AS/400 Advanced Series

Local Device Configuration

Version 4

SC41-5121-00

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Note

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

First Edition (August 1997)

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About Local Device Configuration (SC41-5121)

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

- Local workstation controllers (including twinaxial controllers)
- Tape controllers
- Locally attached devices (including twinaxial devices)

This book also describes concepts related to configuration tasks.

Before performing the configuration tasks in this book, you must also have the Operating System/400 (OS/400) licensed program and any licensed program 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" on page A-1, before you perform your system configuration.

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

This book does not contain information on how to use application program interfaces (APIs) for device configuration descriptions. For information on APIs, go to the *System API Reference* book. The following APIs are available for device configuration:

- Change configuration description (QDCCCFGD)
- List configuration description (QDCLCFGD)
- Retrieve configuration status (QDCRCFGS)
- Retrieve controller description (QDCRCTLD)
- Retrieve device description (QDCRDEVD)
- Retrieve line description (QDCRLIND)

This book does not contain information on how to configure devices attached to the ASCII workstation controllers. For information on configuring ASCII workstation devices, go to the *ASCII Work Station Reference* book.

This book does not contain information on how to configure 3270 and 5250 remote workstation communications. For information on configuring 3270 and 5250 remote workstation communications, go to the *Remote Work Station Support* book.

This book does not contain information on how to configure ASCII LAN-attached printers. For information on configuring ASCII LAN-attached printers, go to the *Printer Device Programming* book.

This book does not contain information on how to configure disk units or auxiliary storage pools. For information on performing these configuration tasks, go to the *LAN and Frame Relay Support* book.

This book 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
- Ethernet local area networks
- Wireless local area networks (WLS)
- Synchronous data link control (SDLC) lines
- X.25 lines
- Facsimile (FAX) lines
- Frame relay (FR) lines
- Distributed data interface (DDI) lines
- ISDN Data Link Control (IDLC) lines
- Network servers (NWS)
- NetBIOS protocols
- Internetwork Packet Exchange** (IPX**) descriptions
- Asynchronous communications
- Binary synchronous communications (BSC)
- Communications controllers
- Communications devices
- Remote workstation controllers
- Remote devices (display station and printers)
- TCP/IP communications

For information on how to configure the items listed above, go to *Communications Configuration* book. For information on how to configure TCP/IP communications, go to the *TCP/IP Configuration and Reference* book. For a list of additional publications regarding OS/400 communications support, see the “Configuring Communications” on page X-1 section of the “Bibliography” on page X-1.

This book 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
- TCP/IP communications

For information on how to configure the items listed above, go to the books *Client Access/400 for DOS with Extended Memory Setup* or *Client Access/400 for OS/2 User Guide*.

Notes:

1. For information on how to configure TCP/IP communications, go to the *TCP/IP Configuration and Reference* book.
2. Users of the Personal System/55 should go to the books, *Client Access/400 for DOS with Extended Memory Setup* or *Client Access/400 for DOS with Extended Memory Setup (DBCS)*, for information specific to their personal computer.

Who Should Read This Book

This book 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 book before using this book:

- If you want information on planning for your system, see the *Physical Planning Reference* book. This book includes directions for creating your floor plans and filling out your System Information Form.
- If you are migrating for a System/36 or System/38, see the books, *System/36 Migration Planning* or *System/38 Migration Planning*.
- If you want to configure communications, or want more information about the AS/400 communications support contained in the operating system, see the *Communications Configuration* book.

Conventions and Terminology Used in This Book

The AS/400 displays in this book could be shown as they are presented through Graphical Access for AS/400, which is part of Client Access on the personal computer. The example displays in this book could also be shown without Graphical Access for AS/400 available. Figure 0-1 on page xvi shows both types of displays.

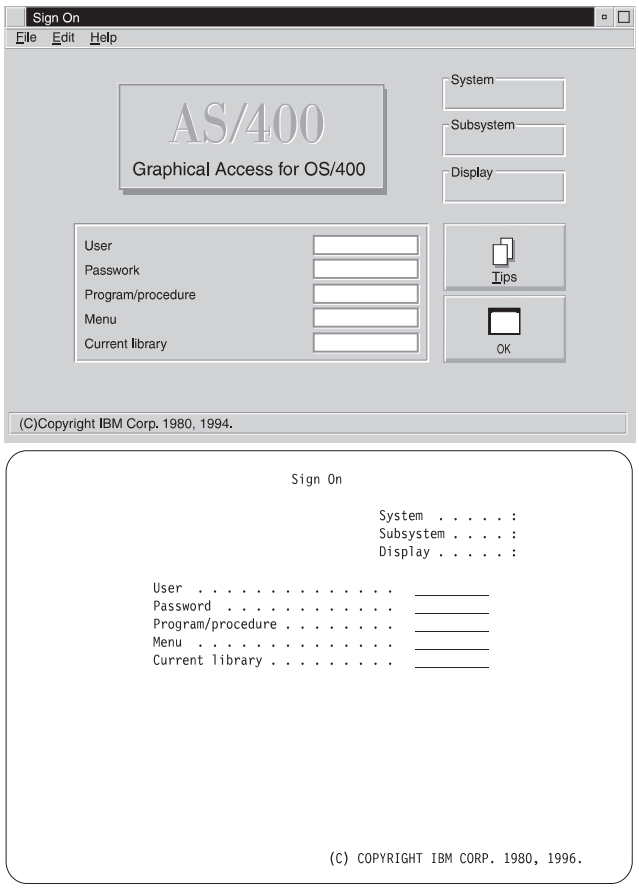


Figure 0-1. Types of AS/400 Displays

Prerequisite and Related Information

For information about Advanced 36 publications, see the *Advanced 36 Information Directory*, SC21-8292, in the AS/400 Softcopy Library.

For information about other AS/400 publications (except Advanced 36), see either of the following:

- The *Publications Reference*, SC41-5003, in the AS/400 Softcopy Library.
- The *AS/400 Information Directory*, SK2T-2226, a unique, multimedia interface to a searchable database that contains descriptions of titles available from IBM or from selected other publishers.

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

Information Available on the World Wide Web

More AS/400 information is available on the World Wide Web. You can access this information from the AS/400 home page, which is at the following uniform resource locator (URL) address:

`http://www.as400.ibm.com`

Select the Information Desk, and you will be able to access a variety of AS/400 information topics from that page.

Chapter 1. Configuring Your System

This chapter assumes that you have read through the tasks in the *Basic System Operation, Administration, and Problem Handling* book and in the *Getting Your AS/400 Working for You* book. If you are using automatic configuration for your local configuration tasks, continue with this chapter for more information.

If you are not using automatic configuration for your local configuration, go to Chapter 2, “Preparing for Manual Configuration” on page 2-1, for instructions on how to prepare for manual configuration.

If you are using automatic configuration for your local configuration, but have one of the following to configure:

- ASCII (American National Standard Code for Information Interchange) workstation controllers
- Devices attached to an ASCII workstation controller

Continue with this chapter. Then to Chapter 2, “Preparing for Manual Configuration” on page 2-1, for instructions on how to prepare for manual configuration.

Using Automatic Configuration—Introduction

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:

- 2661, 266C, 2720, 2721, 2722, 6040, 6050, 6140, 6180, 915A, and 916A Twinaxial Controllers
- 6041, 6141, and 2637 ASCII Controllers
- 9173 LocalTalk** Workstation Controllers
- 6054 LocalTalk Workstation Adapter for the AS/400 Multiple Function Input/Output Processor (MFIOP)
- 6A58 and 6A59 Client Access Console Workstation Controllers

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

Local devices include:

- Your tape, diskette, and optical units
- Media library devices
- The twinaxial printers and display stations attached to local twinaxial workstation 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 gets set on. Unless you changed this option to N (NO) when your system was set up, all of your local controllers and devices 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 one of the following: a normal naming convention, the System/36 style naming convention, or the naming convention that is based on the device address. The Device configuration naming option allows you to change the system value QDEVNAMING, which controls automatic configuration names for your devices. 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 that are 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 3, Configuring Locally Attached Twinaxial Devices Instructions for configuring devices attached to the ASCII workstation controller are found in the *ASCII Work Station Reference* book.

