status

```

From this display, you may change, copy, delete, display, print, work with status, retrieve source, and print device addresses with the controller you have chosen.

Using Keyboard and Display Station Functions

The following is a list of things you need to know when creating configuration descriptions. For more information on keyboard and display station functions, see the *New User's Guide*.

- Use the Enter key and the Roll keys to create configuration descriptions. Press the Enter key when the word **Bottom** is visible at the lower-right corner of the display; press the Roll key when the word **More...** is visible.
- A bold caret symbol is placed to the left of a field after you press the Enter key or the Roll key to indicate that you have entered or changed a value in this field.
- Three types of fields are used with the prompts when entering configuration information:
 - Blank fields that have a bold underline are fields that must be assigned a value.
 - Blank fields that do not have a bold underline are optional.
 - Fields that are already filled have default values that you may change.
- Online help information is available for the command keys shown at the bottom of all displays by pressing the Help key or F1.
- If you make a mistake while typing information to create a description, you can change it

before you exit that display, in most cases. In some cases, to change a field requires that you delete the description and create a new one. (You may want to print the description before deleting it, or use the Retrieve source option to keep a copy of the CL source for the description.)

Varying Objects On and Off

Varying off an object makes it unavailable for use. For example, if you vary off a particular display station, you cannot use that display station again until it is varied on at the system. Varying on an object establishes the logical link between the system and the object so that the object is available to the system for normal use.

Before you can perform some of the configuration tasks on certain objects, you may have to vary off the object. Then, once an object is varied off, you must vary on the object to make it usable again.

The Work with Configuration Status (WRKCFGSTS) display has options for varying on and varying off the network interfaces, lines, controllers, and devices attached to your system.

For more information on how to vary on and vary off objects on your system, see the *Operator's Guide*.

Creating Configuration Descriptions

You can create new configuration descriptions from the "Work with..." configuration displays. When you use the function key to create, you are asked for the specific information, or attributes, of the item for which you are creating a description. For example, when creating a new local work station controller description, you are asked for the name of the local controller, the local controller type and model, the resource name assigned to the local controller, and so on. Once you fill in the information and press the Enter key, your description is created.

Note: If you use option 7 (Add configuration description) from a "Work with..." configuration display that was accessed by the Work with Hardware Resources (WRKHWRSRSC) command, the Create Device Description display is shown with most of the required information already present.

This is a simple way to create configuration descriptions.

Changing Configuration Descriptions

Once you have created a configuration description, it remains on the system as you created it until you choose to change it. You may want to do this later as your system needs change, as your system grows, or as your use for a particular item changes. For example, as you add more devices, you may decide to change your addressing scheme for your devices.

The easiest way to change configuration descriptions is to use option 2 (Change) on the “Work with...” configuration display. When you type 2 next to an entry on the “Work with...” configuration display and press the Enter key, the existing values for the description are shown. You can then change the values you intended to change. The changed description takes effect as soon as you complete entering the information and press the Enter key.

However, some information in a configuration description cannot be changed once the original description is created. For example, you cannot change the type and model number listed for a device. The type and model number you assign initially in the configuration description remains in effect until you delete the entire description. If you decide to change the type and model number listed in a configuration description, you must delete the configuration description, and create it again specifying the new values.

Note: If you have specified port sharing, you may not change certain fields in the port device description. Those fields are the line speed, parity, and word length (if you indicated port sharing was to automatically detect the line speed, parity, and word length).

Also, when you change a configuration description using option 2 (Change) on the “Work with...” configuration display, any prompts shown with the value *SAME are prompts that do not apply to the

object the description is for and cannot be changed.

In addition, some objects must be varied off before changes to the configuration descriptions for those objects can be made.

Also, other values cannot be changed after the original description has been created. These values are not shown with the existing values when you select the change option on the “Work with...” configuration display. To change these values, you must delete the original description, and create a new one. (You may want to print the description before deleting it, or use the Retrieve source option to keep a copy of the CL source for the description.)

Copying Configuration Descriptions

An option on the “Work with...” configuration display allows you to copy a particular configuration description and use it as a base for another similar description.

Copying configuration descriptions is very similar to creating new configuration descriptions. Both result in the creation of a new description. When you type option 3 (Copy) next to an entry on the “Work with...” configuration display and press the Enter key, you see the first prompt display for the appropriate Create command. However, instead of defaults being shown, the values are filled in with the actual values from the description being copied.

For example, if you add a new display station to your system and you want it configured like another one that already exists on your system, you could copy the existing one to create the new one.

For each type of configuration description, however, some information must be unique. When you choose the copy option on the “Work with...” configuration displays, you can change the information that must be unique for the item you are creating.

Deleting a Configuration Description

Another option on the “Work with...” configuration displays allows you to delete configuration descriptions. If a description for a physical attachment that no longer exists on your system is shown, you should delete the description. Or, if you want to create a new description for an existing physical attachment, you should delete the old configuration description first.

A configuration description cannot be deleted unless the object in the description is varied off. Also, all other objects attached to the object in the description being deleted must be varied off. For example, if you want to delete a line description, the line itself must be varied off, and all the controllers and devices attached to that line must be varied off.

Note: You may wish to print a copy of a configuration description before deleting it, or use the Retrieve source option to keep a copy of the CL source for the description. See “Printing Configuration Descriptions” and “Retrieving Configuration Source” for more information on printing descriptions and retrieving copies of CL source.

You can delete a configuration description using option 4 (Delete) on the “Work with...” configuration display. When you type a 4 next to an entry on the display and press the Enter key, the Confirm Delete display is shown. If you press the Enter key again, the description is deleted.

Displaying Your Configuration

Another configuration task is displaying your configuration descriptions. You may want to view them to make sure they were correctly created or to see what the current values are.

You can display a configuration description using option 5 (Display) on the “Work with...” configuration display. When you type a 5 next to an entry on the display and press the Enter key, the description is shown with its current values.

Printing Configuration Descriptions

An option on the “Work with...” configuration displays allows you to print a particular configuration description. This enables you to keep a printed copy of any or all of the configuration descriptions on your system.

You can print a configuration description using option 6 (Print) on the “Work with...” configuration display. When you type a 6 next to an entry on the display and press the Enter key, the description is sent to an output queue so that it can be printed.

Renaming Configuration Descriptions

An option on the “Work with...” configuration displays allows you to change the name of a configuration description without deleting the description and manually creating a new one.

You can rename a configuration description using option 7 (Rename) on the Work with Objects display. When you type a 7 next to an entry on the display and press the Enter key, the Rename Object (RNMOBJ) display is shown. You can then change the name of your configuration description.

Notes:

1. You can also change the name of a configuration description by using the Rename Object (RNMOBJ) command.
2. The new name specified for the configuration description must be unique, and the configuration object must be varied off before you begin.
3. If you are using automatic configuration and decide to change the naming convention for your local configuration, you must change the QDEVNAMING system value. Use the Change System Values (CHGSYSVAL) command) and delete the old configuration descriptions. Then, automatic configuration creates new descriptions using the new naming convention. The new descriptions take effect the next time you perform an IPL or the next time the devices are powered on.

Working with Configuration Status

After you have completed your initial configuration and are using your system, you can use the Work with Configuration Status display to do various tasks related to your configuration. To show the Work with Configuration Status display, select option 4 (Work with configuration status) on the Configure Devices and Communications menu.

Following is an example of the Work with Configuration Status display:

```
Work with Configuration Status          S0000000
                                     05/27/93 10:47:31
Position to . . . . . Starting characters

Type options, press Enter.
 1=Vary on  2=Vary off  5=Work with job  8=Work with description
 9=Display mode status ...

Opt  Description      Status      -----Job-----
-   L1N01              ACTIVE
-   CTL01              ACTIVE
-   DSP01              ACTIVE      PUTGET  QSECOFR  000966
-   DSP02              VARIED OFF
-   L1N02              ACTIVE
-   CTL02              ACTIVE
-   DSP03              SIGNON DISPLAY
-   CTL03              VARY ON PENDING
-   DSP04              VARY ON PENDING

Parameters or command      More...
====>
F3=EXIT  F4=Prompt  F11=Display Types  F12=Cancel  F23=More options
F24=More keys
```

The Work with Configuration Status display shows status information for network interfaces, lines, controllers, devices, and for jobs associated with devices. This information may be sent to a file for printing. The display can be for a location or for one or more network interfaces, lines, controllers, or devices. All attached configuration descriptions are shown for each line, controller, or device description selected. Attached descriptions are indented under the object to which they are attached, as shown in the example.

The status display for a requested location shows lines with attached controllers, devices, and modes for the specified location.

For more information on configuration status, see the *Communications Management Guide*.

Retrieving Configuration Source

An option on the “Work with...” configuration displays allows you to retrieve the CL source statements for a configuration description. This source can be used later to create the configuration description again.

You can retrieve the source for a configuration description using option 9 (Retrieve source) on the “Work with...” configuration display. When you type 9 next to an entry on the display and press the Enter key, the CL source for the description is placed in a database source file member. The file name used is QCLSRC, and the member name used is the name of the configuration description. You can press F4 (Prompt) to specify a different file and member name.

Note: This option is not available on the Work with Configuration Status display.

For more information about retrieving configuration source, see the *OS/400* Communications Configuration Reference*.

Printing Device Addresses

An option on the Work with Controller Descriptions display allows you to print the addresses of all the devices attached to your local work station controllers. You can use this option on both twinaxial and ASCII work station controllers.

You can print the device addresses for the devices attached to a work station controller using option 12 (Print device addresses) on the Work with Controller Descriptions display. When you type 12 next to an entry on the display and press the Enter key, the output is sent to an output queue so it can be printed.

Authority

To perform the configuration tasks on a particular configuration description, you must have special authority to the description. Some tasks are more restricted than others and require a greater amount of authority.

The authority required for each of the configuration tasks is shown:

- To create a configuration description, you only need to have authority to the particular configuration command.
- To display or print a configuration description, you must have *USE authority to the description.
- To copy a configuration description, you must have *USE authority to the description being copied.
- To change a configuration description, you must have *CHANGE authority to the description.
- To delete a configuration description, you must have both operational authority and existence authority for the object.
- To see a configuration description on one of the “Work with...” configuration displays, you must have operational authority to the description.
- To rename a configuration description from the Work with Objects display, you must have object management authority for the description that is being renamed, and you must have update authority for the library in which the object is located.

For more information on authority, see the *Basic Security Guide* and the *Security Reference*.

Configuring Disk Units

Disk units are storage devices that attach locally to your system. You do not have to create configuration descriptions for them. However, when you add more disk units to your system, you do have to tell the system to use the new units, and tell the system which auxiliary storage pool the units should be applied to. In other words, you configure the disk units into the system.

When your system was initially set up, all the disk units you ordered for your system were configured for you. However, if you decide to add more disk units to your system, you must configure them yourself.

To use the Work with Disk Units display, complete the following steps:

1. Perform an IPL with the Keylock switch in the MANUAL position.
2. The IPL/Install the System menu is shown. From this menu, select option 3 (Dedicated Service Tools).
3. Type the default password (22222222) on the Dedicated Service Tools password menu and press the Enter key. If you specified another password, then type that password.
4. The Dedicated Service Tools menu is shown. From this menu, select option 4 (Work with disk devices).
5. The Work with Disk Units display is shown. From this display, you can change your storage device configuration to add the storage of the new disk unit.

For more information on how to configure storage devices, refer to the online help information for the Dedicated Service Tools menus, or see the *Advanced Backup and Recovery Guide*.

For information on how to configure auxiliary storage pools (ASPS) or checksums, see the *Advanced Backup and Recovery Guide*.

Where to Go after This Chapter

If you are using automatic configuration for your local configuration tasks, go to Chapter 3, “Using Automatic Configuration” for more information about automatic configuration.

If you are not using automatic configuration for your local configuration, go to Chapter 4, “Preparing for Configuration,” for instructions on how to prepare for manual configuration.

If you are using automatic configuration for your local configuration, but have ASCII work station controllers or devices attached to an ASCII work station controller to configure, go to Chapter 3, “Using Automatic Configuration,” for information on automatic configuration, and then to Chapter 4, “Preparing for Configuration,” for instructions on how to prepare for manual configuration.

Chapter 3. Using Automatic Configuration

Through automatic configuration, you can have your local controllers, tape controllers, and local twinaxial devices configured for you by the system. Local controllers can include:

- 6040, 6050, 6140, 2638, and 2661 Twinaxial Controllers
- 6041, 6141, and 2637 ASCII Controllers

Tape controllers include the 3422, 3430, 3480, and 3490 Tape Controllers.

Local devices include:

- Your tape and diskette units
- The twinaxial printers and display stations attached to local twinaxial work station controllers

The system automatically assigns default values to create a configuration description for each local controller and each local twinaxial device.

An option on the Set Major System Options display allows you to select automatic configuration.