Automatic Configuration of Personal Computers

If you have PC devices (display stations and printers) using the work station function attached to your system, one of the following is true: some of the configuration descriptions that are needed are automatically created for you, and some of the configuration descriptions have to be manually created. **Work station function** is the part of AS/400 Client Access licensed program for DOS users that allows a personal computer attached to an AS/400 system to emulate up to five display stations. Work station function also allows a PC printer to emulate a system printer. For instructions on how to configure the personal computers on your system with this function, see the *Client Access/400 for DOS with Extended Memory Setup* book or the *Client Access/400 for OS/2 Setup* book.

Note: Users of the Personal System/55 should go to the *Client Access/400 for DOS with Extended Memory Setup (DBCS)* book or *Client Access/400 for OS/2 Setup (DBCS)* book, for information specific to their personal computer.

System Values Used by Automatic Configuration

System values contain specifications that are used to control or change the overall operation of your system. You can change the system values to define a working environment. Automatic configuration uses some system values when creating configuration descriptions.

QAUTOCFG

A system value that is 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 one of the following is true: you specified N (NO) for the *Enable automatic configuration* prompt on the Set Major System Options display, or 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. These names are used 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 1-5 in this chapter.)

If you decide to change the system value QDEVNAMING any new devices that are automatically configured after you change the system value use the new naming convention. (You can use the CHGSYSVAL command to change this value.) However, all the devices that were initially configured using the old naming convention *are not* changed by automatic configuration. If you want to change the names of all the descriptions with the old naming convention, you must do the following: 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 that is 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, the device name is set to QPRTDEV(P1). This 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.

A **default printer** is assigned to a system or user and accepts all the printer output from that system or user, if no other printer is specified.

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. 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, change the system value QPRTDEV to the name of a different printer. Use the CHGSYSVAL command to change the value. 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 do the following:

- Change the system value QPRTDEV to the name of a different printer.
- 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 manually create new ones.
- You can 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 Chapter 8, “Tailoring Your Configuration” on page 8-1.

Working with System Values

To view the current values that are set on your system for any of these system values, use the Display System Value DSPSYSVAL) command. Type **DSPSYSVAL (Display System Value)** 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 that is enclosed in apostrophes.

Adding Local Controllers and Devices Dynamically

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 workstation controllers and tape controllers, and any new twinaxial display stations, twinaxial printers, tape units, diskette units, optical units, and media library devices.

- 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 workstation controller, tape unit controller, optical unit, or media library device, 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 (for example, an optical unit) the system does not have to be powered off. You do not have to perform an IPL for automatic configuration to take place. As long as the system is powered on , 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** (which is relating to, or characteristic of a whole group or class) way. To see the exact descriptions that were 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 1-1 on page 1-6 shows the normal naming convention (*NORMAL), the System/36 style naming convention (*S36), and the naming convention that is based on the device address (*DEVADR).

Table 1-1. Automatic Configuration Naming Conventions

Device	*NORMAL	*S36	*DEVADR
Workstation controllers	CTL01, CTL02,...	CTL01, CTL02,...	CTL01, CTL02,...
Tape controllers (9406, 9404 and 9402 System Units)	TAPCTL01, TAPCTL02,...	TAPCTL01, TAPCTL02,...	TAPCTL01, TAPCTL02,...
Media library devices	See Note 5.	See Note 5.	See Note 5.
Display stations	DSP01, DSP02,...	W1, W2,...	DSP010101, DSP010102,...
Printers	PRT01, PRT02,...	P1, P2,...	PRT010101, PRT010102,...
Tape units	TAP01, TAP02,...	T1, T2, TC	TAP01, TAP02,...
Diskette units	DKT01, DKT02,...	I1	DKT01, DKT02,...
Optical units	OPT01, OPT02,...	OPT01, OPT02,...	OPT01, OPT02,...

Notes:

1. The console for your system is assigned the name QCONSOLE in its device description during an attended IPL. (An attended IPL is 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 that are used after IPL are not restricted. You should create separate descriptions for Both console display or other display stations, and controller. 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 that are shown in this table.
2. For display stations that use 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 that is based on the device address (*DEVADR) differs from the normal naming convention for display stations and printers only. The name that is 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 that is attached to a controller with resource name CTL01 at port 02 with a device address (switch setting) of 03.

   Attention: If the resource name is changed to less than 5 characters and QDEVNAMING is also set to *DEVADR, automatic configuration is able to create a device description for that controller.
4. Automatic configuration defaults to *NORMA, if the system value QDEVNAMING is set to *DEVADR and more then one controller resource name has the same characters in positions 4 and 5.
5. For media library devices, automatic configuration first attempts to create a description using the same name that was created for the resource name. If this name cannot be used, automatic configuration generates names like the following: MLB01, MLB02, and so on.

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 that use 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. (This assumes 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. This is true 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, three display stations have description names of DSP01, DSP02, and DSP03. 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. If you have more than one diskette unit, the remaining diskette units 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 tape units are assigned the names TAP01, TAP02, and TAP03.

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

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 topics list the defaults that are 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.

Workstation Controller Defaults

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

Tape Controller Defaults

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

Media Library Device Defaults

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

Tape Unit Defaults

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

Diskette Unit Defaults

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

Optical Unit Defaults

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

Local Twinaxial Printer Defaults

- *Device description*: Assigned by the system by using the appropriate naming convention
- *Device type*: Automatically assigned by the system
- *Device model*: Automatically assigned by the system
- *Online at IPL*: *YES
- *Controller, port, and switch setting*: Automatically assigned by the system
- *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 (CHGDEVPRT)) command. See Chapter 3, “Configuring Locally Attached Twinaxial Devices” on page 3-1 to configure this parameter.
- *Text description*: Created by automatic configuration

Local Twinaxial Display Station Defaults

- *Device description*: Assigned by the system by using the appropriate naming convention
- *Device type*: Automatically assigned by the system
- *Device model*: Automatically assigned by the system
- *Online at IPL*: *YES
- *Controller, port, and switch setting*: Automatically assigned by the system
- *Keyboard type*: Country code of language that is 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

Some 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. Table 1-2 shows a list of devices that are configured as another device.

Table 1-2 (Page 1 of 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 monitor	V	3486	BA
3488 with a color monitor	H1	3487	HC
3488 with a color monitor	V	3487	HC
3489 with a monochrome monitor	V	3486	BA
3489 with a color monitor	V	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 (Intelligent Printer Data Stream))	2	*IPDS	0
3816 (non-IPDS)	1S, 1D	5219	D1
3816 (IPDS)	1S, 1D	*IPDS	0
3912 (non-IPDS)	AS0	3812	D1
3912 (IPDS)	AS0	*IPDS	0
3916 (IPDS)	AS1	*IPDS	0
3930 (non-IPDS)	02D, 02S	5219	D1
3930 (IPDS)	02D, 02S	*IPDS	0
3935 (IPDS)	001	*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
4247 (non-IPDS)	001	4214	2
4247 (IPDS)	001	*IPDS	0
5150	1, 2	5150	1, 2
4245	T20	4245	T12
5262	1	5256	1

Table 1-2 (Page 2 of 2). Automatic Configuration Device Type and Model Conversion

Actual Device Type	Actual Device Model	Configured as Device Type	Configured as Device Model
6262	T12, T14, T22	4245	T12

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. When 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, 3488, and 3489 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 does one of the following:
  - Creates new configuration descriptions for those devices the next time you perform an IPL.
  - Creates new configuration descriptions the next time the devices are powered on.

The description names that are deleted are used again by automatic configuration if automatic configuration performed the deletion of the old configuration descriptions.

- 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 automatic configuration 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 following occurs:

  – The first description for that device remains in existence until it is deleted.

  – 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 was automatically configured is powered on but does not show the Sign-On display, the problem may be that the device type was excluded from the subsystem description. 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. (Use the Work with Subsystem Descriptions (WRKSBSD) command to do this).

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

  – A **subsystem** is an operating environment, defined by a subsystem description, where the system coordinates processing and resources.

  – A **subsystem description** is a system object that contains information by defining the characteristics of an operating environment that is controlled by the system.

- 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.

- 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.

Automatic Configuration of ASCII Workstations

If you using automatic configuration and have an ASCII workstation controller with ASCII workstations that are attached to it, see the *ASCII Work Station Reference* book.

Chapter 2. Preparing for Manual Configuration

If you are using automatic configuration for your local configuration, go to Chapter 6, “Electronic Customer Support Configuration” on page 6-1, 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, continue with this chapter for instructions on how to prepare for configuration.

You may be interested in Chapter 7, “Saving Your Configuration” on page 7-1, and Chapter 8, “Tailoring Your Configuration” on page 8-1, should you decide to change your configuration.

Note: If you have ASCII (American National Standard Code for Information Interchange) workstation controllers or devices that are attached to an ASCII workstation controller to configure, see the *ASCII Work Station Reference* book for more information.

Preparing for Manual Configuration—Introduction

Reading through Chapter 1, “Configuring Your System” on page 1-1 should prepare you for the configuration tasks. Also, Chapter 9, “Configuration Example” on page 9-1, 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 C, “Upgrading AS/400 System Products” on page C-1 for more information.

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

Planning Diagrams

This section is designed to help you learn about and plan for manual device configuration. Make sure that you have completed your floor plan and your System Information Form before you begin the tasks in this chapter. These forms, and instructions for completing them, reside in the *Physical Planning Reference* book.

You will need to use the System Information Form to complete some of the tasks in this section. Additional information is to be added to this form.

- You should add the *port* number of the local controller on the System Information Form to which you intend to attach each display station and printer.
- For each tape controller and tape unit you are configuring, you should have one row filled out on the System Information Form.

  Note: Only the 3422, 3430, 3480, and 3490 Tape Units require tape controllers. These tape units are available on the 9402, 9404, and 9406 System Units.
- For each diskette unit you are configuring on your 9402, 9404, or 9406 System Units, you should have one row filled in on the System Information Form.

- For each optical unit and media library device you are configuring, you should have one row filled in on the System Information Form.

The person responsible for planning the physical arrangement of your system can provide you with a copy of the System Information Forms. They are used later in Chapters 3, 4, and 5 for completing your configuration tasks.

System Resource Names—Overview

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

Note: You can change the system resource name by using the SST hardware resource manager.

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
- Optical units
- Tape units
- Diskette units
- Tape libraries
- Optical libraries

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 on page Table B-1 on page B-1, 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.

For all the local controllers you need the name that you intend to assign to each of these items. Local controllers, tape controllers, tape units, and diskette units you are configuring on your system, include both twinaxial work station controllers and ASCII work station controllers. 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 ASCIICTL.

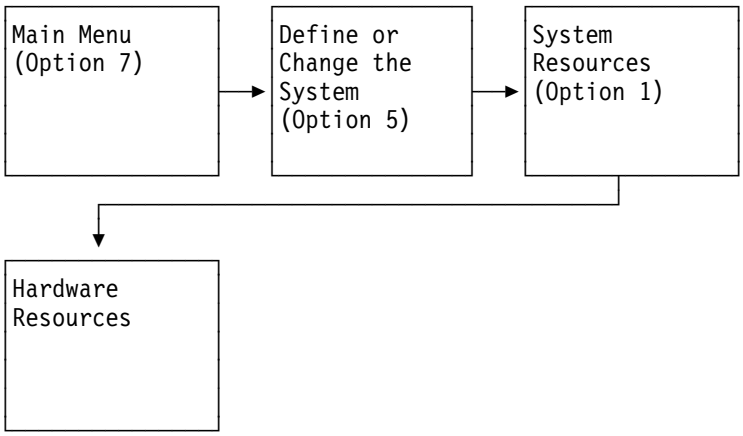
Record the name you have assigned to each work station controller, tape controller, tape unit, optical unit, and diskette unit in the *Controller Name* and *Device Name* columns on Form X1.

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.
3. 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.



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).

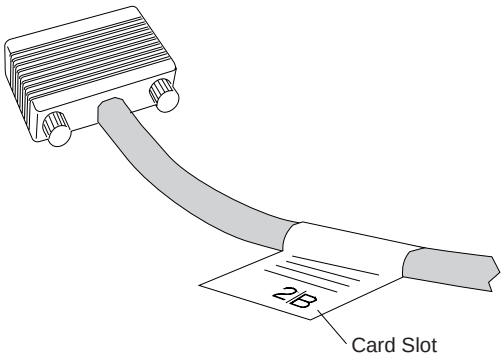
System Resource Names for AS/400 System Units

You need to record the following information on Form X1, before obtaining the system resource names.

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 and 9404 Model 4xx has a controller of type 2637 or 2661. This controller is located in card slot 5. The system unit and expansion unit can also have additional workstation controllers. To determine the card slot number for these controllers, use the instructions that follow.

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



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

Note: You should verify this number with the number that is recognized by the system and that is recorded later in this task.

Tape controllers, tape units, diskette units, optical units.

Internal units

For the Model 15x and 4xx System Units, only one optical unit and one tape unit are internally attached. If you have a 4xx expansion unit, three more tape units can be attached. You can leave the *Serial Number* column blank on Form X1. Record the device name for the tape unit on the form.

External units

External tape units, diskette units, and optical unit can be attached by IOP cards that are installed in any of the IOP card slots.

For each tape controller, diskette unit, and optical unit you are configuring; you need to know the serial number for that device. Get the serial number from the front of the device. Record it in the *Serial Number* column for tape controllers or tape, diskette, and optical 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.

Media library device. For media library device 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 media library devices on Form X1.

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, type 7 on the command line 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 that is needed.

For each local controller you are configuring on your system, get the card slot number for each controller from Form X1. Then 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 that is 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.

Tape controllers, tape, diskette, and optical units. From the Hardware Resource menu, choose option 3 (Work with storage resources). The Work with Storage Resources display is shown. Choose option 9 (Work with resource). The Work with Storage Controller Resources display is shown. From this display, you can find the resource names of your tape unit, diskette unit, or optical unit.

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

For the tape controllers, tape units, diskette units, and optical units you are attaching to your system unit, find the serial number for that device on the display. Then go across the row to the *Resource* column.

For your tape unit resource name, find the resource name that begins with TAP. That is the default resource name for this tape unit on your system.

For your diskette unit resource name, find the resource name that begins with DKT. That is the default resource name for this diskette unit on your system.

For your optical unit, find the resource name that begins with OPT. That is the default resource name for this optical unit on your system.

Record the resource name under the *Resource Name* column for optical unit on Form X1.

Media library devices. From the Hardware Resource menu, choose option 3 (Work with storage resources). The Work with Storage Resources display is shown. Choose option 9 (Work with resource). The Work with Storage Controller Resources display is shown. From this display, you can find the resource names of your media library devices.

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

For the media library device you are attaching to your system unit, go directly to the *Resource* column.

Record the resource name under the *Resource Name* column for media library device on Form X1.

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

Printing AS/400 System Configuration

You must obtain a copy of your system configuration. This document is required for you or your service representative to handle problems. The **system configuration** is a list of devices that are provided with the system.

To print a copy of the system configuration, use the Display Hardware Resources (DSPHDWRSC) command.

1. On any display with a command line, type:

   DSPHDWRSC

2. On the Display Hardware Resource command prompt display, use *AHW for the Type field.
3. Use *PRINT for the Output field and press the Enter key. The system configuration is sent to the output queue that is identified in your user profile. A display of the hardware resources is shown.

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

   If the printer is ready, the system configuration list is printed. If the printer is not ready, do the following:

   a. Start the printer.

   b. When the printer is ready, type the following command: `go assist` to display the Operational Assistant menu.

   c. Select option 1 (Work with printer output).

   d. Look for the configuration list at or near the bottom of the printer output list on the Work with Printer Output display. Use option 5 (Display) to view the printer output.

   e. Use option 10 (Start printing) on the Work with Printer Output display to print the system configuration list.

4. Keep a printed copy of the system configuration list with the *Basic System Operation, Administration, and Problem Handling* book, and with this book for future reference. Your system representative will need the system configuration list to handle problems.