```
Set Major System Options
Type choices, press the Enter key.
Enable automatic configuration . . . . . Y      Y=Yes, N=No
Device configuration
naming . . . . . *NORMAL *NORMAL, *S36, *DEVADR
Default special environment. . . . . *NONE *NONE, *S36
```

Note: The Set Major System Options display is only available during an attended IPL.

The default for the *Enable automatic configuration* prompt is Y (YES). This option allows you to change the system value QAUTOCFG that controls whether or not automatic configuration is set on. Unless you changed this option to N (NO) when your system was set up, all of your local controllers and devices were automatically configured for you.

Also, the system automatically assigned names to all your local devices. Depending on what you selected on the Device configuration naming

option on the Set Major Options display, the system either used a normal naming convention, the System/36 style naming convention, or the naming convention based on the device address. The Device configuration naming option allows you to change the system value QDEVNAMING, which controls how your devices are named by automatic configuration. The system values are described later in this chapter.

If, when the system was initially set up, the *Enable automatic configuration* prompt was changed to N (NO), someone has to manually configure your local controllers and devices.

Note: This includes the controller and the device used for the console. A separate controller description and device description are created and used by the system during an attended IPL.

Instructions for manual configuration are found in Chapter 5, "Configuring Locally Attached Twinaxial Devices." Instructions for configuring devices attached to the ASCII work station controller are found in the *ASCII Work Station Reference and Example*.

Automatic Configuration of Personal Computers

If you have PC devices (display stations and printers) attached to your system using the work station function, some of the configuration descriptions needed will be automatically created for you and some of the configuration descriptions will have to be manually created. For instructions on how to configure the personal computers on your system with this function, see the *PC Support/400 DOS Installation and Administration Guide* or the *PC Support/400 OS/2 Installation and Administration Guide*.

Note: Users of the Personal System/55 should go to *PC Support/400 DOS Installation and Administration Guide (PS/55)*, or the *PC Support/400 OS/2 Installation and Administration Guide (PS/55)* for information specific to their personal computer.

System Values Used by Automatic Configuration

System values contain specifications that can be used to control or change the overall operation of your system. Some system values are used by automatic configuration when creating configuration descriptions.

QAUTOCFG: A system value called QAUTOCFG controls whether or not your system automatically configures any *new* local controllers or devices that are added to your system. It is set to QAUTOCFG(1), or automatic configuration yes, unless you specified N (NO) for the *Enable automatic configuration* prompt on the Set Major System Options display, or unless someone has changed the system value using the CHGSYSVAL command.

If you change the system value to QAUTOCFG(0), or automatic configuration no, you must manually configure any new local controllers and devices that you add to your system. However, you can choose to change the system value back to QAUTOCFG(1) at any time.

QDEVNAMING: Another system value, called QDEVNAMING, controls the naming convention used on your system by automatic configuration when creating device descriptions for local controllers or devices that are added to your system. How this system value is set depends on how your system was packaged. If you ordered a Total System Package (TSP*) system, it is set to QDEVNAMING(*S36). Otherwise, it is set to QDEVNAMING(*NORMAL), unless you changed it on the Set Major System Options display, or unless someone has changed the system value. (The three types of naming conventions are discussed in “Automatic Configuration Naming Conventions” on page 3-3 in this chapter.)

If you decide to change the system value QDEVNAMING (using the CHGSYSVAL command), any new devices that are automatically configured after you change the system value will have the new naming convention. However, all the devices that were initially configured using the old naming convention *are not* changed by auto-

matic configuration. If you want to change the names of all the descriptions with the old naming convention, you must delete each description and then either manually create new ones or allow automatic configuration to create new ones for you. Automatic configuration creates new device descriptions the next time you do an IPL on the system, or the next time the devices are powered on.

QPRTDEV: A third system value used by automatic configuration is called QPRTDEV. This system value contains the name of the default printer device description. If you ordered a Total System Package (TSP) system, it is set to QPRTDEV(P1), which means that the default system printer is the printer with the name P1. Otherwise, it is set to PRT01, which means that the default system printer is the printer with the name PRT01.

If automatic configuration is used to initially configure your local devices, it assigns the name PRT01 (or P1 for TSP systems) to the first printer it configures and that printer is the default system printer. You have to manually change the QPRTDEV name if you want a different printer to be the default system printer.

If you do not want the default system printer to be the printer with the name PRT01, you can change the system value QPRTDEV to the name of a different printer using the CHGSYSVAL command. For example, if you would like the default system printer to be the printer with the name PRT06, you can change the system value.

If you do not like the name PRT01 for one of your printers, you should first change the system value QPRTDEV to the name of a different printer, and then change the name in the device description for the printer with the name PRT01. To change the name in the device description, you can delete the description and then either manually create new ones or allow automatic configuration to create new ones for you. Automatic configuration creates a new device description the next time you do an IPL on the system, or the next time the device is powered on. You can also rename the descriptions as described under “Changing Configuration Descriptions” on page 2-5.

Working with System Values

To view the current values set on your system for any of these system values, use the Display System Value (DSPSYSVAL) command. Type **DSPSYSVAL** and press the Enter key. You are asked to enter the name of the system value. Type **QAUTOCFG**, **QDEVNAMING**, or **QPRTDEV**, and press the Enter key. The system value is shown with the current setting. To change this system value:

- From the system main menu, select option 7 (Define or change the system). The Define or Change the System display is shown.
- From the Define or Change the System display, select option 9 (Change system values). The Change System Values display is shown.

On the Change System Values display, type the name of the system value you want to change, and then the new value enclosed in apostrophes.

Dynamically Adding Local Controllers and Devices

If you do not change the system value **QAUTOCFG**, or automatic configuration yes, the system continues to automatically configure any local controllers and devices you attach. This includes any new local work station controllers and tape controllers, and any new twinaxial display stations, twinaxial printers, tape units, or diskette units.

If you delete a configuration description, automatic configuration uses the description name again the next time it creates that type of configuration description. For example, if you have three display stations with description names of **DSP01**, **DSP02**, and **DSP03**, and you delete description

DSP02, the next time automatic configuration creates a display station description it assigns the name **DSP02** to the display station.

When adding a new local work station controller or tape unit controller, the system must be powered off to physically attach the controllers. Automatic configuration creates a configuration description for the new controllers the next time you perform an IPL on the system.

When adding new external devices, the system does not have to be powered off, and you do not have to perform an IPL for automatic configuration to take place. As long as the system power is on and the system is up and running, automatic configuration takes place as soon as the devices are plugged in and powered on.

Automatic Configuration Defaults

When configuring controllers or devices, automatic configuration chooses the default values for descriptions. This means that your controllers and devices are defined in a generic way. If you would like to see the exact descriptions that have been created for your local controllers and devices, you can use the display option on the "Work with..." configuration displays. This allows you to view all your configuration descriptions and consider whether or not you want to change any of them.

Automatic Configuration Naming Conventions

Automatic configuration uses one of three methods for naming your local controllers and devices. Table 3-1 shows the normal naming convention (***NORMAL**), the System/36 style naming convention (***S36**), and the naming convention based on the device address (***DEVADR**).

Table 3-1 (Page 1 of 2). Automatic Configuration Naming Conventions

| Device | *NORMAL | *S36 | *DEVADR |
|--|------------------------|------------------------|--------------------------|
| Work station controllers | CTL01, CTL02,... | CTL01, CTL02,... | CTL01, CTL02,... |
| Tape controllers (9406 System Unit only) | TAPCTL01, TAPCTL02,... | TAPCTL01, TAPCTL02,... | TAPCTL01, TAPCTL02,... |
| Display stations | DSP01, DSP02,... | W1, W2,... | DSP010101, DSP010102,... |

Table 3-1 (Page 2 of 2). Automatic Configuration Naming Conventions

| Device | *NORMAL | *S36 | *DEVADR |
|----------------|------------------|------------|-----------------------------|
| Printers | PRT01, PRT02,... | P1, P2,... | PRT010101, PRT010102,... |
| Tape units | TAP01, TAP02,... | T1, T2, TC | TAP01, TAP02,... |
| Diskette units | DKT01, DKT02,... | I1 | DKT01, DKT02,... |

Notes:

1. The console for your system is assigned the name QCONSOLE in its device description during an attended IPL (an IPL performed with the keylock switch in the Manual position). The controller for the console uses the name QCTL in its controller description during an attended IPL. These names are reserved for the system. These descriptions are created for you so that you have a console to use to perform your configuration. The names of the console and its controller used after IPL are not restricted. You may change these descriptions after the system comes up. If automatic configuration is not enabled, these descriptions must be manually created. If automatic configuration is enabled, these descriptions are created using the naming conventions shown in this table.
2. For display stations using the System/36 style naming convention, the system first assigns the names W1 through W0 and WA through WZ. After those are used, it then uses the names X1 through X0 and XA through XZ; then Y1 through Y0 and YA through YZ, and so on.
3. The naming convention based on the device address (*DEVADR) differs from the normal naming convention for display stations and printers only. The name used reflects the controller to which the device is attached, the port at which it is attached, and its device address (switch setting). For example, DSP010203 is the display station attached to a controller with resource name CTL01 at port 02 with a device address (switch setting) of 03.

When your system was initially set up, the Set Major System Options display allowed you to choose which of these methods for naming you would prefer. The default is *NORMAL, which means that, if you did not change this option, your

system assigned names using the normal convention. For example, your display stations are named DSP01, DSP02, DSP03, and so on.

Note: If you ordered a TSP system, the naming convention default is *S36.

Automatic configuration does not assign the names to the devices to match where they are physically located. The system cannot sense which device is physically closest to it. The system senses and names the devices in the order that they are powered on when attached to the system.

For example, the first display station that is attached to the system, plugged in, and powered on is assigned the name DSP01 (assuming that the normal naming convention is being used). The next display station attached to the system that is plugged in and powered on is assigned the name DSP02, even if the second display station DSP02 is physically closer to the system than DSP01.

If you delete a configuration description, automatic configuration uses the description name again the next time it creates that type of configuration description. For example, if you have three display stations with description names of DSP01, DSP02, and DSP03, and you delete description DSP02, the next time automatic configuration creates a display station description it assigns the name DSP02 to the display station.

Note: If you have chosen the System/36 style naming convention, you should be aware that:

- Only one diskette unit with a System/36 style name is allowed. The first diskette unit is configured as I1, but if you have more than one diskette unit, the remaining are assigned the names DKT01, DKT02, DKT03, and so on.
- Also with the System/36 style naming convention, three tape units are named T1, T2, and TC (cartridge). If you have more tape units,

the remaining are assigned the names TAP01, TAP02, and TAP03.

Once you have signed on your system you can use the Work with Configuration Status (WRKCFGSTS) or the Work with Device Descriptions (WRKDEVD) command to verify the names and locations of your devices.

Other Automatic Configuration Defaults

In addition to assigning names to your local controllers and devices, automatic configuration also assigns values to the other required, as well as optional, information needed to create the configuration descriptions.

For the required information, the system assigns the correct value automatically. For example, the system can determine the device address and the port to which a device is attached.

For the optional information, the system assigns the system default values, and you must change these if you want to specify a different value.

The following lists the defaults used to create configuration descriptions for items that are automatically configured. You may want to change the defaults to tailor your controllers and devices for your particular system needs.

Work Station Controller Defaults:

- *Controller description:* Assigned by the system using the appropriate naming convention
- *Controller type:* Automatically assigned
- *Controller model:* Automatically assigned
- *Resource name:* Automatically assigned
- *Auto-configuration controller:* *YES
- *Online at IPL:* *YES
- *Text description:* Created by automatic configuration

Tape Controller Defaults:

- *Controller description:* Assigned by the system using the appropriate naming convention
- *Controller type:* Automatically assigned
- *Controller model:* Automatically assigned
- *Resource name:* Automatically assigned

- *Auto-configuration controller:* *YES
- *Online at IPL:* *YES
- *Text description:* Created by automatic configuration

Tape Unit Defaults:

- *Device description:* Assigned by the system using the appropriate naming convention
- *Device type:* Automatically assigned
- *Device model:* Automatically assigned
- *Resource name:* Automatically assigned
- *Controller name:* Automatically assigned
- *Online at IPL:* *YES
- *Text description:* Created by automatic configuration

Diskette Unit Defaults:

- *Device description:* Assigned by the system using the appropriate naming convention
- *Device type:* Automatically assigned
- *Device model:* Automatically assigned
- *Resource name:* Automatically assigned
- *Online at IPL:* *YES
- *Text description:* Created by automatic configuration

Local Twinaxial Printer Defaults:

- *Device description:* Assigned by the system using the appropriate naming convention
- *Device type:* Automatically assigned
- *Device model:* Automatically assigned
- *Online at IPL:* *YES
- *Controller, port, and switch setting:* Automatically assigned
- *Message queue:* Default message queue
- *DBCS feature:* Applicable only to DBCS devices; see "Automatic Configuration of DBCS Devices" on page A-4
- *Host print transform function:* *NO. To enable this function, use the Change Device Description (Printer (CHGDEVPR)). For more information, see the *Guide to Programming for Printing*.
- *Text description:* Created by automatic configuration

Local Twinaxial Display Station Defaults:

- *Device description:* Assigned by the system using the appropriate naming convention
- *Device type:* Automatically assigned
- *Device model:* Automatically assigned
- *Online at IPL:* *YES

- *Controller, port, and switch setting:* Automatically assigned
- *Keyboard type:* Country code of language chosen at IPL
- *Message queue:* Default message queue
- *DBCS feature:* Applicable only to DBCS devices; see “Automatic Configuration of DBCS Devices” on page A-4
- *Text description:* Created by automatic configuration

Table 3-2. Automatic Configuration Device Type and Model Conversion

| Actual Device Type | Actual Device Model | Configured as Device Type | Configured as Device Model |
|--|----------------------|---------------------------|------------------------------|
| 3179 (without G keyboard) | 2 | 5292 | 1 |
| 3197 | C2 | 3197 | C1 |
| 3197 | D4 | 3197 | D1 |
| 3476 | EG | 3476 | EA |
| 3477 | FG | 3477 | FA |
| 3486 | BG | 3486 | BA |
| 3488 with a monochrome monitor | H1 | 3486 | BA |
| 3488 with a monochrome, 132-column monitor | H1 | 3487 | HW |
| 3488 with a color monitor | H1 | 3487 | HC |
| 5219 | D2 | 5219 | D1 |
| 5291 | 1 | 5291 | 2 |
| 3476 (6143 card) | None | 3476 | EA (with monochrome monitor) |
| | | | EC (with color monitor) |
| 3476 (6145 card) | None | 3476 | EA (with monochrome monitor) |
| | | | EC (with color monitor) |
| 3812 (non-IPDS) | 1, 2 | 5219 | D1 |
| 3812 (IPDS) | 2 | *IPDS | 0 |
| 3816 | 1S, 1D | *IPDS | 0 |
| 4028 | AS1 | *IPDS | 0 |
| 4210 | 1 | 4214 | 2 |
| 4224 | All twinaxial models | *IPDS | 0 |
| 4230 (non-IPDS) | 101, 152 | 4214 | 2 |
| 4230 (IPDS) | 102, 111 | *IPDS | 0 |
| 4234 | 12 | *IPDS | 0 |
| 4245 | T20 | 4245 | T12 |
| 5262 | 1 | 5256 | 1 |
| 6262 | T12, T14, T22 | 4245 | |

Some of the device types and models for display stations and printers are not recognized by the system and are configured as a different device

type or model by automatic configuration. See Table 3-2 for a list of devices that are configured as another device.

Notes:

1. The QPRTDEV system value contains the name of the default system printer. When automatic configuration is used to create a printer description, the system checks the QPRTDEV system value. If QPRTDEV has a value, but no printer description exists on the system, automatic configuration creates the next printer description. This printer is defined as the system printer, regardless of the naming convention for devices in use at the time.
2. If you are using more than one language on your system, the keyboard type used by automatic configuration is the main keyboard type for the language chosen when you perform an IPL. For those display stations that use a different language, you must change the keyboard type through configuration, except for the following:
 - For the 3196, 3197, and 3180 Display Stations, the system can determine the appropriate keyboard type for the following languages or countries:
 - Arabic
 - Belgium
 - Italy
 - Spain
 - Spanish-speaking
 - Sweden/Finland
 - Swiss/French
 - Swiss/German
 - Thailand
 - United Kingdom
 - United States
 - For the 3476, 3477, 3486, 3487, and 3488 Display Stations, the system can determine the appropriate keyboard type for all languages or countries.

Automatic Configuration Considerations

- If you delete configuration descriptions of local devices that are powered on when automatic configuration is in effect, automatic configuration creates new configuration descriptions for

those devices the next time you perform an IPL or the next time the devices are powered on. The description names that are deleted are used again by automatic configuration.

- Automatic configuration only configures one controller description for each physical controller. If you want to create more than one controller description for a physical controller, you must create the additional descriptions manually. You can specify *YES on the AUTOCFG parameter for only one of the descriptions. For a specific resource name, if you do not have controller descriptions, or if you specified *NO for controller descriptions on the AUTOCFG parameter, controller descriptions are created for you. If you specified *YES for a controller description on the AUTOCFG parameter, then no controller descriptions are created for a specific resource name.

Note: If you want the AUTOCFG parameter to attach devices to a manually configured controller, specify *YES on the AUTOCFG parameter.

- If you move a device that has already been configured from one location to another, the first description for that device remains in existence until it is deleted or another device is put in that location. When another device is put in that location, automatic configuration deletes the existing description and creates a new description for the new device in that location.
- If a display device that has been automatically configured is powered on but does not show the Sign-On display, the problem may be that the device type has been excluded from the subsystem description.¹ If the Sign-On display is not shown, make sure that the subsystem description associated with that device contains an entry for that device type (using the Work with Subsystem Description (WRKSBSD) command).
- If you have two twinaxial devices with the same switch setting, automatic configuration starts sending error messages. It will not acknowledge either of the devices.

¹ The device type entries in the subsystem description are used to assign display devices to a subsystem. Two subsystems, called QBASE and QINTER, are shipped with the system and initially contain entries for all device types supported.

- If you want to use automatic configuration and also tailor a description, you should allow automatic configuration to run first and then tailor your description.

Where to Go after This Chapter

If you are using automatic configuration for your local configuration, go to Chapter 7, “Electronic Customer Support Configuration,” for instructions on how to configure the electronic customer support communications. If you have already configured your electronic customer support communications, you have completed your configuration.

If you have manual configuration tasks to perform, go to Chapter 4, “Preparing for Configuration,” for instructions on how to prepare for configuration.

You may be interested in Chapter 8, “Saving Your Configuration,” and Chapter 9, “Tailoring Your Configuration,” should you decide to change your configuration.

Note: If you have to configure ASCII work station controllers or any devices attached to an ASCII work station controller, see the *ASCII Work Station Reference and Example* for more information.

Chapter 4. Preparing for Configuration

Reading through Chapter 2, "Learning about Configuration," and Chapter 3, "Using Automatic Configuration," should prepare you for the configuration tasks. Also, Chapter 10, "Configuration Example," contains detailed examples that should help you understand how to perform configuration.

Note: If you are upgrading or changing AS/400 system products, see Appendix D, "Upgrading AS/400 System Products" for more information.

You will need to consider the following information before starting your configuration tasks.

Work Station Diagrams

You should have the Work Station Diagrams that were filled out at planning time. Instructions for filling out these forms are found in Chapter 1, "Planning for Configuration."

- For each local twinaxial controller you are configuring, you should complete a Local Twinaxial Work Station Controller Index (Form D1). This index contains information about the controller.
- Also, you should have one Local Work Station Diagram (Form C1, C2, or C3) completed for each *port* on the local controller to which you intend to attach display stations and printers. These diagrams contain information about the controller and the display stations and printers that attach to it.

| D1 Local Twinaxial Work Station Controller Index | | | |
|--|--|---|--|
| System <u>AS/400 System</u> | Card Address <u>0130</u> | Work Station Controller Name <u>CTL01</u> | |
| Service for Cabling <u>Cindy Jones</u> | Location of Twinaxial Work Station Attachment <u>RM101</u> | Controller Type <u>6050</u> | |
| Telephone Number <u>123-4567</u> | | Controller Model <u>1</u> | |

RSLH549-2

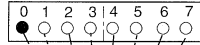
C1

Local Work Station Diagram (Twinaxial Cabling)

Page
Number _____

System AS/400 System Card Address 0130
Service for Cabling Cindy Jones Work Station Controller Name CTL01
Telephone Number 123-4567 Location of Twinaxial Work Station Attachment RM 101

Twinaxial Work Station Attachment Port Numbers



| | |
|--|-----------|
| Device Name | DISPLAY01 |
| Device Type, Model | 3180, 2 |
| Location | RM 102 |
| Device Address | |
| Display <input checked="" type="checkbox"/> Printer <input type="checkbox"/> | 0 |
| Telephone Number | 1-2345 |
| Device Name | DISPLAY02 |
| Device Type, Model | 3180, 2 |
| Location | RM 103 |
| Device Address | |
| Display <input checked="" type="checkbox"/> Printer <input type="checkbox"/> | 1 |
| Telephone Number | 1-2346 |
| Device Name | DISPLAY03 |
| Device Type, Model | 5291, 2 |
| Location | RM 104 |
| Device Address | |
| Display <input checked="" type="checkbox"/> Printer <input type="checkbox"/> | 2 |
| Telephone Number | 1-2347 |
| Device Name | PRINTER01 |
| Device Type, Model | 4214, 2 |
| Location | RM 102 |
| Device Address | |
| Display <input type="checkbox"/> Printer <input checked="" type="checkbox"/> | 3 |
| Telephone Number | 1-2345 |

Example

RSLH503-3

- For each tape controller and tape unit you are configuring on your 9404 and 9406 System Unit, you should have one box filled in on the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1). See example on page 4-3.

Note: Only the 3422, 3430, 3480, and 3490 Tape Units require tape controllers. These tape units are available on the 9404 and 9406 System Units.

E1

9404 and 9406 Tape Controller and Tape Unit Diagram

System AS/400 System

Service Contact Cindy Jones

Telephone Number 123-4567

Example

Tape Controller

| | |
|------------------------|----------|
| Controller Name | TAPCTLO1 |
| Controller Type, Model | 3422,A01 |

Tape Unit with Tape Controller

| | |
|--------------------|----------|
| Controller Name | TAPCTLO1 |
| Device Name | TAPE02 |
| Device Type, Model | 3422,B01 |
| Switch Setting | 1 |

Tape Unit without Tape Controller

| | |
|--------------------|-----------|
| Device Name | TAPE01 |
| Device Type, Model | 9346,0001 |

| | |
|------------------------|----------|
| Controller Name | TAPCTLO2 |
| Controller Type, Model | 3430,A01 |

| | |
|--------------------|----------|
| Controller Name | TAPCTLO1 |
| Device Name | TAPE03 |
| Device Type, Model | 3422,B01 |
| Switch Setting | 2 |

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

| | |
|------------------------|--|
| Controller Name | |
| Controller Type, Model | |

| | |
|--------------------|----------|
| Controller Name | TAPCTLO2 |
| Device Name | TAPE04 |
| Device Type, Model | 3430,A01 |
| Switch Setting | 1 |

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

| | |
|------------------------|--|
| Controller Name | |
| Controller Type, Model | |

| | |
|--------------------|----------|
| Controller Name | TAPCTLO2 |
| Device Name | TAPE05 |
| Device Type, Model | 3430,B01 |
| Switch Setting | 2 |

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

Note: You may copy as necessary.

RV2H438-0

For each diskette unit you are configuring on your 9404 or 9406 System Units, you should have one box filled in on the 9404 and 9406 Diskette Unit Diagram (Form E2).

For each tape unit and diskette unit you are configuring on your 9402 System Unit, you should have one box filled in on the 9402 Tape Unit and Diskette Unit Diagram (Form E3).

E2 9404 and 9406 Diskette Unit Diagram

System AS/400 System

Service Contact Cindy Jones

Telephone Number 123-4567

Example

| | |
|-------------------------------------|-----------------------------|
| Device Name <u>D5KT01</u> | Device Name <u> </u> |
| Device Type, Model <u>9331,0001</u> | Device Type, Model <u> </u> |
| | |
| Device Name <u>D5KT02</u> | Device Name <u> </u> |
| Device Type, Model <u>9331,0002</u> | Device Type, Model <u> </u> |

RV2H439-0

E3 9402 Tape Unit and Diskette Unit Diagram

System AS/400 System

Service Contact Cindy Jones

Telephone Number 123-4567

Example

| | |
|-------------------------------------|----------------------------------|
| Tape Unit | Diskette Unit |
| Device Name <u>TAPE01</u> | Device Name <u>D5KT01</u> |
| Device Type, Model <u>6346,0001</u> | Device Type, Model <u>6132,0</u> |
| | |
| Tape Unit | Diskette Unit |
| Device Name <u>TAPE02</u> | Device Name <u>D5KT02</u> |
| Device Type, Model <u>6346,0001</u> | Device Type, Model <u>6132,0</u> |

RV2H413-1

The person responsible for planning your configuration should provide you with these diagrams. They are used later in Chapters 4, 5, and 6 for completing your configuration tasks.

System Resource Names

System resource names are names assigned *by the system* to hardware attached to the system. These names are automatically assigned and are used by the system to refer to physical hardware information stored in the system. If you are using automatic configuration on your system, you do not need to record resource names.

A resource name is given to some of the hardware that attaches to the system, including communications lines, local twinaxial work station

controllers, local ASCII work station controllers, tape controllers, tape units, and diskette units. When you are configuring this hardware on your system, you must know what resource name the system has assigned to each piece of hardware.

Note: The 3422, 3430, 3480, and 3490 Tape Units do not require a resource name in their configuration descriptions. However, the 3422, 3430, 3480, and 3490 Tape Controllers do require a resource name in their configuration descriptions.

Form X1, located in Appendix B, "Forms for Planning," allows you to record the resource names for your system. Make as many copies of this form as you need, and use it to record the information from the next task. File this information for future reference when working with your configuration.

X1

Recording Resource Names

Lines

| Line Name | Location/Card Slot | Resource Name |
|-----------|--------------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Work Station Controllers

| Controller Name | Location/Card Slot | Resource Name |
|-----------------|--------------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Tape Controllers

| Controller Name | Serial Number | Resource Name |
|-----------------|---------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Tape and Diskette Units

| Device Name | Serial Number | Resource Name |
|-------------|---------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Note: You may copy as necessary.

RSLH540-5

For all the local controllers (including both twinaxial work station controllers and ASCII work station controllers), tape controllers, tape units, and diskette units you are configuring on your system, you need the name that you intend to assign to each of these items. For example, if you have both a local twinaxial work station controller and a local ASCII work station controller, you may decide to call them TWINAXCTL and ASCICTL.

Record the name you have assigned to each work station controller, tape controller, tape unit, and diskette unit in the *Controller Name* and *Device Name* columns on Form X1.

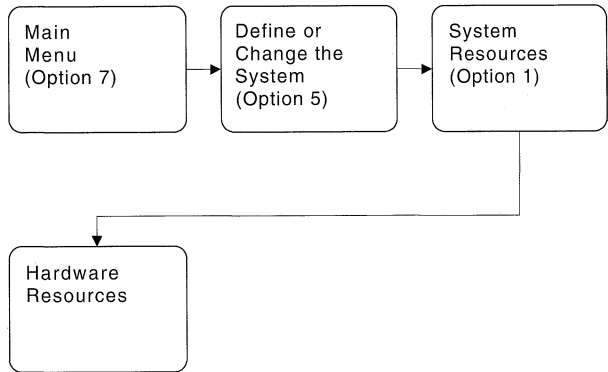
Obtaining the System Resource Names

To get the resource name for the objects on your system, you can use the Work with Hardware Resources display.

To get to the Work with Hardware Resources display, do the following steps:

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 5 (System resources). The System Resources display is shown.

- From the System Resources display, select option 1 (Hardware resources). The Hardware Resource menu display is shown. From this menu, you may find the resource names of your controllers, tape units, and diskette units.



RV2H405-1

Note: You may also access the work with hardware functions by typing

WRKHDWRSC

and pressing F4 (Prompt). From there, you will be asked to enter a type (for example, *LWS for the local work station resources).

If you have a 9402 or 9404 System Unit, go to “System Resource Names for the 9402 and 9404 System Units” on page 4-7 to complete the task of obtaining resource names. If you have a 9406 System Unit, go to “System Resource Names for the 9406 System Unit” on page 4-11 to complete the task of obtaining resource names.

System Resource Names for the 9402 and 9404 System Units

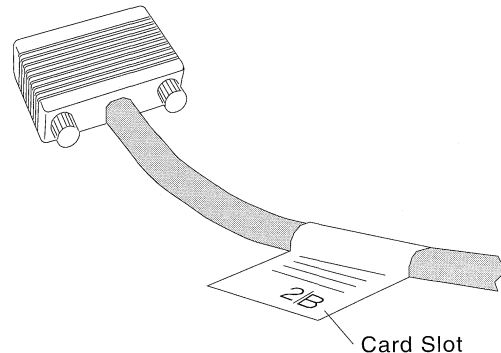
Before obtaining the system resource names, you need to record the following information on Form X1.

Local work station controllers (both twinaxial and ASCII).

For each local controller you are configuring, you need to find the card slot number of the cards that contain the local controllers.

Note: The 9402 System Unit has an internal controller of type 2637, 2638, or 2661. This controller is located in card slot 4. The 9402 System Unit can also have other controllers in the feature card enclosure. To determine the card slot number for these controllers, use the instructions that follow.

There is a one- or two-character number written on the label of the cable for the local controllers that you are going to configure.



RSLH555-1

Get the card slot number from the cable label and record it in the *Location/Card Slot* column for controllers on Form X1.

Tape and diskette units.

For the 9402 and 9404 System Units, only one tape unit and one diskette unit are attached. If you have the 9404 Expansion Unit, one more tape unit and one more diskette unit can be attached.

- | If you have the 9402 Expansion Unit, one more tape unit can be attached. You can leave the *Serial Number* column blank on Form X1. The following example shows the information that should be collected and recorded:

X1

Recording Resource Names

Lines

| Line Name | Location/Card Slot | Resource Name |
|-----------|--------------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Work Station Controllers

| Controller Name | Location/Card Slot | Resource Name |
|-----------------|--------------------|---------------|
| TWINAXCTL | 3 | |
| ASCICTL | 5 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Tape Controllers

| Controller Name | Serial Number | Resource Name |
|-----------------|---------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Tape and Diskette Units

| Device Name | Serial Number | Resource Name |
|-------------|---------------|---------------|
| TAPE01 | | |
| DSKT01 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Note: You may copy as necessary.

RSLH506-6

The information that you recorded is used to identify the correct resource name for a particular item.

Using the Work with Hardware Resources Command

Local work station controllers (both twinaxial and ASCII).

From the Hardware Resource menu, select option 2 (Work with local work station resources). The Work with Local Work Station Resources display is shown. From this display, press F11 (Display resource addresses/statuses), and then F11 again (Display serial numbers/locations), to display the location of the local work station controllers.

Note: You may need to use the roll keys on the display to obtain the information needed.

For each local controller you are configuring on your system, get the card slot number for the local controller from Form X1 and look for that number in the *Card Slot* column. From that card slot number, go across the row to the *Resource* column.

The resource name found there is the resource name for the controller with that card slot number.

Record the resource name under the *Resource Name* column for local controllers on Form X1. Also, record the resource name on the cable label, next to the card slot number you obtained earlier.

Press F12 (Cancel) to return to the Hardware Resource menu.

Keep Form X1 with the configuration planning forms, ready to use while completing your configuration tasks.

Printing the System Configuration

- | **List:** You must obtain a copy of your system configuration list. This document is required for you or your service representative to handle problems. When you have finished using it, place the system configuration list with your *Operator's Guide* for future reference.

To print a copy of the system configuration list, you must go to the Work with Hardware Products display. On any display with a command line, type:

WRKHDWPRD

- | On the Work with Hardware Products display, select option 1 (Copy system configuration). The Specify Printer display is shown.

On the Specify Printer display, type the name of the printer you want the system configuration list printed on. The default is *PRINT.

Note: If you do not have a printer that has already been configured, you should come back and use this procedure to print a copy of your system configuration list after you have configured a printer.

- | Press F17 (Print), and your system configuration list is printed.

If you do *not* have a 9402 or a 9404 Expansion Unit, go to the topic “Where to Go after This Chapter” on page 4-15 to complete preparing for configuration. If you have an expansion unit, continue with the topic “System Resource Names for the 9402 and 9404 Expansion Unit” to complete the task of obtaining resource names.

System Resource Names for the 9402 and 9404 Expansion Unit

- | If you have the 9402 or 9404 Expansion Unit, you need to obtain the system resource names for the following devices attached to it:

- | controllers
- | tape units
- | diskette units

Get the card slot number from the label of the cable for the controllers you are going to configure for the expansion unit as you did for the 9402 and 9404 System Units. Record the number(s) in the *Location/Card Slot* column for controllers on Form X1.

Return to “System Resource Names for the 9402 and 9404 System Units” on page 4-7 to record the system resource names for devices attached to your expansion unit.

The following is an example of the information that could be collected and recorded for the 9404 System Unit and the 9404 Expansion Unit:

X1

Recording Resource Names

Lines

| Line Name | Location/Card Slot | Resource Name |
|-----------|--------------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Work Station Controllers

| Controller Name | Location/Card Slot | Resource Name |
|-------------------|--------------------|---------------|
| <i>TWINAXCTL</i> | <i>3</i> | <i>CTL01</i> |
| <i>ASCICTL</i> | <i>5</i> | <i>CTL02</i> |
| <i>EXPTWINCTL</i> | <i>3</i> | <i>CTL03</i> |
| <i>EXPASCCTL</i> | <i>4</i> | <i>CTL04</i> |
| | | |
| | | |
| | | |

Tape Controllers

| Controller Name | Serial Number | Resource Name |
|-----------------|---------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Tape and Diskette Units

| Device Name | Serial Number | Resource Name |
|---------------|---------------|---------------|
| <i>TAPE01</i> | | <i>TAP01</i> |
| <i>DSKT01</i> | | <i>DKT01</i> |
| <i>TAPE02</i> | | <i>TAP02</i> |
| <i>DSKT02</i> | | <i>DKT02</i> |
| | | |
| | | |
| | | |

Note: You may copy as necessary.

RSLH553-3

Keep Form X1 with the configuration planning forms, ready to use while completing your configuration tasks.

Go to "Where to Go after This Chapter" on page 4-15 for information on where to go next.

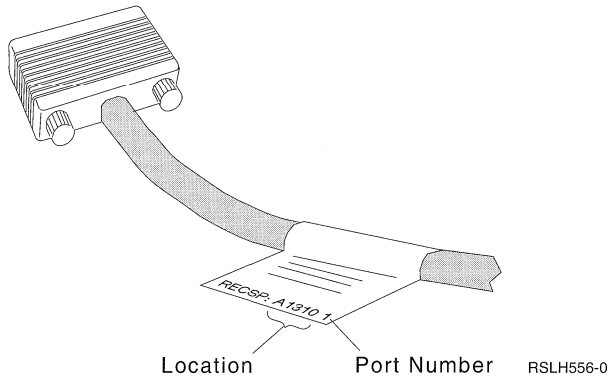
System Resource Names for the 9406 System Unit

Before obtaining the system resource names, you need to record the following information on Form X1.

Local controllers (both twinaxial and ASCII).

For each local controller you are configuring, you need to know the location number of the cards that contain the local controllers.

The location number is a three- to six-character number written on the label of the cables of the local controllers that you are going to configure.



Get the location numbers from the cable labels and record them in the *Location/Card Slot* column for controllers on Form X1.

Tape controllers, tape units, and diskette units.

For each tape controller, tape unit, and diskette unit you are configuring, you need to know the

serial number for that device. The serial number can be found on the front of the device.

Get the serial number from the front of the device and record it in the *Serial Number* column for tape controllers and tape and diskette units on Form X1.

Note: The 3422, 3430, 3480, and 3490 Tape Units do not require a resource name in their configuration descriptions. Therefore, you do not need to record information about these tape units on Form X1. However, when you are configuring the 3422, 3430, 3480, and 3490 Tape Controllers, they do require a resource name in their configuration descriptions. The following example shows the information that should be collected and recorded:

The information that you recorded is used to identify the correct resource name for a particular item.

X1

Recording Resource Names

Lines

| Line Name | Location/Card Slot | Resource Name |
|-----------|--------------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Work Station Controllers

| Controller Name | Location/Card Slot | Resource Name |
|-----------------|--------------------|---------------|
| TWINAXCTL | A 13 7 | |
| ASCICTL | A 13 8 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Tape Controllers

| Controller Name | Serial Number | Resource Name |
|-----------------|---------------|---------------|
| TAPCTLO1 | 10-2850462 | |
| TAPCTLO2 | 10-0945321 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Tape and Diskette Units

| Device Name | Serial Number | Resource Name |
|-------------|---------------|---------------|
| TAPE01 | 12-1111111 | |
| DSKT01 | 10-0000011 | |
| DSKT02 | 11-1000000 | |
| | | |
| | | |
| | | |
| | | |
| | | |

Note: You may copy as necessary.

RSLH554-3

Using the Work with Hardware Resources Command

Local work station controllers (both twinaxial and ASCII).

From the Hardware Resource menu, select option 2 (Work with local work station resources). The Work with Local Work Station Resources display is shown. From this display, press F11 (Display resource addresses/statuses), and then F11 again (Display serial number/locations), to display the location and serial number of the local work station controllers.

Note: You may need to use the roll keys on the display to obtain the information needed.

For each local controller you are configuring on your system, get the location number for the local

controller from Form X1 and look for that number in the *Rack ID EIA Location and Card Slot* column. From that line, go across the row to the *Resource* column.

The resource name found there is the resource name for the controller with that location.

Record the resource name under the *Resource Name* column for local controllers on Form X1. Also, record the resource name on the cable label, next to the card slot number you obtained earlier.

Press F12 (Cancel) to return to the Hardware Resource menu.

Tape controllers and tape and diskette units.

From the Hardware Resource menu, select option 3 (Work with storage resources). The Work with Storage Resources display is shown. From this

Keep Form X1 with the configuration planning forms, ready to use while completing your configuration tasks.

Printing the System Configuration

List: You must obtain a copy of your system configuration list. This document is required for you or your service representative to handle problems. When you have finished using it, place the system configuration list with your *Operator's Guide* for future reference.

To print a copy of the system configuration list, you must go to the Work with Hardware Products display. On any display with a command line, type:

WRKHDWPRD

On the Work with Hardware Products display, select option 1 (Work with system configuration).

The Work with System Configuration display is shown.

Note: If you do not have a printer that has already been configured, you should use this procedure to print a copy of your system configuration list after you have configured a printer.

Press F17 (Print) to print your system configuration list.

Where to Go after This Chapter

If you are using automatic configuration and have an ASCII work station controller with ASCII work stations attached to it, see the *ASCII Work Station Reference and Example*.

If you are not using automatic configuration for your local configuration, go to Chapter 5, "Configuring Locally Attached Twinaxial Devices" to complete your local configuration tasks.

Chapter 5. Configuring Locally Attached Twinaxial Devices

If you choose not to have your local controllers and devices configured automatically, you must configure them manually. This section tells you how to do local configuration using the configuration menus.

- | **Note:** If the console is a local twinaxial display station, the system uses the controller description QCTL and the device description QCONSOLE during an attended IPL. If you choose not to use automatic configuration, the system uses the QCTL and QCONSOLE descriptions until you create your own device and controller descriptions.

Creating Configuration Descriptions for Local Twinaxial Work Station Controllers

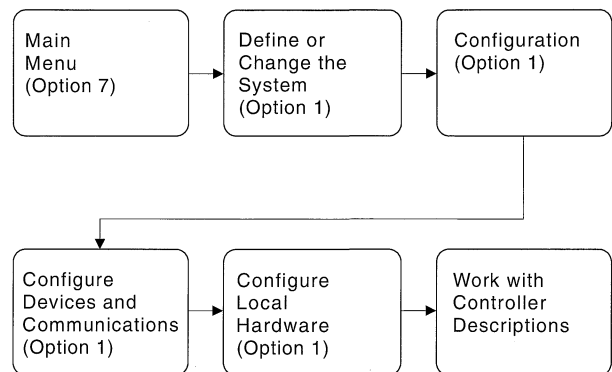
For each local work station controller you are configuring on your system, you should have information filled in on a Local Twinaxial Work Station Controller Index (Form D1) and a Local Work Station Diagram (Forms C1, C2, or C3) for each port on the work station controller to which you intend to attach display stations and printers. You should also have already filled in the resource name for each local work station controller you are configuring on the Recording Resource Names, Form X1. Instructions for filling out these forms are in Chapter 4, "Preparing for Configuration," and Chapter 1, "Planning for Configuration."

To configure your local twinaxial work station controllers, you may use the configuration menus.

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 1 (Configuration). The Configuration menu is shown.

3. From the Configuration menu, select option 1 (Configure devices and communications). The Configure Devices and Communications menu is shown.
4. From the Configure Devices and Communications menu, select option 1 (Configure local hardware). The Configure Local Hardware menu is shown.
5. From the Configure Local Hardware menu, select option 1 (Work station controllers). The Work with Controller Descriptions display is shown.

The following shows the menus and options to select:



RV2H414-0

The local work station controller descriptions for your system that have already been created are listed on this display. If this is the first work station controller you are configuring, no controller descriptions are listed.

6. From the Work with Controller Descriptions display, press F6 (Create).

Note: Some of the prompts are shown only when F10 (Additional Parameters) is pressed to display additional prompts.

| D1 Local Twinaxial Work Station Controller Index | | | |
|--|---------------|---|-------|
| System | AS/400 System | Card Address | 0130 |
| Service for Cabling | Cindy Jones | Location of Twinaxial Work Station Attachment | RM101 |
| Telephone Number | 123-4567 | Work Station Controller Name | CTL01 |
| | | Controller Type | 6050 |
| | | Controller Model | 1 |

RSLH550-2

The Create Controller Description display is shown. This display asks you for the name of the controller to be created.

Note: You can also access this display by using the Work with Hardware Resources (WRKHDWRSC) command. Type

WRKHDWRSC *LWS

to work with local work station controllers. Type a 7 (Add configuration description) in the option field of the twinaxial work station controller you want to configure. When the Create Controller Description display is shown, the controller type/class is already filled in with information detected by the system. When you type your controller name, a list of prompts is shown, with values for the prompts already filled in with information detected by the system. You can accept this information by pressing the Enter key, or you may change these values. Pressing F10 (Additional parameters) allows you to change the parameters that are not automatically displayed.

For the controller name, refer to the Local Twinaxial Work Station Controller Index (Form D1). The name of the controller is listed at the top with the controller information beside the entry *Work Station Controller Name*.

Type the controller name on the Create Controller Description display for the *New controller description* prompt.

Press the Enter key. A list of prompts is shown.

Some of the prompts are already filled in. These represent the system defaults. You need to change these only if you want one of the other choices for your configuration.

Notes:

1. All of the prompts in the following paragraphs may not be shown on the display, depending on the choices you make for the other prompts.
2. You do not need to press F10. The additional prompts that you need for your configuration are shown automatically.

Following is a description of each prompt and the valid choices.

Controller type.

Type the controller type. This should be a 4-digit number listed on the top of Form D1, the Local Twinaxial Work Station Controller Index.

Controller model.

Type the model of the work station controller. The model number should be recorded on the top of Form D1, the Local Twinaxial Work Station Controller Index.

Resource name.

Type the resource name for this local work station controller. The resource name should be recorded on the Recording Resource Names Form (Form X1).

Online at IPL.

This entry determines whether or not the local controller description can be automatically used when you do an IPL.

Type ***YES** if you do want to be able to automatically use this controller and the devices attached to it when you do an IPL.

Type ***NO** if you do not want to be able to automatically use this controller and the devices attached to it when you do an IPL. To make this controller available, go to "Varying Objects On and Off" on page 2-4 .

Device wait timer.

This entry specifies the device wait time-out value. This value is used to limit the amount of time the subsystem waits for an action to complete that

does not require a user response. For example, if the subsystem sends a request to a display station to turn on the message-waiting light, and a response to that request is not received before the amount of time specified for this value runs out, the display station is varied off.

For user jobs, the *Device wait timer* prompt is also used. However, an exception is signaled by the work station function manager if a time-out occurs. User programs can monitor for this exception and take appropriate action when received.

The time-out value specified is used for all local display stations and printers attached to this controller.

Type a value, 2 through 600 seconds, that specifies the maximum number of seconds the system is to wait. The default value is 10 seconds.

Auto-configuration controller.

This entry specifies the description of a controller that should have devices attached to it when the devices are automatically configured.

Although more than one controller description can be created for each controller, only *one* description can be the automatic configuration controller description (the description that has *AUTOCFG(*YES)* specified). Also, only *one* controller description can be varied on at a time. When new devices are automatically configured, they are attached to the automatic configuration controller description, whether or not that description is varied on. If the automatic configuration controller description is *not* varied on at the time a device is automatically configured, the system will be unable to vary on the device.

Type ***NO** if this is not the automatic configuration controller description.

Type ***YES** if this is the automatic configuration controller description.

Note: If you want the *AUTOCFG* parameter to attach devices to a manually configured controller, specify ***YES** on the *AUTOCFG* parameter.

Text description.

Type text that briefly describes the controller and its location. It can be up to 50 characters.

Leave ***BLANK** if no text is to be specified.

After typing all this information, press the Enter key to create your local work station controller description. The Work with Controller Descriptions

display is shown next. To verify that the controller description has been created, press F5, and the controller description you just created is shown in the list on this display.

If, for some reason, the controller description cannot be created, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Controller Descriptions display and start over.

After you have created your first local work station controller description, you can continue creating other local work station controller descriptions from the Work with Controller Descriptions display by pressing F6.

You should use the information already filled in on the Local Twinaxial Work Station Controller Index and repeat this process for each local work station controller you are configuring.

After you have created all your local work station controller descriptions, press F5 so they are shown in the list on the Work with Controller Descriptions display. Then, press the Enter key to return to the Configure Local Hardware menu. Proceed to the next topic to configure your local display stations.

Creating Configuration Descriptions for Local Twinaxial Display Stations

For each local display station you are configuring on your system, you should have information filled in on a Local Work Station Diagram (Form C1, C2, or C3). For more information on filling out the planning forms, see Chapter 1, "Planning for Configuration."

Notes:

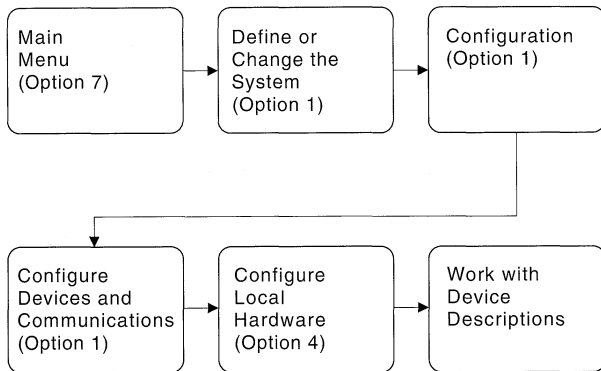
1. The controller description for the local work station controller to which this display station is attached should already be created.
2. If you have PC display stations attached to your system using the work station function, go to one of the PC Support/400 installation and administration guides that are listed in the Bibliography for information on how to configure your PC display stations.

- For information on attaching a personal computer or a Personal System/2 system that is running PC Support Asynchronous Communications, see the *ASCII Work Station Reference and Example*.

To configure your local twinaxial display stations, you may use the configuration menus. If you are already at the Configure Local Hardware menu, go directly to step 5.

- From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
- From the Define or Change the System menu, select option 1 (Configuration). The Configuration menu is shown.
- From the Configuration menu, select option 1 (Configure devices and communications). The Configure Devices and Communications menu is shown.
- From the Configure Devices and Communications menu, select option 1 (Configure local hardware). The Configure Local Hardware menu is shown.
- From the Configure Local Hardware menu, select option 4 (Display stations). The Work with Device Descriptions display is shown.

The following shows the menus and options to select.



RV2H415-0

The local display station descriptions for your system that have already been configured are listed on this display. If this is the first display station you are configuring, no display station descriptions are listed.

- From the Work with Device Descriptions display, press F6 (Create).

The Create Device Description display is shown. This display asks you for the name of the device to be created.

Note: You can also access this display by using the Work with Hardware Resources (WRKHDWRSC) command. Type

WRKHDWRSC *LWS

to work with local work station controllers. Using the top of your Local Work Station Diagram (Form C1, C2, or C3) determine which twinaxial work station controller your display station is attached to. Position the cursor in the option field for that controller, and select option 9 (Work with resource). The Work with Controller/Device Resources display is shown. Find the display station to be configured from the list of detected devices, and select option 7 (Add configuration description) for that display station. When the Create Device Description display is shown, the device type/class is already filled in with information detected by the system. When you type your device name, a list of prompts is shown, with values for the prompts already filled in with information detected by the system. You can accept this information by pressing the Enter key, or you may change these values. Pressing F10 (Additional parameters) allows you to change the parameters that are not automatically displayed. For the device name, refer to the Local Work Station Diagram, C1, C2, or C3. The device name should be listed in the box for this display station.

Type the device name on the Create Device Description display for the *New device description* prompt.

Press the Enter key. A list of prompts is shown.

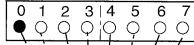
C1

Local Work Station Diagram (Twinaxial Cabling)

Page
Number _____

System AS/400 System Card Address 0130
Service for Cabling Cindy Jones Work Station Controller Name CTL01
Telephone Number 123-4567 Location of Twinaxial Work Station Attachment RM 101

Twinaxial Work Station Attachment Port Numbers



Display
Station
Name

Type and
Model

Display
Station
Address

| | |
|--|-----------|
| Device Name | DISPLAY01 |
| Device Type, Model | 3180, 2 |
| Location | RM 102 |
| Device Address | |
| Display <input checked="" type="checkbox"/> Printer <input type="checkbox"/> | 0 |
| Telephone Number | 1-2345 |
| Device Name | DISPLAY02 |
| Device Type, Model | 3180, 2 |
| Location | RM 103 |
| Device Address | |
| Display <input checked="" type="checkbox"/> Printer <input type="checkbox"/> | 1 |
| Telephone Number | 1-2346 |
| Device Name | DISPLAY03 |
| Device Type, Model | 5291, 2 |
| Location | RM 104 |
| Device Address | |
| Display <input checked="" type="checkbox"/> Printer <input type="checkbox"/> | 2 |
| Telephone Number | 1-2347 |
| Device Name | PRINTER01 |
| Device Type, Model | 4214, 2 |
| Location | RM 102 |
| Device Address | |
| Display <input type="checkbox"/> Printer <input checked="" type="checkbox"/> | 3 |
| Telephone Number | 1-2345 |

Example

RSLH518-3

Some of the prompts are already filled in. These represent the system defaults. You need to change these only if you want one of the other choices for your configuration.

Notes:

1. All of the prompts in the following paragraphs may not be shown on the display, depending on the choices you make for the other prompts.
2. You do not need to press F10. The additional prompts that you need for your configuration are shown automatically.

Once you have filled in the prompts on one display, press the Roll Up or Page Down key. Continue typing your choices until all the prompts have been filled in. (Several prompt displays may be shown.)

Following is a description of each prompt and the valid choices.

Device class.

Type *LCL, for local display station.

Device type.

Type the device type for this display station. The device type should be a 4-digit number listed on Form C1, the Local Work Station Diagram, in the box for this display station.

Note: Some display station types are not recognized by the system. These display station types have to be configured as something the system recognizes, and the system treats the display station as if it were the display station it is configured as. For example, a personal computer attached to a local twinaxial work station controller running PC Support/400 is configured as a 5150 Model 1.

For a list of devices that attach to the 5208 Link Protocol Converter, see the *5208 Model 1 ASCII-5250 Link Protocol Converter User's Guide*.

For a list of devices that attach to the 5209 Link Protocol Converter, see the *5209 Model 1 3270-5250 Link Protocol Converter User's Guide*.

For a list of devices that attach to the ROLMbridge 5250 Link Protocol Converter, see the *CBX 8000 Installation Manual*.

For information about configuring and attaching printers to the 3197, 3476, 3486, 3487, and 3488 Display Stations, see their respective Display Station manuals.

If you have display stations attached to the 5259 Migration Data Link, record those device types. If an address is to be used for migration, use a

device type of 5292 and a device model of 2, and refer to the *5259 Migration Data Link User's Guide* for more information.

The following list contains the local display station device types and device models and also the configured-as device types and device models.

Table 5-1 (Page 1 of 2). Display Station Device Types and Models

| Actual Device Type | Actual Device Model | Configured as Device Type | Configured as Model Number |
|---|--|---------------------------|--------------------------------------|
| 3179 | 2 (Color) | Same | Same |
| 3180 | 2 | Same | Same |
| 3196 | A1, A2, B1, B2 | Same | Same |
| 3197 | C1 (Color), C2 (Color), D1, D2, W1, W2 | Same | Same |
| 3197 | D4 | Same | D1 |
| 3476 | EA, EC1, EG | Same | Same (except EG is configured as EA) |
| 3477 | FA, FC, FD, FE, FG, FW | Same | Same |
| 3486 | BA, BG | Same | BA |
| 3487 | HA, HC, HG, HW | Same | Same |
| 3488 with a monochrome monitor | H1 | 3486 | BA |
| 3488 with a monochrome, 132-column monitor | H1 | 3487 | HW |
| 3488 with a color monitor | H1 | 3487 | HC |
| 5251 | 11 | Same | Same |
| 5291 | 1, 2 | Same | Same |
| 5292 | 1 (Color) | Same | Same |
| 5292 | 2 (Graphics) | Same | Same |
| 7561 | J61 | 5555 | B01,C01 |
| Personal computer or Personal System/2 running 5250 Emulation Program Version 2.10, 2.11, or 2.12 | —2 | 5291 5292 | 2 2 |
| Personal computer or Personal System/2 running 5250 Emulation Program Version 2.2 or 2.3 | —2 | 3196 5292 | A2 2 |

Table 5-1 (Page 2 of 2). Display Station Device Types and Models

| Actual Device Type | Actual Device Model | Configured as Device Type | Configured as Model Number |
|--|---------------------|---------------------------|----------------------------|
| Personal computer or Personal System/2 running PC Support/400 | — ³ | 5150 | 1 |
| Personal System/2 running Work Station Emulation Program Version 1 | — ⁴ | 3196 5292 | A2 2 |

- 1 A 3476 model EC is not an actual 3476 device, it only emulates one. The 3476 model EC is a 6143 or 6145 work station adapter card that emulates either a 3476 model EA or EC.
- 2 Refer to the *IBM Enhanced 5250 Emulation Program*, G570-2221, for the complete list of actual model numbers.
- 3 Refer to one of the PC Support/400 installation and administration guides that are listed in the Bibliography for the complete list of actual model numbers.
- 4 Refer to the *IBM System 36/38 Work Station Emulation Program Version 1.0 User's Guide*, SC21-9680, for the complete list of actual model numbers.

Find your device type in table 5-1, and enter the device type listed under the *Configured-as Device Type* column.

Note: The double-byte character set display stations are listed in Appendix A, "Configuration of Double-Byte Character Set Devices."

Device model.

Type the device model of the display station. The device model should be on Form C1, the Local Work Station Diagram. If your display station model in the figure is listed as one that should be configured as a different device model, enter the device model from the *Configured-as Device Model* column.

Port number.

Type the number of the port on the work station controller to which this display station attaches.

Get the number of the port for this display station from the Local Work Station Diagram.

Switch setting.

Type the switch setting or device address for this display station.

The switch setting is the same as the device address in the box for this display station on the Local Work Station Diagram. It should be a number from 0 through 6.

Online at IPL.

This entry determines whether or not this local display station will be automatically available for use at IPL.

Type ***YES** if you want to be able to automatically use this display station when you do an IPL.

Type ***NO** if you do not want to be able to automatically use this display station when you do an IPL.

To make this device available, go to "Varying Objects On and Off" on page 2-4 .

Attached controller.

Type the name of the controller to which this display station is attached.

You should have already created your local controller descriptions. The name you type here should match what you typed for the controller name for the work station controller to which this display station attaches. That name can also be found on the Local Work Station Diagram beside the *Work Station Controller Name* entry.

Keyboard language type.

Type the three-character keyboard type identifier for this display station.

Notes:

1. The keyboard type for a display station must match the type that was ordered for that particular display station.
2. *SYSVAL instructs the system to use the QKBDTYPE system value.

Use the following figure to find the correct keyboard type for this display station:

| Language or Country | Keyboard Type |
|--|------------------|
| Arabic X/Basic | CLB |
| Austria/Germany | AGB |
| Austria/Germany Multinational | AGI |
| Belgium Multinational | BLI |
| Brazilian Portuguese | BRB |
| Canadian (French) | CAB |
| Canadian (French) Multinational | CAI |
| Cyrillic | CYB |
| Denmark | DMB |
| Denmark Multinational | DMI |
| Finland/Sweden | FNB |
| Finland/Sweden Multinational | FNI |
| France (Azerty) | FAB |
| France (Azerty) Multinational | FAI |
| France (Qwerty) | FQB |
| France (Qwerty) Multinational | FQI |
| Greece | GNB ¹ |
| Hebrew | NCB |
| Iceland | ICB |
| Iceland Multinational | ICI |
| International | INB |
| International Multinational | INI |
| Italy | ITB |
| Italy Multinational | ITI |
| Japan English | JEB |
| Japan English Multinational | JEI |
| Japanese Kanji & United States English | JUB ² |
| Japanese Kanji & Uppercase English | JKB ³ |
| Japan Katakana | KAB ⁴ |
| Korean | KOB |
| Latin 2 | ROB |
| Netherlands | NEB |
| Netherlands Multinational | NEI |
| Norway | NWB |
| Norway Multinational | NWI |
| Portugal | PRB |
| Portugal Multinational | PRI |
| Simplified Chinese | RCB |
| Spain | SPB |
| Spain Multinational | SPI |
| Spanish-Speaking | SSB |
| Spanish-Speaking Multinational | SSI |
| Sweden | SWB |
| Sweden Multinational | SWI |

| Language or Country | Keyboard Type |
|---|---------------|
| Swiss/French Multinational | SFI |
| Swiss/German Multinational | SGI |
| Thai | THB |
| Traditional Chinese | TAB |
| Turkey | TKB |
| United Kingdom | UKB |
| United Kingdom Multinational | UKI |
| United States/Canada | USB |
| United States/Canada Multinational | USI |
| Languages of the former Yugoslavia Multi-national | YGI |

¹ GNB is the default value for the Greece Keyboard Type. The value GKB is also acceptable, and it should be used for older display models.

² For Personal System/55 running 5250 and 3477 display stations that are customized to use United States English instead of Katakana.

³ For Personal System/55, 5295, and 3477 Display Stations.

⁴ For 3196, 3197, 3476, 3477, 3486, 3487, 5251, 5291, 5292, and 3180 Katakana Display Stations.

Character identifier - graphic character set and code page.

Type the character identifier that this display station supports. The character identifier is made up of the graphic character set and code page for this display station.

You need to specify a character identifier so that when a display file is created for this display station, the system translates data sent to the display station and received from the display station into the correct characters.

Leave *SYSVAL if the system is to determine the graphic character set and code page values for this display station.

Type the graphic character set and code page values that match the attributes of this display station. The graphic character set and code page values must be numbers in the range of 1 through 32,767.

The value specified should be based on the attributes of the display station. The following table shows values that are appropriate for each display station keyboard style. The first three digits of the character identifier (CHRID) are the graphic character set, and the second three digits are the code page.

All characters included in the graphic character sets listed for the *Limited CHRID* values can be both entered at and displayed by the device. All characters associated with the *Full CHRID* values can be entered at the display station (including the use of hexadecimal representations), but all characters cannot be displayed by the device.

Values shown in the *Limited CHRID* column should be used for 5291 and 5292 display stations; all other display stations should use the value shown in the *Full CHRID* column.

All display stations that are to be used for OfficeVision/400*, including the 5291 and 5292 display stations, should use the value in the *Full CHRID* column.

Note: When using keyboard type values (KBDTYPE parameter) for devices that support both single-byte and double-byte data (JKB, JUB, KOB, RCB, and TAB), the CHRID values listed are for single-byte data only.

Table 5-2 (Page 1 of 2). Character Identifiers

| Language or Country | Keyboard Type (KBDTYPE) | Limited CHRID | Full CHRID |
|--|---|---------------|------------|
| International and US ASCII | INB | 103 038 | 697 500 |
| Multinational | AGI BLI BRB CAI DMI FAI FNI FQI ICI INI ITI JEI NEI NWI PRI SFI SGI SPI SSI SWI UKI USI | | 697 500 |
| Arabic | CLB | | 235 420 |
| Austria/Germany | AGB | 265 273 | 697 273 |
| Belgium Multinational | BLI | | 697 500 |
| Brazilian Portuguese | BRB | | 697 037 |
| Canadian (French) | CAB | 277 260 | 341 260 |
| Cyrillic | CYB | | 960 880 |
| Denmark/Norway | DMB NWB | 281 277 | 697 277 |
| Finland/Sweden | FNB SWB | 285 278 | 697 278 |
| France | FAB FQB | 288 297 | 697 297 |
| Greece | GNB [†] | | 925 875 |
| Hebrew | NCB | | 941 424 |
| Iceland | ICB | | 697 871 |
| Italy | ITB | 293 280 | 697 280 |
| Japan English | JEB | 297 281 | 697 281 |
| Japanese Kanji and United States English | JUB | | 101 037 |
| Japanese Kanji and Upper-case English | JKB (For Personal System/55 and 3477 display stations) | | 1172 290 |

Table 5-2 (Page 2 of 2). Character Identifiers

| Language or Country | Keyboard Type (KBDTYPE) | Limited CHRID | Full CHRID |
|--|--|---------------|------------|
| Japan Katakana | KAB (For 3196, 3197, 3476, 3477, 3486, 3487, 5251, 5291, 5292, and 3180 Katakana display stations) | | 332 290 |
| Korean | KOB | | 1173 833 |
| Latin 2 | ROB | | 959 870 |
| Netherlands | NEB | | 697 037 |
| Portugal | PRB | 301 037 | 697 037 |
| Simplified Chinese | RCB | | 1174 836 |
| Spain | SPB | 305 284 | 697 284 |
| Spanish Speaking | SSB | 309 284 | 697 284 |
| Swiss/French Multinational | SFI | | 697 500 |
| Swiss/German Multinational | SGI | | 697 500 |
| Thai | THB | | 938 838 |
| Traditional Chinese | TAB | | 1175 037 |
| Turkey | TKB | | 1152 1026 |
| United Kingdom English | UKB | 313 285 | 697 285 |
| United States English | USB | 101 037 | 697 037 |
| Languages of the former Yugoslavia Multinational | YGI | | 959 870 |

¹ GNB is the default value for the Greece Keyboard Type. The value GKB is also acceptable with a Full CHRID value of: 218 423.

Allow blinking cursor.