Chapter 3. Configuring Locally Attached Twinaxial Devices

If you are not using automatic configuration for your local configuration, continue with this chapter to complete your local configuration tasks.

Manual Configuration—Introduction

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 by 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.

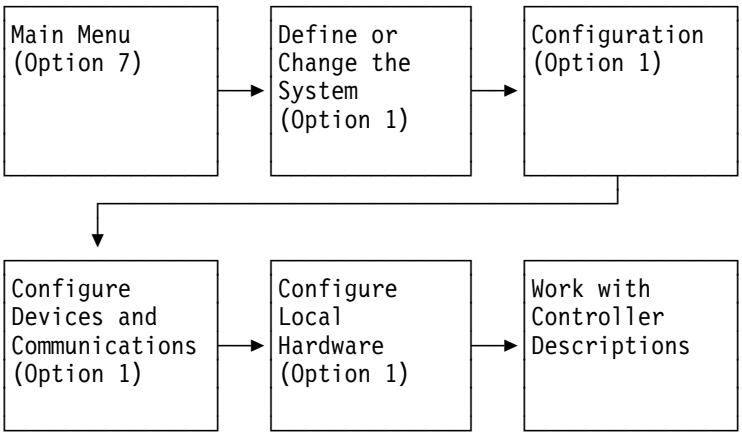
Configuring Local Twinaxial Workstation Controllers

For each local workstation controller you are configuring on your system, you should have information filled in the System Information Form. This information is needed for each port on the workstation controller to which you intend to attach display stations and printers. You should also have already filled in the resource name for each local workstation controller you are configuring on the Recording Resource Names, Form X1. Instructions for filling out these forms are in Chapter 2, "Preparing for Manual Configuration" on page 2-1.

To configure your local twinaxial workstation 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.

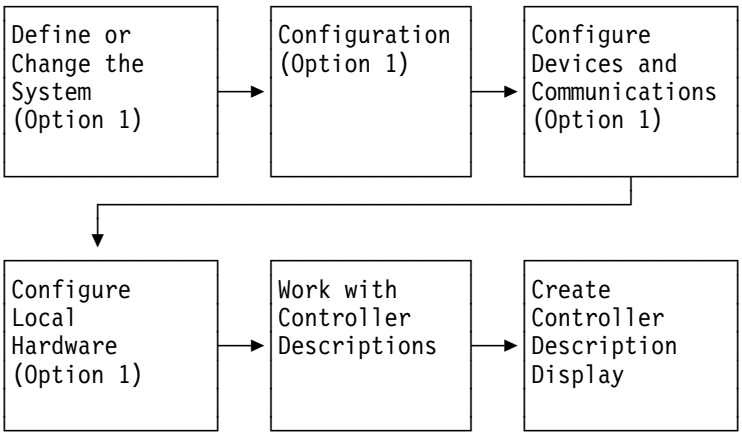
   The following shows the menus and options to select:



The local workstation controller descriptions for your system that have already been created are listed on this display. If this is the first workstation 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.



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 the following:

WRKHDWRSC *LWS

to work with local workstation controllers. Type a 5 (Work with controller description) in the option field of the twinaxial workstation controller you want to configure. Then type a 1 (Create) in the option field. 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. This list contains values for the prompts that are already filled in with information that is 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.

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. The list of prompts depends 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.

Table 3-1. AS/400 Controller Types

Model	Controller Types
150	266C, 6A59
600, 620, S10, S20	2637, 2661, 6050, 6054, 6055, 6056, 6140, 6A58, 6A59, 915A, 916A
640, 650, SB1, S30, S40	2720, 2722, 2665, 6050, 6054, 6055, 6056, 6140, 6180, 6141, 6A58, 6A59

Note: For the 6A58 and 6A59 controllers, these types are available on the system if the following conditions exist:

Table 3-2. AS/400 Reported Controller Types

Model	Card Type	Cable P/N	Slot	Port Number	Reported Type
150	2721	44H7504	A,B,C	2	6A59
600	2612	46G0450 46G0479	5	1	6A59
620	2609	46G0450 46G0479	5	2	6A58
S10, S20	2721	44H7504	C08, C09, C10	1	6A59
640, S30	2699	21H3779	S02B	1	6A59
SB1	2699	21H3779	S01B	1	6A59
650, S40	2699	21H3779	S01B	1	6A59

Prompt Descriptions for Local Workstation Controllers

Following is a description of each prompt and the valid choices. Some of the values are already provided based on the controller type and model you are using.

Controller type. Type the controller type. This should be a 4-digit number that is listed on the System Information Form. See Table 3-1 and Table 3-2 to verify this number.

Controller model. Type the model of the workstation controller. The model number could be recorded on the System Information Form. See Table 3-1 and Table 3-2 to verify this number.

Resource name. Type the resource name for this local workstation 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 that are 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.

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. The display station is varied off for one of the following reasons:

- If the subsystem sends a request to a display station to turn on the message waiting light.
- A response to that request is not received in the amount of time specified.
- The amount of time specifed for that value run out.

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 the program can take appropriate actions when received.

The time-out value that is specified is used for all local display stations and printers that are 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 is 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 automatic configuration to attach devices to a manually configured controller, specify *YES on the AUTOCFG parameter.

Initialization file name. Specifies the name of a source file for a 266A controller that only contains configuration initialization data.

Initialization member name. Specifies the name of a source file member that contains configuration initialization data (for a 266A controller only).

Initialization program name Specifies the name of a program to manage configuration initialization data (for a 266A controller only).

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 do one of the following:

- You can go back and correct the entries that are not valid.
- 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 that is already filled in on the System Information Form and repeat this process for each local workstation 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.

Configuring Local Twinaxial Display Stations

For each local display station you are configuring on your system, you should have information filled in on a System Information Form. For information on using this form, see Chapter 2, “Preparing for Manual Configuration” on page 2-1.

Notes:

1. The controller description for the local workstation controller to which this display station is attached should already be created.
2. If you have PC display stations using the work station function attached to your system, do the following:
   - Go to one of the Client Access installation and administration guides that are listed in the “Bibliography” on page X-1

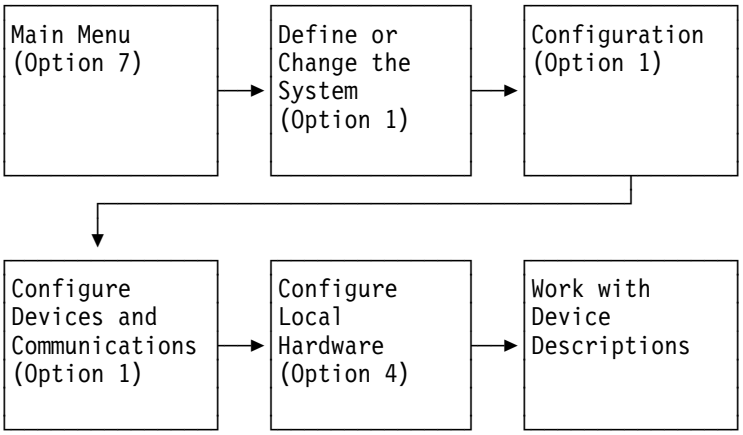
- For information on how to configure your PC display stations.

3. For information on attaching a personal computer or a Personal System/2 system that is running Client Access Asynchronous Communications, see the *ASCII Work Station Reference* book.

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.

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 4 (Display stations). The Work with Device Descriptions display is shown.

   The following shows the menus and options to select.



   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.

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 the following command:

WRKHDWRSC *LWS

to work with local work station controllers. Using the System Information, 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 5 (Work with controller descriptions). Position the cursor to the

option field for that controller and select option 9 (Work with associated device descriptions). When the Work with Associated Device Descriptions display is shown, select option 1 (Create) 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. These prompts are already filled in with information that is 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 System Information Form. The device name should be listed on the line 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.

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, that is 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.)

Prompt Descriptions for Local Twinaxial Display Stations

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 that is listed on the System Information Form 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. 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 AS/400 Client Access 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, 3477, 3486, 3487, 3488, and 3489 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.

Table 3-3 contains the local display station device types and device models and also the configured-as device types and device models.

Table 3-3 (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, EC[1], EG[2]	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 monitor	V	3486	BA
3488 with a color monitor	H1	3487	HC
3488 with a color monitor	V	3487	HC
3489 with a monochrome monitor	V1	3486	BA
3489 with a color monitor	V1	3487	HC
5150	1, 2	Same	Same
5251	11	Same	Same
5291	1, 2	Same	Same
5292	1 (Color)	Same	Same
5292	2 (Graphics)	Same	Same
7561	J61	5555	B01, C01
Macintosh** workstations with a color monitor and 24 x 80 screen size[3]	—	3197	C2
Macintosh workstations with a color monitor and 27 x 132 screen size[3]	—	3477	FC
Macintosh workstations with a monochrome monitor and 24 x 80 screen size[3]	—	3196	A2

Table 3-3 (Page 2 of 2). Display Station Device Types and Models

Actual Device Type	Actual Device Model	Configured as Device Type	Configured as Model Number
Macintosh workstations with a monochrome monitor and 27 x 132 screen size[3]	—	3196	A2
Personal computer or Personal System/2 running 5250 Emulation Program Version 2.10, 2.11, or 2.12	—[4]	5291 5292	2 2
Personal computer or Personal System/2 running 5250 Emulation Program Version 2.2 or 2.3	—[4]	3196 5292	A2 2
Personal computer or Personal System/2 running AS/400 Client Access	—[4]	5150	1
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 This display device emulated by the Macintosh depends on the display type (color or monochrome) and on the screen size specified in the SNA•ps 5250 Version 1.2 application.
4 Refer to the *IBM Enhanced 5250 Emulation Program* G570-2221, for the complete list of actual model numbers.
5 Refer to one of the AS/400 Client Access installation and administration guides that are listed in the Bibliography for the complete list of actual model numbers.
6 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 3-4. 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	All models	5555	E01, F01
Personal System/55 or ThinkPad running Personal Communications/5250	All models	5555	B01, C01
Personal System/55 or ThinkPad running Personal Communications/5250 + 3270	All models	5555	B01, C01
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 the graphic display feature of 5250 PC. Model G01 supports monochrome text; Model G02 supports color text.

Find your device type in Table 3-3 on page 3-8, 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” on page A-1.

Device model. Type the device model of the display station. The device model should be on the System Information Form. If your display station model 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 System Information Form.

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.

Shared session number. Specifies the shared session number for a twinaxial display station.

Displays that share session addresses can be attached to the 266C, 2722, 6050, 2661, 6180, 915A, or 916A local workstation controllers, or to the 5494 remote workstation controller. 3486 and 3487 device types support shared sessions.

0 through 3 session numbers are available.

Notes:

1. The shared session limit for each workstation controller is 80 shared sessions. Different workstation controllers support different numbers of devices (base sessions). The maximum is 40 base sessions plus 80 shared sessions, for a total of 120 sessions.
2. Delays in processing the first keystroke after a session switch on the workstation controller is possible:
   a. If many users on the workstation controller are using address sharing on the display stations
   b. If those users frequently switch sessions on the display stations

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 workstation controller to which this display station attaches.

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 Table 3-5 on page 3-11 to find the correct keyboard type for this display station:

Table 3-5 (Page 1 of 3). Keyboard Type Table

Language or Country	Keyboard Type
Albania	ALI
Arabic X/Basic	CLB
Austria/Germany	AGB
Austria/Germany Multinational	AGI
Belgium Multinational	BLI
Brazilian Portuguese	BRB
Bulgaria	BGB
Canadian (French)	CAB
Canadian (French) Multinational	CAI
Chinese (Simplified)	RCB
Chinese (Traditional)	TAB
Croatia	YGI
Cyrillic	CYB
Czech Republic	CSB
Denmark	DMB
Denmark Multinational	DMI
Estonia	ESB
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
Hungary	HNB
Iceland	ICB
Iceland Multinational	ICI
International	INB
International Multinational	INI
Iran (Farsi)	IRB
Italy	ITB

Table 3-5 (Page 2 of 3). Keyboard Type Table

Language or Country	Keyboard Type
Italy Multinational	ITI
Japan English	JEB
Japan English Multinational	JEI
Japan Kanji	JKB[2]
Japan Latin Extended	JPB
Japan United States Basic	JUB[3]
Japan Katakana	KAB[4]
Korean	KOB
Latvia	LVB
Lithuania	LTB
Latin 2/Roece	ROB
FYR Macedonia (Former Yugoslav Republic)	MKB
Netherlands	NEB
Netherlands Multinational	NEI
Norway	NWB
Norway Multinational	NWI
Poland	PLB
Portugal	PRB
Portugal Multinational	PRI
Romania	RMB
Russia	RUB
Serbia (Cyrillic)	YGB
Serbia (Latin)	SQB
Slovakia	SKB
Slovenia	YGI
Spain	SPB
Spain Multinational	SPI
Spanish-Speaking	SSB
Spanish-Speaking Multinational	SSI
Sweden	SWB
Sweden Multinational	SWI
Switzerland/French Multinational	SFI
Switzerland/German Multinational	SGI
Thai	THB
Turkey (Qwerty)	TKB
Turkey (F)	TRB
Ukraine	UAB
United Kingdom	UKB
United Kingdom Multinational	UKI

Table 3-5 (Page 3 of 3). Keyboard Type Table

Language or Country	Keyboard Type
United States/Canada	USB
United States/Canada Multinational	USI
Urdu	PKB
Vietnam	VNB
Languages of the former Yugoslavia	YGI

1 GNB is the default value for the Greece Keyboard Type. The GKB code was used prior to V2R1 and continues to be supported. GKB provides fewer characters than the GNB code.

2 For Personal System/55, 5295, and 3477 Model J Display Stations.

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

4 For 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 that is sent to the display station. The data must be 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 that is 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 that are included in the graphic character sets that are listed for the *Limited CHRID* values can be entered at and displayed by the device. All characters that are associated with the *Full CHRID* values can be entered at the display station. (These characters can use hexadecimal representations.) All characters cannot be displayed by the device.

The 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, 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), the CHRID values that are listed are for single-byte data only. (JKB, JUB, KOB, RCB, and TAB are keyboard type values).

Table 3-6 (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	AL1 AGI BLI CAI DMI FAI FNI FQI ICI INI ITI JEI NEI NWI PRI SFI SGI SPI SSI SWI UKI USI		697 500
Albania	ALI		697 500
Arabic	CLB		235 420
Austria/Germany	AGB	265 273	697 273
Belgium Multinational	BLI		697 500
Brazilian Portuguese	BRB		697 037
Bulgaria	BGB		1150 1025
Canadian (French)	CAB	277 260	341 260
Chinese (Simplified)	RCB		1174 836
Chinese (Traditional)	TAB		101 037
Croatia	YGI		959 870
Cyrillic	CYB		960 880
Czech Republic	CSB		959 870
Denmark/Norway	DMB NWB	281 277	697 277
Estonia	ESB		1307 1122
Finland/Sweden	FNB SWB	285 278	697 278
France	FAB (Azerty) FQB (Qwerty)	288 297	697 297
Greece	GNB[1]		925 875
Hebrew	NCB		941 424
Hungary	HNB		959 870
Iceland	ICB		697 871
Iran (Farsi)	IRB		1219 1097
Italy	ITB	293 280	697 280
Japan English	JEB	297 281	697 281
Japan Latin Extended	JPB		1172 1027
Japan/Kanji	JKB (For Personal System/55, 5295, and 3477-J display stations)		1172 290
Japan/Katakana	KAB (For 5251, 5291, 5292, and 3180 Katakana display stations)		332 290
Japan United States Basic	JUB (For Personal System/55 and ThinkPad)		697 037
Korean	KOB		1173 833
Latin 2	ROB		959 870
Latvia	LVB		1305 1112
Lithuania	LTB		1305 1112
FYR Macedonia (Former Yugoslav Republic)	MKB		1150 1025
Netherlands	NEB		697 037
Norway	NWB	281 277	697 277
Poland	PLB		959 870
Portugal	PRB	301 037	697 037
Romania	RMB		959 870
Russia	RUB		1150 1025
Serbia (Cyrillic)	SUB		1150 1025
Serbia (Latin)	ICE		959 870
Slovakia	SKI		959 870
Slovenia	YOGI		959 870
Spain	SPY	305 284	697 284
Spanish Speaking	SUB	309 284	697 284

Table 3-6 (Page 2 of 2). Character Identifiers

Language or Country	Keyboard Type (KBDTYPE)	Limited CHRID	Full CHRID
Sweden	SUB	285 278	697 278
Switzerland/French Multinational	SKI		697 500
Switzerland/German Multinational	SKI		697 500
Thai	TAB		938 838
Turkey	TAB (Quarto) TAB (If)		1152 1026
Ukraine	UAB		1326 1123
United Kingdom/English	DUB	313 285	697 285
United States/English	SUB	101 037	697 037
Urdu	PKB		1160 918
Vietnam	VNB		1336 1130
Languages of the former Yugoslavia Multinational	YOGI		959 870

1 GNP is the default value for the Greece Keyboard Type. The value GAB is also acceptable with a Full CRIED 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, the value specified in the device description may be overridden using the keyboard setup feature.