This entry specifies whether you want to allow the cursor to blink on this display station.

Type ***YES** to allow the cursor to blink.

Type ***NO** to suppress the blinking cursor.

Note: For display stations that have the capability of changing the cursor-blinking attribute using the keyboard setup feature, the value specified in the device description may be overridden.

Auxiliary device - auxiliary device type and address.

For a 5292 Model 2 Display Station with an auxiliary device attached to the IEEE-488 port, type the device type and address of the auxiliary device.

The three valid auxiliary device types are: 7371 (IBM 7371 Plotter), 7372 (IBM 7372 Plotter), and 6180 (IBM 6180 Plotter).

Up to 31 plotters may be attached to the same IEEE-488 port on the 5292 Model 2. Each must have a different IEEE-488 address.

The address must match the switch setting address that is set on the auxiliary device. Valid auxiliary device addresses are 1 through 31.

DBCS feature.

This entry is for double-byte character set (DBCS) devices only. Enter an appropriate value for this display station. For a list of valid values, see Appendix A, "Configuration of Double-Byte Character Set Devices."

Text description.

Type text that briefly describes the display station and its location. It can be up to 50 characters.

Leave ***BLANK** if no text is to be specified.

After typing all this information, press the Enter key and your display station description is created. The Work with Device Descriptions display is shown. To verify that the display station description has been created, press F5, and the display station description you just created is shown in the list on the Work with Device Descriptions display.

If, for some reason, your display station description cannot be created, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

After you have created your first local display station description, you can continue creating other local display station descriptions from this display.

You should use the information already filled in on the Local Work Station Diagrams for local display stations and repeat this process for each local display station you are configuring.

After you have created all your local display station descriptions, press F5 so they are shown in the list on the Work with Device Descriptions display. Then, press the Enter key to return to the Configure Local Hardware menu. Proceed to the next topic to configure your local printers.

Creating Configuration Descriptions for Local Twinaxial Printers

For each local printer you are configuring on your system, you should have information filled in on a Local Work Station Diagram (Form C1, C2, or C3). For more information on filling out the planning forms, see Chapter 4, "Preparing for Configuration," or Chapter 1, "Planning for Configuration."

Notes:

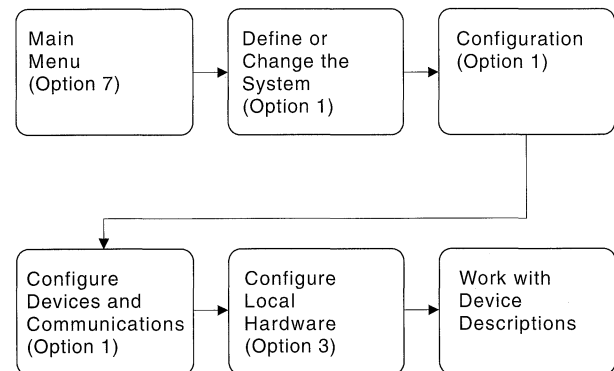
1. The controller description for the local work station controller to which this printer is attached should already be created.
2. If you have PC printers attached to your system using the work station function, go to

one of the PC Support/400 installation and administration guides that are listed in the Bibliography for instructions on how to configure them on the personal computer.

To configure your local twinaxial printers, you may use the configuration menus. If you are already at the Configure Local Hardware menu, go directly to step 5.

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 1 (Configuration). The Configuration menu is shown.
3. From the Configuration menu, select option 1 (Configure devices and communications). The Configure Devices and Communications menu is shown.
4. From the Configure Devices and Communications menu, select option 1 (Configure local hardware). The Configure Local Hardware menu is shown.
5. From the Configure Local Hardware menu, select option 3 (Printers). The Work with Device Descriptions display is shown.

The following shows the menus and options to select:



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The local printer descriptions that have already been created on your system are listed on this display. If this is the first printer you are configuring, no printer descriptions are listed.

6. From the Work with Device Descriptions display, press F6 (Create).

The Create Device Description display is shown. This display asks you for the name of the device to be created.

Note: You can also access this display by using the Work with Hardware Resources (WRKHDWRSC) command. Type

WRKHDWRSC *LWS

to work with local work station controllers. Using the top of your Local Work Station Diagram (Form C1, C2, or C3) determine which twinaxial work station controller your printer is attached to. Position the cursor in the option field for that controller, and select option 9 (Work with resource). The Work with Controller/Device Resources display is shown. Find the printer to be configured from the list of detected devices, and select option 7 (Add configuration description) for that printer. When the Create Device Description display is shown,

the device type/class is already filled in with information detected by the system. When you type your device name, a list of prompts is shown, with values for the prompts already filled in with information detected by the system. You can accept this information by pressing the Enter key, or you may change these values. Pressing F10 (Additional parameters) allows you to change the parameters that are not automatically displayed.

For the device name, refer to the Local Work Station Diagram (Form C1, C2, or C3). The device name should be listed in the box for this printer.

Type the device name on the Create Device Description display for the *New device description* prompt.

Press the Enter key. A list of prompts is shown.

C1 Local Work Station Diagram (Twinaxial Cabling) Page Number ____

System AS/400 System Card Address 0130

Service for Cabling Cindy Jones Work Station Controller Name CTL01

Telephone Number 123-4567 Location of Twinaxial Work Station Attachment RM 101

Twinaxial Work Station Attachment Port Numbers

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|

Device Name DISPLAY01
 Device Type, Model 3180, 2
 Location RM 102
 Device Address _____
 Display Printer 0
 Telephone Number 1-2345

Device Name DISPLAY02
 Device Type, Model 3180, 2
 Location RM 103
 Device Address _____
 Display Printer 1
 Telephone Number 1-2346

Device Name DISPLAY03
 Device Type, Model 5291, 2
 Location RM 104
 Device Address _____
 Display Printer 2
 Telephone Number 1-2347

Device Name PRINTER01
 Device Type, Model 4214, 2
 Location RM 102
 Device Address _____
 Display Printer 3
 Telephone Number 1-2345

Printer Name
 Type and Model
 Printer Address

Example

RSLH519-3

Some of the prompts are already filled in. These represent the system defaults. You need to

change these only if you want one of the other choices for your configuration.

Notes:

1. All of the prompts in the following list may not be shown on the display, depending on the choices you make for the other prompts.
2. You do not need to press F10. The additional prompts that you need for your configuration are shown automatically.

Once you have filled in the prompts on one display, press the Roll Up or Page Down key. Continue typing your choices until all the prompts have been filled in.

Following is a description of each prompt and the valid choices.

Device class.

Type *LCL for local printer.

Device type.

Type the device type for this printer. The device type should be a 4-digit number listed on the Local Work Station Diagram in the box for this printer.

Note: Some device types are not recognized by the system. These device types must be configured as something the system recognizes, and the system treats the device as if it were the type of

device it is configured as. For example, the 4210 Model 1 Printer must be configured as a 4214 Model 2 Printer.

For a list of devices that attach to the 5208 Link Protocol Converter, see the *5208 Model 1 ASCII-5250 Link Protocol Converter User's Guide*.

For a list of devices that attach to the 5209 Link Protocol Converter, see the *5209 Model 1 3270-5250 Link Protocol Converter User's Guide*.

For a list of devices that attach to the ROLMbridge 5250 Link Protocol Converter, see the *CBX 8000 Installation Manual*.

For information about configuring and attaching printers to the 3197, 3476, 3477, 3486, 3487, and 3488 Display Stations, see their respective Display Station manuals.

If you have printers attached to the 5259 Migration Data Link, record those device types and refer to the *5259 Migration Data Link User's Guide* for more information.

Following is a list of the local printer device types and device models for each type of printer and the configured-as device type and device models:

Table 5-3 (Page 1 of 2). Printer Device Types and Models

| Actual Device Type | Actual Device Model | Configured-as Device Type | Configured-as Device Model |
|--------------------|-------------------------|---------------------------|----------------------------|
| 3812 (non-IPDS) | 1, 2 | 3812 | 1 |
| 3812 (IPDS) | 2 | *IPDS | 0 |
| 3816 (non-IPDS) | 1D, 1S | 3812 | 1 |
| 3816 (IPDS) | 1D, 1S | *IPDS | 0 |
| 4028 | AS1 | *IPDS | 0 |
| 4210 | 1 | 4214 | 2 |
| 4214 | 2 | Same | Same |
| 4224 | 101, 102, 1E2, 1C2, 1E3 | *IPDS | 0 |
| 4230 | 102, 111 | *IPDS | 0 |
| 4230 | 101, 152 | 4214 | 2 |
| 4234 | 2, | Same | Same |
| 4234 | 8, 12 | *IPDS | 0 |
| 4245 | T12, T20 | Same | Same |
| 5219 | D01, D02 | Same | D1, D2 |
| 5224 | 1, 2 | Same | Same |

Table 5-3 (Page 2 of 2). Printer Device Types and Models

| Actual Device Type | Actual Device Model | Configured-as Device Type | Configured-as Device Model |
|--------------------|---------------------|---------------------------|----------------------------|
| 5225 | 1, 2, 3, 4 | Same | Same |
| 5256 | 1, 2, 3 | Same | Same |
| 5262 | 1 | 5256 | 1 |
| 6252 | T08, T12 | 6252, 4245 | T08, T12 |
| 6262 | T12, T14, T22 | 4245 | T12 |

Find your device type in the figure, and enter the device type listed under the *Configured-as Device Type* column.

Note: The double-byte character set printers are listed in Appendix A, "Configuration of Double-Byte Character Set Devices."

Device model.

Type the device model of the printer. The device model should also be listed on Form C1, the Local Work Station Diagram. If your device model in the table above is one that is configured as a different device model, enter the device model listed in the *Configured-as Device Model* column.

Advanced function printing*

This prompt indicates whether or not this printer supports advanced function printing. The 3812, 3816, 4028, 4224, 4234 Printers are capable of advanced function printing.

Type ***YES** if this printer does advanced function printing, and you want to use advanced function printing.

Type ***NO** if this printer does not do advanced function printing, or if you do not want your printer to do advanced function printing.

The default is ***NO**.

AFP* attachment.

This prompt is shown only for printers that have been configured for advanced function printing and indicates how the printer is attached to the system.

Type ***WSC** to indicate that the printer is attached to a work station controller. This is the default. (The other possible value is ***APPC**, used for remote printers attached using APPC/APPN. See the *OS/400* Communications Configuration Reference* for more information.)

Port number.

Type the number of the port on the work station controller to which this printer is attached.

The port for this printer is shown on the Local Work Station Diagram.

Switch setting.

Type the switch setting or device address for this printer.

The switch setting is the same as the device address in the box for this printer on the Local Work Station Diagram. It should be a number 0 through 6.

Online at IPL.

This entry determines whether or not this local printer will automatically be available for use at IPL.

| Type ***YES** if you want to be able to use this printer automatically when you do an IPL.

| Type ***NO** if you do not want to be able to use this printer automatically when you do an IPL. To make this printer available, refer to "Varying Objects On and Off" on page 2-4.

Attached controller.

Type the name of the controller description to which this device is attached.

You should have already created your local controller descriptions. The name you enter here should match what you entered for the controller name for the work station controller to which this printer is attached. The name can also be found on the Local Work Station Diagram, next to the *Work Station Controller Name* entry.

Print quality.

This entry specifies the quality of print that is produced.

Type ***STD** if you want standard quality printouts.

Type ***DRAFT** if you want draft quality printouts.

Type ***NLQ** if you want near letter quality printouts.

Font identifier.

Type the font identifier if this is a 3812, 5219, or Intelligent Printer Data Stream* (IPDS*) Printer. Otherwise, leave this entry blank. See the *Guide to Programming for Printing* for tables of all the valid font identifiers.

Point size.

Specifies the size of a font in points. Valid point size values range from 000.1 to 999.9. The default value for the point size is ***NONE**. If ***DEV** or ***CPI** is selected for the font identifier, then no value is allowed for the point size.

Form feed.

Type the mode in which forms are to be fed to the printer, if it is a 4214, 5219, 5553, or IPDS Printer. Otherwise, leave this entry blank.

Type ***TYPE** if you want the system to select a value that is typical of the printer device type.

Type ***CONT** if you want continuous forms used by the printer (a tractor-feed feature must be attached).

Type ***CUT** if you want sheet feed used by the printer. Each sheet must be manually loaded.

Type ***AUTOCUT** if you want sheets fed automatically into the printer (a sheet-feed feature must be attached).

Separator drawer.

Specifies which drawer is selected for printing separator pages.

Type ***FILE** if you want the separator pages to be printed on paper from the same drawer as the rest of the spooled file.

Type ***1** if you want the separator pages to be printed from drawer 1.

Type ***2** if you want the separator pages to be printed from drawer 2.

Type ***3** if you want the separator pages to be printed from drawer 3.

Separator program.

Specifies a style of separator page by allowing you to call a user exit program while printing job and file separators. The default value is ***NONE**. If you choose an exit program name, you also need to specify a library in which the program is located. For more information, see the *System Programmer's Interface Reference*.

Printer error message.

Specifies whether the printer sends inquiry messages or informational messages for recoverable errors. The operator must respond with action to inquiry messages, while informational messages are information for the operator to use or not.

Type ***INQ** if you want inquiry messages sent for recoverable errors.

Type ***INFO** if you want informational messages sent for recoverable errors.

Message queue and library.

Specifies the message queue and library to which messages for this printer are to be sent.

Leave ***LIBL** for the library, and **QSYSOPR** for the message queue, if you want messages sent to the **QSYSOPR** message queue.

Type the qualified name of the message queue and library to which you want operational messages sent. (If you do not list a library qualifier, ***LIBL** is used to find the queue.)

You could also enter the user profile name. A person's default message queue has the same name as the user profile name for that person. For example, William Smith has a user profile name of **WSMITH**. His default message queue name is also **WSMITH**.

Maximum pending requests.

This prompt is shown only for printers that have been configured for advanced function printing.

Type the maximum number of print requests that may be pending at any point in time.

Valid values range from 1 to 31. The default value is 6.

Print while converting.

This prompt is shown only for printers that have been configured for the Advanced Function Printing (AFP) feature. Files are converted during the printing process.

***YES** must be specified on the AFP parameter.

Type ***YES** if you want AFP files to start printing while they are being converted.

Type ***NO** if you do not want AFP files to start printing while they are converted.

Print request timer.

This prompt is shown only for printers that have been configured for advanced function printing and that will use continuous forms.

Type the number of seconds to wait after a print request has been sent to a printer that has continuous forms before the last printed output is forced into the stacker.

Valid values are *NOMAX and 1 to 3600. *NOMAX indicates to wait indefinitely and is the default.

Form definition and library.

This prompt is shown only for printers that have been configured for advanced function printing and indicates the form definition and library to be used if no other form definition is specified for a print request.

Type the qualified name of the form definition to be used.

The default is form definition F1C10110 and library *LIBL. If *LIBL is used, the libraries in the library list are searched for the form definition.

DBCS feature.

This entry is for double-byte character set (DBCS) devices only. Type the appropriate value for this printer. For a list of valid values, see Appendix A, "Configuration of Double-Byte Character Set Devices."

Host print transform.

| This prompt is for ASCII printers only. Host print
| transform is an Operating System/400 print func-
| tion that converts an SNA character string (SCS)
| data stream into an ASCII data stream. The
| ASCII data stream is then formatted and sent to
| an ASCII printer through one or more hardware
| connections, such as PC Support/400, 3477, or
| 3487 work stations. This single location of the
| transformation allows for consistent ASCII printing
| through any of the hardware connections.

| Type *YES if you want to use the host printer
| transform function.

| Type *NO if you do not want to use the host printer
| transform function. This is the default.

| The following parameters are also available:

| Manufacturer type and model (MFRTYPMDL)
| Paper source 1 (PPRSRC1)
| Paper source 2 (PPRSRC2)
| Envelope source (ENVELOPE)
| ASCII code page 899 support (ASCII899)

For more information on the host print transform function, see the *Guide to Programming for Printing*.

Text description.

Type text that briefly describes the printer and its location. It can be up to 50 characters.

Leave *BLANK if no text is to be specified.

After typing all this information, press the Enter key and your printer description is created. The Work with Device Descriptions display is shown. To verify that the printer description has been created, press F5 and the printer description you just created is shown in the list on this display.

When a printer description is created, the system automatically creates the printer's default output queue in library QUSRSYS. The output queue is given a text description of

'Default output queue for printer xxxxxxxxxx'
where xxxxxxxxxx is the name of the printer.

The default output queue for a printer is owned by the user who created the printer device description. In the case of automatic configuration, both the printer and the output queue are owned by the system profile QPGMR.

If, for some reason, the printer description cannot be created, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

After you have created your first local printer description, you can continue creating other local printer descriptions from the Work with Device Descriptions display.

You should use the information already filled in on the Local Work Station Diagrams for local printers and repeat this process for each local printer you are configuring.

After you have created all your local printer descriptions, press F5 so they are shown in the list on the Work with Device Descriptions display. Then, press the Enter key to return to the Configure Local Hardware menu. At the Configure Local Hardware menu, press F16 to return to the system main menu.

Where to Go after This Chapter

If you have completed your local controller and work station configuration, and you do not have to configure any ASCII work station controllers, devices attached to ASCII work station controllers, tape controllers, tape units, or diskette units, go to Chapter 7, “Electronic Customer Support Configuration,” for instructions on how to configure your electronic customer support communications. If this is not an initial configuration and your electronic customer support communications is already configured, go to Chapter 8, “Saving Your Configuration,” for instructions on how to save your configuration.

If you have completed your local controller and work station configuration, and you need to configure ASCII work station controllers and devices attached to an ASCII work station controller, see the *ASCII Work Station Reference and Example* for more information.

If you have completed your local controller and work station configuration, and have tape controllers, tape units, and diskette units to configure, go to Chapter 6, “Configuring Tape Controllers, Tape Units, and Diskette Units,” for instructions on performing tape controller, tape unit, and diskette unit configuration.

Chapter 6. Configuring Tape Controllers, Tape Units, and Diskette Units

If you choose not to have your tape controllers, tape units, and diskette units configured automatically, you must configure them manually. This section tells you how to manually configure tape controllers, tape units, and diskette units.

Note: Only the 3422, 3430, 3480, and 3490 Tape Units require tape controllers. These tape units are available on the 9404 and 9406 System Units.

Creating Configuration Descriptions for Tape Controllers for the 9404 and 9406 System Units

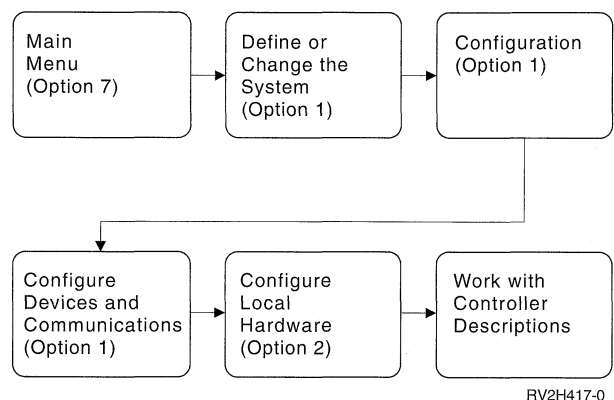
For each tape unit (3422, 3430, 3480, or 3490) you are configuring on your system that requires a tape controller, you should have the tape controller name, type, and model number filled in on a 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1). You should also have already filled in the resource name for each tape controller you are configuring on the Recording Resource Names (Form X1). Instructions for filling out these forms are in Chapter 4, "Preparing for Configuration," and Chapter 1, "Planning for Configuration."

To configure your tape controller, do the following steps. If you are already at the Configure Local Hardware menu, go directly to step 5.

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 1 (Configuration). The Configuration menu is shown.

3. From the Configuration menu, select option 1 (Configure devices and communications). The Configure Devices and Communications menu is shown.
4. From the Configure Devices and Communications menu, select option 1 (Configure local hardware). The Configure Local Hardware menu is shown.
5. From the Configure Local Hardware menu, select option 2 (Tape controllers). The Work with Controller Descriptions display is shown.

The following shows the menus and options to select:



The tape controller descriptions that have already been created on your system are listed on this display. If this is the first tape controller you are configuring, no tape controller descriptions are listed.

6. From the Work with Controller Descriptions display, press F6 (Create).

The Create Controller Description display is shown. This display asks you for the name of the tape controller to be created.

E1 9404 and 9406 Tape Controller and Tape Unit Diagram

System AS/400 System

Service Contact Cindy Jones

Telephone Number 123-4567

Example

Tape Controller

| | |
|------------------------|----------|
| Controller Name | TAPCTLO1 |
| Controller Type, Model | 3422,A01 |

Tape Unit with Tape Controller

| | |
|--------------------|----------|
| Controller Name | TAPCTLO1 |
| Device Name | TAPE02 |
| Device Type, Model | 3422,A01 |
| Switch Setting | 1 |

Tape Unit without Tape Controller

| | |
|--------------------|-----------|
| Device Name | TAPE01 |
| Device Type, Model | 9346,0001 |

| | |
|------------------------|----------|
| Controller Name | TAPCTLO2 |
| Controller Type, Model | 3430,A01 |

| | |
|--------------------|----------|
| Controller Name | TAPCTLO1 |
| Device Name | TAPE03 |
| Device Type, Model | 3422,B01 |
| Switch Setting | 2 |

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

RV2H427-1

For the tape controller name, refer to the appropriate box on the 9406 Tape Controller and Tape Unit Diagram (Form E1).

Type the controller name in the *New controller description* field on the Create Controller Description display.

Press the Enter key. A list of prompts is shown.

Some of the prompts are already filled in. These represent the system defaults. You need to change these only if you want one of the other choices for your configuration.

Notes:

1. All of the prompts in the following list may not be shown on the display, depending on the choices you make for the other prompts.
2. You do not need to press F10. The additional prompts that you need for your configuration are shown automatically.

The following is a description of each prompt and the valid choices:

Controller type.

Type the controller type. This should be a 4-digit number listed in the box for this controller on the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1).

Possible tape controller values are:

- 3422
- 3430
- 3480
- 3490

Controller model.

Type the model number of the tape controller. The model number should be listed on the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1).

Possible values are:

| Type | Model |
|------|----------|
| 3422 | A01 |
| 3430 | A01 |
| 3480 | A11, A22 |
| 3490 | *ANY |

Resource name.

Type the resource name for this tape controller. The resource name was recorded on the Recording Resource Names Form (Form X1).

Online at IPL.

This entry determines whether or not the tape controller description can be automatically used when you do an IPL.

Type *YES if you want to be able to automatically use this controller and the devices attached to it when you do an IPL.

Type *NO if you do not want to be able to use this controller and the devices attached to it automat-

ically when you do an IPL. To make this tape unit available, go to "Varying Objects On and Off" on page 2-4.

Auto-configuration controller.

This entry specifies the description of a controller that should have devices attached to it when it is automatically configured.

Although more than one controller description can be created for each controller, only *one* description can be the automatic configuration controller description (the description that has *AUTOCFG(*YES)* specified). Also, only *one* controller description can be varied on at a time. When new devices are automatically configured, they are attached to the automatic configuration controller description, whether or not that description is varied on. If the automatic configuration controller description is *not* varied on at the time a device is automatically configured, the system will be unable to vary on the device.

Type ***NO** if this is not the automatic configuration controller description.

Type ***YES** if this is the automatic configuration controller description.

Text Description.

Type a brief description about the controller and its location. It can be up to 50 characters.

Leave ***BLANK** if no text is to be specified.

After typing all this information, press the Enter key to create your tape controller description. The Work with Controller Descriptions display is shown next. To verify that the tape controller description has been created, press F5 and the tape controller description you just created is shown in the list on this display.

If, for some reason, the controller description cannot be created, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Controller Descriptions display and start over.

After you have created your first tape controller description, you can continue creating other tape controller descriptions from the Work with Controller Descriptions display by pressing F6.

You should use the information already filled in on Form E1, the 9404 and 9406 Tape Controller and Tape Unit Diagram, and repeat this process for each tape controller you are configuring.

After you have created all your tape controller descriptions, press F5 so they are shown in the list on the Work with Controller Descriptions display. Then, press the Enter key to return to the Configure Local Hardware menu. Proceed to the next topic to configure your tape units.

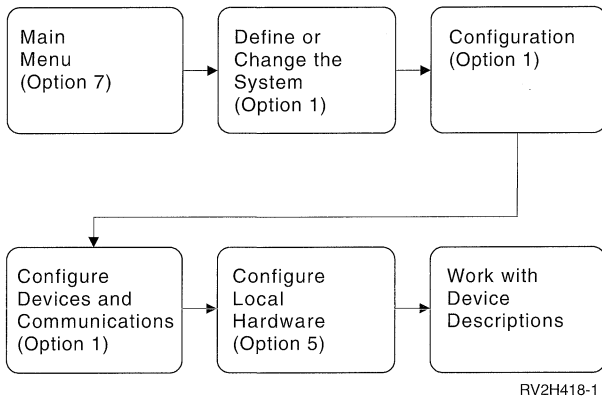
Creating Configuration Descriptions for Tape Units

For each tape unit you are configuring on your 9404 and 9406 System Units, you should have information filled in on a 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1). For each tape unit you are configuring on your 9402 System Unit, you should have information filled in on a 9402 Tape Unit and Diskette Unit Diagram (Form E3). You should also have already filled in the resource name for each tape unit you are configuring on the Recording Resource Names (Form X1). Instructions for filling out these forms are in Chapter 4, "Preparing for Configuration," or Chapter 1, "Planning for Configuration."

To configure your tape units, do the following steps. If you are already at the Configure Local Hardware menu, go directly to step 5.

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 1 (Configuration). The Configuration menu is shown.
3. From the Configuration menu, select option 1 (Configure devices and communications). The Configure Devices and Communications menu is shown.
4. From the Configure Devices and Communications menu, select option 1 (Configure local hardware). The Configure Local Hardware menu is shown.
5. From the Configure Local Hardware menu, select option 5 (Tape drives). The Work with Device Descriptions display is shown.

The following shows the menus and options to select:



RV2H418-1

Note: If you are performing configuration for the first time, the tape unit description for the tape used to install the system already exists. It is called TAP01, if you are using the normal naming convention, or the naming convention based on the device address on your system. Or, it is called T1 if you are using the System/36 style naming convention on your system.

6. From the Work with Device Descriptions display, press F6 (Create).

The Create Device Description display is shown. This display asks you for the name of the device description to be created.

The tape unit descriptions that have already been created on your system are listed on this display. If this is the first tape unit you are configuring, no tape unit descriptions are listed.

If you have a 9404 or 9406 System Unit, refer to the appropriate box on the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1) for the device name.

E1 9404 and 9406 Tape Controller and Tape Unit Diagram

System AS/400 System
 Service Contact Cindy Jones
 Telephone Number 123-4567

Example

| Tape Controller | | Tape Unit with Tape Controller | | Tape Unit without Tape Controller | |
|------------------------|----------|--------------------------------|----------|-----------------------------------|-----------|
| Controller Name | TAPCTLO1 | Controller Name | TAPCTLO1 | Device Name | TAPE01 |
| Controller Type, Model | 3422,A01 | Device Name | TAPE02 | Device Type, Model | 9346,0001 |
| | | Device Type, Model | 3422,A01 | | |
| | | Switch Setting | 1 | | |
| Controller Name | TAPCTLO2 | Controller Name | TAPCTLO1 | Device Name | |
| Controller Type, Model | 3430,A01 | Device Name | TAPE03 | Device Type, Model | |
| | | Device Type, Model | 3422,B01 | | |
| | | Switch Setting | 2 | | |

Tape Name
Type and Model

RV2H428-1

E3 9402 Tape Unit and Diskette Unit Diagram

System AS/400
 Service Contact Cindy Jones
 Telephone Number 123-4567

Tape Unit

| | |
|--------------------|-----------|
| Device Name | TAPE01 |
| Device Type, Model | 6346,0001 |

Diskette Unit

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

Tape Unit

| | |
|--------------------|-----------|
| Device Name | TAPE02 |
| Device Type, Model | 6346,0001 |

Diskette Unit

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

Example

Annotations:
 Tape Name points to TAPE01
 Type and Model points to 6346,0001

RV2H440-0

- | If you have a 9402 System Unit, refer to the appropriate box on the 9402 Tape Unit and Diskette Unit Diagram (Form E3) for the device name.

Type the device name for the *New device description* prompt on the Create Device Description display.

Press the Enter key. A list of prompts is shown.

Some of the prompts are already filled in. These represent the system defaults. You need to change these only if you want one of the other choices for your configuration.

Notes:

1. All of the prompts in the following list may not appear on the display, depending on the choices you make for the other prompts.
2. You do not need to press F10. The additional prompts that you need for your configuration are shown automatically.

The following is a description of each prompt and the valid choices:

Device type.

- | Type the device type for this tape unit. The device type should be a 4-digit number in the box for this tape unit on the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1) or the 9402 Tape Unit and Diskette Unit Diagram (Form E3).

Possible tape unit values are:

| | |
|------|------|
| 2440 | 3422 |
| 3430 | 3480 |
| 3490 | 6343 |
| 6347 | 6348 |
| 6366 | 6368 |
| 6341 | 6342 |
| 6343 | 6346 |
| 7208 | 9346 |
| 9347 | 9348 |

Note: The 3422, 3430, 3480, and 3490 Tape Units require tape controllers. The controller descriptions for the tape controllers to which these tape units are attached should already be created.

Device model.

- | Type the device model of the tape unit. The device model should be listed on the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1) or the 9402 Tape Unit and Diskette Unit Diagram (Form E3).

Possible values are:

| Type | Model |
|------|----------|
| 2440 | A12 |
| 3422 | A01, B01 |
| 3430 | A01, B01 |
| 3480 | B11, B22 |
| 3490 | *ANY |
| 6341 | 0001 |
| 6342 | 0001 |
| 6343 | 0001 |

| | |
|------|------------|
| 6346 | 0001 |
| 6347 | 0001 |
| 6348 | 0001 |
| 6366 | 0001 |
| 6368 | 0001 |
| 7208 | 0002, 0012 |
| 9346 | 0001 |
| 9347 | 0001 |
| 9348 | 0001 |

Resource name.

Type the resource name for this tape unit if it does *not* have a tape controller. The resource name was recorded on the form for Recording Resource Names (Form X1). The resource name is not allowed for 3422, 3430, 3480, or 3490 Tape Units, but is required for the others.

Switch setting.

Type the switch setting of this tape unit if it has a tape controller. For 3422 Tape Units, the possible values are 0 to F. For 3430 Tape Units, the possible values are 0 to 3. This parameter is only valid for 3422, 3430, 3480, and 3490 Tape Units.

Attached controller.

Type the name of the controller to which this device is attached. This parameter is valid only for 3422, 3430, 3480, and 3490 Tape Units.

Online at IPL.

This entry determines whether the tape unit will be automatically available for use at IPL.

Type ***YES** if you want to be able to automatically use this tape unit when you do an IPL.

Type ***NO** if you do not want to be able to automatically use this tape unit when you do an IPL. To make this tape unit available, refer to "Varying Objects On and Off" on page 2-4 for more information.

Assign device at vary on.

This entry specifies whether a 3480 or 3490 tape unit is assigned to the system when the tape unit is varied on.

Type ***YES** if you want a 3480 or 3490 tape unit assigned to the system when the tape unit is varied on.

Type ***NO** if you do not want a 3480 or 3490 tape unit assigned to the system when the tape unit is varied on.

Note: Specifying ***NO** for the ASSIGN parameter when installing the operating system could cause

the tape operation to fail if another system uses the tape unit.

Unload device at vary off.

This entry specifies whether the tape unit is unloaded when the tape unit is varied off.

Type ***YES** if you want the tape unit unloaded when the tape unit is varied off.

Type ***NO** if you do not want the tape unit unloaded when tape unit is varied off.

Message queue and library.

This entry specifies the message queue and library to which messages for this tape unit are to be sent.

Type ***LIBL** for the library and **QSYSOPR** for the message queue if you want messages sent to the QSYSOPR message queue.

Type the qualified name of the message queue and library to which you want operational messages sent. (If no library qualifier is given, ***LIBL** is used to find the queue.)

Text description.

Type text that briefly describes the tape unit and its location. It can be up to 50 characters.

Leave ***BLANK** if no text is to be specified.

After typing this information, press the Enter key and your tape unit description is created. The Work with Device Descriptions display is shown next. To verify that the tape unit description has been created, press F5, and the tape unit description you just created is shown in the list on this display.

If, for some reason, the tape unit description cannot be created, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

After you have created your first tape unit description, you can continue creating other tape unit descriptions from the Work with Device Descriptions display. You should use the information already filled in on either the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1) or the 9402 Tape Unit and Diskette Unit Diagram (Form E3) for any other tape units. Repeat this process for each tape unit you are configuring.

After you have created all your tape unit descriptions, press F5 so they are shown in the list on the Work with Device Descriptions display. Then press the Enter key to return to the Configure Local Hardware menu. Proceed to the next topic to configure your diskette units.

Creating Configuration Descriptions for Diskette Units

For each diskette unit you are configuring on your 9404 and 9406 System Units, you should have information filled in on a 9404 and 9406 Diskette Unit Diagram (Form E2). For each diskette unit you are configuring on your 9402 System Unit, you should have information filled in on a 9402 Tape Unit and Diskette Unit Diagram (Form E3). You also should have already filled in the resource name for each diskette unit you are configuring on the Recording Resource Names (Form X1). Instructions for filling out these forms are in Chapter 4, "Preparing for Configuration," and Chapter 1, "Planning for Configuration."

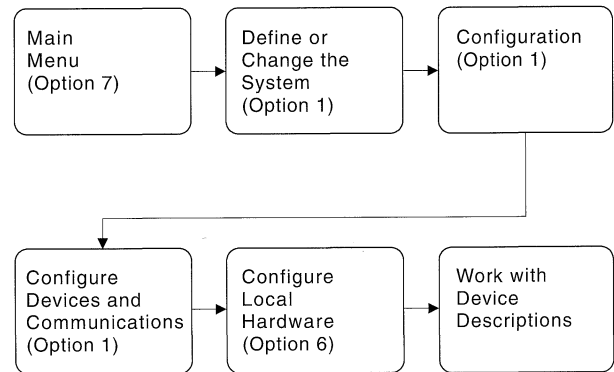
To configure your diskette units, do the following steps. If you are already at the Configure Local Hardware menu, go directly to step 5.

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 1 (Configuration). The Configuration menu is shown.
3. From the Configuration menu, select option 1 (Configure devices and communications). The

Configure Devices and Communications menu is shown.

4. From the Configure Devices and Communications menu, select option 1 (Configure local hardware). The Configure Local Hardware menu is shown.
5. From the Configure Local Hardware menu, select option 6 (Diskette drives). The Work with Device Descriptions display is shown.

The following shows the menus and options to select:



RV2H419-1

All the diskette unit descriptions that have been created for your system are listed on this display. If this is the first diskette unit you are configuring, no diskette unit descriptions are listed.

6. From the Work with Device Descriptions display, press F6 (Create).

The Create Device Description display is shown. This display asks you for the name of the device to be created.

E2 9404 and 9406 Diskette Unit Diagram

System AS/400 System
 Service Contact Cindy Jones
 Telephone Number 123-4567

Example

Diskette Name

Type and Model

| | |
|--------------------|-----------|
| Device Name | D5KT01 |
| Device Type, Model | 9331,0001 |

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

| | |
|--------------------|-----------|
| Device Name | D5KT02 |
| Device Type, Model | 9331,0002 |

| | |
|--------------------|--|
| Device Name | |
| Device Type, Model | |

RV2H441-0

If you have a 9404 or 9406 System Units, see the appropriate box on the 9404 and 9406 Diskette Unit Diagram (Form E2) for the device name.

If you have a 9402 System Unit, refer to the appropriate box on the 9402 Diskette Unit Diagram (Form E3) for the device name.

E3 9402 Tape Unit and Diskette Unit Diagram

System AS/400
 Service Contact Cindy Jones
 Telephone Number 123-4567

Example

Diskette Name

Type and Model

Tape Unit

| | |
|--------------------|-----------|
| Device Name | TAPE01 |
| Device Type, Model | 6346,0001 |

Tape Unit

| | |
|--------------------|-----------|
| Device Name | TAPE02 |
| Device Type, Model | 6346,0001 |

Diskette Unit

| | |
|--------------------|--------|
| Device Name | D5KT01 |
| Device Type, Model | 6132,0 |

Diskette Unit

| | |
|--------------------|--------|
| Device Name | D5KT02 |
| Device Type, Model | 6132,0 |

RV2H442-0

Type the device name for the *New device description* prompt on the Create Device Description display.

Press the Enter key. A list of prompts is shown.

Some of the prompts are already filled in. These represent the system defaults. You need to change these only if you want one of the other choices for your configuration.

Notes:

1. All of the prompts listed below may not appear on the display, depending on the choices you make for the other prompts.
2. You do not need to press F10. The additional prompts that you need for your configuration are shown automatically.

The following is a description of each prompt and the valid choices:

Device type.

Type the device type for this diskette unit. The device type should be a 4-digit number listed in the box for this diskette unit on the 9404 and 9406 Diskette Unit Diagram (Form E2) or the 9402 Tape Unit and Diskette Unit Diagram (Form E3).

Possible diskette unit values are:

- 6131
- 6132
- 6133
- 9331

Device model.

Type the device model of the device. The device model should be shown on the 9404 and 9406 Diskette Unit Diagram (Form E2) or the 9402 Tape Unit and Diskette Unit Diagram (Form E3).

Possible values are:

| Type | Model |
|------|------------|
| 6131 | 0 |
| 6132 | 0 |
| 6133 | 0 |
| 9331 | 0001, 0002 |

Resource name.

Type the resource name for this diskette unit. The resource name was recorded on the Recording Resource Names Form (Form X1).

Online at IPL.

This entry determines whether this diskette unit is automatically available for use at IPL time.

Type ***YES** if you want to be able to automatically use this diskette unit when you do an IPL.

Type ***NO** if you do not want to be able to automatically use this diskette unit when you do an IPL.

To make this diskette unit available, go to "Varying Objects On and Off" on page 2-4 for more information.

Text description.

Type text that briefly describes the diskette unit and its location. It can be no more than 50 characters.

Leave ***BLANK** if no text is to be specified.

After typing all this information, press the Enter key and your diskette unit description will be created. The Work with Device Descriptions display is shown next. To verify the diskette unit description has been created, press F5, and the diskette unit description you just created is shown in the list on this display.

If, for some reason the diskette unit description cannot be created, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

After you have created your first diskette unit description, you can continue creating other diskette unit descriptions from the Work with Device Descriptions display. You should use the information already filled in on either the 9404 and 9406 Diskette Unit Diagram (Form E2) or the 9402 Tape Unit and Diskette Unit Diagram (Form E3) for any other diskette units. Repeat this process for each diskette unit you are configuring.

After you have created all your diskette unit descriptions, press F5 so they are shown in the list on the Work with Device Descriptions display. Then press the Enter key to return to the Configure Local Hardware menu. At the Configure Local Hardware menu, press F16 to return to the system main menu.

Where to Go after This Chapter

If you have completed your tape controller, tape unit, and diskette unit configuration, go to Chapter 7, "Electronic Customer Support Configuration," for instructions on how to configure your electronic customer support communications.

If this is not an initial configuration and your electronic customer support communications is already configured, go to Chapter 8, "Saving Your Configuration," for instructions on how to save your configuration.

| If you do not have electronic customer support
| communications, go to Chapter 8, "Saving Your
| Configuration" for instructions on how to save your
| configuration.

Chapter 7. Electronic Customer Support Configuration

The electronic customer support communications that IBM provides has already been configured for you. However, some configuration information cannot be predetermined that is unique to your system. Therefore, you may have to make some changes to the configuration objects that are provided for your AS/400 system. This section provides instructions on how to make those changes.

Before beginning this task, you, or the person responsible for planning your system, should have already used the *Physical Planning Guide and Reference* to prepare for the support communications. The communications modem and line should already be installed.

Also, you should have received the Support Data sheet in your *Welcome Packet*. This sheet contains the unique information for your support communications configuration, as well as information needed to set up your support contact information. Use this information while performing this task.

Note: For information on how to configure any other type of communications, see the *OS/400* Communications Configuration Reference*.

Configuration Descriptions for Electronic Customer Support

For your support communications, the AS/400 system provides several configuration descriptions. Most of these descriptions do not need to be changed. The following table lists the configuration descriptions that have been sent with your system that should not be deleted.

Table 7-1. Configuration Descriptions

| Technical Information Exchange | Question and Answer Function | IBM Product Information | Service |
|--------------------------------|------------------------------|-------------------------|---------|
| QTILINE | QTILINE | QTILINE | QESLINE |
| QTICTL | QTICTL | QTICTL | QESCTL |
| QTIDA | QQAHOST | QIADSP | QESPAP |
| | | QIAPRT | |

Some of the descriptions listed in the table above may have to be changed. If any of the descriptions need to be changed, they are listed on the Support Data sheet along with information on what needs to be changed.

If you need to make changes to line descriptions (QESLINE and QTILINE), go to "Changing Line Descriptions." If you need to make changes to controller descriptions (QESCTL and QTICTL), go to "Changing Controller Descriptions" on page 7-2. If you need to make changes to a device description (any of the other descriptions in the table above), go to "Changing Device Descriptions" on page 7-3. When you have completed the necessary changes, refer to "Entering Additional Support Contact Information" on page 7-3.

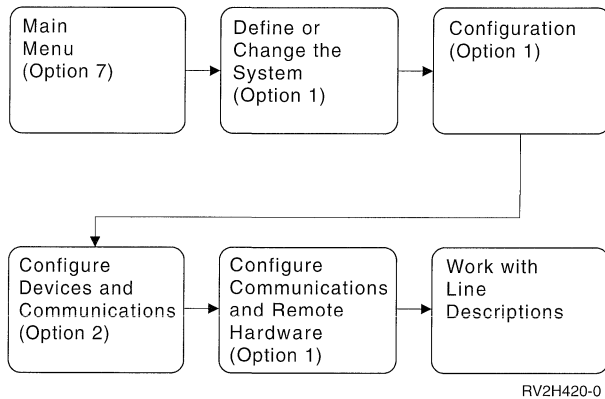
Changing Line Descriptions

The following procedure guides you through the process for changing the communications line descriptions QTILINE or QESLINE. You will need your Support Data sheet to complete the task.

To change the configuration descriptions for your line, do the following:

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 1 (Configuration). The Configuration menu is shown.
3. From the Configuration menu, select option 1 (Configure devices and communications). The Configure Devices and Communications menu is shown.
4. From the Configure Devices and Communications menu, select option 2 (Configure communications and remote hardware). The Configure Communications and Remote Hardware menu is shown.
5. From the Configure Communications and Remote Hardware menu, select option 1 (Lines). The Work with Line Descriptions display is shown.

The following shows the menus and options to take:



The Work with Line Descriptions display lists any line descriptions to which you are authorized that have already been created for your system. Among those listed should be QTILINE and QESLINE.

On the Work with Line Descriptions display, type 2 (Change) next to the line description names that you need to change (refer to the Support Data sheet) and press the Enter key.

Note: If you type 2 in front of more than one name, you are asked for the changed information for one description, and then sequentially asked for the changed information for each of the remaining descriptions before you return to the Work with Line Descriptions display.

A list of prompts is shown with the existing values filled in. The only prompts that you should change are the ones listed on the Support Data sheet.

Be sure that you have entered all the information listed on the Support Data sheet before you press the Enter key.

After you have completed the changes to the line description(s) and pressed the Enter key, the Work with Line Descriptions display is shown.

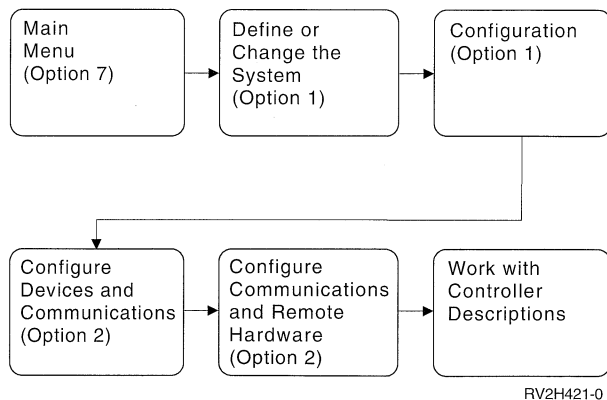
Changing Controller Descriptions

The following procedure guides you through the process for changing the communications controller descriptions QTICTL or QESCTL. You will need your Support Data sheet to complete the task.

To change the configuration descriptions for your controllers, do the following:

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 1 (Configuration). The Configuration menu is shown.
3. From the Configuration menu, select option 1 (Configure devices and communications). The Configure Devices and Communications menu is shown.
4. From the Configure Devices and Communications menu, select option 2 (Configure communications and remote hardware). The Configure Communications and Remote Hardware menu is shown.
5. From the Configure Communications and Remote Hardware menu, select option 2 (Communications controllers). The Work with Controller Descriptions display is shown.

The following shows the menus and options to take:



The Work with Controller Descriptions display lists any communications controller descriptions to which you are authorized that have already been created for your system. Among those listed should be QTICTL and QESCTL.

On the Work with Controller Descriptions display, type 2 (Change) next to the controller description name(s) that you need to change (refer to the Support Data sheet) and press the Enter key.

Note: If you type 2 in front of more than one name, you are asked for the changed information

for one description, and then sequentially asked for the changed information for each of the remaining descriptions before you return to the Work with Controller Descriptions display.

A list of prompts is shown with the existing values filled in. The only prompts that you should change are the ones listed on the Support Data sheet.

Be sure that you have entered all the information listed on the Support Data sheet before you press the Enter key.

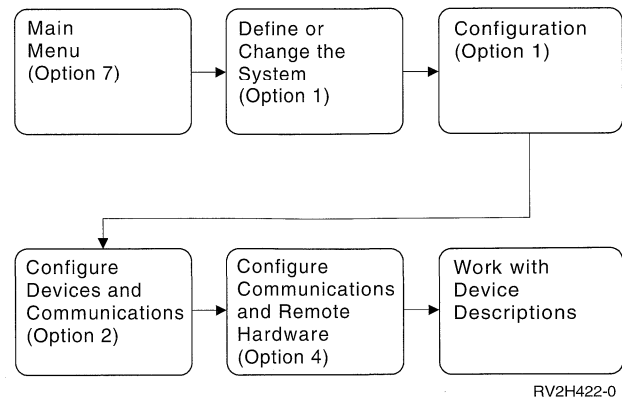
Once you have entered all the unique information for the controller description and pressed the Enter key, the Work with Controller Descriptions display is shown.

Changing Device Descriptions

The following procedure guides you through the process for changing the communications device description(s). You will need your Support Data sheet to complete the task. If the sheet indicates that no changes are necessary, go to “Entering Additional Support Contact Information.” To change the configuration descriptions for your device(s), do the following:

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 1 (Configuration). The Configuration menu is shown.
3. From the Configuration menu, select option 1 (Configure devices and communications). The Configure Devices and Communications menu is shown.
4. From the Configure Devices and Communications menu, select option 2 (Configure communications and remote hardware). The Configure Communications and Remote Hardware menu is shown.
5. From the Configure Communications and Remote Hardware menu, select option 4 (Communications devices). The Work with Device Descriptions display is shown.

The following shows the menus and options to take:



The Work with Device Descriptions display lists any communications device descriptions to which you are authorized that have already been created for your system. Among those listed should be all the ones listed in Table 7-1 on page 7-1.

On the Work with Device Descriptions display, type 2 (Change) next to the device description name(s) that you need to change (refer to the Support Data sheet) and press the Enter key.

Note: If you type 2 in front of more than one name, you are asked for the changed information for one description, and then sequentially asked for the changed information for each of the remaining descriptions before you return to the Work with Device Descriptions display.

A list of prompts is shown with the existing values filled in. The only prompts that you should change are the ones listed on the Support Data sheet.

Be sure that you have entered all the information listed on the Support Data sheet before you press the Enter key.

Once you have entered all the unique information for the device description(s) and pressed the Enter key, the Work with Device Descriptions display is shown.

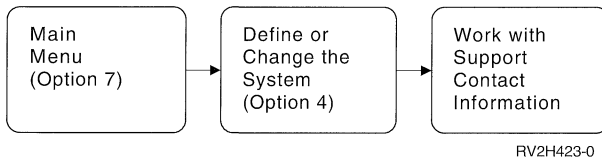
Entering Additional Support Contact Information

Once you have completed the task of changing the configuration descriptions, you are ready to enter the support contact information for your system. The information is listed on the Support Data sheet.

To enter the support contact information, do the following:

1. From the system main menu, select option 7 (Define or change the system). The Define or Change the System menu is shown.
2. From the Define or Change the System menu, select option 4 (Work with support contact information). The Work with Contact Information display is shown.

The following shows the menus and options to take:



The options on the Select Contact Information display match the headings listed on the Support Data sheet. They are:

- Work with question and answer (Q & A) database
- Work with local service information
- Work with IBM product information
- Work with technical information exchange (TIE)
- Work with upgrade order information
- Work with service providers

Select the options, one at a time, of each of the headings that have filled-in information on the Support Data sheet. Type your choices using the information on the sheet.

Note: If you need additional help completing this task, press the Help key on the appropriate menu.

If you need to change the telephone numbers for electronic customer support or technical information exchange (TIE), type CALL QESPHONE or CALL QTIPHONE, respectively, on any command line and press Enter. You will be prompted to enter the new telephone numbers.

Where To Go after This Chapter

If you have completed all your configuration tasks, continue with Chapter 8, "Saving Your Configuration" for additional configuration information.

If you have additional communications configuration tasks to perform, go to the *OS/400* Communications Configuration Reference* for information on how to do those tasks. That manual contains information on how to configure the following:

- Integrated services digital network (ISDN) networks
- Frame relay (FR) networks
- Token-ring networks
- Ethernet local area networks
- Distributed Data Interface (DDI) networks
- Synchronous data link control (SDLC) and X.25 lines
- ISDN Data Link Control (IDLC) lines
- Frame relay (FR) lines
- Distributed data interface (DDI) lines
- Asynchronous communications and binary synchronous communications (BSC)
- Communications controllers
- Communications devices
- Remote work station controllers
- Remote devices (display stations and printers)

Chapter 8. Saving Your Configuration

After you have completed configuring your system, you need to save the configuration. You may want to consider some other things before you begin operating your system. This chapter discusses how to save your configuration, and provides a brief overview of considerations before you begin using your system.

Saving Your Configuration

After you have completed your configuration tasks, you should save your configuration. This allows you to recover from any system failures that require installing your system again. Also, having a saved version allows you to install your system again without reconfiguring devices.

You can save your system configuration by saving:

- Only the configuration objects
- Only the CL source for the configuration
- The entire system

Saving Configured Objects: Use the Save Configuration (SAVCFG) command to save only the objects you have configured. To save the objects you have configured, do the following:

1. At the command line, type **GO SAVE**. You are shown the Save display.
2. From the Save display, select option 10 (Configuration).

Saving CL Source: You can save the CL source for a configuration using option 9 (Retrieve source) on the "Work with..." configuration displays. You can also save the CL source by typing the Retrieve Configuration Source (RTVCFGSRC) command on any display that has a command line and pressing F4 (Prompt).

Note: APPC passwords and authority are not retrieved. You may add the authority parameter to the CL source or change the authority of the object description using the Grant Object Authority (GRTOBJAUT) command.

Saving the CL source for a configuration takes only a few minutes, and can be done on an active

system (you do not have to bring down your subsystems).

Saving the Entire System Configuration: To save your system configuration by saving the entire system, do the following:

1. At the command line, type **GO SAVE**. You are shown the Save display.
2. From the Save display, select option 21 (Entire system).

The next display shown provides you with information about what happens during the save process. Then, you are asked for values for the following commands:

- ENDSBS *ALL *IMMED (End the Subsystems)
- SAVSYS (Save the System)
- SAVCFG (Save the Configuration)
- SAVLIB LIB (*NONSYS) (Save the Non-System Libraries)
- SAVDLO (Save the Document Library Objects)

If you wish to save just the configuration, you do not have to run the SAVLIB or the SAVDLO commands. However, if in addition to your configuration, you wish to save user libraries or documents, you should complete the entire system-saving process.

Note: For additional information about the system saving prompts, press the Help key on the appropriate displays.

For more complete information on saving your system, refer to the *Operator's Guide*.

| You should now print a copy of your system configuration list. On any display with a command line, type:

| **WRKHDWPRD**

| On the Work with Hardware Products display, select option 1 (Work with System Configuration).

| Press F17 (print) and your system configuration list is printed. You must obtain a copy of your system configuration list. This document is required by you or your service representative to

- | handle problems. Place the configuration list with your *Operator's Guide* for future reference.

Installing Multiple Systems

If you are configuring at a central site, with the intention of sending the saved system to be installed at multiple systems, see the *Central Site Distribution Guide* for information on installing multiple systems.

Restoring Your Device Configuration

If, for some reason, you need to restore your device configuration from a save of the system, you can use the Restore Configuration (RSTCFG) command. The RSTCFG command allows you to restore your configuration descriptions either as a group or individually.

- | The system resource management (SRM) parameter on the RSTCFG command specifies the type of SRM information to be restored. The default value for this parameter is *ALL.
- | **Note:** To avoid restoring an incorrect SRM when restoring a device configuration from another system or from a previous release, you must change the value in the SRM parameter to *NONE.

Before your configuration descriptions can be restored, they must be varied off. You can vary off the descriptions by entering the Vary Configuration (VRYCFG) command.

For more information on the RSTCFG and the VRYCFG commands, refer to the online help information for those commands.

Things to Consider After Your Initial Configuration

The following covers aspects of the AS/400 system you might want to consider after you have completed your configuration tasks. This information is intended to give you an overview of some important aspects of the system so that you can make educated decisions when tailoring your system.

For more detailed information on operating your AS/400 system, refer to the *Operator's Guide*.

Libraries: Your system comes with the following libraries in which permanent objects are stored. They are:

- QSYS (the system library)
- QGDDM (the graphics library)
- QUSRSYS (the user's system library)
- QDOC (the document library)
- QHLPSYS (the help library)
- QTEMP (the temporary library)

You may want to create additional libraries to meet special needs of your application, such as:

- Grouping objects according to the type of application, system user, or department that uses the objects.
- Allowing multiple versions of the same objects without requiring unique names. Objects stored in different libraries can have the same name.
- Providing security for a group of objects that contain sensitive information. All the objects in the library are subject to security restrictions placed on the library. For more information about security considerations for storing objects, see the *Basic Security Guide* and the *Security Reference* manual.
- Distinguishing between the test and production versions of files. Libraries can have either test or production attributes. A program that is being tested can only change files that are in a test library.
- Making copies of physical data files that are used for online saves or that are to be saved at the same time the original file is being updated.

If you need additional libraries for your initial applications, you can create them as part of your initial system set up or later.

Security Considerations: System security functions provide a set of standard user profiles and passwords for the following:

- Security officer (QSECOFR)
- Security administrator (QSECADM)
- Programmer (QPGMR)
- System operator (QSYSOPR)
- Work station user (QUSER)
- IBM service representatives (QSRV)

If you are not using security on your system, you do not need to change the passwords for these profiles. If you are using security on your system, you should consider changing the passwords for these profiles. If you would like more information about security considerations, see the *Basic Security Guide* and the *Security Reference*.

Because the security officer's user profile allows a user to do most operations on all objects on the system, the use of this profile should be limited to the one person who is in charge of system security. You should change the security officer's password from the one provided by the system (QSECOFR) to a password that is known only by the security officer.

Also, you can create additional user profiles for your system and you can change the programmer, system operator, and work station user profiles to meet the security needs of your applications. You should review the default authorizations of the IBM-supplied objects and commands before you make any changes. See the *Basic Security Guide* and the *Security Reference* manual for more information about security on your system.

Subsystems: Your system provides several subsystems used to manage and control jobs performed on the system. Each subsystem has its own subsystem description that describes the working environment of the subsystem. In most cases the descriptions provided by the system are sufficient for you to use. However, the following should be considered to determine whether you should change the subsystem descriptions provided with the system.

- Because the storage pools provided by the system are based on a main storage capacity of 1024K bytes, you might need to change the subsystem attributes to accommodate your main storage size and the needs of your applications.
- If specialized operating environments are needed to support your applications, you should create additional subsystem descriptions to provide the appropriate environments. For example, you could place all production work stations in one subsystem to provide a convenient method to start and stop.

The *Work Management Guide* contains more information on subsystems.

Spooling: The following queues for spooled output files are provided with the system:

- Printer output queue, which can be used for one-part paper (QPRINT)
- Printer output queue, which can be used for two-part paper (QPRINT2)
- Printer output queue, which can be used for special forms (QPRINTS)
- Diskette output queue (QDKT)

You might want to create additional output queues for special requirements, such as:

- Additional output queues for special forms
- Printer output queues for each work station printer
- Printer output queues for output requiring special print belts or trains (for example, 4245 and 6262 printers)

By providing specialized output queues, you can reduce the amount of operator intervention required when special forms, print belts, or trains are used. Thus, you can allow output with special requirements to be accumulated and then printed at one time instead of having the system operator change the forms, print belt, or train for each job.

The *Guide to Printing Manual* contains information for spooling support concerning printing.

System Values: The AS/400 system provides you with a set of system values that allow you to specify certain attributes of the system. These values can be used to tune the performance of your system, set system editing values, set the default library list, and control some functions during the starting of the OS/400 operating system. A complete list and description of these system values is contained in the *Work Management Guide*. You should review the system values to determine whether or not you want to change any of these attributes.

Where to Go after This Chapter

If you have completed all your configuration tasks, your system should be ready for use. Go to the *Operator's Guide* for information on how to operate your system. If you would like information on tailoring your configuration, continue with Chapter 9, "Tailoring Your Configuration."

Chapter 9. Tailoring Your Configuration

The configuration descriptions you created when your system first arrived may have been adequate for your system originally. However, because of possible changing systems needs and a changing system environment, you may want to change your descriptions, add new ones, or just change the location of the hardware.

In addition to tailoring your configuration, you can also customize your work stations. The customizing functions enable you to customize:

- ASCII printers
- ASCII display stations (including keyboards)
- ASCII printers attached to 3477 Model H, 3486, 3487, and 3488 twinaxial displays
- Keyboards for twinaxial display stations

More information about customizing work stations is in the *Workstation Customization Function Programmer's Guide*.

This chapter is designed to help you tailor your system as the result of a changing system environment.

Changing Existing Configurations

The process for changing existing configurations is very similar to the process for creating initial configurations. You can use the same menus and "Work with..." configuration displays for the change function as you used for the create function.

Using the Menus and "Work with..." Configuration Displays

You can use the configuration menus and "Work with..." configuration displays to change your existing configuration descriptions. From the "Work with..." configuration displays, you can perform any of the configuration functions necessary to efficiently change your configuration.

Changing Configuration Description Names

The names that you assign originally to your configuration descriptions can be changed by using the Rename Object (RNMOBJ) command. If you decide to change your naming convention, or decide to change the names that were assigned originally by you or by automatic configuration, you have two options. You can either use the RNMOBJ command on each configuration description, or you can delete the original descriptions, and then create new ones, assigning new names.

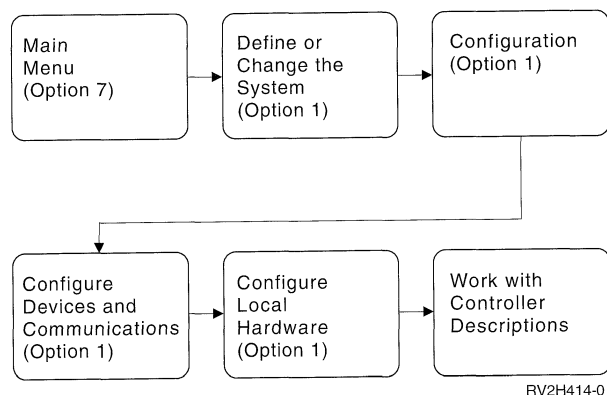
Notes:

1. If you have changed your naming convention, and you want automatic configuration to create your configuration descriptions for you, you must delete the original descriptions. Once you delete a configuration description for a local twinaxial controller, a local ASCII controller, a tape controller, a tape unit, a diskette unit, or a local twinaxial device (display station or printer), automatic configuration creates a new description using the new naming convention. (Automatic configuration does *not* create a new description for devices attached to an ASCII work station controller. You must create these new descriptions manually.) See Chapter 3, "Using Automatic Configuration," for more information about changing your naming convention.
2. Do not begin your configuration description names with the letter Q. Names beginning with the letter Q are reserved for use by the system. If you create configuration description names beginning with the letter Q, you may be duplicating names that are already being used. For example, QINCTL is a reserved controller description name used during OS/400 installation. QINDEV is a reserved device description name that is also used during OS/400 installation.

Before you delete the old descriptions, you should print a copy of the original description or use the Retrieve source option to keep a copy of the CL source for the description so that you have a record of your choices. This way you can create the exact description with only a change in the name.

Changing Work Station Controller Descriptions

To change your local twinaxial or ASCII controller description, use the same menus you used to create the descriptions:



By starting at the system main menu, and taking the appropriate options shown in the preceding diagram, the Work with Controller Descriptions display is shown. The display lists all the local controller descriptions that you have configured on your system.

From the Work with Controller Descriptions display, you can do any of the configuration tasks on the controller descriptions listed. The options on this display allow you to change, copy, delete, display, and print your controller descriptions; work with the configuration status of your controller descriptions; retrieve the CL source for your controller descriptions; and print the addresses of all the devices attached to your controllers. You may, for example, want to view or print a particular description so that you know exactly how that controller is configured before you make the changes.

To change an existing controller description from this “Work with...” display, you need the name of the controller you are planning to change. The

“Work with...” display provides you with the name, type, and text associated with each controller to help you identify the correct controller.

Type 2 in the option field next to the entry for the controller description to be changed and press the Enter key.

Note: On the Work with Controller Descriptions display, you can enter an option for more than one description. For example, if you want to change two different controller descriptions, type 2 in front of both the description names. You are asked for the changes to each controller description one at a time, before the “Work with...” display is shown again.