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” on page A-1.

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 key. 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 the error display you can do the following:

- You can go back and correct the entries that are not valid.
- 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.

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.

Configuring Local Twinaxial Printers

For each local printer you are configuring on your system, you should have information filled in on the System Information Form. For more information on filling out the planning forms, see Chapter 2, Preparing for Manual Configuration.

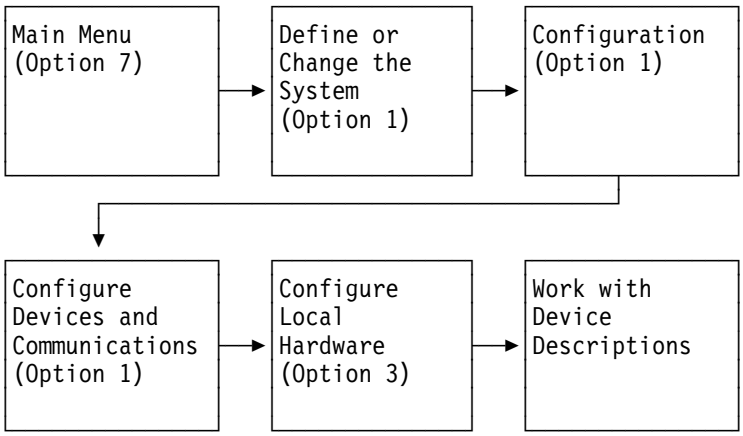
Notes:

1. The controller description for the local workstation controller to which this printer is attached should already be created.
2. If you have PC printers, using the work station function, attached to your system, do the following: go to one of the Client Access/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:



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 the following command:

WRKHDWRSC *LWS

to work with local workstation controllers. Use the System Information Form to determine which twinaxial workstation controller your printer that is attached to. Position the cursor in the option field for that controller, and select option 5 (Work with controller description). Position the cursor to the option field for that controller and select option 9 (Work with associated device description). The Work with Associate Device Descriptions display is shown. Find the printer to be configured from the list of detected devices, and select option 1 (Create) for that printer. When the Create Device Description display is shown, the device type/class is already filled in with information that is detected by the system. When you type your device name, a list of prompts is shown, with values for the prompts that are already filled in with information that is 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 System Information Form. The device name
| should be listed under the description 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.

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.

Prompt Descriptions for Local Twinaxial Printers

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 that is listed on the System Information Form for this printer.

Note: Some device types are not recognized by the system. These device types must be configured as something the system recognizes. 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, 3477, 3486, 3487, 3488, and 3489 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.

Table 3-7 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 3-7 (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
3912 (non-IPDS)	AS0	3812	1
3912 (IPDS)	AS1	*IPDS	0
3916 (non-IPDS)	AS0	3812	1
3916 (IPDS)	AS1	*IPDS	0
3930 (non-IPDS)	02D, 02S	3812	1
3930 (IPDS)	02D, 02S	*IPDS	0

Table 3-7 (Page 2 of 2). Printer Device Types and Models

Actual Device Type	Actual Device Model	Configured-as Device Type	Configured-as Device Model
3935 (IPDS)	001	*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
4247	AS1	*IPDS	0
4247	1	4214	2
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
6400 (non-IPDS)	004, 008, 012, CTA	4234, 5225	2,1
6400 (IPDS)	004, 008, 012, CTA	*IPDS	0
6404 (non-IPDS)	CTA	4234, 5225	2,1
6404 (IPDS)	CTA	*IPDS	0
6408 (non-IPDS)	CT0, CTA	4234, 5225	2,1
6408 (IPDS)	CT0, CTA	*IPDS	0
6412 (non-IPDS)	CT0, CTA	4234, 5225	2,1
6412 (IPDS)	CT0, CTA	*IPDS	0
Macintosh printers	—	3812	1
Printers attached to Personal System running Personal Communications/5250	—	3812	1

Table 3-8. 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
5407	001, 002, 003 005	5553	B01
5427	001, 002, 003, 005	5553	B01
5437	001, 002, 003, 005	5553	B01
5583	200	Same	Same
Twinaxial DBCS Capable Printers except 5583	–	5553	B01

Table 3-9. 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	510	5553	B01
5553	B01, B02	Same	B01
5557	B01	5553	B01
5563	B02, H02	5553	B01
5572	B01	5553	B01
5575	B01, B02, F01, F02, H02	5553	B01
5573	H02	5553	B01
5577	B01, B02, F01, F02, G01, HC2, FU2, H02, J02, K02	5553	B01
5579	H02	5553	B01
5582	P01	5553	B01
5584	G02, H01	5553	B01
5587	G01, H01	5553	B01
5589	H01	5553	B01
Personal System/55, 5295 and 3477 attached Printers	-	5583	B01

Find your device type in Table 3-7 on page 3-18, 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" on page A-1.

Device model. Type the device model of the printer. The device model should also be listed on the System Information Form. If your device model in the table above is one that is configured as a different 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. **Advanced Function Printing (AFP)** pertains to the ability of programs to use the all-points-addressable concept to print text and images on a printer. The 3812, 3816, 3912, 3916, 3930, 3935, 4028, 4224, 4234, and 4247 printers are capable of Advanced Function Printing.

Note: The 3935 printer should be configured as AFP(*YES), or the system will automatically switch the AFP value from *N0 to *YES.

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 workstation controller. This is the default. (The other possible value is *APPC, used for

remote printers that are attached using APPC/APPN. **Advanced program-to-program communications (APPC)** is data communications support that allows programs on an AS/400 System to communicate with programs on other systems having capable communications support. APPC on the AS/400 System provides application programming interface to the SNA LU Type 6.2 and node type 2.1 architecture. **Advanced Peer-to-Peer Networking (APPN)** pertains to data communications support that routes data in a method between two or more APPC systems that do not need to be directly connected. See the *Communications Configuration* book 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 System Information Form.

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 System Information Form. 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.

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.

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, 3816, 3912, 3916, 3930, 5219, or Intelligent Printer Data Stream (IPDS) printer. Otherwise, leave this entry blank.**Intelligent Printer Data Stream (IPDS)** pertains to an all-points-addressable data stream that allows users to position text images and graphics at any defined point in a printed page. A **data stream** is all information (data and control commands) that is sent over a data link in a single read or write operation. The **font identifier (font ID)** is a number that identifies the character style and size for certain printers. See the *Printer Device Programming* book 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 the a font identifier value of *DEVD or *CPI is selected, then no value is allowed for the point size value.

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.

For an IPDS printer, this value cannot be accurately determined. You must select a value that is appropriate for this printer: *CONT, *CUT, or *AUTOCUT.

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. The sheet-feed attachment must be on the printer.

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 through 255** if you want the separator pages to be printed from other drawers.

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 API Programming* book.

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 before the last printed output is forced into the stacker. This printer has continuous forms.

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. This prompt 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” on page A-1.

Host print transform. This prompt is for ASCII printers only. **Host print transform** is an Operating System/400 print function that converts an SNA character string (SCS) data stream or Advanced Function Printing Data Stream (AFPDS) 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 Client Access, 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 print transform function.

Type ***NO** if you do not want to use the host print 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 *Printer Device Programming* book.

User-defined option. Specifies one or more user-defined options to be used by user applications or user-specified programs that process spooled files. A maximum of 4 options can be specified.

Type ***NONE** if no user-defined options are specified.

Type the user-defined options to be used by the driver program. All characters are acceptable.

User-defined object. Specifies the qualified name and type of the user-defined object to be used by user applications or user-specified programs that process spooled files.

Type ***NONE** if no user defined object that is specified.

Specify a user-defined object name and type.

Data transform program. Specifies the qualified name of the user-defined program to transform the spooled file.

Notes:

1. This parameter cannot be specified when AFP(*YES) is specified.
2. This parameter cannot be specified when TRANSFORM(*YES) is specified.

Type ***NONE** if no user-defined transform program is named.

User driver program. Specifies the qualified name of the user-defined driver program.

Note: This parameter cannot be specified when AFP(*YES) is specified, or when DEVCLS(*LAN), TYPE(3812) and LANATTACH(*IP) are specified.

Type ***NONE** if no user defined driver program is specified.

The following parameters are also available:

- Internet protocol address
- Activation timer
- Lan-attached printer

For more information on the LAN (local area network)-attached printers, see the *Printer Device Programming* book.

System driver program. Specifies the name of the system-defined driver program, which provides the capability for sending AS/400 printer output to a printer that is attached over a TCP/IP network.

Note: This parameter is only valid when DEVCLS(*LAN), TYPE(3812), and LANATTACH(*IP) are specified.

Network station driver Specifies the name of the network station driver program.