```

Work with Controller Descriptions          System: SYS325
Position to . . . . . Starting characters
Type options, press Enter.
 2=Change  3=Copy  4=Delete  5=Display  6=Print  7=Rename
 8=Work with status  9=Retrieve source  12=Print device addresses

Opt  Controller  Type  Text
-   CTL01      6040  1st local work station controller
-   CTL02      6041  2nd local work station controller (ASCII)
-   CTL03      6050  3rd local work station controller
-   CTL04      5294  1st remote work station controller
-   CTL05      5294  2nd remote work station controller

Parameters or command
====>
F3=Exit  F4=Prompt  F5=Refresh  F6=Create  F9=Retrieve  F12=Cancel
F14=Work with status
  
```

The next display shown contains the list of prompts associated with the controller description along with the current values assigned for this controller. Type your choices for the values you intended to change and press the Roll Up or Page Down key. Any prompts you do not want to change should be left as they are.

Also, any prompts that have the *SAME value filled in do not apply to the type of controller you are working with. Do not change these values. You will receive an error message if you attempt to change the *SAME values.

Note: For an explanation of a particular prompt, press the Help key with the cursor located on that prompt.

Continue typing your choices until all the prompts have been shown. (Several prompt displays may be shown.) After the last prompt display is shown, press the Enter key. The Work with Controller

Descriptions display is shown and the change is complete.

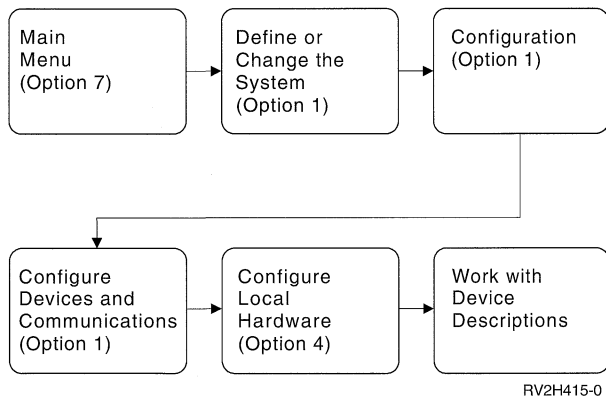
If, for some reason, the controller description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Controller Descriptions display and start over.

After changing your controller description, you can continue to use the "Work with..." display for other configuration tasks.

Note: For more detailed information about using the "Work with..." display, refer to online help information for that display.

Changing Display Station Descriptions

To change your descriptions for display stations attached to local twinaxial or ASCII work station controllers, use the same menus you used to create the descriptions:



By starting at the system main menu, and taking the appropriate options shown in the preceding diagram, the Work with Device Descriptions display is shown. The display lists all the display station descriptions you have configured on your system to which you are authorized.

From the Work with Device Descriptions display, you can do any of the configuration functions on the display station descriptions listed. The options on this display allow you to change, copy, delete, display, and print your display station descriptions; work with the status of your display station descriptions; and retrieve the CL source for your display station descriptions. You may, for

example, want to view or print a particular description so that you know exactly how that display station is configured before you make the changes.

To change an existing display station description from this "Work with..." display, you need the name of the display station you are planning to change. The "Work with..." display provides you with the name, type, and text associated with each display station to help you identify the correct display station.

Type 2 in the option field next to the entry for the display station description to be changed and press the Enter key.

Note: On the Work with Device Descriptions display, you can enter an option in front of more than one description. For example, if you want to change two different display station descriptions, you can type 2 in front of both of the description names. You are asked for the changes to each display station description one at a time, before the "Work with..." display is shown again.

```

Work with Device Descriptions                               System: SYS325
Position to . . . . . Starting characters
Type options, press Enter.
2=Change 3=Copy 4=Delete 5=Display 6=Print 7=Rename
8=Work with status 9=Retrieve source

Opt Device Type Text
- DSP01 5291 Console (system operator office)
- DSP02 5292 Advertising office 2-4325
- DSP03 5251 Secretaries office 2-8745
- DSP04 5291 Accounting office (Peter) 2-8801
- DSP05 3180 Accounting office (Jackie) 2-4596
- DSP06 3180 Jan Jones office 2-5629
- DSP07 5291 Bob Athen office 2-7427
- USPH8 3151 Storage room 2-6372
- DSP09 5292 Vice President office 2-0906
More...

Parameters or command
====>
F3=Exit F4=Prompt F5=Refresh F6=Create F9=Retrieve F12=Cancel
F14=Work with status
  
```

The next display contains the list of prompts associated with the display station description along with the current values assigned for this display station. Type your choices for the values you intended to change and press the Roll Up or Page Down key. Any prompts you do not want to change should be left as they are.

Also, any prompts that have the *SAME value filled in do not apply to the type of display station you are working with. You should leave *SAME, or an error occurs when you try to enter the change.

Note: For an explanation of a particular prompt, press the Help key with the cursor located on that prompt.

Continue typing your choices until all the prompts have been shown. (Several prompt displays may be shown.) After the last prompt display is shown, press the Enter key. The Work with Device Descriptions display is shown and the change is complete.

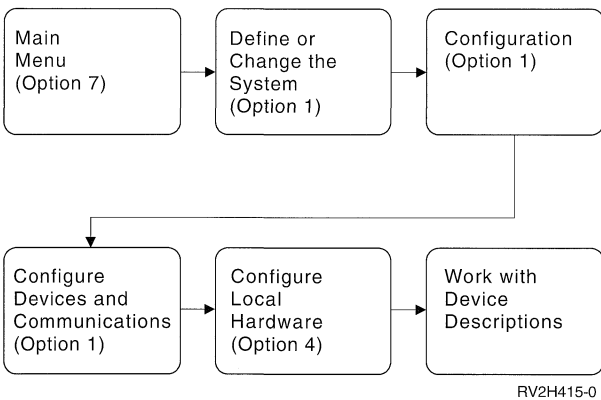
If, for some reason, the display station description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

After changing your display station description, you can continue to use the “Work with...” display for other configuration tasks.

Note: For more detailed information about using the “Work with...” display, refer to the online help information for that display.

Changing Keyboard Language Type:

To change your keyboard language type, use the same menus you used to create the descriptions:



By starting at the system main menu, and selecting the appropriate options shown in the preceding diagram, the Work with Device Descriptions display is shown. The display lists all the display station descriptions you have configured on your system to which you are authorized.

From the Work with Device Descriptions display, select the change option.

- | To change the keyboard language type specified
- | for a particular display station, you need the name of the display station you are planning to change. The “Work with...” display provides you with the name, type, and text associated with each display station to help you identify the correct display station.

Type 2 in the option field next to the entry for the display station description to be changed and press the Enter key.

```

Work with Device Descriptions                               System:  SYS325
Position to . . . . . Starting characters
Type options, press Enter.
2=Change  3=Copy  4=Delete  5=Display  6=Print  7=Rename
8=Work with status  9=Retrieve source

Opt  Device      Type      Text
--  -
DSP01 5291 Console (system operator office)
--  -
DSP02 5292 Advertising office 2-4325
--  -
DSP03 5251 Secretaries office 2-8745
--  -
DSP04 5291 Accounting office (Peter) 2-8801
--  -
DSP05 3180 Accounting office (Jackie) 2-4596
--  -
DSP06 3180 Jan Jones office 2-5629
--  -
DSP07 5291 Bob Athen office 2-7427
--  -
DSP08 3151 Storage room 2-6372
--  -
DSP09 5292 Vice President office 2-0906
More...

Parameters or command
==>
F3=Exit  F4=Prompt  F5=Refresh  F6=Create  F9=Retrieve  F12=Cancel
F14=Work with status
  
```

The next display contains the list of prompts associated with the display station description along with the current values assigned for this display station. Type your choice for the new keyboard language type value. Any prompts you do not want to change should be left as they are.

Also, any prompts that have the *SAME value filled in do not apply to the type of display station you are working with. You should leave *SAME, or an error occurs when you try to enter the change.

Note: For an explanation of a particular prompt, press the Help key with the cursor located on that prompt.

After changing the keyboard language type value, press the Enter key. The Work with Device Descriptions display is shown and the change is complete.

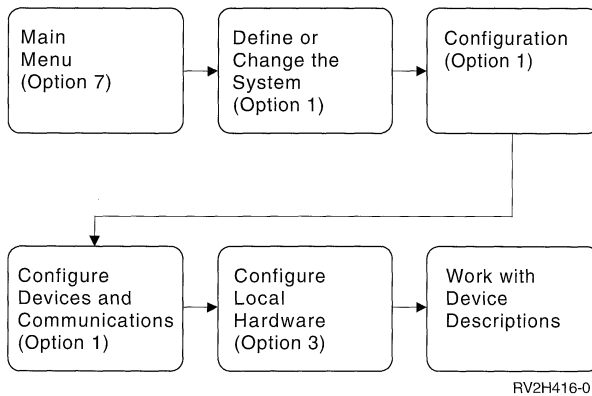
If, for some reason, the display station description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back

to the Work with Device Descriptions display and start over.

Note: For more detailed information about using the “Work with...” display, refer to the online help information for that display.

Changing Printer Descriptions

To change your local twinaxial or ASCII printer descriptions, use the same menus you used to create the descriptions:



By starting at the system main menu, and taking the appropriate options shown in the preceding diagram, the Work with Device Descriptions display is shown. The display lists all the local printer descriptions you have configured on your system to which you are authorized.

From the Work with Device Descriptions display you can do any of the configuration functions on the printer descriptions listed. The options on this display allow you to change, copy, delete, display, and print your printer descriptions; work with the configuration status of your printer descriptions; and retrieve the CL source for your printer descriptions. You may, for example, want to view or print a particular description so that you know exactly how that printer is configured before you make the changes.

To change an existing printer description from this “Work with...” display, you need the name of the printer you are planning to change. The “Work with...” display provides you with the name, type, and text associated with each printer to help you identify the correct printer.

Type 2 in the option field next to the entry for the printer description to be changed and press the Enter key.

Note: On the Work with Device Descriptions display, you can enter an option in front of more than one description. For example, if you want to change two different printer descriptions, you can type 2 in front of both of the description names. You are asked for the changes to each printer description one at a time, before the “Work with...” display is shown again.

```

Work with Device Descriptions          System: SYS325
Position to . . . . . Starting characters
Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display  6=Print  7=Rename
  8=Work with status  9=Retrieve source

Opt Device      Type      Text
- PRT01        5219      System printer (system operator office)
- PRT02        5219      Advertising office 2-4325
- PRT03        4245      Secretaries office 2-8745
- PRT04        3812      Accounting office (Peter) 2-8801
- PRT05        3812      Accounting office (Jackie) 2-4596
- PRT06        5204      Jan Jones office 2-5629
- PRT07        *IPDS     Graphics

Parameters or command
====>
F3=Exit  F4=Prompt  F5=Refresh  F6=Create  F9=Retrieve  F12=Cancel
F14=Work with status

(C) Copyright IBM Corp. 1980, 1989.
  
```

The next display shown contains the list of prompts associated with the printer description along with the current values assigned for this printer. Type your choices for the values you intended to change and press the Roll Up or Page Down key. Any prompts you do not want to change should be left as they are.

Also, any prompts that have the *SAME value filled in do not apply to the type of printer you are working with. You should leave *SAME, or an error occurs when you try to enter the change.

Note: For an explanation of a particular prompt, press the Help key with the cursor located on that prompt.

Continue typing your choices until all the prompts have been shown. (Several prompt displays may be shown.) After the last prompt display is shown, press the Enter key. The Work with Device Descriptions display is shown and the change is complete.

If, for some reason, the printer description cannot be changed, an error display is shown. From this

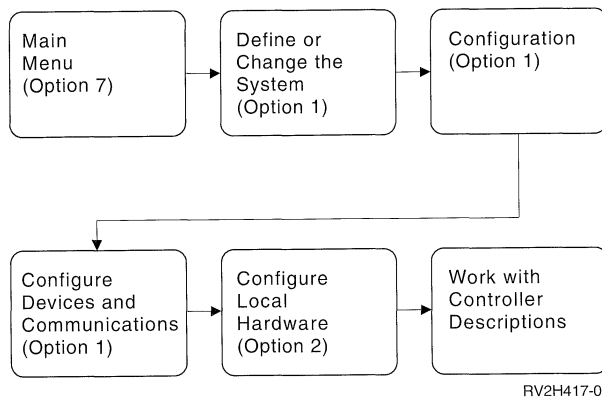
display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

After changing your printer description, you can continue to use the “Work with...” display for other configuration tasks.

Note: For more detailed information about using the “Work with...” display, refer to online help information for that display.

Changing Tape Controller Descriptions

To change your tape controller descriptions, use the same menus you used to create the descriptions:



By starting at the system main menu and taking the appropriate options shown in the preceding diagram, the Work with Controller Descriptions display is shown. The display lists all the tape controller descriptions you have configured on your system to which you are authorized.

From the Work with Controller Descriptions display, you can do any of the configuration functions on the tape controller descriptions listed. The options on this display allow you to change, copy, delete, display, and print your tape controller descriptions; work with the status of your tape controller descriptions; and retrieve the CL source for your tape controller descriptions. You may, for example, want to view or print a particular description so that you know exactly how that tape controller is configured before you make the changes.

To change an existing tape controller description from this “Work with...” display, you need the

name of the tape controller you are planning to change. The “Work with...” display provides you with the name, type, and text associated with each tape controller to help you identify the correct tape controller.

Type 2 in the option field next to the entry for the tape controller description you are going to change and press the Enter key.

Note: On the Work with Controller Descriptions display, you can enter an option in front of more than one description. For example, if you want to change two different tape controller descriptions, you can type 2 in front of both of the description names. You are asked for the changes to each tape controller description, one at a time, before the “Work with...” display is shown again.

```

Work with Controller Descriptions          System: SYS325
Position to . . . . . Starting characters
Type options, press Enter.
  2=Change  3=Copy  4=Delete  5=Display  6=Print  7=Rename
  8=Work with status  9=Retrieve source  12=Print device address

Opt  Controller  Type  Text
-   TAPCTL01    3422  1st tape controller

Parameters or command
====>
F3=Exit  F4=Prompt  F5=Refresh  F6=Create  F9=Retrieve  F12=Cancel
F14=Work with status
  
```

The next display shown contains the list of prompts associated with the tape controller description, along with the current values assigned for this tape controller. Type your choices for the values you want to change. Any prompts you do not want to change should be left as they are.

Also, any prompts that have the *SAME value filled in do not apply to the type of controller you are working with. You should leave *SAME, or an error occurs when you try to enter the change.

Note: For an explanation of a particular prompt, press the Help key with the cursor located on that prompt.

Continue typing your choices until all the prompts have been shown. (Several prompt displays may be shown.) After the last prompt display is shown, press the Enter key. The Work with Controller

Descriptions display is shown and the change is complete.

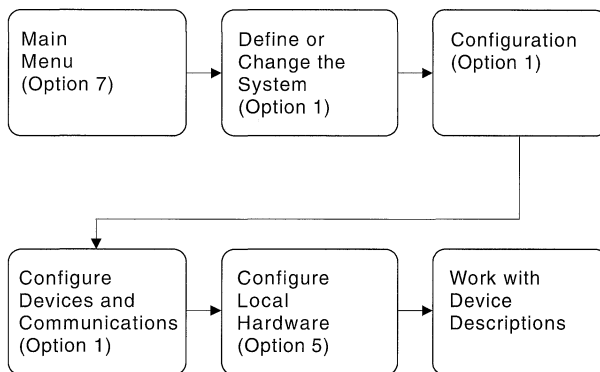
If, for some reason, the tape controller description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Controller Descriptions display and start over.

After changing your tape controller description, you can continue to use the “Work with...” display for other configuration tasks.

Note: For more detailed information about using the “Work with...” display, refer to the online help information for that display.

Changing Tape Unit Descriptions

To change your tape unit descriptions, use the same menus you used to create the descriptions:



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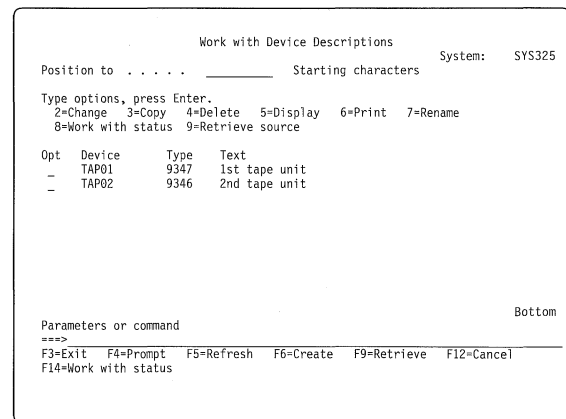
By starting at the system main menu, and taking the appropriate options shown in the preceding diagram, the Work with Device Descriptions display is shown. The display lists all the tape unit descriptions that you have configured on your system.

From the Work with Device Descriptions display, you can do any of the configuration functions on the tape unit descriptions listed. The options on this display allow you to change, copy, delete, display, and print your tape unit descriptions; work with the status of your tape unit descriptions; and retrieve the CL source for your tape unit descriptions. You may, for example, want to view or print a particular description so that you know exactly how that tape unit is configured before you make the changes.

To change an existing tape unit description from this “Work with...” display, you need the name of the tape unit you are planning to change. The “Work with...” display provides you with the name, type, and text associated with each tape unit to help you identify the correct tape unit.

Type 2 in the option field next to the entry for the tape unit description you are going to change and press the Enter key.

Note: On the Work with Device Descriptions display, you can enter an option in front of more than one description. For example, if you want to change two different tape unit descriptions, you can type 2 in front of both of the description names. You are asked for the changes to each tape unit description one at a time, before the “Work with...” display is shown again.



The next display shown contains the list of prompts associated with the tape unit description along with the current values assigned for this tape unit. Type your choices for the values you intended to change and press the Roll Up or Page Down key. Any prompts you do not want to change should be left as they are.

Also, any prompts that have the *SAME value filled in do not apply to the type of tape unit you are working with. Do not change these values. You will receive an error message if you attempt to change the *SAME values.

Note: For an explanation of a particular prompt, press the Help key with the cursor located on that prompt.

Continue typing your choices until all the prompts have been shown. (Several prompt displays may be shown.) After the last prompt display is shown, press the Enter key. The Work with Device Descriptions display is shown and the change is complete.

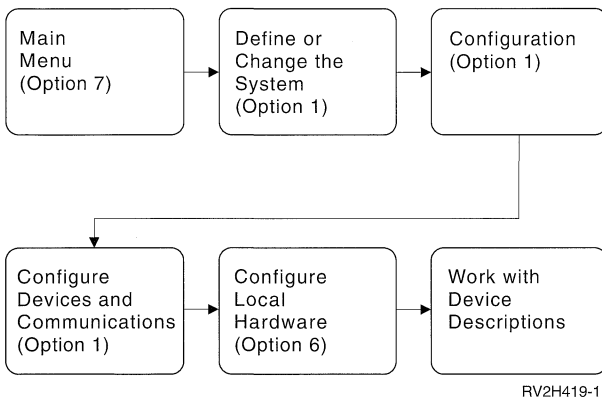
If, for some reason, the tape unit description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

After changing your tape unit description, you can continue to use the “Work with...” display for other configuration tasks.

Note: For more detailed information about using the “Work with...” display, refer to the online help information for that display.

Changing Diskette Unit Descriptions

To change your diskette unit descriptions, use the same menus you used to create the descriptions:



By starting at the system main menu, and taking the appropriate options shown in the preceding diagram, the Work with Device Descriptions display is shown. The display lists all the diskette unit descriptions you have configured on your system to which you are authorized.

From the Work with Device Descriptions display, you can do any of the configuration functions on the diskette unit descriptions listed. The options on this display allow you to change, copy, delete, display, and print your diskette unit descriptions;

work with the status of your diskette unit descriptions; and retrieve the CL source for your diskette unit descriptions. You may, for example, want to view or print a particular description so that you know exactly how that diskette unit is configured before you make the changes.

To change an existing diskette unit description from this “Work with...” display, you need the name of the diskette unit you are planning to change. The “Work with...” display provides you with the name, type, and text associated with each diskette unit to help you identify the correct diskette unit.

Type 2 in the option field next to the entry for the diskette unit description to be changed and press the Enter key.

Note: On the Work with Device Descriptions display, you can enter an option in front of more than one description. For example, if you want to change two different diskette unit descriptions, you can type 2 in front of both of the description names. You are asked for the changes to each diskette unit description one at a time, before the “Work with...” display is shown again.

```

Work with Device Descriptions          System:  SYS325
Position to . . . . . Starting characters
Type options, press Enter.
2=Change 3=Copy 4=Delete 5=Display 6=Print 7=Rename
8=Work with status 9=Retrieve source

Opt  Device   Type  Text
--  -
 1  DKT01     9331  1st diskette unit
 2  DKT02     9331  2nd diskette unit

Parameters or command
==>
F3=Exit  F4=Prompt  F5=Refresh  F6=Create  F9=Retrieve  F12=Cancel
F14=Work with status
  
```

The next display shown contains the list of prompts associated with the diskette unit description along with the current values assigned for this diskette unit. Type your choices for the values you intended to change and press the Roll Up or Page Down key. Any prompts you do not want to change should be left as they are.

Also, any prompts that have the *SAME value filled in do not apply to the type of diskette unit you are working with. Do not change these

values. You will receive an error message if you attempt to change the *SAME values.

Note: For an explanation of a particular prompt, press the Help key with the cursor located on that prompt.

Continue typing your choices until all the prompts have been shown. (Several prompt displays may be shown.) After the last prompt display is shown, press the Enter key. The Work with Device Descriptions display is shown and the change is complete.

If, for some reason, the diskette unit description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

After changing your diskette unit description, you can continue to use the "Work with..." display to perform other configuration tasks.

Note: For more detailed information about using the "Work with..." display, refer to the online help information for that display.

Adding New Configuration Descriptions

At any time, you may decide to add to your configuration, such as adding new display stations and printers. This section is designed to give you information needed when adding to your configuration. Any special considerations for adding certain devices or controllers are listed.

Notes:

1. Whenever you add a configuration description to the system, the description becomes effective immediately. You do not have to wait until the next IPL.
2. When adding a configuration description to the system that is similar to an existing description, use option 3 (Copy) from the configuration "Work with..." displays to copy the existing description and create the new one.

When adding new configuration descriptions, you should first see Chapter 1, "Planning for Configuration," for configuration planning informa-

tion. That chapter tells you how to fill out the planning forms needed for performing local twinaxial configuration. The information on those forms is needed for creating your new configuration descriptions.

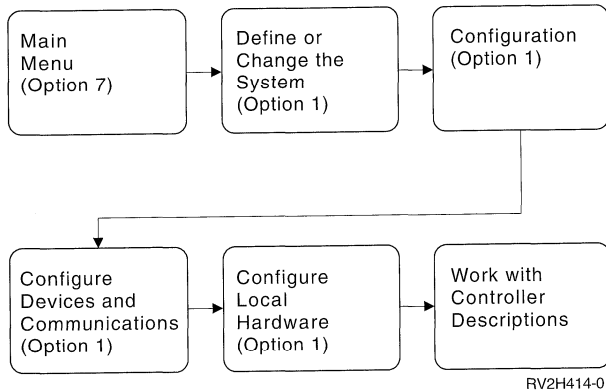
After you have completed configuration planning, follow the same procedure used to create new configuration descriptions. To review these procedures, refer to Chapter 5, "Configuring Locally Attached Twinaxial Devices," or Chapter 6, "Configuring Tape Controllers, Tape Units, and Diskette Units." If you need to review these procedures for ASCII devices, refer to the *ASCII Work Station Reference and Example*. The following sections list the prompts and show the values required in certain prompts for each description. (Some of the prompts are followed by restrictions on their use.) For more detailed information on the prompts, refer to the online help information for each prompt.

- After you have created the new configuration description, print a new copy of the system configuration list. On any display with a command line, type:
- ```
| WRKHDWPRD
```
- | On the Work with Hardware Products display, select option 1 (Work with system configuration). The Work with System Configuration display is then shown.
- | Press F17 (Print) to print your system configuration list. You must obtain a copy of your system configuration list. This document is required for you or your service representative to handle problems. Place the system configuration list with your *Operator's Guide* for future reference.

## Adding a Local Twinaxial Work Station Controller

If you are using automatic configuration, configuration descriptions for new local controllers are created automatically for you. Go to Chapter 3, "Using Automatic Configuration," for more information on automatic configuration.

If you are not using automatic configuration, you must create configuration descriptions for new local controllers. To add a new local work station controller, use the menus for local controllers:



On the Work with Controller Descriptions display, press F6 (Create).

On the Create Controller Description display, type the controller name for the new local controller. For the controller type or class, \*LWS is already filled in. Press the Enter key.

The following shows the prompts for a local work station controller. For each new local work station controller you are configuring on your system, you should have information filled in on a Local Twinaxial Work Station Controller Index (Form D1). You should also have already filled in the resource name for each local work station controller you are configuring on the Recording Resource Names (Form X1). Instructions for filling out these forms are in Chapter 4, “Preparing for Configuration,” and Chapter 1, “Planning for Configuration.”

**Note:** Some of the prompts are only shown when F10 is pressed to display the additional prompts.

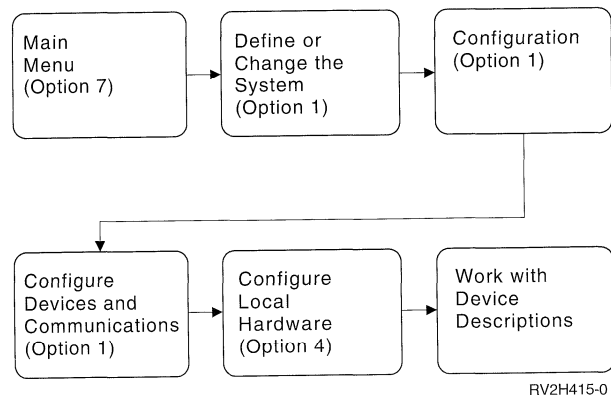
- *Controller type*
- *Controller model*
- *Resource name*
- *Online at IPL*
- *Device wait timer*
- *Auto-configuration controller*
- *Text description*

For more information on the prompts listed above, go to “Creating Configuration Descriptions for Local Twinaxial Work Station Controllers” on page 5-1.

## Adding a Display Station Attached to a Local Twinaxial Work Station Controller

If you are using automatic configuration, configuration descriptions for new local display stations are created automatically for you. Go to Chapter 3, “Using Automatic Configuration,” for more information on automatic configuration.

If you are not using automatic configuration, you must create configuration descriptions for new local display stations. To add a new display station to a local work station controller, use the menus for local display stations:



On the Work with Device Descriptions display, press F6 (Create).

On the Create Device Description display, type the device name for the new display station. For the device type or class, \*DSP is already filled in. Press the Enter key.

The following shows the prompts for a local display station. For each new display station you are configuring on your system, you should have information filled in on a Local Work Station Diagram (Form C1, C2, or C3). For more information on filling out the planning forms, see Chapter 1, “Planning for Configuration.”

- *Device class (\*LCL)*
- *Device type*
- *Device model*
- *Port number*
- *Switch setting* (display station device address)
- *Online at IPL*
- *Attached controller* (name of local work station controller)



- *Keyboard language type*
- *Character identifier* (graphic character set and code page)
- *Allow blinking cursor*
- *Auxiliary device* (type and address of auxiliary devices—for 5292 Model 2 display stations only)
- *Text description*

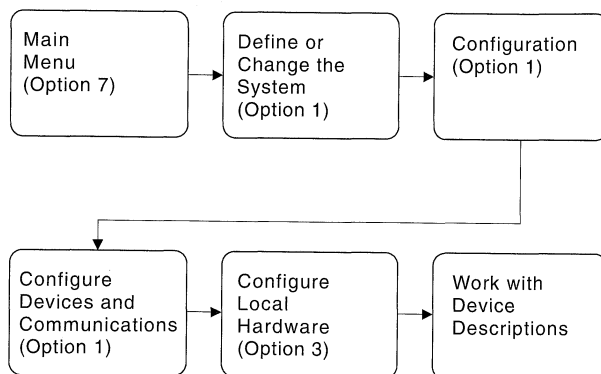
For more information on the prompts listed above, go to “Creating Configuration Descriptions for Local Twinaxial Display Stations” on page 5-3.

**Note:** If you are not shown a sign-on display on the display station after creating this description, make sure the display station is varied on, and that a work station is entered in the subsystem description that is controlling this display station. You must have an entry for this type of display station (3180, 3196, 5291, and so on) in the subsystem description for the display station to be usable. For information about customizing twinaxial keyboards, see the *Workstation Customization Function Programmer’s Guide*.

## Adding a Printer Attached to a Local Twinaxial Work Station Controller

If you are using automatic configuration, configuration descriptions for new local printers are created automatically for you. Go to Chapter 3, “Using Automatic Configuration,” for more information on automatic configuration.

If you are not using automatic configuration, you must create configuration descriptions for new local printers. To add a new printer to a local work station controller, use the menus for local printers:



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On the Work with Device Descriptions display, press F6 (Create).

On the Create Device Description display, type the device name for the new printer. For the device type or class, \*PRT is already filled in. Press the Enter key.

The following shows the prompts for a local printer. For each new local printer you are configuring on your system, you should have information filled in on a Local Work Station Diagram (Form C1, C2, or C3). For more information on filling out the planning forms, see Chapter 1, “Planning for Configuration.”

- *Device class* (\*LCL)
- *Device type*
- *Device model*
- *Emulated twinaxial device*
- *Advanced function printing*
- *AFP attachment* (for printers configured for advanced function printing)
- *Port number*
- *Switch setting*
- *Online at IPL*
- *Attached controller* (name of local work station controller)
- *Font identifier* (for 5219, 3812, and IPDS printers)
- *Form feed* (for 5219, 4214, 5553 and IPDS printers)
- *Printer error message*
- *Message queue and library*
- *Maximum pending requests* (for printers configured for advanced function printing)
- *Print request timer* (for printers configured for advanced function printing)
- *Form definition and library* (for printers configured for advanced function printing)
- *Host print transform* (to use the host print transform function)
- *Text description*

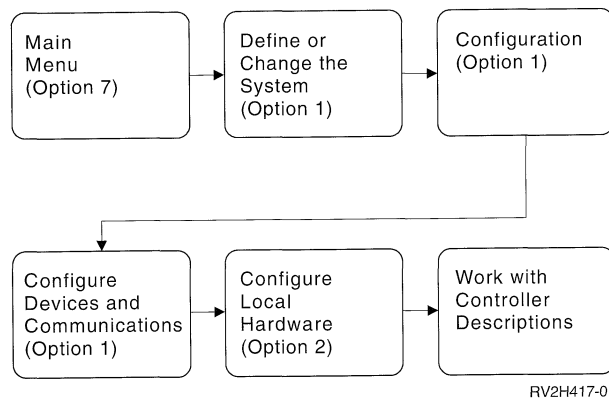
For more information on the prompts listed above, go to “Creating Configuration Descriptions for Local Twinaxial Printers” on page 5-11.

**Note:** If you specify a message queue associated with a display station for the *Message Queue* prompt, the description for the display station must already exist.

## Adding a Tape Controller

If you are using automatic configuration, configuration descriptions for new tape controllers are created automatically for you. Go to Chapter 3, “Using Automatic Configuration,” for more information on automatic configuration.

If you are not using automatic configuration, you must create configuration descriptions for new tape controllers. To add a new tape controller, use the menus for tape controllers:



On the Work with Controller Descriptions display, press F6 (Create).

On the Create Controller Description display, type the device name for the new tape controller. For the controller type or class, \*TAP is already filled in. Press the Enter key.

The following shows the prompts for a tape controller. For each new tape controller you are configuring on your system, you should have information filled in on the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1). You also should have already filled in the resource name for each tape controller you are configuring on the Recording Resource Names (Form X1). For more information on filling out the planning forms, see Chapter 4, “Preparing for Configuration,” or Chapter 1, “Planning for Configuration.”

**Note:** Some of the prompts are only shown when F10 is pressed to display the additional prompts.

- *Controller type*
- *Controller model*
- *Resource name*

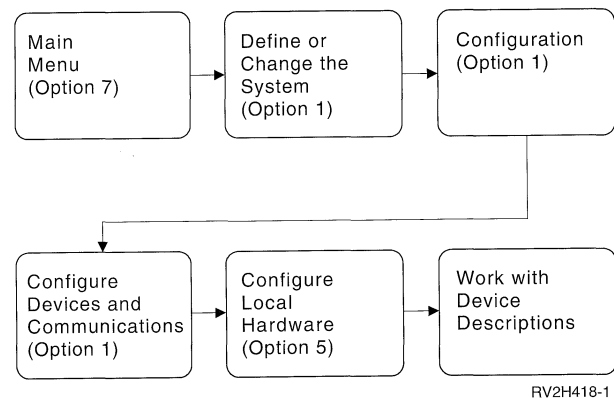
- *Online at IPL*
- *Auto-configuration controller*
- *Text description*

For more information on the prompts listed above, go to “Creating Configuration Descriptions for Tape Controllers for the 9404 and 9406 System Units” on page 6-1.

## Adding a Tape Unit

If you are using automatic configuration, configuration descriptions for new tape units are created automatically for you. Go to Chapter 3, “Using Automatic Configuration,” for more information on automatic configuration.

If you are not using automatic configuration, you must create configuration descriptions for new tape units. To add a new tape unit, use the menus for tape units:



On the Work with Device Descriptions display, press F6 (Create).

On the Create Device Description display, type the device name for the new tape unit. For the device type or class, \*TAP is already filled in. Press the Enter key.

The following shows the prompts for a tape unit. For each new tape unit you are configuring on your system, you should have information filled in on a 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1) or on a 9402 Tape Unit and Diskette Unit Diagram (Form E3). You also should have already filled in the resource name for each tape unit you are configuring on the Recording Resource Names (Form X1). Instructions for filling out these forms are in

Chapter 4, “Preparing for Configuration,” and Chapter 1, “Planning for Configuration.”

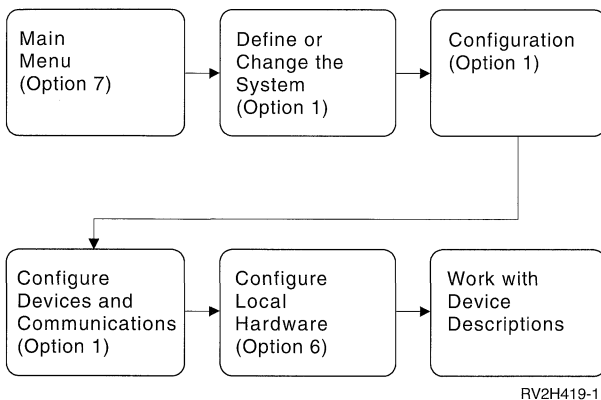
- *Device type*
- *Device model*
- *Resource name* (for 2440, 6341, 6342, 6343, 6346, 6347, 6348, 6366, 6368, 7208, 9346, 9347, and 9348 device types)
- *Switch setting* (for 3422, 3430, 3480, and 3490 device types)
- *Online at IPL*
- *Attached controller name* (for 3422, 3430, 3480, and 3490 device types)
- *Assign device at vary on* (for 3480 and 3490 device types)
- *Unload device at vary off*
- *Message queue and library*
- *Text description*

For more information on the prompts listed above, go to “Creating Configuration Descriptions for Tape Units” on page 6-3.

## Adding a Diskette Unit

If you are using automatic configuration, configuration descriptions for new diskette units are created automatically for you. Go to Chapter 3, “Using Automatic Configuration,” for more information on automatic configuration.

If you are not using automatic configuration, you must create configuration descriptions for new diskette units. To add a new diskette unit, use the menus for diskette units:



On the Work with Device Descriptions display, press F6 (Create).

On the Create Device Description display, type the device name for the new diskette unit. For the

device type or class, \*DKT is already filled in. Press the Enter key.

The following shows the prompts for a diskette unit. For each new diskette unit you are configuring on your system, you should have information filled in on the 9404 and 9406 Diskette Unit Diagram (Form E2) or on the 9402 Tape Unit and Diskette Unit Diagram (Form E3). You also should have already filled in the resource name for each diskette unit you are configuring on the Recording Resource Names (Form X1). Instructions for filling out these forms are in Chapter 4, “Preparing for Configuration,” and Chapter 1, “Planning for Configuration.”

- *Device type*
- *Device model*
- *Resource name*
- *Online at IPL*
- *Text description*

For more information on the prompts listed above, go to “Creating Configuration Descriptions for Diskette Units” on page 6-7.

## Moving Display Stations and Printers

This section describes special considerations when moving physical pieces of hardware from one location to another on your system.

### Moving a Display Station Attached to a Local Twinaxial Work Station Controller

If you are using automatic configuration, a new local display station description is created for you if the display station is moved to a new port and address. However, the old description is not automatically deleted until a new device is put at that port and address.

If you are not using automatic configuration, you may have to work with the description when moving a local display station.

If you are moving the display station to a different position on the same port, you do not have to make any changes to the display station description as long as you do not change the display station address. However, if the display

station is moved to or from the last position on a cable, make sure you indicate to the system which device is the last device on the line. See the setup manual for the particular display station for more information on the last display station on the line.

If you are moving the display station to a different port on the same work station controller, and the addresses have changed, consider the following:

- You must change the port number in the description of the display station.
- You may also have to change the display station address if a display station or printer is already attached to the new port with the same address as this display station. A unique address must be assigned to each device on a port.

If you are moving the display station to a different work station controller, you must delete the existing display station description, and then create a new one with the new controller name specified. Before deleting the existing description, print a copy of the description to use as a record, or use option 9 (Retrieve source) on the Work with Device Descriptions display to keep a copy of the CL source for the description.

## Moving a Printer Attached to a Local Twinaxial Work Station Controller

If you are using automatic configuration, new local printer descriptions are created for you if the printer is moved to a new port and address. However, the old description is not automatically

deleted until a new device is put at that port and address.

If you are not using automatic configuration, you may have to work with the description when moving a local twinaxial printer.

If you are moving the printer to a different position on the same port, you do not have to make any changes to the printer description as long as you do not change the printer address. However, if the printer is moved to or from the last position on a cable, make sure you indicate to the system which device is the last device on the line. See the setup manual for the particular printer for more information on the last printer on the line.

If you are moving the printer to a different port on the same work station controller and the addresses have changed, consider the following:

- You must change the port number in the description of the printer.
- You may also have to change the printer address if a device (display station or printer) is already attached to the new port with the same address as this printer. A unique address must be assigned to each device on a port.

If you are moving the printer to a different work station controller, you must delete the existing printer description, and then create a new one with the new controller name specified. Before deleting the existing description, print a copy of the description to use as a record, or use option 9 (Retrieve source) on the Work with Device Descriptions display to keep a copy of the CL source for the description.

---

## Chapter 10. Configuration Example

This chapter shows an example configuration of a system. The example is designed to help you understand the configuration process. Even though your configuration may not resemble this example, you can use it as a model for performing your own configuration.

---

### Example: Local Configuration

This sample configuration consists of a system with the following:

- One 6050 Local Work Station Controller
- Eleven local work stations
  - Three 3196 Model A1 Display Stations
  - Three 3180 Model 2 Display Stations
  - One 5292 Model 2 Display Station (with an auxiliary 6180 Plotter)
  - Two 5219 Model D01 Printers
  - One 4214 Model 2 Printer
  - One 3816 Model 1S Printer
- One 9331 Diskette Unit
- One 3422 Tape Controller and Tape Unit
- One 9347 Tape Unit

**Note:** Some of the hardware used in this example is supported only on the 9404 and 9406 System Units.. However, the configuration process is the same for the 9406 System Unit, the 9404 System Unit, and the 9402 System Unit. If you have a 9404 System Unit or a 9402 System Unit, you can still use this example, considering that you may have different types and models for some of the hardware.

Before the system arrived, this *Device Configuration Guide* and the *Physical Planning Guide and Reference* were used for the following:

- Suggested scheduling of site preparation
- Space requirements
- Recommendations about lightning protection
- Cabling information
- Electrical requirements
- Humidity and temperature requirements
- Configuration planning (Work Station Diagrams)

The Work Station Diagrams are very important during the configuration process. For this example, copies of the following, with the appropriate information filled in, are needed:

- Local Twinaxial Work Station Controller Index, one filled in for each local work station controller. (Only one local work station controller is used in this example, so one completed form is needed.)
- Local Work Station Diagrams, one filled in for each port on the work station controller that has devices attached to it. (Five ports are used in this example, so five completed forms are needed.)
- 9404 and 9406 Tape Controller and Tape Unit Diagram, with a box filled in for the tape controller and each tape unit.
- 9404 and 9406 Diskette Unit Diagram, with a box filled in for the diskette unit.
- Recording Resource Names form (Form X1) with the resource names for the local controller, the tape controller, the tape units, and the diskette unit.

A drawing of the floor layout of the Chicago site is needed. The Figure 10-1 on page 10-2 shows a floor plan for this example. A system diagram for this configuration might look like Figure 10-2 on page 10-2.

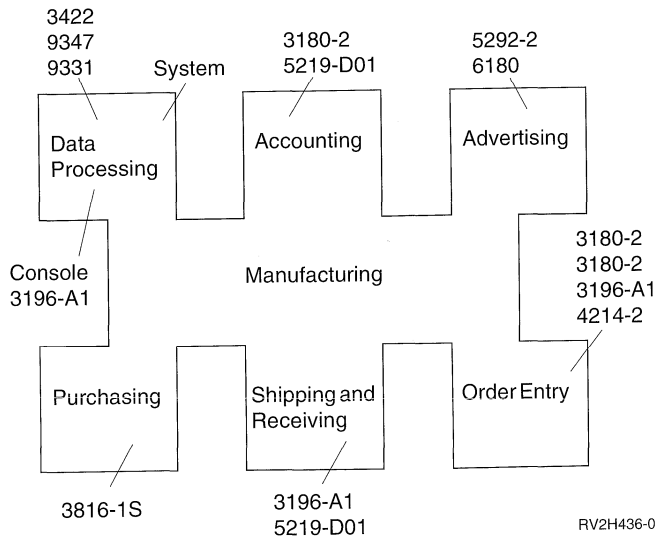


Figure 10-1. Local Configuration Example. A drawing of how the system is arranged including all devices attached to the system is needed.

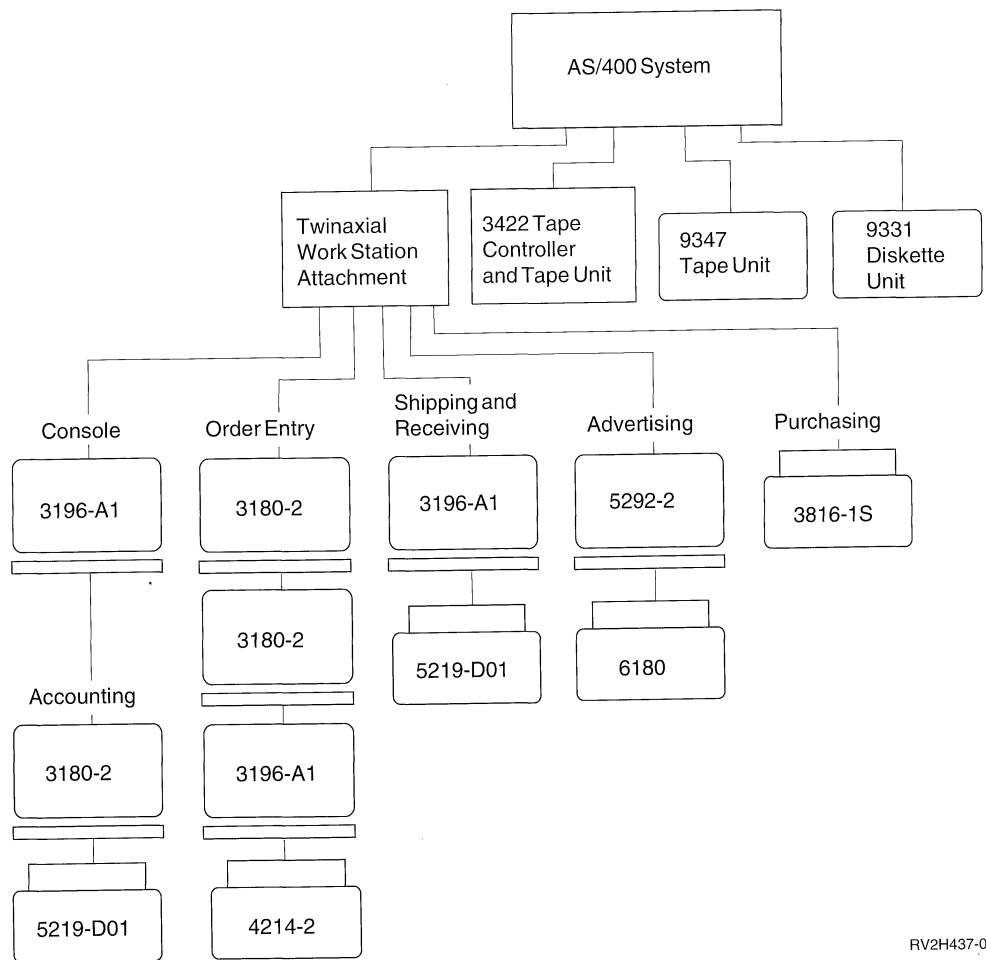


Figure 10-2. Physical Representation. This provides a physical representation of the information given to the system through configuration.

Also, other tasks to be done before configuration takes place are:

- The system is already set up. This includes having a local work station controller and the console already configured and available for use. Also, the tape unit used to install the system has already been configured.
- Operating System/400 (OS/400) and all the licensed programs ordered for this system have been installed as directed in the *Licensed Programs and New Release Installation Guide*.
- All the devices are set up and off-line tests have been performed as directed in the individual setup manuals for the devices.
- All the cables are connected and address switches set at the devices as directed in the individual setup manuals for the device. The switch settings are recorded on the appropriate Work Station Diagram that contains information for that device.

When all of the above has been completed and verified, this example can be configured.

For this example, automatic configuration is not used for the local devices. Configuration descriptions will be manually created for the locally attached devices.

## Local Controller

According to the configuration hierarchy, the local controller should be configured first. In this example, the descriptions for the local controller and the console have already been created. The controller name is CTL01 and the console name is DISPLAY01. Some planning information may have already been filled out on the Local Twinaxial Work Station Controller Index, Form D1, for this controller. See Figure 10-3 for this information. This form can still be kept as a record.

| D1 Local Twinaxial Work Station Controller Index |                      |                                               |              |
|--------------------------------------------------|----------------------|-----------------------------------------------|--------------|
| System                                           | <u>AS/400 System</u> | Card Address                                  | <u>0130</u>  |
|                                                  |                      | Work Station Controller Name                  | <u>CTL01</u> |
| Service for Cabling                              | <u>Cindy Jones</u>   | Location of Twinaxial Work Station Attachment | <u>RM101</u> |
| Telephone Number                                 | <u>123-4567</u>      | Controller Type                               | <u>6050</u>  |
|                                                  |                      | Controller Model                              | <u>1</u>     |

RSLH549-2

Figure 10-3. Work Station Controller Index Example

Also, one Work Station Diagram (Form C1, C2, or C3) is filled in for each port on the work station controller that will be used to attach devices.

The configuration description for this controller looks something like the following:

- *Controller description:* CTL01
- *Controller type:* 6050
- *Controller model:* 1
- *Resource name:* CTL01
- *Online at IPL:* \*YES
- *Device wait timer:* 10
- *Auto-configuration controller:* \*YES

This work station controller has the name CTL01. The resource name created by the system is also CTL01. The device wait timer is 10, which is the default for local controllers. Also, this controller will have any new devices that are automatically configured later attached to it (that is, if we change the system value QAUTOCFG to 1, or yes).

## Local Devices

First, the eleven local devices that attach to the local work station controller CTL01 are configured.

**Note:** The 5292 advertising display station is configured slightly differently from the others. The 5292 Model 2 is a color graphics display station that has its own 6180 Plotter attached to it. The plotter does not need a configuration description. However, the plotter type and plotter address must be specified in the *Auxiliary device* prompt for the 5292 Display Station.

The console has already been configured. The configuration description for the console will look something like the following:

- Console (3196 Model A1)
  - *Device description:* DISPLAY01
  - *Device class:* \*LCL

- *Device type:* 3196
- *Device model:* A1
- *Port number:* 0
- *Switch setting (device address):* 0
- *Online at IPL:* \*YES
- *Attached controller:* CTL01
- *Keyboard language type:* USB
- *Character identifier:* \*SYSVAL

- *Allow blinking cursor:* \*NO

**Note:** In this example, the console has the name DISPLAY01 and is attached to the controller CTL01. It is attached to port 0 and has an address of 0. Local Work Station Diagrams (Form C1, C2, or C3) one for each port, contain the planning information for the other local devices. One box is filled in for each local device.



# C1

Local Work Station Diagram (Twinaxial Cabling)

Page Number \_\_\_\_\_

# C1

Local Work Station Diagram (Twinaxial Cabling)

Page Number \_\_\_\_\_

# C1

Local Work Station Diagram (Twinaxial Cabling)

Page Number \_\_\_\_\_

# C1

Local Work Station Diagram (Twinaxial Cabling)

Page Number \_\_\_\_\_

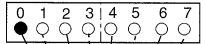
# C1

Local Work Station Diagram (Twinaxial Cabling)

Page Number \_\_\_\_\_

System AS/400 System Card Address 08  
 Service for Cabling Cindy Jones Work Station Controller Name CTL01  
 Telephone Number 123-4567 Location of Twinaxial Work Station Attachment RM 101

Twinaxial Work Station Attachment Port Numbers



- Device Name DISPLAY01  
 Device Type, Model 3196, A1  
 Location System Room  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_
- Device Name DISPLAY02  
 Device Type, Model 3180, 2  
 Location Accounting  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_
- Device Name PRINTER01  
 Device Type, Model 5219, D01  
 Location Accounting  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_
- Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_
- Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_
- Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_
- Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_



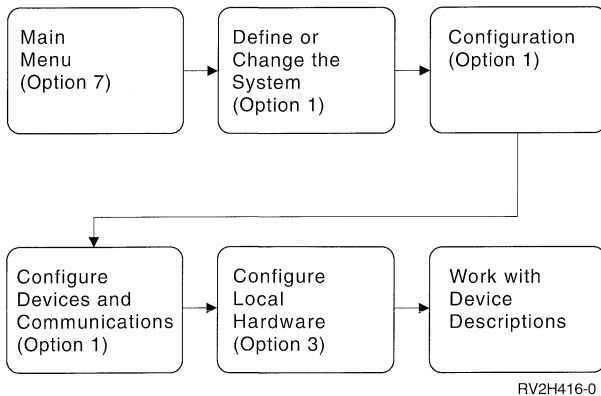
## Example

**Note:** There is a maximum of 7 work stations per port on the Twinaxial Work Station Attachment.

**Note:** You may copy as necessary.

RSLH529-5

**Local Printers:** To configure the local printers, the menus for local printers are used.



From the Work with Device Descriptions display, the local printer descriptions can be created, one at a time. After pressing F6 (Create) on that display, prompts need to be filled in with the information that will make up the local printer description. Some of the information comes directly from the Local Work Station Diagram (Form C1, C2, or C3).

The following shows the values entered for the local printers in this example:

- Accounting printer (5219 Model D1)
  - *Device description:* PRINTER01
  - *Device class:* \*LCL
  - *Device type:* 5219
  - *Device model:* D1
  - *Port number:* 0
  - *Switch setting (device address):* 2
  - *Online at IPL:* \*YES
  - *Attached controller:* CTL01
  - *Font identifier:* 011
  - *Form feed:* \*AUTOCUT
  - *Separator drawer:* \*FILE
  - *Separator program:* \*NONE
  - *Printer error message:* \*INQ
  - *Message queue and library:* \*LIBL/WSMITH
  - *Text description:* Accounting printer

This 5219 Model D01 accounting printer has the name PRINTER01. It is located on port 0, with a switch setting (device address) of 2. (Address 0 is used by the console and address 1 is used by the accounting display station that are also attached to this port.) It is attached to the work station controller CTL01 that has already been configured.

Because this is a 5219 Printer, the font to be used is specified. The font identifier 011 is for the Courier font.

Also, this printer has a sheet-feed attachment on it, so \*AUTOCUT is specified for form feed.

The message queue to which operational messages for this printer will be sent is WSMITH. Inquiry messages are sent for recoverable errors.

- Order entry printer (4214 Model 2)
  - *Device description:* PRINTER02
  - *Device class:* \*LCL
  - *Device type:* 4214
  - *Device model:* 2
  - *Port number:* 1
  - *Switch setting (device address):* 3
  - *Online at IPL:* \*YES
  - *Attached controller:* CTL01
  - *Printer error message:* \*INQ
  - *Message queue and library:* \*LIBL/SJOHNSON
  - *Text description:* Order entry printer

This 4214 Model 2 order entry printer has the name PRINTER02. It is located on port 1, with a switch setting (device address) of 3. (Addresses 0, 1, and 2 are used by the order entry display stations that are attached to this same port. Refer to the system diagram.) It is attached to the work station controller called CTL01 that has been configured.

The font and form feed information do not apply to the 4214 Printer, so those prompts are left blank.

Messages for this printer are handled the same way as for the accounting printer. The message queue to which operational messages for this printer will be sent is SJOHNSON. Inquiry messages are sent for recoverable errors.

- Shipping and receiving printer (5219 Model D1)
  - *Device description:* PRINTER03
  - *Device class:* \*LCL
  - *Device type:* 5219
  - *Device model:* D1
  - *Port number:* 2
  - *Switch setting (device address):* 1
  - *Online at IPL:* \*YES
  - *Attached controller:* CTL01

- *Font identifier:* 011
- *Form feed:* \*CONT
- *Separator drawer:* \*FILE
- *Separator program:* \*NONE
- *Printer error message:* \*INQ
- *Message queue/library:* \*LIBL/MJONES
- *Text description:* Shipping and receiving printer

This 5219 Model D01 shipping and receiving printer is configured similarly to the accounting printer. It has the name PRINTER03. It is located on port 2, with a switch setting (device address) of 1. (Address 0 is used by the shipping and receiving display station that is attached to this same port. Refer to the system diagram.) It is also attached to the work station controller CTL01 that has been configured.

This 5219 Printer uses the same font (Courier 011) as the accounting printer. However, there is no sheet-feed attachment on this printer, so the default of \*CONT is specified for form feed.

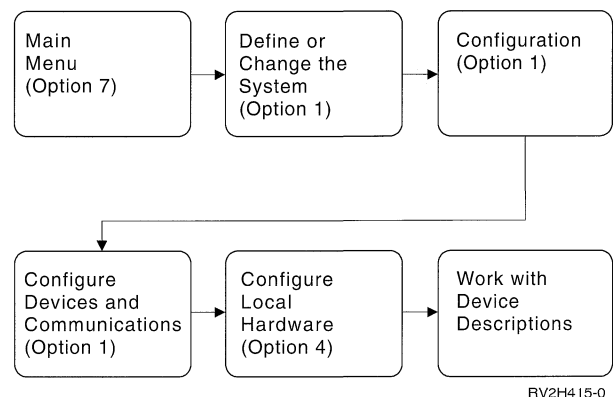
Messages for this printer are handled the same way as for the accounting printer. The message queue to which operational messages for this printer will be sent is MJONES. Inquiry messages are sent for recoverable errors.

- Purchasing printer (3816 Model 1S)
  - *Device description:* PRINTER04
  - *Device class:* \*LCL
  - *Device type:* \*IPDS
  - *Device model:* 0
  - *Advanced function printing:* \*YES
  - *AFP attachment:* \*WSC
  - *Port number:* 4
  - *Switch setting (device address):* 0
  - *Online at IPL:* \*YES
  - *Attached controller:* CTL01
  - *Font identifier:* 011
  - *Form feed:* \*AUTOCUT
  - *Separator drawer:* \*FILE
  - *Separator program:* \*NONE
  - *Printer error message:* \*INQ
  - *Message queue/library:* \*LIBL/MREED
  - *Maximum pending requests:* 8
  - *Form definition and library:* \*LIBL/F1C10110
  - *Text description:* Purchasing printer
  - *Print while converting:* \*YES

This 3816 Model 1S purchasing printer has the name PRINTER04. It is capable of advanced function printing. It is located on port 4, with a switch setting (device address) of 0. It is also attached to the work station controller CTL01.

The maximum number of print requests that can wait on the print queue is 8. It will use a form definition of F1C10110.

**Local Display Stations:** To configure the local display stations, use the menus for local display stations.



From the Work with Device Descriptions display, the local display station descriptions can be created, one at a time. After pressing F6 (Create) on that display, prompts need to be filled in with the information that will make up the local display station description. Some of the information comes directly from the Local Work Station Diagram (Form C1, C2, or C3).

The following shows the values entered for the local display stations in this example:

- Accounting display station (3180 Model 2)
  - *Device description:* DISPLAY02
  - *Device class:* \*LCL
  - *Device type:* 3180
  - *Device model:* 2
  - *Port number:* 0
  - *Switch setting (device address):* 1
  - *Online at IPL:* \*YES
  - *Attached controller:* CTL01
  - *Keyboard language type:* USB
  - *Allow blinking cursor:* \*NO
  - *Text description:* Accounting display station

This 3180 Model 2 accounting display station has the name DISPLAY02. It is located on port 0, the same port as accounting printer PRINTER01, with a switch setting (device address) of 1. It is attached to the work station controller CTL01 that has been configured.

This 3180 Display Station will use a United States keyboard, as do all the display stations in this configuration.

- Order entry display station 1 (3180 Model 2)
  - *Device description:* DISPLAY03
  - *Device class:* \*LCL
  - *Device type:* 3180
  - *Device model:* 2
  - *Port number:* 1
  - *Switch setting (device address):* 0
  - *Online at IPL:* \*YES
  - *Attached controller:* CTL01
  - *Keyboard language type:* USB
  - *Allow blinking cursor:* \*NO
  - *Text description:* Order entry display station 1

This 3180 Model 2 order entry display station is configured similarly to the accounting display station. It is located on port 1, the same port as order entry printer PRINTER02, with a switch setting (device address) of 0. (Note that the console and this display station can have the same address of 0 because they are attached to different ports.)

This display station is attached to the work station controller CTL01 that has been configured.

- Order entry display station 2 (3180 Model 2)
  - *Device description:* DISPLAY04
  - *Device class:* \*LCL
  - *Device type:* 3180
  - *Device model:* 2
  - *Port number:* 1
  - *Switch setting (device address):* 1
  - *Online at IPL:* \*YES
  - *Attached controller:* CTL01
  - *Keyboard language type:* USB
  - *Allow blinking cursor:* \*NO
  - *Text description:* Order entry display station 2

This 3180 Model 2 order entry display station is configured identically to the first order entry display station, except for the address. It is

located on port 1, the same port as order entry display station DISPLAY03, with a switch setting (device address) of 1, instead of 0.

- Order entry display station 3 (3196 Model A1)
  - *Device description:* DISPLAY05
  - *Device class:* \*LCL
  - *Device type:* 3196
  - *Device model:* A1
  - *Port number:* 1
  - *Switch setting (device address):* 2
  - *Online at IPL:* \*YES
  - *Attached controller:* CTL01
  - *Keyboard language type:* USB
  - *Allow blinking cursor:* \*NO
  - *Text description:* Order entry display station 3

This 3196 Model A1 order entry display station is configured similarly to the other order entry display stations, except for the device type, model, and address. It is located on port 1, but has a switch setting (device address) of 2.

- Shipping and receiving display station (3196 Model A1)
  - *Device description:* DISPLAY06
  - *Device class:* \*LCL
  - *Device type:* 3196
  - *Device model:* A1
  - *Port number:* 2
  - *Switch setting (device address):* 0
  - *Online at IPL:* \*YES
  - *Attached controller:* CTL01
  - *Keyboard language type:* USB
  - *Allow blinking cursor:* \*NO
  - *Text description:* Shipping and receiving display station

This 3196 Model A1 shipping and receiving display station is configured similarly to the 3196 order entry display station. It is located on a different port (2), which is the same port as the shipping and receiving printer PRINTER03, and has a switch setting (device address) of 0.

- Advertising display station (5292 Model 2)
  - *Device description:* DISPLAY07
  - *Device class:* \*LCL
  - *Device type:* 5292
  - *Device model:* 2
  - *Port number:* 3

- Switch setting (device address): 0
- Online at IPL: \*YES
- Attached controller: CTL01
- Keyboard language type: USB
- Allow blinking cursor: \*NO
- Auxiliary device type and address: 6180, 01
- Text description: Advertising display station

The 5292 advertising display station is configured slightly differently from the others. The 5292 Model 2 is a color graphics display station that has its own 6180 Plotter attached to it. The plotter does not need a configuration description. However, the plotter type and plotter address must be specified in the *Auxiliary device* prompt for the 5292 Display Station.

This display station is located on port 3, which is a different port from all the other display stations and printers, and has a switch setting (device address) of 0.

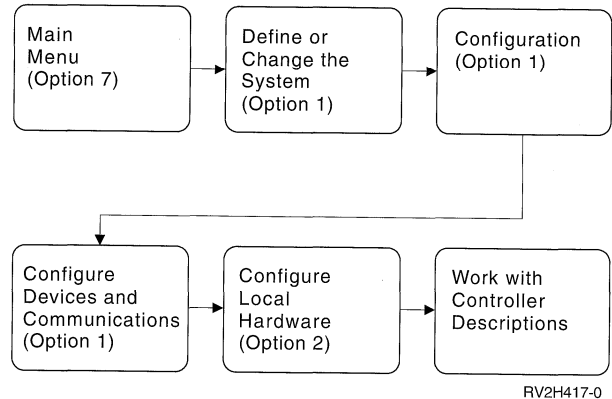
## Tape Controller, Tape Units, and Diskette Units

Next, the tape controller, tape units, and the diskette unit should be configured.

**Note:** The 3422 Tape Unit is attached to a 3422 Tape Controller. The 9347 Tape Unit does not require a tape controller.

- | The 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1) and the 9404 and 9406 Diskette Unit Diagram (Form E2) contain the planning information for these devices.

**Tape Controller:** To configure the tape controller, the menus for tape controllers are used.



RV2H417-0

From the Work with Controller Descriptions display, the tape controller description can be created. After pressing F6 (Create) on that display, prompts need to be filled in with the information that makes up the tape controller description. Some information comes directly from the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1).

**E1** 9404 and 9406 Tape Controller and Tape Unit Diagram

System AS/400 System

Service Contact Cindy Jones

Telephone Number 123-4567

**Example**

| Tape Controller                                                 | Tape Unit with Tape Controller                                                                            | Tape Unit without Tape Controller                      |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Controller Name   TAPCTLO1<br>Controller Type, Model   3422,A01 | Controller Name   TAPCTLO1<br>Device Name   TAPE02<br>Device Type, Model   3422,A01<br>Switch Setting   1 | Device Name   TAPE01<br>Device Type, Model   9346,0001 |
| Controller Name   TAPCTLO2<br>Controller Type, Model   3430,A01 | Controller Name   TAPCTLO1<br>Device Name   TAPE03<br>Device Type, Model   3422,B01<br>Switch Setting   2 | Device Name  <br>Device Type, Model                    |

Tape Name

Type and Model

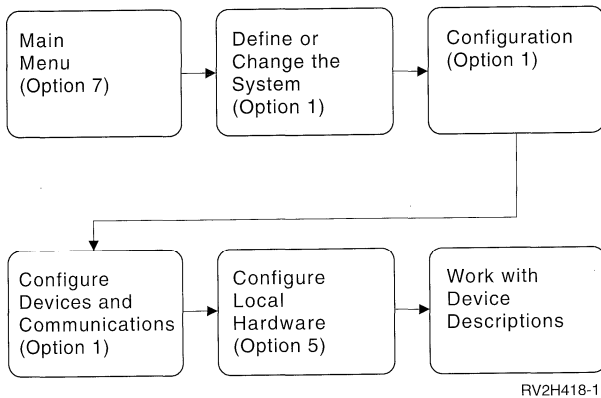
RV2H428-1

The following shows the values entered for the tape controller in this example:

- Tape controller (3422 Model A01)
  - *Controller description:* TAPCTL01
  - *Controller type:* 3422
  - *Device model:* A01
  - *Resource name:* TAPCTL01
  - *Online at IPL:* \*YES
  - *Text description:* Tape unit controller

This tape controller was assigned the name TAPCTL01. The resource name created by the system is also TAPCTL01. This tape controller is varied on at IPL.

**Tape Units:** To configure the tape units, the menus for tape units are used.



From the Work with Device Descriptions display, the tape unit descriptions can be created, one at a time. After pressing F6 (Create) on that display, prompts need to be filled in with the information that makes up the tape unit description. Some of the information comes directly from the 9404 and 9406 Tape Controller and Tape Unit Diagram (Form E1).

The following shows the values entered for the tape units in this example:

- First tape unit (3422 Model A01)
  - *Device description:* TAPE01
  - *Device type:* 3422
  - *Device model:* A01
  - *Switch setting:* 1

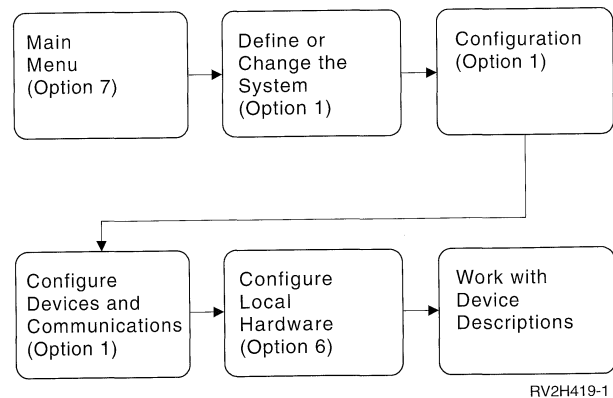
- *Online at IPL:* \*YES
- *Attached controller:* TAPCTL01
- *Message queue and library:* \*LIBL/QSYSOPR
- *Text description:* First tape unit

This tape unit has the name TAPE01. It is attached to a 3422 Tape Controller. This tape unit is varied on at IPL, and uses the QSYSOPR message queue for its messages.

- Second tape unit (9347 Model 0001)
  - *Device description:* TAPE02
  - *Device type:* 9347
  - *Device model:* 0001
  - *Resource name:* TAP02
  - *Online at IPL:* \*YES
  - *Message queue and library:* \*LIBL/QSYSOPR
  - *Text description:* Second tape unit

This tape unit has the name TAPE02. It requires a resource name because it is not attached to a tape controller. It has been assigned a resource name of TAP02. It is varied on at IPL, and uses the QSYSOPR message queue for its messages.

**Diskette Unit:** To configure the diskette unit, the menus for diskette units are used.



From the Work with Device Descriptions display, the diskette unit description can be created. After pressing F6 (Create) on that display, prompts need to be filled in with the information that makes up the diskette unit description. Some of the information comes directly from the 9404 and 9406 Diskette Unit Diagram (Form E2).

# E2

## 9404 and 9406 Diskette Unit Diagram

System AS/400 System

Service Contact Mark Horn

Telephone Number 123-7654

**Example**

|                    |                   |
|--------------------|-------------------|
| Device Name        | <u>DISKETTE01</u> |
| Device Type, Model | <u>9331,0001</u>  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

RV2H443-0

The following shows the values entered for the diskette unit in this example:

- Diskette unit (9331 Model 0001)
  - *Device description:* DISKETTE01
  - *Device type:* 9331
  - *Device model:* 0001
  - *Resource name:* DKT01
  - *Online at IPL:* \*YES
  - *Text description:* First diskette unit

This 9331 Diskette Unit has the name DISKETTE01. The resource name created by the system is DKT01. This diskette unit is varied on at IPL.

## Saving the Configuration

After all the configuration descriptions for this example have been created, the Save menu is used to save the entire system.

To save your system configuration by saving the entire system, do the following:

1. At the command line, type **GO SAVE**. You are shown the Save display.
2. From the Save display, select option 21 (Entire system).

For more information on saving the system, go to Chapter 8, "Saving Your Configuration."





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## Appendix A. Configuration of Double-Byte Character Set Devices

Some languages, such as Chinese, Japanese, and Korean have a writing scheme that uses many different characters, which cannot be represented with single-byte codes. To create coded character sets for such languages, the system uses two bytes to represent each character (a double-byte character set).

This appendix contains the local configuration information unique to double-byte character set (DBCS) devices. Most of the configuration information and procedures discussed in this guide apply to DBCS devices. However, information unique to DBCS devices does not apply to non-DBCS devices.

For information regarding configuration of remote DBCS devices, see the *OS/400\* Communications Configuration Reference* manual.

---

### Local Display Stations and Printers

You attach your local DBCS devices (display stations and printers) to the system in the same way as other devices are attached. They attach directly to any of the local twinaxial work station controllers on your system.

Table A-1. Display Station Device Types and Models

| Actual Device Type                                            | Actual Device Model | Configured as Device Type | Configured as Device Model |
|---------------------------------------------------------------|---------------------|---------------------------|----------------------------|
| Personal Systems running 5250 PC or 5250 work station program | All models          | 5555                      | B01, C01, G01, G02         |
| Personal Systems running 5250 PC/2 AD                         | All models          | 5555                      | E01, F01                   |
| 7561                                                          | J61                 | 5555                      | B01, C01                   |
| 5295                                                          | All models          | 5555                      | B01, C01                   |
| InfoWindow* 3477                                              | J, K, S, T          | 5555                      | B01, C01                   |

**Note:** Models B01 and E01 are used for monochrome displays. Models C01 and F01 are used for color displays. Models G01 and G02 are used for graphics displays. Model G01 supports monochrome text; Model G02 supports color text.

---

### Device Configuration Prompts

Two device configuration prompts require special attention when DBCS devices are being manually configured.

#### Device Type (TYPE) Prompt

When configuring DBCS devices (display stations and printers), the device type of the device *must* be typed into the device description. The device type is a four-digit number, such as 5553, 5555, and so on.

Some device types are not recognized by the system. These types have to be configured as a device type that the system recognizes, and the system treats the device as if it were actually the device type it is configured as.

Table A-1 and Table A-2 on page A-2 list all the device types and model numbers for DBCS display stations and printers in the *Configured as Device Type* and *Configured as Device Model* columns.

Table A-2. Printer Device Types and Models

| Actual Device Type | Actual Device Model     | Configured as Device Type | Configured as Device Model |
|--------------------|-------------------------|---------------------------|----------------------------|
| 4208               | 502, 5K2, 5C2           | 5553                      | B01                        |
| 4216               | 510                     | 5553                      | B01                        |
| 5227               | 001, 002, 003, 005      | 5553                      | B01                        |
| 5317               | 001                     | 5553                      | B01                        |
| 5327               | 001, 002, 003           | 5553                      | B01                        |
| 5337               | 001, R05                | 5553                      | B01                        |
| 5427               | 001, 002, 003, 005      | 5553                      | B01                        |
| 5553               | B01, B02                | 5553                      | B01                        |
| 5557               | B01                     | 5553                      | B01                        |
| 5563               | B02, H02                | 5553                      | B01                        |
| 5572               | B01                     | 5553                      | B01                        |
| 5575               | B01, B02, F01, F02      | 5553                      | B01                        |
| 5577               | B01, F01, FU2, G01, HC2 | 5553                      | B01                        |
| 5582               | P01                     | 5553                      | B01                        |
| 5583               | 200                     | 5583                      | 200                        |
| 5585               | H01                     | 5553                      | B01                        |
| 5587               | G01, H01                | 5553                      | B01                        |

## Double-Byte Character Set Feature (IGCFEAT) Prompt

This prompt specifies which DBCS table is used by the display stations and printers, according to device and language. When creating DBCS display station and printer descriptions as instructed, use the following table to determine the correct configuration type and DBCS table for the device being configured. The value under the

column for *DBCS feature* should be typed in the prompt for *DBCS feature*.

**Note:** Some of these values consist of two alphanumeric groups separated by a space, while others consist of only one alphanumeric group. The first of the two groups (or the one group if there is only one group) should be entered at the “Device Features” prompt, and the second of the two groups should be entered at the “Last Code” prompt.

Table A-3 (Page 1 of 2). DBCS Feature Values for DBCS Display Stations and Printer Descriptions

| Language and Device                  | Type of Physical DBCS Work Station                         | Configure as Type-Model | Configure with DBCS Feature |
|--------------------------------------|------------------------------------------------------------|-------------------------|-----------------------------|
| Japanese Display Stations            | 5295-001 Display Station                                   | 5555-B01                | 2424J4 55FE                 |
|                                      | 5295-002 Display Station                                   | 5555-B01                | 2424J4 68FE                 |
|                                      | InfoWindow 3477-J                                          | 5555-B01, C01           | 2424J4 68FE                 |
|                                      | Personal System/55 running 5250 PC                         | 5555-B01, C01, G01, G02 | 2424J4 68FE                 |
|                                      | Personal System/55 running 5250 PC/2 AD                    | 5555-E01, F01           | 2424J0                      |
|                                      | Personal System/55 running DOS 5250 work station program   | 5555-B01                | 2424J0                      |
|                                      | Personal System/55 running OS/2* 5250 work station feature | 5555-B01                | 2424J0                      |
| Japanese 24x24 Printers              | Attached to 5295-001 Display Stations                      | 5553-B01                | 2424J1 55FE                 |
|                                      | Attached to 5295-002 or InfoWindow 3477-J Display Stations | 5553-B01                | 2424J1 68FE                 |
|                                      | Attached to Personal System/55                             | 5553-B01                | 2424J1 68FE                 |
|                                      | 5227-001 Printer                                           | 5553-B01                | 2424J2 55FE                 |
|                                      | 5327-001 Printer                                           | 5553-B01                | 2424J2 68FE                 |
|                                      | 5427-001 Printer                                           | 5553-B01                | 2424J2 68FE                 |
| Japanese 32x32 Printers              | 5585-H01 Printer                                           | 5553-B01                | 2424J1 68FE                 |
|                                      | 5587-G01 Printer                                           | 5553-B01                | 2424J1 68FE                 |
|                                      | 5337-001 Printer                                           | 5553-B01                | 3232J0                      |
|                                      | 5583-200 Printer                                           | 5583-200                | 3232J0                      |
| Japanese Multi-purpose Printer       | 5582-P01 Printer                                           | 5553-B01                | 2424J1 68FE                 |
| Korean Display Stations              | All Display Stations                                       | 5555-B01                | 2424K0                      |
| Korean 24x24 Printers                | Attached to 5295 Display Stations                          | 5553-B01                | 2424K0                      |
|                                      | Attached to Personal System/55                             | 5553-B01                | 2424K0                      |
|                                      | 5227-002 Printer                                           | 5553-B01                | 2424K2 52FE                 |
|                                      | 5327-002 Printer                                           | 5553-B01                | 2424K2 52FE                 |
|                                      | 5427-002 Printer                                           | 5553-B01                | 2424K2 D3FE                 |
| Traditional Chinese Display Stations | All Display Stations                                       | 5555-B01                | 2424C0                      |

Table A-3 (Page 2 of 2). DBCS Feature Values for DBCS Display Stations and Printer Descriptions

| Language and Device                 | Type of Physical DBCS Work Station                     | Configure as Type-Model | Configure with DBCS Feature |
|-------------------------------------|--------------------------------------------------------|-------------------------|-----------------------------|
| Traditional Chinese 24x24 Printers  | Attached to 5295 or InfoWindow 3477-T Display Stations | 5553-B01                | 2424C0                      |
|                                     | Attached to Personal System/55                         | 5553-B01                | 2424C0                      |
|                                     | 5227-003 Printer                                       | 5553-B01                | 2424C2 5CFE                 |
|                                     | 5327-003 Printer                                       | 5553-B01                | 2424C2 5CFE                 |
|                                     | 5427-003 Printer                                       | 5553-B01                | 2424C2 91FE                 |
| Simplified Chinese Display Stations | All Display Stations                                   | 5555-B01                | 2424S0                      |
| Simplified Chinese 24x24 Printers   | Attached to 5295 Display Stations                      | 5553-B01                | 2424S0                      |
|                                     | Attached to Personal Systems                           | 5553-B01                | 2424S0                      |
|                                     | 5227-005 Printer                                       | 5553-B01                | 2424S2 6FFE                 |
|                                     | 5427-005 Printer                                       | 5553-B01                | 2424S2 6FFE                 |
| Simplified Chinese 32x32 Printer    | 5337-R05 Printer                                       | 5553-B01                | 3232S0                      |

## Automatic Configuration of DBCS Devices

Automatic configuration configures all local devices (display stations and printers) that are attached to the system, including local DBCS devices. If you are using automatic configuration, the system will create configuration descriptions for locally attached devices for you.

## Special Considerations for Automatic Configuration of DBCS Devices

However, automatic configuration of local DBCS devices has some limitations:

- The following devices cannot be configured automatically by the AS/400 system as 5555 C01 or 5555 F01 when a color monitor is used:
  - 5295 display station
  - InfoWindow 3477 J, K, S, and T display stations

- PS/55s using Japanese 5250PC version 6 or earlier, 5250PC/A version 7, and corresponding DBCS 5250 emulation programs

These devices must be manually configured if you want the system to recognize its color capability. To determine whether a color display can be configured automatically by the AS/400 system, and for additional information on how to perform display station setup, see the user's guide for your display station and 5250 emulation program.

- The *DBCS feature* prompt default supplied by automatic configuration for some DBCS devices *must* be manually changed so that the devices can operate on the AS/400 system.
- The *DBCS feature* prompt supplied by automatic configuration for other DBCS devices *should* be manually changed to achieve best device performance.

The following tables list the DBCS devices for which you must change the *DBCS feature* prompt, and those devices for which it is recommended that you change the *DBCS feature* prompt, and what it should be changed to.

## DBCS Printers That Must Be Reconfig-

**ured:** The following table lists the DBCS printers that are automatically configured by the system, but *must* be reconfigured. The DBCS feature specified by automatic configuration for these devices must be changed to the value in the table under the *Must Change to DBCS Feature* column.

Table A-4. Automatically Configured DBCS Printers

| Language            | Type of DBCS Device  | Auto-Config Supplied DBCS Feature | Must Change to DBCS Feature |
|---------------------|----------------------|-----------------------------------|-----------------------------|
| Japanese            | 5337 (32x32) Printer | 2424J1 55FE                       | 3232J0                      |
| Korean              | 5227 (24x24) Printer | 2424K0                            | 2424K2 52FE                 |
|                     | 5327 (24x24) Printer | 2424K0                            | 2424K2 52FE                 |
|                     | 5427 (24x24) Printer | 2424K0                            | 2424K2 D3FE                 |
| Traditional Chinese | 5227 (24x24) Printer | 2424C0                            | 2424C2 5CFE                 |
|                     | 5327 (24x24) Printer | 2424C0                            | 2424C2 5CFE                 |
|                     | 5427 (24x24) Printer | 2424K0                            | 2424C2 91FE                 |
| Simplified Chinese  | 5227 (24x24) Printer | 2424S0                            | 2424S2 6FFE                 |
|                     | 5427 (24x24) Printer | 2424S0                            | 2424S2 6FFE                 |

## DBCS Devices That Should Be Recon-

**figured:** The following table lists the double-byte character set devices (display stations and printers) that are automatically configured by the system, but that *should* be reconfigured manually for improved performance. It is recommended that the DBCS feature for the devices listed be

changed to the value in the table in the *Recommended Change to DBCS Feature* column.

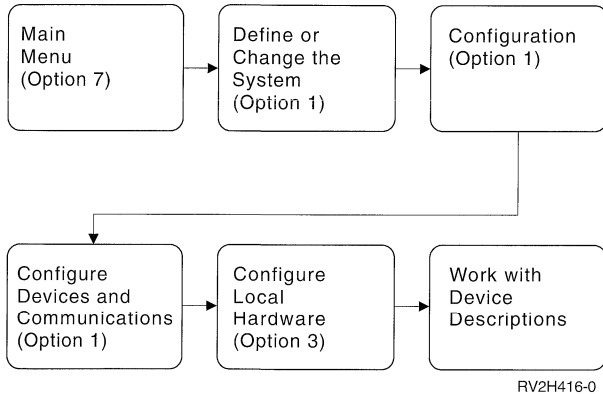
Table A-5. DBCS Devices for which Manual Reconfiguration is Recommended

| Language | Type of DBCS Device                                                         | Auto-Config Supplied DBCS Feature | Recommended Change to DBCS Feature |
|----------|-----------------------------------------------------------------------------|-----------------------------------|------------------------------------|
| Japanese | Personal System/55 running 5250PC                                           | 2424J4 55FE                       | 2424J4 68FE                        |
| Japanese | All Printers attached to 5295, 3477 and Personal System/55 Display Stations | 2424J1 55FE                       | 2424J1 68FE                        |
| Japanese | 5227 (24x24) Printer                                                        | 2424J1 55FE                       | 2424J2 55FE                        |
| Japanese | 5327 (24x24) Printer                                                        | 2424J1 55FE                       | 2424J2 68FE                        |
| Japanese | 5427 (24x24) Printer                                                        | 2424J1 55FE                       | 2424J2 68FE                        |

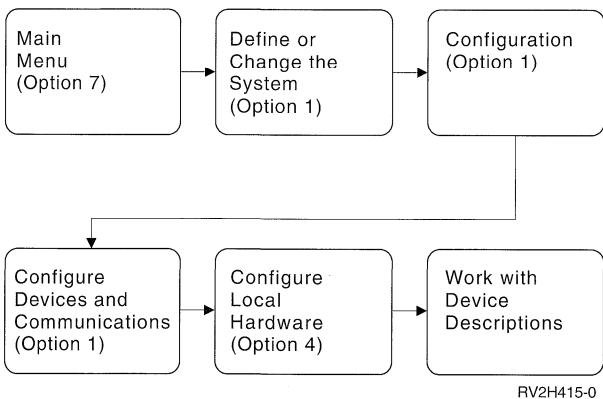
## Changing the DBCS Feature

To change the *DBCS feature* prompt in the device descriptions created by automatic configuration, use the menus for local printers or local display stations.

Following are the menus for local printers:



Following are the menus for local display stations:



On the Work with Device Descriptions display, type option 2 (Change) next to those display stations or printers that need to have the DBCS feature changed.

A list of prompts is shown. Several prompt displays may be shown. If the prompt for the *DBCS feature* is not on the first prompt display, press the Roll Up or Page Down key until that prompt is shown.

Change the value for the *DBCS feature* prompt and press the Enter key.

Continue to do this until all the device descriptions have been changed. The Work with Device Descriptions display is shown again.

## Considerations for Japanese DBCS Display Stations

Japanese DBCS display stations use the EBCDIC Katakana code page. They do not support concurrent display of single-byte English lowercase characters and single-byte Katakana characters. Two Japanese keyboard types, JKB and JUB, are available to provide alternative ways of working within this restriction.

Japanese DBCS display stations with the JKB keyboard type can display the following:

- Double-byte Japanese characters
- Double-byte and single-byte Katakana characters
- Double-byte and single-byte English characters, uppercase only

Japanese DBCS display stations with the JUB keyboard type can display the following:

- Double-byte Japanese characters
- Double-byte and single-byte English characters, both uppercase and lowercase

On some DBCS display stations, you can select the use of single-byte English lowercase characters or single-byte Katakana characters. When you use automatic configuration, the AS/400 system can determine the proper keyboard type for the display. For more information about keyboard types, see Table 5-2 on page 5-9.

To find out whether your DBCS display station supports the use of keyboard type JUB, refer to the *Japanese 5250PC User's Guide*, or the *Japanese InfoWindow 3477 User's Guide*.

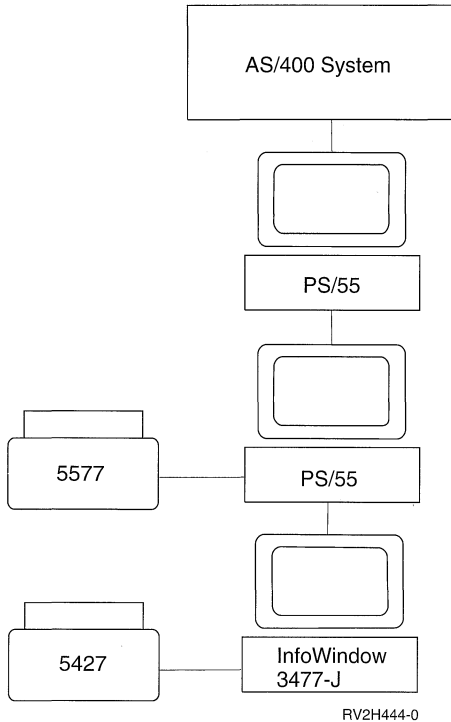
## Example Configurations

The following examples show:

- How you might attach local Japanese DBCS work stations to a work station controller.
- How you might attach local Korean, Simplified Chinese, and Traditional Chinese DBCS work stations to a work station controller.

The controller and device descriptions used for the devices shown follow each illustration.

## Local Configuration Example for Japanese DBCS Work Stations

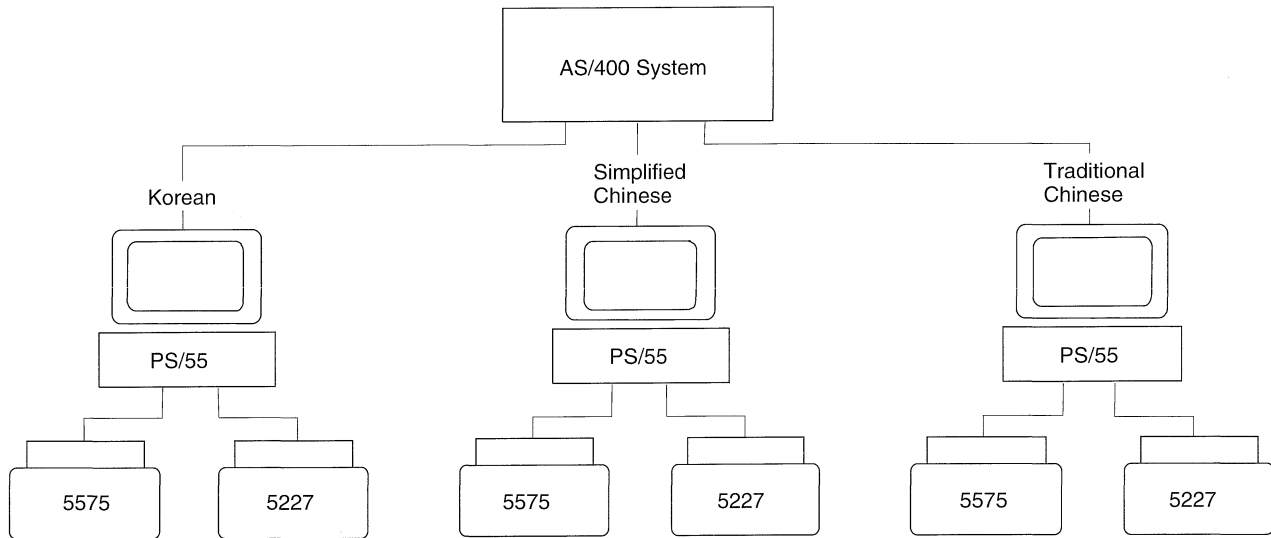


Type the following information for the prompts to create the controller and device descriptions:

- Local work station controller
  - *Controller description:* DBCSWC2
  - *Controller type:* 6040
  - *Controller model:* 1
  - *Resource name:* CTL01
  - *On-line at IPL:* \*YES
  - *Device wait timer:* 10
  - *Auto-configuration controller:* \*YES
  - *Text description:* Local work station controller
- First display station (PS/55 running Japanese 5250 PC)
  - *Device description:* DBCSDSP1
  - *Device class:* \*LCL
  - *Device type:* 5555
  - *Device model:* B01
  - *Port number:* 0
  - *Switch setting (device address):* 1
  - *Attached controller:* DBCSWC2

- *Keyboard language type:* JKB
- *DBCS feature:* 2424J4 68FE
- *Text description:* 1st local display station
- Second display station with color display (PS/55 running Japanese 5250 PC)
  - *Device description:* DBCSDSP2
  - *Device class:* \*LCL
  - *Device type:* 5555
  - *Device model:* C01
  - *Port number:* 0
  - *Switch setting (device address):* 2
  - *Attached controller:* DBCSWC2
  - *Keyboard language type:* JUB
  - *DBCS feature:* 2424J4 68FE
  - *Text description:* 2nd local display station
- First printer (5577 Printer)
  - *Device description:* DBCSPRT1
  - *Device class:* \*LCL
  - *Device type:* 5553
  - *Device model:* B01
  - *Port number:* 0
  - *Switch setting (device address):* 3
  - *Attached controller:* DBCSWC2
  - *Form Feed:* \*AUTOCUT
  - *DBCS feature:* 2424J1 68FE
  - *Text description:* 1st local printer
- Third display station (InfoWindow 3477-J)
  - *Device description:* DBCSDSP3
  - *Device class:* \*LCL
  - *Device type:* 5555
  - *Device model:* B01
  - *Port number:* 0
  - *Switch setting (device address):* 4
  - *Attached controller:* DBCSWC2
  - *Keyboard language type:* JKB
  - *DBCS feature:* 2424J4 68FE
  - *Text description:* 3rd local display station
- Second printer (5427 Printer)
  - *Device description:* DBCSPRT2
  - *Device class:* \*LCL
  - *Device type:* 5553
  - *Device model:* B01
  - *Port number:* 0
  - *Switch setting (device address):* 5
  - *Attached controller:* DBCSWC2
  - *DBCS feature:* 2424J2 68FE
  - *Text description:* 2nd local printer

# Local Configuration Example for Korean, Simplified Chinese, and Traditional Chinese DBCS Work Stations



RV2H445-0

Type the following information for the prompts to create the controller and device descriptions:

- Local work station controller
  - Controller description: DBCSWC5
  - Controller type: 6040
  - Controller model: 1
  - Resource name: CTL05
  - On-line at IPL: \*YES
  - Device wait timer: 10
  - Auto-configuration controller: \*NO
  - Text description: Local work station controller
- Korean display station (Personal System/55 running Korean 5250 PC)
  - Device description: KORDSP1
  - Device class: \*LCL
  - Device type: 5555
  - Device model: B01
  - Port number: 0
  - Switch setting (device address): 0
  - Attached controller: DBCSWC5
  - Keyboard language type: KOB
  - DBCS feature: 2424K0
  - Text description: Korean display station
- First Korean printer (5575 Printer)
  - Device description: KORPRT1
  - Device class: \*LCL
  - Device type: 5553
  - Device model: B01
- Second Korean printer (5427 Printer)
  - Device description: KORPRT2
  - Device class: \*LCL
  - Device type: 5553
  - Device model: B01
  - Port number: 0
  - Switch setting (device address): 2
  - Attached controller: DBCSWC5
  - DBCS feature: 2424K2 52FE
  - Text description: 2nd Korean printer
- Simplified Chinese display station (Personal System/55 running Simplified Chinese 5250 PC)
  - Device description: SCDSP1
  - Device class: \*LCL
  - Device type: 5555
  - Device model: B01
  - Port number: 1
  - Switch setting (device address): 0
  - Attached controller: DBCSWC5
  - Keyboard language type: RCB
  - DBCS feature: 2424S0
  - Text description: Simplified Chinese display station
- Port number: 0
- Switch setting (device address): 1
- Attached controller: DBCSWC5
- DBCS feature: 2424K0
- Text description: 1st Korean printer



- First Simplified Chinese printer (5575 Printer)
  - *Device description:* SCPRT1
  - *Device class:* \*LCL
  - *Device type:* 5553
  - *Device model:* B01
  - *Port number:* 1
  - *Switch setting (device address):* 1
  - *Attached controller:* DBCSWC5
  - *DBCS feature:* 2424S0
  - *Text description:* 1st Simplified Chinese printer
- | • Second Simplified Chinese printer (5427 Printer)
  - *Device description:* SCPRT2
  - *Device class:* \*LCL
  - *Device type:* 5553
  - *Device model:* B01
  - *Port number:* 1
  - *Switch setting (device address):* 2
  - *Attached controller name:* DBCSWC5
  - *DBCS feature:* 2424S2 6FFE
  - *Text description:* 2nd Simplified Chinese printer
- Traditional Chinese display station (Personal System/55 running Traditional Chinese 5250 PC)
  - *Device description:* TCDSP1
  - *Device class:* \*LCL
  - *Device type:* 5555
  - *Device model:* B01
- *Port number:* 2
- *Switch setting (device address):* 0
- *Attached controller:* DBCSWC5
- *Keyboard language type:* TAB
- *DBCS feature:* 2424C0
- *Text description:* Traditional Chinese display station
- First Traditional Chinese printer (5575 Printer)
  - *Device description:* TCPRT1
  - *Device class:* \*LCL
  - *Device type:* 5553
  - *Device model:* B01
  - *Port number:* 2
  - *Switch setting (device address):* 1
  - *Attached controller:* DBCSWC5
  - *DBCS feature:* 2424C0
  - *Text description:* 1st Traditional Chinese printer
- | • Second Traditional Chinese printer (5427 Printer)
  - *Device description:* TCPRT2
  - *Device class:* \*LCL
  - *Device type:* 5553
  - *Device model:* B01
  - *Port number:* 2
  - *Switch setting (device address):* 2
  - *Attached controller:* DBCSWC5
  - *DBCS feature:* 2424C2 91FE
  - *Text description:* 2nd Traditional Chinese printer



---

## Appendix B. Forms for Planning

One copy of each form is included in this appendix. You may make as many copies of these forms as you need. Each form has a letter and a number in the top left corner; this information will help you retrieve the forms easily. By

looking at the top left corner, you can tell which form you have.

Store these forms together in a safe place to be referred to later.



# C1

## Local Work Station Diagram (Twinaxial Cabling)

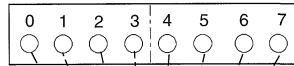
Page  
Number \_\_\_\_\_

System \_\_\_\_\_ Card Address \_\_\_\_\_

Service for Cabling \_\_\_\_\_ Work Station Controller Name \_\_\_\_\_

Telephone Number \_\_\_\_\_ Location of Twinaxial Work Station Attachment \_\_\_\_\_

Twinaxial Work Station Attachment Port Numbers



|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Device Name                                                       | _____ |
| Device Type, Model                                                | _____ |
| Location                                                          | _____ |
| Device Address                                                    | _____ |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> |       |
| Telephone Number                                                  | _____ |

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Device Name                                                       | _____ |
| Device Type, Model                                                | _____ |
| Location                                                          | _____ |
| Device Address                                                    | _____ |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> |       |
| Telephone Number                                                  | _____ |

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Device Name                                                       | _____ |
| Device Type, Model                                                | _____ |
| Location                                                          | _____ |
| Device Address                                                    | _____ |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> |       |
| Telephone Number                                                  | _____ |

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Device Name                                                       | _____ |
| Device Type, Model                                                | _____ |
| Location                                                          | _____ |
| Device Address                                                    | _____ |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> |       |
| Telephone Number                                                  | _____ |

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Device Name                                                       | _____ |
| Device Type, Model                                                | _____ |
| Location                                                          | _____ |
| Device Address                                                    | _____ |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> |       |
| Telephone Number                                                  | _____ |

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Device Name                                                       | _____ |
| Device Type, Model                                                | _____ |
| Location                                                          | _____ |
| Device Address                                                    | _____ |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> |       |
| Telephone Number                                                  | _____ |

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Device Name                                                       | _____ |
| Device Type, Model                                                | _____ |
| Location                                                          | _____ |
| Device Address                                                    | _____ |
| Display <input type="checkbox"/> Printer <input type="checkbox"/> |       |
| Telephone Number                                                  | _____ |

**Note:** A maximum of 7 work stations can be attached per port on the Twinaxial Work Station Attachment.

**Note:** You may copy as necessary.

RSLX033-10

# C2 Local Work Station Diagram (Other)

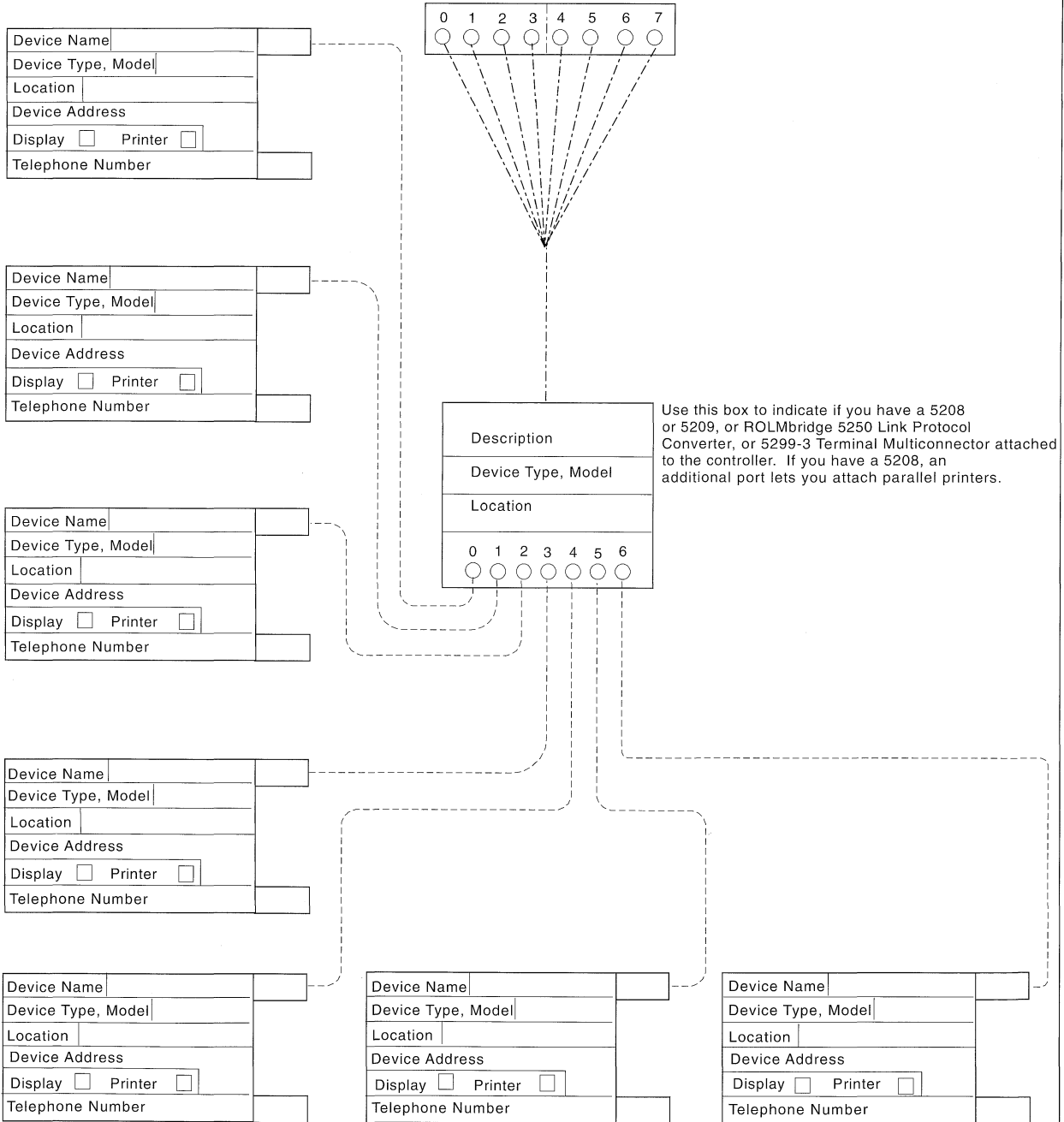
Page Number \_\_\_\_\_

System \_\_\_\_\_ Card Address \_\_\_\_\_

Service for Cabling \_\_\_\_\_ Work Station Controller Name \_\_\_\_\_

Telephone Number \_\_\_\_\_ Location of Twinaxial Work Station Attachment \_\_\_\_\_

Twinaxial Work Station Attachment Port Numbers



**Note:** A maximum of 7 work stations can be attached per port on the Twinaxial Work Station Attachment.

**Note:** You may copy as necessary.

RSLX016-10

# C3

## Local Work Station Diagram (IBM Cabling System)

Page Number \_\_\_\_\_

System \_\_\_\_\_ Card Address \_\_\_\_\_  
 Service for the IBM Cabling System \_\_\_\_\_ Work Station Controller Name \_\_\_\_\_  
 Telephone Number \_\_\_\_\_ Location of Twinaxial Work Station Attachment \_\_\_\_\_

| Twinaxial Work Station Attachment Port Numbers                                                                                                                                                                             | Accessories in Work Area | Cable Runs from (wall) | Cable & Cable Length | Cable Runs to (panel) | Accessories on Equipment Rack |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------|----------------------|-----------------------|-------------------------------|
| 0 1 2 3 4 5 6 7<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |                          |                        |                      |                       |                               |

Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_

Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_

Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_

Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_

Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_

Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_

Device Name \_\_\_\_\_  
 Device Type, Model \_\_\_\_\_  
 Location \_\_\_\_\_  
 Device Address \_\_\_\_\_  
 Display  Printer   
 Telephone Number \_\_\_\_\_

**Note:** A maximum of 7 work stations can be attached per port on the Twinaxial Work Station Attachment.

**Note:** You may copy as necessary.

RSLX020-7

# D1 Local Twinaxial Work Station Controller Index

System \_\_\_\_\_ Card Address \_\_\_\_\_ Work Station Controller Name \_\_\_\_\_

Service for Cabling \_\_\_\_\_ Location of Twinaxial Work Station Attachment \_\_\_\_\_ Controller Type \_\_\_\_\_

Telephone Number \_\_\_\_\_ Controller Model \_\_\_\_\_

**Choices:**

Twinaxial Cabling (C1)

Type of Cabling/  
Attachment

Your Form C Page  
Number

Telephone Twisted-Pair Cabling (C1)

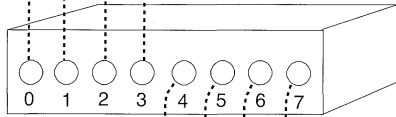
Telephone Twisted-Pair Cabling with  
5299-3 Terminal Multiconnector (C2)

ROLMbridge 5250 Link Protocol Converter (C2)

5208 Link Protocol Converter (C2)

5209 Link Protocol Converter (C2)

IBM Cabling System (C3)



Port 0 \_\_\_\_\_

Port 1 \_\_\_\_\_

Port 2 \_\_\_\_\_

Port 3 \_\_\_\_\_

Port 4 \_\_\_\_\_

Port 5 \_\_\_\_\_

Port 6 \_\_\_\_\_

Port 7 \_\_\_\_\_

**Note:** Only 40 work stations can be active at one time.

**Note:** You may copy as necessary.

RSLX035-7



# E1

## 9404 and 9406 Tape Controller and Tape Unit Diagram

System \_\_\_\_\_

Service Contact \_\_\_\_\_

Telephone Number \_\_\_\_\_

### Tape Controller

|                        |  |
|------------------------|--|
| Controller Name        |  |
| Controller Type, Model |  |

### Tape Unit with Tape Controller

|                    |  |
|--------------------|--|
| Controller Name    |  |
| Device Name        |  |
| Device Type, Model |  |
| Switch Setting     |  |

### Tape Unit without Tape Controller

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                        |  |
|------------------------|--|
| Controller Name        |  |
| Controller Type, Model |  |

|                    |  |
|--------------------|--|
| Controller Name    |  |
| Device Name        |  |
| Device Type, Model |  |
| Switch Setting     |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                        |  |
|------------------------|--|
| Controller Name        |  |
| Controller Type, Model |  |

|                    |  |
|--------------------|--|
| Controller Name    |  |
| Device Name        |  |
| Device Type, Model |  |
| Switch Setting     |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                        |  |
|------------------------|--|
| Controller Name        |  |
| Controller Type, Model |  |

|                    |  |
|--------------------|--|
| Controller Name    |  |
| Device Name        |  |
| Device Type, Model |  |
| Switch Setting     |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

Note: You may copy as necessary.

RV2X011-0

# E2 9404 and 9406 Diskette Unit Diagram

System \_\_\_\_\_

Service Contact \_\_\_\_\_

Telephone Number \_\_\_\_\_

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

**Note:** You may copy as necessary.

RV2X012-0

# E3

## 9402 Tape Unit and Diskette Unit Diagram

System \_\_\_\_\_

Service Contact \_\_\_\_\_

Telephone Number \_\_\_\_\_

### Tape Unit

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

### Diskette Unit

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

### Tape Unit

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

### Diskette Unit

|                    |  |
|--------------------|--|
| Device Name        |  |
| Device Type, Model |  |

**Note:** You may copy as necessary.

RV2X013-0

# X1

## Recording Resource Names

### Lines

| Line Name | Location/Card Slot | Resource Name |
|-----------|--------------------|---------------|
|           |                    |               |
|           |                    |               |
|           |                    |               |
|           |                    |               |
|           |                    |               |
|           |                    |               |
|           |                    |               |
|           |                    |               |

### Work Station Controllers

| Controller Name | Location/Card Slot | Resource Name |
|-----------------|--------------------|---------------|
|                 |                    |               |
|                 |                    |               |
|                 |                    |               |
|                 |                    |               |
|                 |                    |               |
|                 |                    |               |
|                 |                    |               |
|                 |                    |               |

### Tape Controllers

| Controller Name | Serial Number | Resource Name |
|-----------------|---------------|---------------|
|                 |               |               |
|                 |               |               |
|                 |               |               |
|                 |               |               |
|                 |               |               |
|                 |               |               |
|                 |               |               |
|                 |               |               |

### Tape and Diskette Units

| Device Name | Serial Number | Resource Name |
|-------------|---------------|---------------|
|             |               |               |
|             |               |               |
|             |               |               |
|             |               |               |
|             |               |               |
|             |               |               |
|             |               |               |
|             |               |               |

**Note:** You may copy as necessary.

RSLH505-5

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## Appendix C. Configuration Commands

This appendix contains a list of all the configuration commands available on the AS/400 system.

You can also perform configuration by directly entering the configuration commands, though you should use the commands only if you are already familiar with the configuration tasks.

To enter the command directly, type the command name on the command line and press F4.

Prompts asking for the parameter (characteristic) information are shown. If you already know what the parameters are and what values you want specified for each parameter, type them with the command name on the command line without using the prompt displays.

For each command that you type, some parameters are required for the descriptions to be configured successfully. You must fill in values for these required parameters. If you do not, the command does not successfully run. For example, if you are creating a local display station description, it is required that you tell the system the description name you would like assigned to the display station, what the display station type and model are, the port to which the display station is attached, and what the display station address is.

Many parameters are not required and default values are assigned by the system. For example, if you do not specify whether you would like the EBCDIC or ASCII character code for a particular remote work station controller, the system specifies EBCDIC as the default.

In most cases, the system defaults are adequate for your configuration. As you are performing your configuration tasks, you may decide to change some of the defaults if you feel that a different value would better suit your needs.

Following is a list of the configuration commands that you can use to create and change your local and remote configurations. More configuration commands relating to communications are discussed in detail in the *OS/400\* Communications Configuration Reference*.

The online help information for that command or the *CL Reference* contains more detailed information on these commands.

- Network Interface Descriptions
  - Work with Network Interfaces (WRKNWID)
  - Create Network Interface Description (CRTNWIISDN)
  - Change Network Interface Description (CHGNWIISDN)
  - Create Network Interface Description (CRTNWIFR)
  - Change Network Interface Description (CHGNWIFR)
  - Delete Network Interface Description (DLTNWID)
  - Display Network Interface Description (DSPNWID)
  - End Network Interface Recovery (ENDNWIRCY)
  - Resume Network Interface Recovery (RSMNWIRCY)
- Line description commands:
  - Work with Line Descriptions (WRKLIND)
  - Create Line Description (Asynchronous) (CRTLINASC)
  - Create Line Description (BSC) (CRTLINBSC)
  - Create Line Description (DDI) (CRTLINDDI)
  - Create Line Description (Ethernet) (CRTLINETH)
  - Create Line Description (FR) (CRTLINFR)
  - Create Line Description (IDLC) (CRTLINIDLC)
  - Create Line Network (CRTLINNET)
  - Create Line Description (SDLC) (CRTLINS DLC)
  - Create Line Description (TDLC) (CRTLINTDLC)
  - Create Line Description (TRLAN) (CRTLINTRN)
  - Create Line Description (X.25) (CRTLINX25)
  - Change Line Description (Asynchronous) (CHGLINASC)
  - Change Line Description (BSC) (CHGLINBSC)

- Change Line Description (DDI) (CHGLINDDI)
- Change Line Description (Ethernet) (CHGLINETH)
- Change Line Description (FR) (CHGLINFR)
- Change Line Description (IDLC) (CHGLINIDLC)
- Change Line Network (CHGLINNET)
- Change Line Description (SDLC) (CHGLINS DLC)
- Change Line Description (TDLC) (CHGLINTDLC)
- Change Line Description (TRLAN) (CHGLINTRN)
- Change Line Description (X.25) (CHGLINX25)
- Delete Line Description (DLTLIND)
- Display Line Description (DSPLIND)
- Controller description commands:
  - Work with Controller Descriptions (WRKCTLD)
  - Create Controller Description (APPC) (CRTCTLAPPC)
  - Create Controller Description (Asynchronous) (CRTCTLASC)
  - Create Controller Description (BSC) (CRTCTLBSC)
  - Create Controller Description (Finance) (CRTCTLFNC)
  - Create Controller Description (SNA Host) (CRTCTLHOST)
  - Create Controller Description (Network) (CRTCTLNET)
  - Create Controller Description (Local Work Station) (CRTCTLLWS)
  - Create Controller Description (Retail) (CRTCTLRTL)
  - Create Controller Description (Remote Work Station) (CRTCTLRWS)
  - Create Controller Description (Virtual Work Station) (CRTCTLVWS)
  - Create Controller Description (Tape) (CRTCTLTAP)
  - Change Controller Description (APPC) (CHGCTLAPPC)
  - Change Controller Description (Asynchronous) (CHGCTLASC)
  - Change Controller Description (BSC) (CHGCTLBSC)
  - Change Controller Description (Finance) (CHGCTLFNC)
  - Change Controller Description (SNA Host) (CHGCTLHOST)
  - Change Controller Description (Network) (CHGCTLNET)
  - Change Controller Description (Local Work Station) (CHGCTLLWS)
  - Change Controller Description (Retail) (CHGCTLRTL)
  - Change Controller Description (Remote Work Station) (CHGCTLRWS)
  - Change Controller Description (Virtual Work Station) (CHGCTLVWS)
  - Change Controller Description (Tape) (CHGCTLTAP)
  - Delete Controller Description (DLTCTLD)
  - Display Controller Description (DSPCTLD)
  - Print Device Addresses (PRTDEVADR)
- Device description commands:
  - Work with Device Descriptions (WRKDEV D)
  - Create Device Description (APPC) (CRTDEVAPPC)
  - Create Device Description (Asynchronous) (CRTDEVASC)
  - Create Device Description (BSC) (CRTDEVBSC)
  - Create Device Description (Diskette) (CRTDEV DKT)
  - Create Device Description (Display Station) (CRTDEV DSP)
  - Create Device Description (Finance) (CRTDEV FNC)
  - Create Device Description (SNA Host) (CRTDEV HOST)
  - Create Device Description (Intrasystem) (CRTDEV INTR)
  - Create Device Description (Network) (CRTDEV NET)
  - Create Device Description (Printer) (CRTDEV PRT)
  - Create Device Description (Retail) (CRTDEV RTL)
  - Create Device Description (SNA Pass-Through) (CRTDEV SNPT)
  - Create Device Description (SNA Upline Facility) (CRTDEV SNUF)
  - Create Device Description (Tape) (CRTDEV TAP)
  - Change Device Description (APPC) (CHGDEVAPPC)
  - Change Device Description (Asynchronous) (CHGDEVASC)

- Change Device Description (BSC) (CHGDEVBSC)
- Change Device Description (Diskette) (CHGDEVDKT)
- Change Device Description (Display Station) (CHGDEVDSP)
- Change Device Description (Finance) (CHGDEVFNC)
- Change Device Description (SNA Host) (CHGDEVHOST)
- Change Device Description (Intrasystem) (CHGDEVINTR)
- Change Device Description (Network) (CHGDEVNET)
- Change Device Description (Printer) (CHGDEVPRT)
- Change Device Description (Retail) (CHGDEVRTL)
- Change Device Description (SNA Pass-Through) (CHGDEVSNPT)
- Change Device Description (SNA Upline Facility) (CHGDEVSNUF)
- Change Device Description (Tape) (CHGDEVTAP)
- Delete Device Description (DLTDEVD)
- Display Device Description (DSPDEVD)
- Mode description commands:
  - Work with Mode Descriptions (WRKMODD)
  - Create Mode Description (CRTMODD)
  - Change Mode Description (CHGMODD)
  - Delete Mode Description (DLTMODD)
  - Display Mode Description (DSPMODD)
- Class-of-service description commands:
  - Work with Class-of-Service Descriptions (WRKCOSD)
  - Create Class-of-Service Description (CRTCOSD)
  - Change Class-of-Service Description (CHGCOSD)
  - Delete Class-of-Service Description (DLTCOSD)
  - Display Class-of-Service Description (DSPCOSD)
  - Configuration list commands:
    - Work with Configuration Lists (WRKCFGL)
    - Add Configuration List Entries (ADDCFGLE)
    - Remove Configuration List Entries (RMVCFGLE)
    - Create Configuration List (CRTCFGL)
    - Change Configuration List (CHGCFGL)
    - Change Configuration List Entry (CHGCFGLE)
    - Copy Configuration List (CPYCFGL)
    - Delete Configuration List (DLTCFGL)
    - Display Configuration List (DSPCFGL)
  - Connection list commands:
    - Work with Connection Lists (WRKCNL)
    - Add Connection List Entry (ADDCNNLE)
    - Create Connection List (CRTCNL)
    - Change Connection List (CHGCNNL)
    - Change Connection List Entry (CHGCNNLE)
    - Delete Connection List (DLTCNNL)
    - Display Connection List (DSPCNL)
    - Remove Connection List Entry (RMVCNNLE)





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## Appendix D. Upgrading AS/400 System Products

This appendix provides you with information on how to upgrade or change AS/400 system products. It is especially helpful if you are upgrading from an AS/400 system model B to any AS/400 system model, including model F.

When you upgrade or change AS/400 system products you need to remember that after any hardware has been upgraded or changed, the configuration objects that you had on the system need to be reconfigured to recognize any new or changed hardware.

This appendix helps you to understand the concept behind *system resource names* and how they are used for instructing the AS/400 system to recognize new or changed hardware devices.

This appendix is designed to provide guidance with the following tasks:

- Upgrading your AS/400 9402 or 9404 system.

When you upgrade one of these systems, you need to reconfigure your resource names and resource types. See “Updating Device Configuration Objects” on page D-12 for the commands that you use to both upgrade system hardware and reconfigure your system resource names and resource types.

- Upgrading your AS/400 9406 system.

When you upgrade your AS/400 9406 system, the System Upgrade Program, a tool used by the hardware service representative, automatically reconfigures your system resource names and resource types. See “Special Considerations for 9406 Systems” on page D-3 for more information about automatic reconfiguration. If you find that the reconfigured resource names and resource types do not operate as expected after you have upgraded your system, you can use the commands found in “Updating Device Configuration Objects” on page D-12 to reconfigure your system resource names and resource types.

This appendix includes the following sections:

- System Resource Names
- Special Considerations for 9406 Systems

- Device Configuration Changes made by the System Upgrade Program
- Commands for Reconfiguring System Resource Names and Resource Types
- Descriptions of Related AS/400 System Commands

---

### System Resource Names

System resource names are assigned *by the system* to hardware attached to the system. These names are assigned automatically and are used by the system to refer to physical hardware information stored in the system.

The system assigns resource names to the following types of hardware:

- Tape units
- Disk units
- Tape controllers
- Communications ports
- Local ASCII work station controllers
- Local twinaxial work station controllers
- Disk units, storage IOPs, communication IOPs, main storage cards, processor cards. (Resource names are assigned to these units, but they are not affected by device configuration.)

When you upgrade or change hardware on your system, you must know which resource name the system has assigned to each piece of hardware.

### Why Resource Names are Used

The AS/400 system design provides a great deal of flexibility in the number of hardware and software options, features, and combinations that are available to you. This flexibility creates some complex situations that are not readily obvious. For example, your service representative might change the address of your work station controller in the process of adding a communications product. The address of the work station controller is needed in order to vary on the associated controller description. If the system only referred to hardware devices using the hardware address, the configuration for the work station controller would be incorrect after the hardware service rep-

representative installed the new communications product. It would be undesirable to install the new communications product and disturb any attached work station configurations. To prevent disruption of any device configurations, the AS/400 system uses the resource name.

## How System Resource Names are Assigned

When the OS/400 system first recognizes a new hardware resource, it assigns a resource name. It automatically establishes the resource name by using the hardware resource type, model number, and serial number.

The resource name is used for configuring AS/400 system devices. The resource name is also used when logging hardware errors, in alerts, and in hardware problem analysis.

The device configuration objects that need resource names are:

- Local work station controller descriptions (CTLD)
- Tape controller descriptions (CTLD)
- Line descriptions (LIND) not connected to network interface descriptions
- Network interface descriptions (NWID)
- Diskette unit device descriptions (DEVD)
- Device descriptions (DEVD) for tape units that do not have tape controllers

Table D-1 shows the resource names, device configuration objects, and the commands in which they would be used. For descriptions of the commands in the following table, see "Descriptions of Related AS/400 System Commands" on page D-18.

Table D-1. Resource names and device configuration

| Object | Resource Name* | Associated Commands                              |
|--------|----------------|--------------------------------------------------|
| CTLD   | CTLnn          | CRTCTLLWS<br>CHGCTLLWS                           |
| CTLD   | TAPCTLnn       | CRTCTLTAP<br>CHGCTLTAP                           |
| LIND   | LINnnm         | CRTLINxxx<br>CHGLINxxx                           |
| NWID   | NWInnm         | CRTNWIISDN<br>CHGNWIISDN<br>CRTNWIFR<br>CHGNWIFR |
| DEVD   | TAPnn          | CRTDEVTAP<br>CHGDEVTAP                           |
| DEVD   | DKTnn          | CRTDEVDKT<br>CHGDEVDKT                           |

\* Resource names are represented by a two-, three-, or six-letter code for the hardware resource type, such as CTL, and the values *m* and *nn*, where *m* is the port number, and *nn* is a number from 01 to 99.

## Recovery Planning

To facilitate recovery in the event of a system failure, it is recommended that you keep updated records of all your hardware and configuration objects. Before *and* after every hardware upgrade, create a report of your hardware and configuration objects using the Display Hardware Resources (DSPHWRSC) command with parameters specified as follows:

```
DSPHWRSC TYPE(*LWS) OUTPUT(*PRINT)
DSPHWRSC TYPE(*STG) OUTPUT(*PRINT)
DSPHWRSC TYPE(*CMN) OUTPUT(*PRINT)
DSPHWRSC TYPE(*PRC) OUTPUT(*PRINT)
/* The *PRC report does not show */
/* device configuration objects */
```

If any of the configurations listed in the report are not specified the way you want, the procedures for changing the device configurations are in the following tables:

- Table D-6 on page D-13
- Table D-7 on page D-13
- Table D-8 on page D-13
- Table D-9 on page D-14
- Table D-10 on page D-14
- Table D-11 on page D-16
- Table D-12 on page D-17

## A Hardware Change Scenario

Assume that a garment company in New York City called Best Dressed has a 9348 reel tape unit with a resource name, TAP01, and a device description name of FIRSTTAPE. Best Dressed wants to remove the 9348 reel tape unit and install a 6368 cartridge tape unit. The system gives the new 6368 cartridge tape unit a different resource name, TAP03. (You can view the resource name by using the command `WRKHDWRSC TYPE(*STG)`.)

**What Happens:** The old device description, FIRSTTAPE, will not vary on because it contains the resource name TAP01.

**What Best Dressed Needs to Do:** Best Dressed needs to specify a new device description for the 6368 cartridge tape unit. This new device description must reflect the type and resource name of the 6368 cartridge tape unit. You can create an entirely new device description for the device with the `CRTDEVTAP` command. Alternatively, you can change the existing device description and keep the original device description name (FIRSTTAPE) using the procedures explained in Table D-12 on page D-17.

**Best Dressed Changes Its Mind:** Best Dressed has decided that they want the old 9348 reel tape unit to remain where it was. They decided to install the new 6368 cartridge tape unit at another office location. The original 9348 reel tape unit is re-installed. The system treats the 9348 reel tape unit as a new device and assigns it a new resource name. In order for the device description named FIRSTTAPE to work, it must be changed to contain the new resource name of the 9348 reel tape unit. The `WRKHDWRSC` command is used to view the new resource name. The `WRKCFGSTS` command is used to change the device description to reflect the new resource name (see Table D-9 on page D-14).

---

## Special Considerations for 9406 Systems

Because of the complexity of upgrading a 9406 System (adding or changing hardware to the system), a tool called the System Upgrade Program is available for use by your hardware service representative.

Hardware changes can disrupt existing device configurations. Due to the large number of device configuration objects on the 9406 System, the System Upgrade Program has been enhanced with a function that automatically preserves the device configuration objects of the system. Before the physical upgrade begins, the hardware service representative uses the System Upgrade Program to plan the hardware upgrade, which includes capturing data about existing hardware and device configuration objects. After the physical upgrade is completed, the hardware service representative will use the System Upgrade Program again to change the system resource names and device configuration objects on the system so that they work the way they did before you upgraded your AS/400 system.

In order for the System Upgrade Program to work effectively, no hardware (such as a modem or local area network (LAN) device) connected to the cables on the AS/400 system can be changed while the upgrade is in process. If any hardware is changed, the device configuration objects cannot function the same as they did before.

The System Upgrade Program performs device configuration management tasks in two phases:

- Phase one occurs before the hardware upgrade. The System Upgrade Program captures information about your existing device configuration and uses it along with information about the upgrade to determine which changes are needed so that the device configurations will operate correctly after the upgrade.
- Phase two occurs after the hardware upgrade. It makes the actual changes to the device configuration objects and internal system tables, which causes your device configuration to match the new hardware configuration. ***Do not make any changes to the device configuration on the system between the time***

***the first phase is run and the time the second phase is run.***

The System Upgrade Program will produce a working set of configuration objects that perform the same function as before the hardware upgrade. If you intend to configure the new hardware on the system to perform different functions than were performed before the upgrade, you have to manually update these device configuration objects after the upgrade is complete. If you want your device configuration objects to remain as they were before the upgrade, you can rely on the changes that the System Upgrade Program makes automatically.

If your device configuration objects need to be changed manually, the following tables provide information to help you with these changes:

- The reports described in “Recovery Planning” on page D-2.
- The procedures described in:
  - Table D-6 on page D-13
  - Table D-7 on page D-13
  - Table D-8 on page D-13
  - Table D-9 on page D-14
  - Table D-10 on page D-14
  - Table D-11 on page D-16
  - Table D-12 on page D-17

## **Limitations of the System Upgrade Program**

The system upgrade program has the following limitations for tape units, work station controller descriptions, automatic call units, and port sharing.

**Tape Units:** When existing tape units are replaced by a new 34xx tape unit, the device configuration objects cannot always be attached to the correct hardware. For most 34xx models, the System Upgrade Program does not track the individual devices; it tracks the tape controller. Some device descriptions from the current configuration may not be attached to devices after the upgrade in the target configuration.

For example, suppose a 3480 tape subsystem with two devices is being replaced by a 3490 model D32, which also has two devices. The System Upgrade Utility does not track the individual devices, so it is not known that there are

going to be two devices to which the device descriptions could be attached after the upgrade. The two device descriptions cannot be used after the upgrade in the target configuration.

A few exceptions:

- The 3490-C10, 3490-C11, and 3490-D32 tape units are tracked by the System Upgrade Program. The System Upgrade Program knows that the C10 and C11 models have one device and that the C22 model has two devices.
- The 3422-A01 and 3430-A01 tape units each have one built-in device.

### **Workstation Controller Descriptions:**

Any work station controller description referred to by an existing TDLC line description may be modified. The TDLC line descriptions should be verified manually to ensure that they reflect the name of the correct work station controller description.

**Automatic Call Units:** The System Upgrade Program does not provide for any cable adjustment associated with the existing automatic call units. Line descriptions that specify an automatic call unit resource name can not be used, and their resource name is changed to LINXXX. These line descriptions have to be updated manually.

**X.21 Multiple Port Sharing:** The System Upgrade Program may change resource names in a line description using X.21 multiple port sharing. When this occurs, the resource names are not in the same communications subsystem and the line descriptions are no longer controlled by the same I/O processor. This situation should occur only when more than one line description is using multiple port sharing. The lines may specify some but not all of the ports. Line descriptions using multiple port sharing should be inspected manually to verify that they are referring to valid X.21 ports in the same communications subsystem.

---

## **Device Configuration Changes Made by the System Upgrade Program**

Your hardware service representative is responsible for running the System Upgrade Program.

Having the device configuration changes managed by the System Upgrade Program allows the system to return to operation as quickly as possible. You can customize your configuration objects at a later time, if you choose. The System Upgrade Program maintains the existing device configuration by associating each existing device configuration object with a hardware resource on the upgraded system. The program manages the assignment of configuration objects to the following devices during a system upgrade:

- Work station controllers
- Communications ports
- Diskette units
- Tape units

The process of associating configuration objects with each of these hardware resources is explained in the following sections:

- “Processing Work Station Controllers”
- “Processing Communications Ports” on page D-7
- “Processing Diskette Units” on page D-9
- “Processing Tape Units” on page D-10

In most cases, the System Upgrade Program ensures that hardware resources that remain on the system have the same set of device configuration objects associated with them after the

upgrade. Exceptions arise in certain circumstances with the console work station controller, the electronic customer support line, and the alternate IPL device. See “Processing Work Station Controllers,” “Processing Communications Ports” on page D-7 , and “Processing Tape Units” on page D-10 for more information about this.

Except for the special cases mentioned above, the hardware remaining on the system continues to use the same device configuration objects. Other configuration objects are associated with compatible hardware according to the rules described in:

- Table D-2 on page D-6
- Table D-3 on page D-8
- Table D-4 on page D-9
- Table D-5 on page D-11

## **Processing Work Station Controllers**

The System Upgrade Program associates existing local work station controller objects with work station controller resources while the system is being upgraded. The program associates work station controller objects by using the rules in Table D-2 on page D-6. The rules are applied in order.

Table D-2 (Page 1 of 2). Processing Work Station Controllers

| Rule | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>The console work station controller description is associated with the first work station controller in hardware address order on the upgraded system. This is required because the console is defined to be the first work station on the first work station controller on bus zero (0). Your hardware service representative follows the instructions of the System Upgrade Program and connects the proper work station controller cable to the console work station controller on the upgraded system. The assumption is that you want to keep the same console device. Consider the following conditions:</p> <ul style="list-style-type: none"> <li>• If the console controller is the same hardware resource before and after the upgrade, then the work station controller keeps the same controller description that it had before.</li> <li>• If the console controller after the upgrade is not the same hardware resource as the console controller before the upgrade, there are three alternative considerations:             <ol style="list-style-type: none"> <li>1. If the new console controller was not on the system before the upgrade, then the controller descriptions that existed before the upgrade are used for the console controller in the upgraded system. The work station controller that was the console controller before the upgrade, if it is still on the system after the upgrade, does not have controller descriptions associated with it (see rules 2 through 5 for an explanation of how controller descriptions are assigned to controllers).</li> <li>2. If the work station controller that is the new console controller on the upgraded system was on the system before the upgrade but was not the console controller before the upgrade, and the work station controller that was the console controller before the upgrade remains on the system, then the controller descriptions that were associated with the old console controller before the upgrade will be associated with the new console controller after the upgrade. The work station controller that was the console controller before the upgrade will have controller descriptions associated with it as provided by rules 2 through 5 below.</li> <li>3. If the new console controller was not the console controller before the upgrade and the console controller before the upgrade was removed from the system, then the controller descriptions that were associated with the console controller that was removed are associated with the console controller on the upgraded system. The controller descriptions that were associated with the work station controller that is now the console controller are associated with other work station controllers following the rules specified below.</li> </ol> </li> <li>• If the new console controller is not compatible with the old console controller (for example, if the controllers attach to two different kinds of work stations because one is twinaxial and the other is ASCII) then it is impossible to associate the old console controller descriptions with the new console controller. Though the controller descriptions cannot be used, the System Upgrade Program ensures that the new console device has a device description with the same name as the old console device. A new console controller is automatically configured and a new console device description is created. The new console device description is given the same name, ownership, and authorities as the old console device description. All other work station controllers are processed according to the rules below.</li> </ul> |
| 2    | <p>After the console controller has the proper controller descriptions associated with it, any work station controllers that were on the system before the upgrade (and that are still on the system) are processed. Any work station controller that was on the system before the upgrade and is still on the system, and that was not involved in any of the console special cases discussed above, keeps the controller description that was associated with it before the upgrade. For example, if all work station controllers remain on the system and the console controller remains the same, then all the old controller descriptions are associated with the same hardware as before, even if the local work station controllers have been moved to different locations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3    | <p>If rules 1 and 2 did not apply, then the remaining controller descriptions are associated with compatible new hardware resources. Twinaxial controller descriptions are associated with twinaxial work station controllers and ASCII controller descriptions are associated with ASCII work station controllers. When several work station controller descriptions are associated with one work station controller before the upgrade, they remain associated with one work station controller after the upgrade. In other words, they are not split up across multiple work station controllers.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

Table D-2 (Page 2 of 2). Processing Work Station Controllers

| Rule | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | Work station controller descriptions that were not associated with any work station controllers before the upgrade are not associated with any work station controller after the upgrade. If they exist, they are probably old work station controller objects that are no longer needed but have not been deleted. These objects are not deleted by the System Upgrade Program, but their resource names are changed to a value that is not valid, CTLXX. The intent is to keep the configuration looking as it did before the upgrade. |
| 5    | There can be a case when a controller description contains a valid resource name but the type in the controller description does not match the type of the hardware resource. These controller descriptions are given a resource name that is not valid, CTLXX, so that they are not associated with any work station controllers.                                                                                                                                                                                                       |

### Associating Controller Descriptions

**with Different Cards:** It is important to remember that whenever a controller description is associated with a different card, you must also move the cable associated with that controller description. Your hardware service representative uses the System Upgrade Program instructions for moving the cables to ensure that the work stations are associated with the proper work station controllers.

- After the System Upgrade Program, you must configure the new controllers. This can be done with automatic configuration or manually. If you choose to do this manually, the WRKHDWRSC TYPE(\*LWS) command is helpful.
- In some cases, the System Upgrade Program will not properly associate all the work station controller descriptions that were working before the upgrade of the work station controllers on the upgraded system. In this case, you must manually update the device configuration descriptions to obtain the desired result.

For example, suppose that there were three work station controllers on the system before

the upgrade, and that each of these work station controllers had one work station controller description, named, respectively, CTL01, CTL02, and CTL03. If, after the upgrade, there are only two work station controllers on the system, the System Upgrade Program can only associate two of the work station controller descriptions with the remaining work station controllers. The third controller description will not be associated with any hardware resource. If the System Upgrade Program associated CTL01 and CTL02 with the two controllers, but you intended to use CTL03, you would need to use the procedures described in Table D-8 on page D-13 and Table D-10 on page D-14 to make the appropriate changes.

### Processing Communications Ports

Existing line description objects and network interface description objects are associated with physical communications ports on the upgraded system. The System Upgrade Program associates communication port objects by using the rules in Table D-3 on page D-8. The rules are applied in order.

Table D-3 (Page 1 of 2). Processing Communications Ports

| Rule | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>The IBM-supplied electronic customer support line descriptions (QESLINE and QTILINE) are associated with the first communications port in the configuration, assuming that it is compatible with the electronic customer support line function. This is done because the electronic customer support line is generally the first port (that is, the port with the lowest hardware address). Any other line descriptions that were associated with the same port as the electronic customer support line are moved to this port.</p> <p>If the first communications port on the system is not a new port (that is, it was not added during the upgrade) or is not compatible with the electronic customer support line function, then the electronic customer support line description is not moved. It remains on the port that it was associated with before the upgrade.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 2    | <p>After the electronic customer support line is processed, any ports that were on the system before the upgrade (and are still on the system) are processed. These ports have the same line descriptions associated with them after the upgrade as they did before the upgrade.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3    | <p>If there are still line descriptions that have not been associated with hardware ports in the upgraded configuration, then they are associated with the remaining compatible ports. If multiple line descriptions were associated with one port before the upgrade, then they are still associated with one port after the upgrade. The intent is to keep the configuration looking as it did before the upgrade.</p> <p>When rules 2 and 3 are used there are two kinds of line descriptions that are handled as special cases: (1) line descriptions with an associated automatic call port; and (2) line descriptions that are using multiple port sharing.</p> <ul style="list-style-type: none"> <li>• Certain line descriptions can have an associated automatic call port. These line descriptions will not be associated with any hardware after the upgrade, nor will any line descriptions that contained the same resource names as the line descriptions that had an associated automatic call port.</li> <li>• Some line descriptions make use of multiple port sharing. When this is used, multiple resource names are specified in the line description. The line description can make use of any of those ports. A line description using multiple port sharing is associated with the same number of compatible ports after the upgrade as it was before the upgrade, if possible. The ports being shared by one line description must be controlled by the same I/O processor. All resource names are updated in the line description to point to the new ports.</li> </ul> <p>There may not be enough ports in the upgraded system to ensure that the line description is attached to the same number of ports after the upgrade. In this case, as many ports as possible are associated with the line description.</p> |
| 4    | <p>Line descriptions that were not associated with any ports before the upgrade are not associated with any ports after the upgrade. They were probably old objects that are no longer needed but have not been deleted. These line descriptions are not deleted by the System Upgrade Program. The resource names in these line descriptions are set a value that is not valid, LINXXX, to ensure that they are not connected to ports after the upgrade. The intent is to keep the configuration looking as it did before the upgrade.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



Table D-3 (Page 2 of 2). Processing Communications Ports

| Rule | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>There can be cases when there are fewer line descriptions of a particular type than there are compatible communications ports. In these cases, there are some ports following the upgrade that have no corresponding line description. You must configure this new hardware manually.</p> <p>Each line description is associated with a port that is compatible with the function being performed by that line description. Therefore, all line descriptions work after the upgrade is complete (assuming that the hardware at the other end of the cable has not been changed). However, some line descriptions may not be associated with the ports that you had intended. For example, suppose you have two existing 4 Mbps Token-Ring line descriptions. You have one 4 Mbps Token-Ring port and one 4/16 Mbps Token-Ring port (both on new cards that were not on the system before the upgrade). You intend to put line description number 1 on the high speed port, change the line description to the higher speed, and leave line description number 2 on the other port. The System Upgrade Program cannot determine which line description you intended to associate with the high speed port. Depending on the hardware placement, it is possible that the line description number 2 is associated with the high speed port and line description number 1 is associated with the other port. In this case, you have to reconfigure the ports manually.</p> <p>This example also illustrates the importance of not changing the hardware on the other end of the cable during the upgrade. If you had changed one of the LANs to a high speed LAN at the same time as the upgrade, then the mapping specified in the example would have connected the slow token ring port to the high speed LAN. This port would not be operational after the upgrade since a slow port cannot support a high speed LAN.</p> |

If there are fewer communications ports after the upgrade than there were before the upgrade, then it is not possible to associate each line description with a communications port. This could occur if you had intended to discontinue some line descriptions. The System Upgrade Program cannot determine which line descriptions you intend to discontinue. In this case, you may need to configure the line descriptions again manually after the upgrade. See Table D-7 on page D-13 for information on how to reconfigure line descriptions manually.

For multiple port sharing, there may not be enough compatible ports on the upgraded system to support the existing line descriptions. In this case, as many ports as possible are associated with a line description.

### Associating Line Descriptions with Different Ports:

It is important to remember that whenever a line description is associated with a different port, the cable associated with that line description must also be moved. Your hardware service representative follows the System Upgrade Program instructions when moving the cables to ensure that the modems and other devices are connected to the proper card.

**Note:** Network interface objects follow the same rules as line descriptions.

### Processing Diskette Units

The System Upgrade Program associates diskette unit objects by using the rules in Table D-4. The rules are applied in order.

Table D-4 (Page 1 of 2). Processing Diskette Units

| Rule | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | The diskette units that were on the system before the upgrade (and are still on the system) are processed. Any diskette unit that remains on the upgraded system keeps the same device descriptions.                                                                                                                                                                                                                                                                                                                                                                                    |
| 2    | If diskette unit descriptions that had been associated with diskette units in the upgraded configuration still exist, then the old diskette unit descriptions are associated with the new diskette units. 5-1/4 inch diskette unit descriptions are associated with 5-1/4 inch devices, and 8-inch device descriptions are associated with 8-inch devices. When several device descriptions are associated with one device before the upgrade, they are all associated with one device after the upgrade. The intent is to keep the configuration looking as it did before the upgrade. |

Table D-4 (Page 2 of 2). Processing Diskette Units

| Rule | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | Device descriptions that are not associated with a device in the system before the upgrade are not associated with a device after the upgrade. Such device descriptions are probably old objects that are no longer needed but that have not been deleted. The System Upgrade Program does not delete these configuration objects, but changes their resource names to a value that is not valid, DKTXX, to ensure that they are not associated with devices after the upgrade. The intent is to keep the configuration looking as it did before the upgrade. |

### Special Cases for Processing Diskette

**Units:** The following special cases pertain to processing diskette units:

- When existing device descriptions of a particular type outnumber compatible diskette units, some device descriptions are not associated with any diskette unit in the upgraded system. These device descriptions do not work after the upgrade.

If you have fewer diskette units after the upgrade, you may want to delete some of the device descriptions. The System Upgrade Program can delete the wrong device descriptions. You may have to change the device configuration manually after the upgrade (see Table D-9 on page D-14).

For example, suppose two 8-inch diskette units are on the system before the upgrade. Each has one device description associated with it. The device description names are FLOPPY1 and FLOPPY2.

For example, assume that the upgrade removes the diskette unit associated with FLOPPY1 and that, as a result, the System Upgrade Program associates FLOPPY1 with

no hardware resource. Assume further that the System Upgrade Program associates FLOPPY2 with the diskette unit that is on the system after the upgrade. If this is not the configuration you intended, you may choose to delete FLOPPY2 and use the procedures in Table D-9 on page D-14 to associate FLOPPY1 with the diskette unit that is on the system.

- The second case occurs when device descriptions in a particular class are outnumbered by compatible diskette units. In this case, some diskette units have no corresponding device description after the upgrade. You must configure this new hardware manually or with automatic configuration. You can use the `WRKHDWRSC TYPE(*STG)` command to do this.

### Processing Tape Units

The System Upgrade Program associates tape controller and device description objects to tape controllers and devices on the upgraded system by using the rules in Table D-5 on page D-11. The rules are applied in order.

Table D-5 (Page 1 of 2). Processing Tape Units

| Rule | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Tape units or controllers that are on the system after the upgrade are processed. All tape units or controllers (that are still being used) keep the same device descriptions or controller descriptions that they had before the upgrade.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2    | <p>The alternate initial program load (IPL) device is processed as a special case unless rule 1 is applied. Rule 1 always takes precedence. This is to ensure that the old tape units have the same device descriptions after the upgrade. There are several possible cases when dealing with the alternate IPL device:</p> <ul style="list-style-type: none"> <li>• The old and new alternate IPL devices are the same device. Rule 1 takes care of this case. The alternate IPL device keeps the configuration objects that it had before the upgrade.</li> <li>• The alternate IPL device on the original system is not the same as the alternate IPL device on the upgraded system. The following four conditions may occur: <ol style="list-style-type: none"> <li>1. The original alternate IPL device is used on the system after the upgrade, but it is not being used as the alternate IPL device. Another tape unit used on the system before the upgrade becomes the new alternate IPL device. Rule 1 is valid for this case and both devices keep the same device descriptions. However, the device used as the alternate IPL device following the upgrade is a different device than the one that was used before the upgrade. Therefore, a different device description must be used to specify the new alternate IPL device.</li> <li>2. The device that was the alternate IPL device before the upgrade is still on the system, but a new device is the alternate IPL device after the upgrade. Rule 1 is valid for the old device. It keeps the same device description that it had before the upgrade. The new device is either assigned an existing device description with which it is compatible, or it is not assigned an existing device description and you must configure it manually. In either case, a different name must be used to specify the alternate IPL device after the upgrade. <p>Note that the new alternate IPL device may not have configuration objects associated with it after the upgrade. If this is the case, the alternate IPL device is not usable until you configure it manually or use automatic configuration. You can use the WRKHDWRSC TYPE(*STG) for manual configuration.</p> </li> <li>3. The device that was the alternate IPL device before the upgrade is removed from the system, and the alternate IPL device after the upgrade was not the alternate IPL device before the upgrade. Rule 1 is valid for the new alternate IPL device. It keeps the same device description that it had before the upgrade. The device description that was associated with the old alternate IPL device is either associated with compatible hardware in the upgraded system, or it is not associated with any device. Therefore, you must specify a new device description for the new alternate IPL device.</li> <li>4. The device that was the alternate IPL device before the upgrade is removed from the system and a new device is used as the alternate IPL device. Rule 1 does not apply in this case. The device description that was associated with the old alternate IPL device is automatically associated with the new alternate IPL device. The name, ownership, and authorities of the new alternate IPL device description are the same as for the old alternate IPL device description.</li> </ol> </li> </ul> |
| 3    | <p>If any other tape configuration objects have not been associated with tape units in the new configuration, then they are associated with new hardware (if there is any). Configuration objects are associated with compatible hardware in the upgraded system. A configuration object is first associated with a device of the same type and model. If one is not available, the configuration object is associated with a device that uses the same type of tape media (for example, reel, 1/2-inch cartridge, 1/4-inch cartridge, or 8-mm cartridge).</p> <p>When several configuration objects are associated with one device before the upgrade, they are all still associated with one device after the upgrade. In other words, they are not split up across multiple devices. The intent is to keep the configuration looking as it did before the upgrade.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

Table D-5 (Page 2 of 2). Processing Tape Units

| Rule | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | Configuration objects that are not associated with a device before the upgrade are not associated with a device after the upgrade. These configuration objects are probably old objects that are no longer needed but have not been deleted. The System Upgrade Program does not delete these configuration objects, but changes their resource names to a value that is not valid, TAPCTLXX (tape controller descriptions) and TAPXX (tape unit descriptions). The intent is to keep the configuration looking as it did before the upgrade. |

## Special Cases for Processing Tape

**Units:** Some tape units require a controller description and some do not. Consider the following special cases for processing tape units:

- **Associating non-34xx tape unit configuration objects to a 34xx tape unit.**

The 34xx tape unit requires both a device description and a controller description, but the non-34xx tape unit requires only a device description. A controller description is created for the 34xx controller. A new name is assigned to it as if it were being automatically configured. Then a device description with the same name, ownership, and authorizations as the non-34xx device description is attached to this controller description. The original device description is deleted by the System Upgrade Program.

- **Associating 34xx configuration objects to a non-34xx tape unit.**

The 34xx tape unit has both a controller description and a device description, but non-34xx tape units only require a device description.

The 34xx controller description and device description are deleted. A device description with the same name, ownership, and authorization as the original is created with the correct type and resource name. There is not a tape controller description after the upgrade.

- When there are more existing configuration objects in a particular type than there are compatible tape units, some configuration objects are not associated with any tape units in the upgraded system. You must manually reconfigure the configuration objects. See Table D-8 on page D-13 and Table D-9 on page D-14 for more information on creating the configuration objects.

For example, suppose two non-34xx reel tape units are on the system before an upgrade. Each has one device description associated with it. The device description names are MAINTAPE and BACKUPTAPE. The upgrade removes the tape unit associated with MAINTAPE. As a result, the System Upgrade Program does not associate the MAINTAPE device description with any hardware resource. In addition, the System Upgrade Program associates BACKUPTAPE with the tape unit that remains on the system after the upgrade. If this is not the intended configuration, you may choose to delete the BACKUPTAPE device description and use the procedures in Table D-9 on page D-14 and Table D-12 on page D-17 to associate the MAINTAPE device description with the reel tape unit that remains on the system.

- When there are fewer configuration objects than there are compatible tape units, you must configure the new hardware manually or use automatic configuration. You can use the WRKHDWRSC TYPE(\*STG) command to manually configure the device.

## Updating Device Configuration Objects

If you are upgrading a 9402 or 9404 System, then you must use the following procedures for reconfiguring system resource names and resource types.

**Note:** You must have the Application Development Tools (ADT) licensed program installed to use the Source Entry Utility (SEU) in the following procedures.

Also, if you are upgrading a 9406 System and do not want to use the device configuration objects that are automatically created by the System Upgrade Program, you can use the following pro-

cedures for reconfiguring system resource names and resource types.

See “Descriptions of Related AS/400 System Commands” on page D-18 for descriptions of the commands used in the following tables.

Again, it is strongly recommended that you create a report that lists your hardware and configuration objects before *and* after every hardware upgrade to facilitate recovery in the event of a system failure. The commands for creating this report are listed in “Recovery Planning” on page D-2.

| <i>Table D-6. Changing the Network Interface Description Resource Names</i> |                                                                                                                                                                                            |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step</b>                                                                 | <b>Action</b>                                                                                                                                                                              |
| 1                                                                           | Select the WRKCFGSTS command to work with the status of the network interface description.                                                                                                 |
| 2                                                                           | Vary off the network interface description by selecting option 2 (Vary off) on the Work with Configuration Status display. All attached lines, controllers and devices must be varied off. |
| 3                                                                           | Select option 8 (Work with description) to work with the network interface description.                                                                                                    |
| 4                                                                           | Select option 2 (Change) on the Work With Network Interface Descriptions screen to change the network interface description.                                                               |
| 5                                                                           | On the Change Network Interface Description screen, specify the correct resource name (RSRCNAME parameter) for the network interface description.                                          |
| 6                                                                           | Press the Enter key to change the network interface description.                                                                                                                           |
| 7                                                                           | Press the Enter key again to return to the Work With Configuration Status screen.                                                                                                          |
| 8                                                                           | Vary on the network interface description by selecting option 1 (Vary on) on the Work With Configuration Status display. This also varies on all attached lines, controllers and devices.  |

| <i>Table D-7. Changing the Line Resource Names</i> |                                                                                                                                                                        |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step</b>                                        | <b>Action</b>                                                                                                                                                          |
| 1                                                  | Select the WRKCFGSTS command to work with the status of the line description.                                                                                          |
| 2                                                  | Vary off the line description by selecting option 2 (Vary off) on the Work With Configuration Status display. All attached controllers and devices must be varied off. |
| 3                                                  | Select option 8 (Work with description) to work with the line description.                                                                                             |
| 4                                                  | Select option 2 (Change) on the Work With Line Descriptions screen to change the line description.                                                                     |
| 5                                                  | On the CHGLINxxxx command prompt display, specify the correct resource name (RSRCNAME parameter) for the line description.                                             |
| 6                                                  | Press the Enter key to change the line description.                                                                                                                    |
| 7                                                  | Press the Enter key again to return to the Work With Configuration Status screen.                                                                                      |
| 8                                                  | Vary on the line description by selecting option 1 (Vary on) on the Work With Configuration Status display. This also varies on the attached controllers and devices.  |

| <i>Table D-8 (Page 1 of 2). Changing the Controller Resource Names</i> |                                                                                                                                                              |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step</b>                                                            | <b>Action</b>                                                                                                                                                |
| 1                                                                      | Select the WRKCFGSTS command to work with the status of the controller description.                                                                          |
| 2                                                                      | Vary off the controller description by selecting option 2 (Vary off) on the Work With Configuration Status display. All attached devices must be varied off. |
| 3                                                                      | Select option 8 (Work with description) to work with the controller description.                                                                             |
| 4                                                                      | Select option 2 (Change) on the Work With Controller Descriptions display to change the controller description.                                              |

Table D-8 (Page 2 of 2). Changing the Controller Resource Names

| Step | Action                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | On the Change Controller display, specify the correct resource name (RSRCNAME parameter) for the controller description.                                    |
| 6    | Press the Enter key to change the controller description.                                                                                                   |
| 7    | Press the Enter key again to return to the Work With Configuration Status screen.                                                                           |
| 8    | Vary on the controller description by selecting option 1 (Vary on) on the Work With Configuration Status display. This also varies on all attached devices. |

Table D-9. Changing the Device Resource Names

| Step | Action                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------|
| 1    | Select the WRKCFGSTS command to work with the status of the device description.                                  |
| 2    | Vary off the device description by selecting option 2 (Vary off) on the Work With Configuration Status screen.   |
| 3    | Select option 8 (Work with description) to work with the device description.                                     |
| 4    | Select option 2 (Change) on the Work With Device Description screen to change the device description.            |
| 5    | On the Change Device display, specify the correct resource name (RSRCNAME parameter) for the device description. |
| 6    | Press the Enter key to change the device description.                                                            |
| 7    | Press the Enter key again to return to the Work With Configuration Status display.                               |
| 8    | Vary on the device description by selecting option 1 (Vary on) on the Work With Configuration Status display.    |

Table D-10 (Page 1 of 3). Changing the Local Work Station Controller Type

| Step | Action                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------|
| 1    | Select the WRKCFGSTS command to work with the status of the controller description.                              |
| 2    | Select option 8 (Work with description) to work with the controller description.                                 |
| 3    | Select option 9 (Retrieve source) to retrieve the control language (CL) source for the controller description.   |
| 4    | On the Retrieve Configuration Source display, specify the name and library of a source file (SRCFILE parameter). |
| 5    | Specify the name of a source file member in which the CL source is to be placed (SRCMBR parameter).              |
| 6    | Specify *OBJ for the retrieve option (RTVOPT parameter).                                                         |
| 7    | Press the Enter key to retrieve the source of the controller description.                                        |

Table D-10 (Page 2 of 3). Changing the Local Work Station Controller Type

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | <p>Select option 5 (Display) to determine whether there is a twinaxial data link control (TDLC) line description attached to the work station controller description. If there is, do the following:</p> <ol style="list-style-type: none"> <li>1. Select the WRKCFGSTS command to work with the status of the TDLC line description.</li> <li>2. Vary off the TDLC line description by selecting option 2 (Vary off) on the Work With Configuration Status display. All of its attached controller and device descriptions must be varied off.</li> <li>3. Select option 8 (Work with description) to work with the line description.</li> <li>4. Select option 9 (Retrieve source) to retrieve the CL source for the line description.</li> <li>5. On the Retrieve Configuration Source display, specify the name and library of a source file (SRCFILE parameter).</li> <li>6. Specify the name of a source file member in which the CL source is to be placed (SRCMBR parameter).</li> <li>7. Specify *OBJ for the retrieve option (RTVOPT parameter).</li> <li>8. Press F10 (additional parameters).</li> <li>9. Specify *ADD for the member option (MBROPT parameter).</li> <li>10. Press the Enter key to retrieve the source of the controller description.</li> <li>11. Select the DSPOBJAUT command to find the ownership and authority of the TDLC line description.</li> </ol> |
| 9    | Vary off the controller description by selecting option 2 (Vary off) on the Work With Configuration Status display. All attached devices must be varied off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 10   | Select the DSPOBJAUT command to find the object ownership and authority of the WS controller description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 11   | Delete the WS controller description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 12   | Delete the TDLC line description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 13   | Select the Start Source Entry Utility (STRSEU) command to edit the source file member that contains the CL source for the controller and TDLC line descriptions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 14   | On the Start SEU display, specify the name and library of the source file (SRCFILE parameter).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 15   | Specify the member name (SRCMBR parameter).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 16   | Specify CLP for the source type (TYPE parameter).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 17   | Select option 2 (edit) for the OPTION parameter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 18   | Press the Enter key to edit the source file member.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 19   | Type the PGM statement at the beginning of the source.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 20   | Type the ENDPGM statement at the end of the source.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 21   | Change the TYPE parameter in the CL source for the controller description to the correct value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 22   | Change the resource name (RSRCNAME parameter) to the correct value for the controller description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 23   | Press F3 to exit the Edit display.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 24   | Press the Enter key to change the source file member.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 25   | Select the CRTCLPGM command to create a CL program from the source file member.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 26   | On the Create a Control Language Program display, specify the name and library of the source file (SRCFILE parameter).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 27   | Specify the member name (SRCMBR parameter).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 28   | Press the Enter key to create the CL program.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| <i>Table D-10 (Page 3 of 3). Changing the Local Work Station Controller Type</i> |                                                                                                                                                                   |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step</b>                                                                      | <b>Action</b>                                                                                                                                                     |
| 29                                                                               | Re-create the descriptions by calling the CL program. At the command line, type CALL xxxxxxxx where xxxxxxxx is the name of the CL program that you just created. |
| 30                                                                               | Select the CHGOBJOWN command to update the object ownership of the TDLC line description.                                                                         |
| 31                                                                               | Select the Edit Object Authority (EDTOBJAUT) command to update the object authorities of the TDLC line description.                                               |
| 32                                                                               | Use the Change Object Ownership display to update the object ownership of the controller description.                                                             |
| 33                                                                               | Use the Edit Object Authority display to update the object authorities of the controller description.                                                             |
| 34                                                                               | Vary on the controller description by selecting option 1 (Vary on) on the Work With Configuration Status display.                                                 |
| 35                                                                               | Vary on the TDLC line description by selecting option 1 (Vary on) on the Work With Configuration Status display.                                                  |

| <i>Table D-11 (Page 1 of 2). Changing the Tape Controller Type</i> |                                                                                                                        |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Step</b>                                                        | <b>Action</b>                                                                                                          |
| 1                                                                  | Select the WRKCFGSTS command to work with the status of the controller description.                                    |
| 2                                                                  | Vary off the controller description by selecting option 2 (Vary off) on the Work With Configuration Status display.    |
| 3                                                                  | Select the DSPOBJAUT command to find the object ownership and authority.                                               |
| 4                                                                  | Select option 8 (Work with description) to work with the controller description.                                       |
| 5                                                                  | Select option 9 (Retrieve source) to retrieve the CL source for the controller description.                            |
| 6                                                                  | On the Retrieve Configuration Source display, specify the name and library of a source file (SRCFILE parameter).       |
| 7                                                                  | Specify the name of a source file member in which the CL source is to be placed (SRCMBR parameter).                    |
| 8                                                                  | Specify *OBJ for the retrieve option (RTVOPT parameter).                                                               |
| 9                                                                  | Press the Enter key to retrieve the source of the controller description.                                              |
| 10                                                                 | Delete the tape controller description.                                                                                |
| 11                                                                 | Use the STRSEU command to edit the source file member that contains the CL source for the tape controller description. |
| 12                                                                 | On the Start SEU display, specify the name and library of the source file (SRCFILE parameter).                         |
| 13                                                                 | Specify the member name (SRCMBR parameter).                                                                            |
| 14                                                                 | Specify CLP for the source type (TYPE parameter).                                                                      |
| 15                                                                 | Select option 2 (edit) for the OPTION parameter.                                                                       |
| 16                                                                 | Press the Enter key to edit the source file member.                                                                    |
| 17                                                                 | Type the PGM statement at the beginning of the source.                                                                 |
| 18                                                                 | Type the ENDPGM statement at the end of the source.                                                                    |
| 19                                                                 | Change the TYPE parameter in the CL source for the controller description to the correct value.                        |
| 20                                                                 | Change the resource name (RSRCNAME parameter) to the correct value for the controller description.                     |
| 21                                                                 | Press F3 to exit the Edit display.                                                                                     |
| 22                                                                 | Press the Enter key to change the source file member.                                                                  |



*Table D-11 (Page 2 of 2). Changing the Tape Controller Type*

| <b>Step</b> | <b>Action</b>                                                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 23          | Use the CRTCLPGM command to create a CL program from the source file member.                                                                                        |
| 24          | On the Create Control Language Program display, specify the name and library of the source file (SRCFILE parameter).                                                |
| 25          | Specify the member name (SRCMBR parameter).                                                                                                                         |
| 26          | Press the Enter key to create the CL program.                                                                                                                       |
| 27          | Re-create the descriptions by calling the CL program. At the command line, type CALL xxxxxxxxx where xxxxxxxxx is the name of the CL program that you just created. |
| 28          | Use the CHGOBJOWN command to update the object ownership.                                                                                                           |
| 29          | Use the EDTOBJAUT command to update the object authorities.                                                                                                         |
| 30          | Vary on the controller description by selecting option 1 (Vary on) on the Work With Configuration Status display.                                                   |

*Table D-12 (Page 1 of 2). Changing the Diskette or Tape Unit Type*

| <b>Step</b> | <b>Action</b>                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------|
| 1           | Select the WRKCFGSTS command to work with the status of the device description.                                  |
| 2           | Vary off the device description by selecting option 2 (Vary off) on the Work With Configuration Status display.  |
| 3           | Use the DSPOBJAUT command to find the object ownership and authority.                                            |
| 4           | Select option 8 (Work with description) to work with the device description.                                     |
| 5           | Select option 9 (Retrieve source) to retrieve the CL source for the device description.                          |
| 6           | On the Retrieve Configuration Source display, specify the name and library of a source file (SRCFILE parameter). |
| 7           | Specify the name of a source file member in which the CL source is to be placed (SRCMBR parameter).              |
| 8           | Specify *OBJ for the retrieve option (RTVOPT parameter).                                                         |
| 9           | Press the Enter key to retrieve the source of the device description.                                            |
| 10          | Use the DLTDEVD command to delete the device description.                                                        |
| 11          | Use the STRSEU command to edit the source file member that contains the CL source for the device description.    |
| 12          | On the Start SEU display, specify the name and library of the source file (SRCFILE parameter).                   |
| 13          | Specify the member name (SRCMBR parameter).                                                                      |
| 14          | Specify CLP for the source type (TYPE parameter).                                                                |
| 15          | Select option 2 (edit) for the OPTION parameter.                                                                 |
| 16          | Press the Enter key to edit the source file member.                                                              |
| 17          | Type the PGM statement at the beginning of the source.                                                           |
| 18          | Type the ENDPGM statement at the end of the source.                                                              |
| 19          | Change the TYPE parameter in the CL source for the device description to the correct value.                      |
| 20          | Change the resource name (RSRCNAME parameter) to the correct value for the device description.                   |
| 21          | Press F3 to exit the Edit display.                                                                               |
| 22          | Press the Enter key to change the source file member.                                                            |

Table D-12 (Page 2 of 2). Changing the Diskette or Tape Unit Type

| Step | Action                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 23   | Use the CRTCLPGM command to create a CL program from the source file member.                                                                              |
| 24   | On the Create Control Language Program display, specify the name and library of the source file (SRCFILE parameter).                                      |
| 25   | Specify the member name (SRCMBR parameter).                                                                                                               |
| 26   | Press the Enter key to create the CL program.                                                                                                             |
| 27   | Re-create the descriptions by calling the CL program. At the command line, type CALL xxxxxxxx where xxxxxxxx is the name of the CL program just created). |
| 28   | Use the CHGOBJOWN command to update the object ownership.                                                                                                 |
| 29   | Use the EDTOBJAUT command to update the object authorities.                                                                                               |
| 30   | Vary on the device description by selecting option 1 (Vary on) on the Work With Configuration Status display.                                             |

## Descriptions of Related AS/400 System Commands

The following five types of commands are used for configuring new or changed AS/400 system hardware:

- Controller description commands
- Device description commands
- Line description commands
- Network interface description commands
- Other related commands

The following describes the commands that are used to upgrade or change AS/400 system configurations:

### Controller Description Commands

|           |                                        |
|-----------|----------------------------------------|
| CHGCTLLWS | Change Local WS Controller Description |
| CHGCTLTAP | Change Tape Controller Description     |
| CRTCTLLWS | Create Local WS Controller Description |
| CRTCTLTAP | Create Tape Controller Description     |
| DSPCTLD   | Display Controller Description         |
| WRKCTLD   | Work With Controller Descriptions      |

### Device Description Commands

|           |                              |
|-----------|------------------------------|
| CHGDEVDKT | Change Device Diskette       |
| CHGDEVTAP | Change Device Tape           |
| CRTDEVDKT | Create Device Diskette       |
| CRTDEVTAP | Create Device Tape           |
| WRKDEVD   | Work With Device Description |

### Line Description Commands

|            |                                                          |
|------------|----------------------------------------------------------|
| CHGLINASC  | Change Async Line Description                            |
| CHGLINBSC  | Change BSC Line Description                              |
| CHGLINDDI  | Change Distributed Data Interface (DDI) Line Description |
| CHGLINETH  | Change Ethernet Line Description                         |
| CHGLINFR   | Change Frame Relay (FR) Line Description                 |
| CHGLINSDLC | Change SDLC Line Description                             |
| CHGLINTRN  | Change Token-Ring Line Description                       |
| CHGLINX25  | Change X.25 Line Description                             |
| CRTLINASC  | Create Async Line Description                            |
| CRTLINBSC  | Create BSC Line Description                              |
| CRTLINDDI  | Create Distributed Data Interface (DDI) Line Description |
| CRTLINETH  | Create Ethernet Line Description                         |

|             |                                          |
|-------------|------------------------------------------|
| CRTLINFR    | Create Frame Relay (FR) Line Description |
|             |                                          |
| CRTLINS DLC | Create SDLC Line Description             |
| CRTLINTRN   | Create Token-Ring Line Description       |
|             |                                          |
| CRTLINX25   | Create X.25 Line Description             |
| DSPLIND     | Display Line description                 |
| WRKLIND     | Work With Line Descriptions              |

## Network Interface Description Commands

|            |                                             |
|------------|---------------------------------------------|
| CHGNWIISDN | Change Network Interface Description (ISDN) |
| CRTNWIISDN | Create Network Interface Description (ISDN) |
| CHGNWIFR   | Change Network Interface Description (FR)   |
|            |                                             |
| CRTNWIFR   | Create Network Interface Description (FR)   |
|            |                                             |
| WRKNWID    | Work With Network Interface Description     |

## Other Related Commands

|            |                                |
|------------|--------------------------------|
| RTVCFG SRC | Retrieve Configuration Source  |
| VRYCFG     | Vary Configuration             |
| WRKCFGSTS  | Work With Configuration Status |



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# Glossary

This glossary includes terms and definitions from:

- The *American National Dictionary for Information Systems*, ANSI X3.172-1990, copyright 1990 by the American National Standards Institute (ANSI). Copies may be purchased from the American National Standards Institute, 1430 Broadway, New York, New York 10018. Definitions are identified by the symbol (A) after the definition.
- The *Information Technology Vocabulary*, developed by Subcommittee 1, Joint Technical Committee 1, of

**add authority.** A data authority that allows the user to add entries to an object; for example, add job entries to a job queue or add records to a file.

**address.** (1) The location in the storage of a computer where particular data is stored. Also, the numbers that identify such a location. (2) In data communications, the unique code assigned to each device or system connected in a network. (3) The second part of a two-part user identification used to send distributions. See also *user ID/address*.

**address switches.** Switches on a device that the user sets to represent the address of that device.

**Advanced Function Printing (AFP).** Pertaining to the ability of programs to use the all-points-addressable concept to print text and images on a printer.

**Advanced Peer-to-Peer Networking (APPN).** Pertaining to data communications support that routes data in a network between two or more APPC systems that do not need to be directly connected.

**advanced program-to-program communications (APPC).** Data communications support that allows programs on an AS/400 system to communicate with programs on other systems having compatible communications support. APPC on the AS/400 system provides an application programming interface to the SNA LU type 6.2 and node type 2.1 architectures.

**alphanumeric.** (1) Pertaining to the letters A through Z or a through z; numbers 0-9; and special symbols \$, #, @, ., or \_ . (2) Pertaining to a character set that contains letters, digits, and usually other characters, such as punctuation marks. (A)

**American National Standard Code for Information Interchange (ASCII).** The code developed by the American National Standards Institute for information exchange among data processing systems, data communications systems, and associated equipment. The

the International Organization for Standardization and the International Electrotechnical Committee (ISO/IEC JTC1/SC1). Definitions of published parts of this vocabulary are identified by the symbol (I) after the definition; definitions taken from draft international standards, committee drafts, and working papers being developed by ISO/IEC JTC1/SC1 are identified by the symbol (T) after the definition, indicating that final agreement has not yet been reached among the participating National Bodies of SC1.

ASCII character set consists of 7-bit control characters and symbolic characters, plus one parity bit.

**American National Standards Institute (ANSI).** An organization sponsored by the Computer and Business Equipment Manufacturers Association for establishing voluntary industry standards.

**API.** See *application program interface (API)*.

**APPC.** See *advanced program-to-program communications (APPC)*.

**application program interface (API).** A functional interface supplied by the operating system or a separately orderable licensed program that allows an application program written in a high- or low-level language to use specific data or functions of the operating system or the licensed program.

**APPN.** See *Advanced Peer-to-Peer Networking (APPN)*.

**ASCII.** See *American National Standard Code for Information Interchange (ASCII)*.

**ASCII port sharing.** A function that allows the user to have different ASCII devices (programmable or nonprogrammable work stations) share the same port, at different times, without needing to manually create a configuration description for each new device.

**asynchronous.** (1) Not occurring in a regular or predictable pattern. (2) Without a regular time relationship.

**asynchronous communications.** A method of communications supported by the operating system that allows an exchange of data with a remote device, using either a start-stop line or an X.25 line. Asynchronous communications includes the file transfer support and the interactive terminal facility support.

**automatic configuration.** A function that names and creates the descriptions of network devices and controllers attached to a preexisting line. The objects are also varied on at a user's request.

**auxiliary storage.** All addressable disk storage other than main storage. See also *control storage*. Contrast with *main storage*.

**backup.** (1) Pertaining to an alternative copy used as a substitute if the original is lost or destroyed, such as a backup log. (2) The act of saving some or all of the objects on a system to a tape, diskette, or save file. (3) The tapes, diskettes, or save files with the saved objects. (4) For communications, see *switched network backup (SNBU)*.

**binary synchronous communications (BSC).** A data communications line protocol that uses a standard set of transmission control characters and control character sequences to send binary-coded data over a communications line.

**bit.** A contraction of binary digit. Either of the binary digits, 0 or 1. Compare with *byte*.

**BSC.** See *binary synchronous communications (BSC)*.

**byte.** The amount of storage required to represent one character; a byte is 8 bits.

**C & SM.** See *communications and systems management (C & SM)*.

**change authority.** An object authority that allows a user to perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can add, change, and delete entries in an object, or read the contents of an entry in the object. Change authority combines object operational authority and all the data authorities.

**character.** Any letter, number, or other symbol in the data character set that is part of the organization, control, or representation of data.

**character ID.** See *character identifier (character ID)*.

**character identifier (character ID).** The standard identifier for a character, regardless of its style. For example, all uppercase A's have the same character identifier.

**character set.** (1) A group of characters used for a specific reason; for example, the set of characters the display station can display, the set of characters a printer can print, or a particular set of graphic characters in a code page; for example, the 256 EBCDIC characters. (2) All the valid COBOL characters.

**CL.** See *control language (CL)*.

**class-of-service description.** A system object created for Advanced Peer-to-Peer Networking (APPN) support that provides the information required to assign relative

priority to the transmission groups and intermediate routing nodes for an APPN session. The system-recognized identifier for the object type is \*COSD.

**code page.** (1) A particular assignment of hexadecimal identifiers to graphic characters. (2) In AFP support, a font file that associates code points and graphic character identifiers.

**command.** (1) A statement used to request a function of the system. A command consists of the command name abbreviation, which identifies the requested function, and its parameters. (2) In REXX, a single clause consisting of only an expression. The expression is evaluated and the result is passed as a command string to the default or specified environment. (3) In SDLC, a frame transmitted by a primary station. Asynchronous balanced mode stations send both commands and responses. Contrast with *response*. (4) In SNA, any field set in the transmission header (TH), request header (RH), or request unit (RU) that states an action or that starts a protocol.

**command line.** The blank line on a display where commands, option numbers, or selections can be entered.

**command name.** In query management, the verb in a query command that specifies the action to be performed.

**communications and systems management (C & SM).** A part of the system that contains the remote management support (also referred to as DHCF), the change management support (referred to as DSNX), and the problem management support (referred to as alerts).

**communications configuration.** The physical placement of communications controllers, the attachment of communications lines, and so forth; and the configuration descriptions that describe the physical configuration to the system and describe how the configuration will be used by the system. See also *line configuration, controller configuration, and device configuration*.

**communications controller.** The I/O processor card in the card enclosure.

**communications line.** The physical link (such as a wire or a telephone circuit) that connects one or more work stations to a communications controller, or connects one controller to another. Contrast with *data link protocol*.

**communications manager.** A function of the OS/2 Extended Edition program that lets a work station connect to a host computer and use the host resources as well as the resources of other personal computers to which the work station is attached, either directly or

through a host system. The communications manager provides application programming interfaces (APIs) so that users can develop their own applications.

**configuration.** The physical and logical arrangement of devices and programs that make up a data processing system. See also *communications configuration*, *line configuration*, *controller configuration*, and *device configuration*.

**configuration list.** A list of local or remote locations, network addresses, or pass-through device descriptions used by some types of communications descriptions. The system-recognized identifier for the object type is \*CFGL.

**configure.** (1) To describe the interconnected arrangement of the devices, programs, communications, and optional features installed on a system. (2) To describe setting up auxiliary storage pools and checksum protection.

**connection.** (1) In OSI, a connection between nodes. Connections are established and released at the network, transport, session, and presentation layers. (2) In TCP/IP, the path between two protocol applications that provides reliable data stream delivery service. In the internet, a connection extends from a TCP application on one system to a TCP application on another system.

**connection list.** An AS/400 communications object for ISDN that provides a list of information used to determine when to accept incoming calls and what information to send with outgoing calls. The system-recognized identifier for the object type is \*CNL.

**console.** A display station from which an operator can control and observe the system operation. For example, an operator can install the operating system, do an attended IPL, or sign on the system after using the End System (ENDSYS) command.

**control language.** The set of all commands with which a user requests system functions.

**control storage.** Storage in the computer that contains the programs used to control input and output operations and other machine operations. See also *auxiliary storage*. Contrast with *main storage*.

**controller.** A device that coordinates and controls the operation of one or more input/output devices (such as work stations) and synchronizes the operation of such devices with the operation of the system as a whole.

**controller configuration.** The process of creating configuration descriptions for the local (device configuration) and remote (communications configuration)

controllers that make up a data processing system. See also *line configuration* and *device configuration*.

**controller description.** An object that contains a description of the characteristics of a controller that is either directly attached to the system or attached to a communications line. The system-recognized identifier for the object type is \*CTLD.

**cursor.** A movable symbol, often a blinking or solid block of light, that tells the display station user where to type, or identifies a choice to select.

**data communications.** The sending and receiving of data between computers, remote devices, or both according to selected protocols.

**data file.** A group of related data records organized in a specific order. A data file can be created by the specification of FILETYPE(\*DATA) on the create commands. Contrast with *source file*.

**data link.** The physical connection (communications lines, modems, controller, work stations, other communications equipment), and the rules (protocols) for sending and receiving data between two or more locations in a data network.

**data link protocol.** The rules that govern control of the physical connection for sending and receiving data between two or more locations in a network. Examples of data link protocols include (a) asynchronous, (b) binary synchronous communications (BSC), (c) Ethernet, (d) synchronous data link control (SDLC), (e) token-ring network, and (f) X.25. Contrast with *communications line*.

**data stream.** All information (data and control commands) sent over a data link usually in a single read or write operation.

**database.** All the data files stored in the system.

**date.** A three-part value or data type that designates a day, month, and year.

**DBCS.** See *double-byte character set (DBCS)*.

**dedicated service tools (DST).** The part of the service function used to service the system when the operating system is not working.

**default.** A value that is automatically supplied or assumed by the system or program when no value is specified by the user.

**default printer.** A printer that is assigned to a system or user and accepts all the printed output from that system or user, if no other printer is specified.

**DEVD.** See *device description*.

**device address.** A unique identifier for each device so it is recognized by the system.

**device class.** The generic name for a group of device types. For example, all display stations belong to the same device class. Contrast with *device type*.

**device configuration.** The physical placement of display stations, printers, and so forth; and the configuration descriptions that describe the physical configuration to the system and describe how the configuration will be used by the system. See also *line configuration* and *controller configuration*.

**device description.** An object that contains information describing a particular device or logical unit (LU) that is attached to the system. A device description is a description of the logical connection between two LUs (local and remote locations). The system-recognized identifier for the object type is \*DEV.D.

**device name.** The symbolic name of an individual device.

**device type.** The generic name for a group of devices. For example, 5219 for IBM 5219 Printers. Contrast with *device class*.

**disk.** A direct-access storage medium with magnetically recorded data.

**disk drive.** A device for moving and controlling the disk.

**disk operating system (DOS).** An operating system for personal computers that can only perform tasks one at a time.

**disk unit.** A physical enclosure containing one or more disk drives.

**diskette.** A thin, flexible magnetic disk permanently stored in a semirigid protective jacket.

**diskette drive.** The device used to read or write data on a diskette as the diskette rotates within its protective jacket.

**diskette unit.** A physical enclosure containing one or more diskette drives.

**display station.** A device that includes a keyboard from which an operator can send information to the system and a display screen on which an operator can see the information sent to or the information received from the system.

**display station pass-through.** A communications function that allows a user to sign on to one system (either an AS/400 system, System/38, or System/36) from another system (either an AS/400 system,

System/38, or System/36) and use that system's programs and data. Sometimes called pass-through or 5250 pass-through.

**distributed data interface (DDI).** An optical fiber-based LAN using the ANSI X3T9.5 standard for a token-passing ring MAC protocol and its physical attachments. Stations, concentrators, and bridges in a DDI network are physically connected to one or both of a pair of counter-rotating rings operating at 100 Mbps.

**Note:** The term *DDI* is used to represent all LAN types based on the fiber distributed data interface (FDDI) specifications, regardless of the media used (optical fiber, copper, or shielded twisted pair).

**document.** Any collection of data stored in a document object.

**document library.** The entire collection of documents and folders on a system.

**document library object (DLO).** Any system object that resides in the document library, such as RFT and FFT documents, folders, and PC files.

**DOS.** See *disk operating system (DOS)*.

**double-byte character.** An entity that requires two character bytes.

**double-byte character set (DBCS).** A set of characters in which each character is represented by 2 bytes. Languages such as Japanese, Chinese, and Korean, which contain more symbols than can be represented by 256 code points, require double-byte character sets. Because each character requires 2 bytes, the typing, displaying, and printing of DBCS characters requires hardware and programs that support DBCS. Four double-byte character sets are supported by the system: Japanese, Korean, Simplified Chinese, and Traditional Chinese. Contrast with *single-byte character set (SBCS)*.

**downline.** Pertaining to devices that are below a controller, and controllers that are below a communications line in a communications configuration. Contrast with *upline*.

**draft.** A printed copy of a document that is not yet completed.

**EBCDIC.** See *extended binary-coded decimal interchange code (EBCDIC)*.

**EIA.** Electronic Industries Association.

**electronic customer support.** A part of the operating system that allows a customer to access: the question-and-answer (Q & A) function; problem analysis,



reporting, and management; IBM product information; and technical information exchange.

**emulation.** Imitation of one system or device by another.

**emulation program.** A control program that permits functions written for one system or device to be run on another system or device.

**expansion unit.** A feature that can be connected to a system unit to provide additional storage and processing capacity.

**extended binary-coded decimal interchange code (EBCDIC).** A coded character set consisting of 8-bit coded characters.

**external storage.** Data storage not located in main or auxiliary storage, such as tape or diskette.

**folder.** (1) A directory for documents. A folder is used to group related documents and to find documents by name. The system-recognized identifier for the object type is \*FLR. See also *document library object*. Compare with *library*. (2) A list used to organize objects.

**font.** (1) An assortment of characters of a given size and type style. (2) A particular type style (for example, Bodoni or Times Roman) that contains definitions of character sets, marker sets, and pattern sets.

**form feed.** An ASCII printer control, X'0C', that causes the printer to eject the current page. All jobs printing on a page printer should end with a form feed, which forces the last page to print.

**frame relay.** A protocol for routing frames through the network based on the address field (data link connection identifier) in the frame and for managing the route or virtual connection.

**generic.** Relating to, or characteristic of, a whole group or class.

**generic name.** The characters common to object names that can be used to identify a group of objects. A generic name ends with an asterisk (\*). For example, ORD\* identifies all objects whose names begin with the characters ORD.

**hardware.** Physical equipment, rather than programs, procedures, rules, and associated information.

**hexadecimal.** Pertaining to a numbering system with a base of 16.

**high-level data link control (HDLC).** A form of communications line control that uses a specified series of

bits rather than control characters to control data transmission over a communications line.

**Hiragana.** A graphic character set that is used to write Japanese words phonetically. This set of characters is used as word endings when writing in Kanji. Contrast with *Katakana*.

**host print transform.** An Operating System/400 print function that converts an SNA character string (SCS) data stream into an ASCII data stream. The ASCII data stream is then formatted and sent to an ASCII printer through one or more hardware connections, such as PC Support/400, 3477, or 3487 work stations. This single location of the transform allows for consistent ASCII printing through any of the hardware connections.

**I/O.** See *input/output*.

**I/O controller.** See *input/output controller (IOC)*.

**I/O processor.** See *input/output processor (IOP)*.

**IBM Operating System/2 (OS/2).** Pertaining to the IBM licensed program that can be used as the operating system for personal computers. The OS/2 licensed program can perform multiple tasks at the same time.

**IBM Operating System/400 Version 2 (OS/400).** Pertaining to the IBM licensed program that can be used as the operating system for the AS/400 system.

**IBM PC Support/400 Version 2.** The IBM licensed program that provides system functions to an attached personal computer.

**information display.** A display that presents information to a user, such as the status of the system, but that rarely requests a response.

**initial program load (IPL).** The process that loads the system programs from the system auxiliary storage, checks the system hardware, and prepares the system for user operations.

**input/output.** Data provided to the computer or data resulting from computer processing.

**input/output controller (IOC).** A functional unit that combines the I/O processor and one or more I/O adapters, and directly connects and controls one or more input or output devices.

**input/output processor (IOP).** A functional unit or the part of an I/O controller that processes programmed instructions and controls one or more input/output devices or adapters.

**integrated services digital network (ISDN).** A CCITT Recommendation that defines an interface to a network

that can carry voice, data, and image over the same communications line.

**Intelligent Printer Data Stream (IPDS).** (1) Pertaining to an all-points-addressable data stream that allows users to position text, images, and graphics at any defined point on a printed page. (2) In the GDDM function, pertaining to a structured-field data stream for managing and controlling printer processes, allowing both data and controls to be sent to the printer.

**IPDS.** See *Intelligent Printer Data Stream (IPDS)*.

**IPL.** See *initial program load (IPL)*.

**ISDN.** See *integrated services digital network (ISDN)*.

**ISDN data link control (IDLC).** An asynchronous, balanced data link protocol used between two systems to exchange information over an ISDN B-channel.

**Kanji.** Characters originating from the Chinese characters used in the Japanese written language.

**Katakana.** A graphic Japanese character set that is used to write non-Japanese words phonetically in Japanese. Contrast with *Hiragana*.

**keyboard type.** The physical key arrangement and assignments for the keyboard shipped from the factory.

**keylock switch.** A switch on the control panel that can be set to one of four different positions to establish the power-on and power-off modes allowed for the system.

**LAN.** See *local area network (LAN)*.

**library.** (1) A system object that serves as a directory to other objects. A library groups related objects, and allows the user to find objects by name. The system-recognized identifier for the object type is \*LIB. Compare with *folder* and *document library*. (2) The set of publications for a system.

**licensed program (LP).** A separately orderable program, supplied by IBM, that performs functions related to processing user data. Examples of licensed programs are PC Support/400, SAA COBOL/400, AS/400 Application Development Tools, SAA OfficeVision/400, and so on.

**line.** (1) The physical path in data transmission. (2) In OSI Communications Subsystem/400, a physical communications line that connects an OSI node to an X.25 subnetwork. Each line is associated with a data terminal equipment (DTE) address at the OSI node from which the line originates.

**line configuration.** The process of creating configuration descriptions for the lines that make up a data pro-

cessing system. See also *controller configuration* and *device configuration*.

**line description.** An object that contains information describing a particular communications line that is attached to the system. The system-recognized identifier for the object type is \*LIND.

**link.** A term for a communications line. A TCP/IP link may share the use of a communications line with SNA.

**link level.** (1) In SNA, the combination of the transmission connection, protocol, devices, and programming joining network nodes. (2) A part of Recommendation X.25 that defines the link protocol used to get data into and out of the network across the duplex line connecting the subscriber's equipment to the network.

**link protocol.** The rules for sending and receiving data at the link level.

**link protocol converter (LPC).** A device that changes one type of link-level protocol information to another type of link-level protocol information for processing; for example, 5208 Link Protocol Converter, 5209 Link Protocol Converter, or ROLMbridge 5250 Link Protocol Converter. See also *protocol converter*.

**load.** (1) To move data or programs into storage. (2) In SAA SystemView System Manager/400, the smallest logical collection of objects that can make an application option. Code and language are the two types of loads. The SystemView object type is \*PRDLOD.

**local.** (1) Pertaining to a device or system that is connected directly to your system or a file that is read directly from your system, without the use of a communications line. Contrast with *remote*. (2) In OSI, pertaining to the node from which one views the rest of the network.

**local area network (LAN).** The physical connection that allows the transfer of information among devices located on the same premises. Contrast with *wide area network (WAN)*.

**local controller.** A functional unit within the system that controls the operation of one or more directly attached input/output devices or communications lines. Contrast with *remote controller*.

**local work station.** A work station that is connected directly to the system without a need for data transmission functions. Contrast with *remote work station*.

**main storage.** All addressable storage where programs are run. Synonymous with *memory*. See also *control storage*. Contrast with *auxiliary storage*.

**medium.** The disk, tape, or diskette used to store information in a save or restore operation.

**memory.** In PC Support/400, program-addressable storage from which instructions and other data can be loaded directly into registers for subsequent processing. See also *main storage*.

**menu.** (1) A displayed list of items from which a user can make a selection. The system-recognized identifier for the object type is \*MENU. (2) In SQL, a displayed list of available, logically grouped functions for selection by the operator.

**message queue.** A list on which messages are placed when they are sent to a user ID or device description. The system-recognized identifier for the object type is \*MSGQ.

**migration.** The process of moving data and source from one computer system to another without converting the data.

**MNCS.** See *multinational character set (MNCS)*.

**mode description.** A system object created for advanced-program-to-program communications (APPC) devices that describes the session limits and the characteristics of the session, such as the maximum number of sessions allowed, maximum number of conversations allowed, the pacing value for incoming and outgoing request or response units, and other controlling information for the session. The system-recognized identifier for the object type is \*MODD.

**modem (modulator/demodulator).** A device that converts data from the computer to a signal that can be sent over a communications line (modulator), and converts the communications signal received to data for the computer (demodulator).

**modification level.** A distribution of all temporary fixes issued since the previous modification level. A change in modification level does not add new functions or change the programming support category of the release to which it applies. A new release is shipped with a modification level of 0. When the release is shipped with the service changes incorporated, the modification level is incremented by 1. See also *release* and *version*.

**multinational character set (MNCS).** A set of graphic characters that support the languages within a specific language group.

**network.** A collection of data processing products connected by communications lines for exchanging information between stations.

**network attribute.** Control information about the communications environment. System name and default

local location name are examples of network attributes. Contrast with *system value*.

**network interface description.** An AS/400 communications object that represents the physical interface to the integrated services digital network (ISDN). The network interface description must be configured in addition to the line, controller, and device descriptions. The system-recognized identifier for the object type is \*NWID.

**nonprogrammable work station (NWS).** A work station that does not have processing capability and does not allow the user to change its functions. Contrast with *programmable work station (PWS)*.

**nonswitched line.** A connection between computers or devices that does not have to be made by dialing. Contrast with *switched line*.

**object.** A named storage space that consists of a set of characteristics that describe itself and, in some cases, data. An object is anything that exists in and occupies space in storage and on which operations can be performed. Some examples of objects are programs, files, libraries, and folders.

**object authority.** A specific authority that controls what a system user can do with an entire object. For example, object authority includes deleting, moving, or renaming an object. There are three types of object authorities: object operational, object management, and object existence.

**object description.** The characteristics (such as name, type, and owner name) that describe an object.

**object management authority.** An object authority that allows the user to specify the authority for the object, move or rename the object, and add members to database files.

**object name.** The name of an object. Contrast with *qualified name*.

**object type.** In query management, the substring following the query command name that specifies the type of query object to be processed.

**offline.** Pertaining to the operation of a functional unit that is not under the continual control of the system. Contrast with *online*.

**online.** Pertaining to the operation of a functional unit that is under the continual control of the system. Contrast with *offline*.

**operating system.** A collection of system programs that control the overall operation of a computer system.

**OS/2.** See *IBM Operating System/2 (OS/2)*.

**OS/400.** See *IBM Operating System/400 Version 2 (OS/400)*.

**output.** Information or data received from a computer that is shown on a display, printed on the printer, or stored on disk, diskette, or tape.

**output queue.** An object that contains a list of spooled files to be written to an output device, such as a printer or a diskette. The system-recognized identifier for the object type is \*OUTQ.

**page down.** To move to the information below the information currently shown on the display. Contrast with *page up*.

**page up.** To move to the information above the information currently shown on the display. Contrast with *page down*.

**panel.** In UIM, a visual presentation of data on the screen.

**pass-through.** See *display station pass-through*.

**path.** In a network, any route between any two nodes. (T)

**PC Support.** See *IBM PC Support/400 Version 2*.

**peer.** A general term for the corresponding node or entity with which one communicates.

**peer-to-peer networking.** See *Advanced Peer-to-Peer Networking (APPN)*.

**pica.** In AFP support, a unit of about 1/6 inch used in measuring typographical material.

**plotter.** In AS/400 Business Graphics Utility, a device for drawing a chart on paper or transparencies.

**point.** (1) The second byte of a DBCS code, which uniquely identifies double-byte characters in the same ward. Contrast with *ward*. (2) In AFP support, a unit of measurement used mainly for describing type sizes. Each pica has 12 points, and an inch has approximately 72 points.

**poll.** To determine if any remote device on a communications line is ready to send data.

**polling.** (1) The process whereby stations are invited, one at a time, to transmit. (2) The process whereby a controlling station contacts the attached devices to avoid contention, to determine operational status, or to determine readiness to send or receive data.

**port.** (1) System hardware where the I/O devices are attached. (2) An access point (for example, a logical unit) for data entry or exit. (3) A functional unit of a

node through which data can enter or leave a data network. (4) In data communications, that part of a data processor that is dedicated to a single data channel for the purpose of receiving data from or transmitting data to one or more external, remote devices.

#### **Post Telephone and Telegraph Administration**

**(PTT).** An organization, usually a government department, that provides data communication services in countries other than the USA and Canada. Examples of PTTs are the Bundespost in Germany and the Nippon Telephone and Telegraph Public Corporation in Japan.

**processing.** The action of performing operations and calculations on data.

**profile.** Data that describes the characteristics of a user, program, device, or remote location.

**programmable work station (PWS).** A work station that has some degree of processing capability and allows the user to change its functions. Contrast with *nonprogrammable work station (NWS)*.

**Programming Request for Price Quotation (PRPQ).** A customer request for a price quotation for a licensed program to be designed especially for a particular group of customers or an application. Documentation for the program is provided only to those customers who order the PRPQ. Compare with *Request for Price Quotation (RPQ)*.

**prompt.** A reminder or a displayed request for information or user action. The user must respond to allow the program to proceed.

**protocol.** (1) A set of rules controlling the communication and transfer of data between two or more devices or systems in a communications network. (2) In OSI, a specification of the format and relative timing of information exchanged between peer entities within a layer.

**protocol converter.** A general term for a device that changes one type of coded data to another type of coded data for processing. See also *link protocol converter (LPC)*.

**PRPQ.** See *Programming Request for Price Quotation (PRPQ)*.

**PTT.** See *Post Telephone and Telegraph Administration (PTT)*.

**qualified name.** The name of the library containing the object and the name of the object. Contrast with *object name*.

**queue.** A list of messages, jobs, files, or requests waiting to be read, processed, printed, or distributed in a predetermined order.

**rack.** A free-standing framework that holds the devices and card enclosure.

**rack configuration list.** A list of all of the equipment within the rack and the logic cards within the card enclosure.

**release.** A distribution of a new product or new function and authorized program analysis report (APAR) fixes for an existing product. Normally, programming support for the prior release is discontinued after some specified period of time following availability of a new release. The first version of a product is announced as Release 1 Modification Level 0. See also *modification level* and *version*.

**remote.** Pertaining to a device, system, or file that is connected to another device, system, or file through a communications line. Contrast with *local*.

**remote controller.** A device or system, attached to a communications line, that controls the operation of one or more remote devices. Contrast with *local controller*.

**remote device.** A device whose controller is connected to an AS/400 system by a communications line.

**remote work station.** A work station that is connected to the system by data communications. Contrast with *local work station*.

**Request for Price Quotation (RPQ).** A customer request for a price quotation on alterations or additions to the functional capabilities of a hardware product for a computing system or a device. Compare with *Programming Request for Price Quotation (PRPQ)*.

**resource.** Any part of the system required by a job or task, including main storage, devices, the processing unit, programs, files, libraries, and folders.

**resource name.** A name assigned by the system to a line, controller, or device that is connected to the system.

**response.** (1) In OSI, a service primitive issued by a service user to complete the procedures associated with a confirmed service. (2) In SDLC, a frame transmitted by a secondary station. Stations using asynchronous balanced mode send both commands and responses. Contrast with *command*.

**restore.** To copy data from tape, diskette, or a save file to auxiliary storage. Contrast with *save*.

**RPQ.** See *Request for Price Quotation (RPQ)*.

**save.** To copy specific objects, libraries, or data by transferring them from main storage or auxiliary storage to a media such as tape, diskette, or a save file. Contrast with *restore*.

**Simplified Chinese.** The Chinese character set that has been simplified by reducing the number of strokes in common characters and deleting complicated variants. Simplified Chinese characters are used primarily in the People's Republic of China.

**single-byte character set (SBCS).** A character set in which each character is represented by a one-byte code. Contrast with *double-byte character set (DBCS)*.

**SNA.** See *Systems Network Architecture (SNA)*.

**source file.** A file of programming code that is not compiled into machine language. A source file can be created by the specification of FILETYPE(\*SRC) on the Create command. A source file can contain source statements for such items as high-level language programs and data description specifications. Contrast with *data file*.

**source system.** (1) In communications, the system that issues a request to establish communications with another system. (2) In DDM, the system on which an application program issues a request to use a remote file. Contrast with *target system*.

**special authority.** The types of authority a user can have to perform system functions, including all object authority, save system authority, job control authority, security administrator authority, spool control authority, and service authority. Contrast with *specific authority*.

**specific authority.** The types of authority a user can be given to use the system resources, including object authorities and data authorities. Contrast with *special authority*.

**spool.** The system function of putting files or jobs into disk storage for later processing or printing.

**storage pool.** A logical division of storage reserved for processing a job or group of jobs.

**subsystem.** An operating environment, defined by a subsystem description, where the system coordinates processing and resources.

**subsystem description.** A system object that contains information defining the characteristics of an operating environment controlled by the system. The system-recognized identifier for the object type is \*SBSD.

**switched line.** In data communications, a connection between computers or devices that is established by dialing. Contrast with *nonswitched line*.

**switched network backup (SNBU).** A modem feature that allows a nonswitched line to be used alternatively as a switched line or allows a switched line to

be used as a nonswitched line depending on the characteristics of the modem.

**synchronous data link control (SDLC).** (1) A form of communications line control that uses commands to control the transfer of data over a communications line. (2) A communications discipline conforming to subsets of the Advanced Data Communication Control Procedures (ADCCP) of the American National Standards Institute (ANSI) and High-Level Data Link Control (HDLC) of the International Organization for Standardization (ISO), for transferring synchronous, code-transparent, serial-by-bit information over a communications line. Transmission exchanges may be duplex or half-duplex over switched or nonswitched lines. The configuration of the connection may be point-to-point, multipoint, or loop.

**system configuration list.** A list of devices that are provided with the system.

**system resources.** Those items controlled by the system, such as programs, devices, and storage areas that are assigned for use in jobs.

**system unit.** A part of a computer that contains the processing unit, and may contain devices such as disk units and tape units.

**system value.** Control information for the operation of certain parts of the system. A user can change the system value to define his working environment. System date and library list are examples of system values. Contrast with *network attribute*.

**Systems Network Architecture (SNA).** In IBM networks, the description of the layered logical structure, formats, protocols, and operational sequences that are used for transmitting information units through networks, as well as controlling the configuration and operation of networks.

**table.** An orderly arrangement of data in rows and columns that can contain numbers, text, or a combination of both. The system-recognized identifier for the object type is \*TBL. See also *translation table*.

**tape controller.** A logic card that is located in some tape units that control input/output tape devices and synchronizes their operation with the operation of the system as a whole.

**tape drive.** A device used to move the tape and read and write information on magnetic tapes.

**tape unit.** The physical enclosure containing the tape drive.

**tape volume.** A single reel of magnetic tape.

**target system.** (1) The system that receives a request from another system to establish communications. (2) In a distributed data management (DDM) network, the system that receives a request from an application program on another system to use one or more files located on the target system. Contrast with *source system*.

**TCP.** See *Transmission Control Protocol (TCP)*.

**TCP/IP.** See *Transmission Control Protocol/Internet Protocol (TCP/IP)*.

**technical information exchange (TIE).** A part of the electronic customer support function that allows a user to send files to and receive files from an IBM support system, and to search for information on an IBM support system. The files are sent and received through an IBM Information Network.

**Traditional Chinese.** The Chinese character set expressed in traditional form. Traditional Chinese characters are used in Taiwan, Hong Kong, and some other parts of the world.

**translation table.** An object that contains a set of hexadecimal characters used to translate one or more characters of data. The table can be used for translation of data being moved between the system and a device. For example, data stored in one national language character set may need to be displayed or entered on display devices that support a different national language character set. The table can also be used to specify an alternative collating sequence or field translation functions. The system-recognized identifier for the object type is \*TBL. See also *table*.

**Transmission Control Protocol (TCP).** In TCP/IP, a host-to-host protocol that provides transmission in an internet environment. TCP assumes Internet Protocol (IP) as the underlying protocol.

**Transmission Control Protocol/Internet Protocol (TCP/IP).** A set of non-proprietary communications protocols that support peer-to-peer connectivity functions for both local and wide area networks.

**twinaxial cable.** A cable made of two twisted wires inside a shield that is used on the 5250 family devices.

**twinaxial data link control (TDLC).** A communications function that allows personal computers, which are attached to the work station controller by twinaxial cable, to use advanced program-to-program communications (APPC) or Advanced Peer-to-Peer Networking (APPN) support.

**twisted-pair.** Pertaining to a transmission medium that consists of two insulated conductors twisted together to reduce interference. For example, twisted-pair wiring can be used as an alternative to twinaxial cable.

**update authority.** A data authority that allows the user to change the data in an object, such as a journal, a message queue, or a data area. See also *add authority*.

**upline.** Pertaining to controllers that are above devices, and lines that are above controllers in a communications configuration. Contrast with *downline*.

**user ID/address.** The two-part network name used in the system distribution directory and in the office applications to uniquely identify a user and send electronic mail.

**user profile.** An object with a unique name that contains the user's password, the list of special authorities assigned to a user, and the objects the user owns. The system-recognized identifier for the object type is \*USRPRF.

**vary off.** To make a device, controller, line, or network interface unavailable for its normal, intended use.

**vary on.** To make a device, controller, line, or network interface available for its normal, intended use.

**version.** (1) A separate IBM licensed program, based on an existing IBM licensed program, that usually has significant new code or new function. Each version has its own license, terms, conditions, product type number, monthly charge, documentation, test allowance (if applicable), and programming support category. The numbering of versions starts with Version 2. See also *modification level* and *release*. (2) In the Application Development Manager/400 product, a separate program or release, new or based on an existing application, that contains significant new code or function.

**virtual device.** A device description that does not have hardware associated with it. It is used to form a connection between a user and a physical work station attached to a remote system. A virtual device can be a virtual display station or a virtual printer. See also *virtual work station controller*.

**virtual work station controller.** A work station controller description that has the characteristics of a locally attached work station controller but does not exist as hardware. See also *virtual device*.

**ward.** A section of a double-byte character set (DBCS) where the first byte of the DBCS codes belonging to that section are the same value. According to IBM standards for DBCS codes, there are 190 wards, and each ward has up to 190 points on which DBCS characters can be assigned. Contrast with *point*.

**wide area network (WAN).** A data communications network designed to serve an area of hundreds or thousands of miles—for example, public and private packet-

switching networks, and national telephone networks. Contrast with *local area network (LAN)*.

**work station.** A device used to transmit information to or receive information from a computer, for example, a display station or printer.

**work station address.** The address to which the switches on a work station are set, or the internal address assumed by the system if no address is specified.

**work station controller (WSC).** An I/O controller card in the card enclosure that provides the direct connection of local work stations to the system.

**work station function (WSF).** The part of the PC Support/400 licensed program for DOS users that allows a personal computer attached to an AS/400 system to emulate up to five display stations, and a PC printer to emulate a system printer.

**workstation customization.** An Operating System/400 function that allows a user to tailor ASCII workstations and printers for use with the AS/400 system. Most twinaxial keyboards can also be customized. Character presentation, font specifications, and control key sequences are examples of characteristics that can be customized.

**writing.** The action of making a recording of data on an external storage device or other data medium.

**X.25.** A CCITT Recommendation that defines the physical level (physical layer), link level (data link layer), and packet level (network layer) of the OSI reference model. An X.25 network is an interface between data terminal equipment (DTE) and data circuit-terminating equipment (DCE) operating in the packet mode, and connected to public data networks by dedicated circuits. X.25 networks use the connection-mode network service.

**5208 Link Protocol Converter.** A device that attaches asynchronous-attached work stations using ASCII encoding to the system as if they were 5250 work stations. Compare with *5209 Link Protocol Converter*.

**5209 Link Protocol Converter.** A device that attaches 327x work stations to the system as if they were 5250 work stations. Compare with *5208 Link Protocol Converter*.

**5250 display station.** Any display station, attached by twinaxial cable, that uses 5250 data streams.

**5250 emulation.** Any one of many licensed programs that allow a personal computer to perform like a 5250 display station or printer and to use the functions of an AS/400 system.

**5250 Work Station Feature.** A feature of the OS/2 Communications Manager that allows the personal computer to perform like a 5250 display station and use the

functions of an AS/400 system, System/36, or System/38. See also *work station function (WSF)*.



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## Bibliography

The IBM publications listed here provide additional information about topics described or referred to in this guide:

**The AS/400 System:** For general information about the AS/400 system, see the following:

- The *ASCII Work Station Reference and Example*, SA41-9922, for information on how to set up and attach ASCII devices to the AS/400 system.
- The *Central Site Distribution Guide*, SC41-9993, for information on installing multiple systems.
- The *Data Management Guide*, SC41-9658, for information about spooling support concerning diskettes, disks, and tapes.
- The *Education Curriculum Planning Guide*, (from your IBM representative), for information about education available for the AS/400 system.
- The *Form Design Reference Guide for Printers*, GA24-3488, if you have special forms requirements for your printer.
- The *Guide to Programming for Printing*, SC41-8194, for information about spooling support concerning printing.
- The *IBM InfoWindow 3477 User's Guide*, GA18-2923-00, for information on how to set up and use the 3477 display station.
- The *Programming: Control Language Reference*, SC41-0030, for detailed information on the configuration commands.
- The *Programming: Work Management Guide*, SC41-8078, for complete information about subsystems.
- The *Publications Guide*, GC41-9678, for information about other manuals in the AS/400 library.

**Configuring Communications:** For additional information about configuring communications and remote devices, see the following:

- The *AS/400\* 9402 Attaching Workstation and Communications Cables*, SA41-0005, for information about attaching cables to the 9402 System Unit.
- The *9404 Attaching Workstation and Communications Cables*, SA41-0004, for information about attaching cables to the 9404 System Unit.
- The *9406 Attaching Workstation and Communications Cables*, SA41-9957, for information about attaching cables to the 9406 System Unit.
- The *CBXII 8000 Installation Manual*, 30041, for information about the 5250 Link Protocol Converter.

- The *Communications: Advanced Program-to-Program Communications Programmer's Guide*, SC41-8189, for information about mode descriptions and class-of-service descriptions.
- The *Communications: Integrated Services Digital Network Guide*, SC41-0003, for information about working with ISDN networks.
- The *Communications: Local Area Network Guide*, SC41-0004, for information about configuring a token ring or Ethernet network. This includes information on the 8209 LAN Bridge.
- The *Communications: Management Guide*, SC41-0024, for information about using AS/400 communications such as work management, communications status, error handling, aggregate line speed and subsystem storage.
- The *Communications: Operating System/400\* Communications Configuration Reference*, SC41-0001, for information about creating remote configuration descriptions.
- The *Communications: Operating System/400\* Communications Configuration Reference*, SC41-0001, for information about configuring objects for communications.
- The *Communications: X.25 Network Guide*, SC41-0005, for information about configuring X.25 network support.
- The *Communications: Remote Work Station Guide*, SC41-0002, for information about remote work stations.
- The *Data Communications Concepts* manual, GC21-5169, for more information on data communications concepts.
- The *IBM 5208 Model 1 ASCII-5250 Link Protocol Converter User's Guide*, SA21-9870, for information on ASCII-5250 devices that attach to the 5208 Link Protocol Converter.
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- The *IBM 5250 Information Display System Planning and Site Preparation Guide*, GA21-9337, for information about remote work stations.
- The *IBM 5299 Terminal Multiconnector Model 3 Planning, Setup, and Maintenance Guide*, GA27-3749, for information about telephone twisted-pair cabling and the 5299 Model 3 Terminal Multiconnector.

- The *Operating System/400 Workstation Customization Function Programmer's Guide*, SC41-0056, for information about customizing your work stations.
- The *System Programmer's Interface Reference*, SC41-8223, for information about configuring objects for user-defined communications support and other communications-oriented system programming interfaces.
- *Using the IBM Cabling System with Communications Products*, GA27-3620, for information about the IBM cabling system.
- The *5259 Migration Data Link User's Guide*, SA21-9551, for information about the 5259 Migration Data Link. for information about the 5394-1,2 Remote Work Station Controller.

**System Operations:** For information about system operations, see the following:

- The *Advanced Backup and Recovery Guide*, SC41-8079, for detailed information on AS/400 backup and recovery for the experienced user.
- The *Basic Backup and Recovery Guide*, SC41-0036, for detailed information on AS/400 backup and recovery for the novice and intermediate user.

- *Basic Security Guide*, SC41-0047 and *Security Reference*, SC41-8083 for complete information about site security.
- The *Licensed Programs and New Release Installation Guide*, SC41-9878, for information on installing your operating system and other licensed programs.
- The *New User's Guide*, SC41-8211, for information on how to use your display stations when attached to the AS/400 system.
- The *System Operator's Guide*, SC41-8082, for information on how to operate the AS/400 system after performing configuration.

**Personal Computers:** For information about personal computers, see the following:

- The *Japanese 5250 PC User's Guide* (that you received with your 5250 PC), for information about display station DBCS support.
- The *PC Support/400: DOS Installation and Administration Guide*, SC41-0006, the *PC Support/400: OS/2 Installation and Administration Guide*, SC41-0007, the *PC Support/400: DOS Installation and Administration Guide (PS/55)*, SC41-0008, or the *PC Support/400: OS/2 Installation and Administration Guide (PS/55)*, SC41-0009, for information on configuring personal computers using the workstation function.

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*See also Communications: Operating System/400\**

*Communications Configuration Reference,*

SC41-0001

# Customer Satisfaction Feedback

Application System/400  
Device Configuration Guide  
Version 2

Publication No. SC41-8106-02

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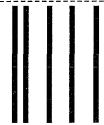
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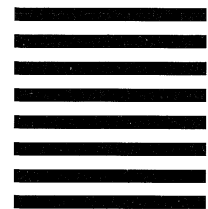
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