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 the following:

```
'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 do one of the following: 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.

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.

Configuring ASCII Workstation Controllers

If you have completed your local controller and workstation configuration, and you do not have to configure any ASCII workstation controllers, devices attached to ASCII workstation controllers, tape controllers, tape units, or diskette units. you need to configure electronic customer support. For instructions on how to configure your electronic customer support communications go toChapter 6, “Electronic Customer Support Configuration” on page 6-1. If this is not an initial configuration and your electronic customer support communications is already configured, go to Chapter 7, “Saving Your Configuration” on page 7-1, for instructions to save your configuration.

If you have completed your local controller and workstation configuration, and you need to configure ASCII workstation controllers and devices that are attached to an ASCII workstation controller, see the *ASCII Work Station Reference* book.

Chapter 4. Configuring Tape Controllers, Tape Units, Tape Libraries, and Diskette Units

If you have completed your local controller and workstation configuration, and have tape controllers, tape units, tape libraries, and diskette units to configure, continue with this chapter.

Configuring Tape Controller, Tape Units, and Diskette Units—Introduction

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

Note: Tape controllers are optional.

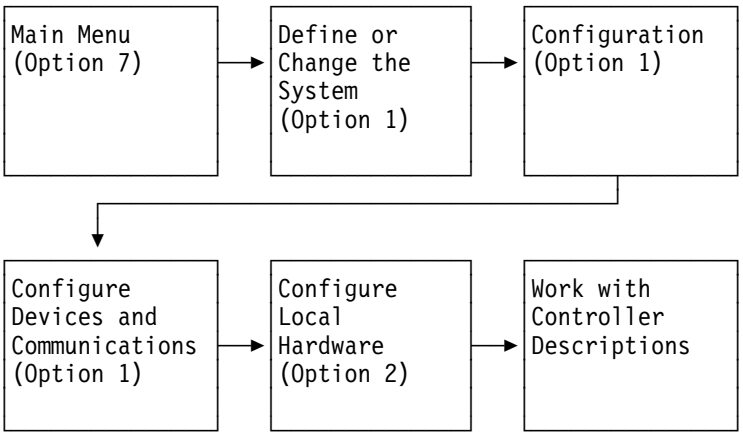
Configuring Tape Controllers for 3422, 3430, 3480, and 3490 Tape Units

For each tape unit 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 the System Information Form. The tape controllers include the 3422, 3430, 3480 or 3490. 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 2, “Preparing for Manual Configuration” on page 2-1.

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.

For the tape controller name, refer to the appropriate area of the System Information Form.

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.

Prompt Descriptions for Tape Controllers

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 that is listed for this controller on the System Information Form.

Possible tape controller values are:

- *RSCRNAME
- 3422
- 3430

- 3480
- 3490

When the *RSCRNAME value is used, the device type is determined by the resource name parameter. This is the default.

Controller model. Type the model number of the tape controller. The model number should be listed on Form A1.

Possible values are:

Type	Model
***RSCRNAME**	*RSCRNAME
3422	A01
3430	A01
3480	A11, A22
3490	*ANY

When the *RSCRNAME value is used, the device model is determined by the resource name parameter. This is the default.

Resource name. Type the resource name for this tape controller. The resource name was recorded on the Recording Resource Names Form (Form X1).

Note: Use the Work with Hardware Resources (WRKHRDRSC) command with *STG that is specified on the TYPE parameter to determine the resource name.

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 that are attached to it when you do an IPL.

Type ***NO** if you do not want to to use this controller and the devices attached to it automatically when you do an IPL.

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 is 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 the error display you can do one of the following:

- You can go back and correct the entries that are not valid.
- 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.

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.

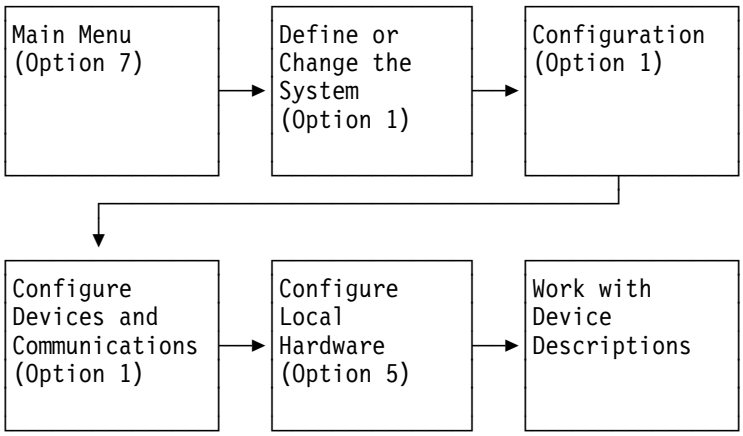
Creating Configuration Descriptions for Tape Units

For each tape unit you are configuring on your system, you should have information filled in on the System Information Form. 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 2, “Preparing for Manual Configuration” on page 2-1.

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:



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.

Note: If you are performing configuration for the first time, the tape unit description for the tape that is used to install the system already exists. It is called TAP01, if you are using the normal naming convention, or the naming convention that is 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 (see the System Information Form.

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 displaythat is 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.

Prompt Descriptions for Tape Units

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 Form A1.

Possible type values are:

***RSCRNAME**

2440 3570

3590 6335

6378 6379

6380 6385

6390 63A0

7208 9347

9348

When the *RSCRNAME value is used, the device type is determined by the resource name parameter. This is the default.

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 System Information Form.

Possible values are:

Type	**Model**
***RSCRNAME**	
2440	A12
3570	B1A, B11
3590	B1A, B11
6335	0001
6378	0001
6379	0001
6380	0001
6385	0001
6390	0001
63A0	0001
7208	0002, 0012
9347	0001
9348	0001

When the *RSCRNAME value is used, the device type is determined by the resource name parameter. This is the default.

Resource name. Type the resource name for this tape unit. The resource name was recorded on the form for Recording Resource Names (Form X1).

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *STG that is specified on the TYPE parameter to determine the resource name.

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.

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 the error display you can do one of the following:

- You can go back and correct the entries that are not valid.
- 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 that is already filled in on the System Inforamtion For 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.

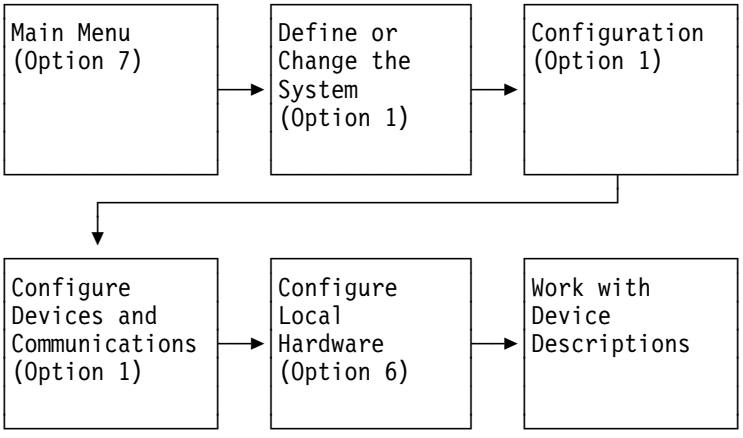
Creating Configuration Descriptions for Diskette Units

For each diskette unit you are configuring on your system, you should have information filled in on the System Information Form. You also should have already filled in the resource name for each diskette unit you are configuring on Form X1 (Recording Resource Names). Instructions for filling out these forms are in Chapter 2, “Preparing for Manual Configuration” on page 2-1.

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:



   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 (using Form A1).

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.

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 that 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 that are listed below may not appear on the display that is 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.

Prompt Descriptions for Diskette Units

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 Form A1.

The possible diskette unit value is 9331.

Device model. Type the device model of the device. The device model should be shown on Form A1.

Possible values are:

Type	Model
9331	0001, 0002, 0011, 0012

Resource name. Type the resource name for this diskette unit. The resource name was recorded on the Recording Resource Names Form (Form X1).

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *STG that is specified on the TYPE parameter to determine the resource name.

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.

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 that 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 the error display you can do the following:

- You can go back and correct the entries that are not valid.
- 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 that is already filled in on the System Information Form 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.

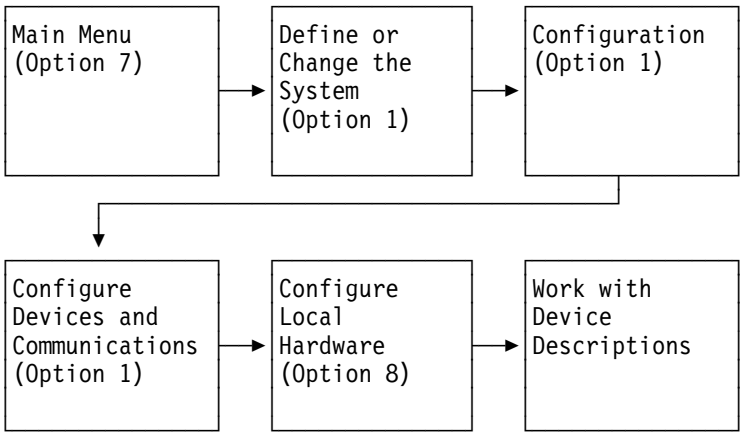
Creating Configuration Descriptions for Tape Libraries

For each tape library you are configuring, you should have information filled in on Form A1. For each tape library you are configuring, you need the device name and resource name. You also should have already filled in the resource name for each media library device (tape library) you are configuring on the Form X1 (Recording Resource Names). Instructions for filling out these forms are in Chapter 2, “Preparing for Manual Configuration” on page 2-1.

To configure your tape libraries, do the following steps. If you are already at the Configure Local Hardware menu, go directly to step 5 and 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 1 (Configure local hardware). The Configure Local Hardware menu is shown.
5. From the Configure Local Hardware menu, select option 8 (Media library devices). The Work with Device Descriptions display is shown.

   The following shows the menus and options to select:



All the media library descriptions that have been created for your system are listed on this display. If this is the first media library description, you are configuring, no media library descriptions are listed.

Initially, all tape library resources that are associated with this device description are allocated for use by this system. To change the allocation of drive resources within a tape library, use the Work with Media Library Status (WRKMLBSTS) command or the Vary Configuration (VRYCFG) command.

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.

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 that are listed below may not appear on the display that is 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.

Prompt Descriptions for Tape Libraries

The following is a description of each prompt and the valid choices:

Device class. Type **`*TAP`** for tape library.

Resource name. Type the resource name for this media library device. A resource name must be provided before the device can be varied on.

Note: Use the Work with Hardware Resources (WRKHDWRSC)

command with a TYPE value *STG to determine the resource name.

Device type. Type ***RSCRNAME** to let the device type be determined from the resource name parameter.

Online at IPL. This entry determines whether this tape library is automatically available for use at IPL time.

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

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

Message queue and library. This entry specifies the message queue and library to which messages for this tape library are sent.

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

Type the qualified name of the message queue and library to which your operational messages are sent. (If no library qualifier is given, *LIBL is used to find the queue.)

Generate cartridge identifiers. This entry specifies how the cartridge identifiers are assigned to each volume for tape libraries without bar code readers.

Type ***VOLID** so the volume identifier is used as the cartridge identifier. Cartridge identifiers can be assigned by mounting each volume and reading the volume identifier.

Type ***SYSGEN** to let the system generate the cartridge identifiers for each volume. If system-generated identifiers are used, tape operations must use the generated cartridge identifiers. The cartridge identifiers are assigned sequentially in the form SLT01, SLT02, SLT03, and so on.

Robot device description. This entry specifies the name of the device description that is representing the robot for library devices with separate robots.

Maximum device time. This entry specifies the maximum amount of time a volume can remain mounted in an internal device if there are requests for other volumes.

Type ***SYSGEN** to let the system determine the value.

Type ***NOMAX** to let the volume remain mounted indefinitely.

Specify the number of minutes the volume can remain mounted. Valid values range from 1 through 600.

Authority. This entry specifies the authority given to users for the following:

- Who do not have specific authority to the device description.
- Who are not on the authorization list.
- Whose user group has no specific authority to the device description.

Text description. Type text that briefly describes the tape library 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 tape library device description is created. The Work with Device Descriptions display is shown next. To verify the tape library description thathas been created, press F5, and the tape library description you just created is shown in the list on this display.

If, for some reason the tape library description cannot be created, an error display is shown. From the error display you can do one of the following:

- You can go back and correct the entries that are not valid.
- You can go back to the Work with Device Descriptions display and start over.

After you have created your first tape library description, you can continue creating other tape library descriptions from the Work with Device Descriptions display. Repeat this process for each tape library you are configuring.

After you have created all your tape library 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.

Chapter 5. Configuring Optical Units (CD-ROM) and Optical Libraries

If you have completed your local controller and workstation configuration, and you have tape controllers, tape units, tape library, and diskette units configuration, continue with this chapter.

Configuring Optical Units—Introduction

If you choose not to have your optical units configured automatically, you must configure them manually. This section tells you how to manually configure optical units and optical library devices.

Configuring CD-ROM Optical Units for the AS/400 System

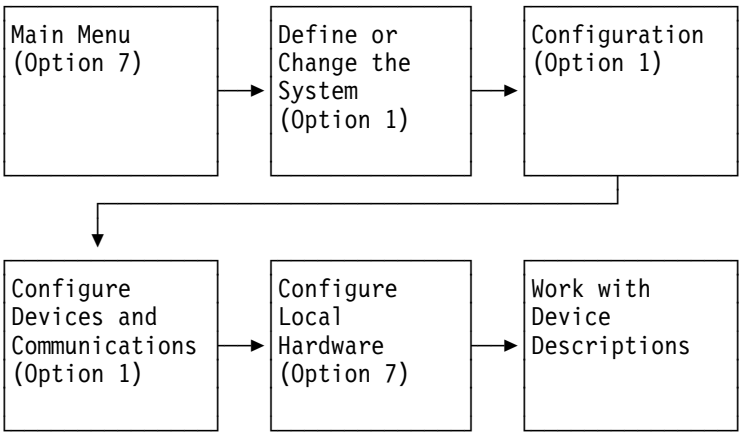
For each optical unit you are configuring, you should have information filled out on the System Information Form. You also should have already filled in the resource name for each optical unit you are configuring on the Form for Recording Resource Names (Form X1). Instructions for filling out these forms are in Chapter 2, “Preparing for Manual Configuration” on page 2-1.

For each optical unit you are configuring on your system you will need a device name and resource name.

To configure your optical unit, 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 Devices and Communications menu, select option 1 (Configure local hardware). The Configure Local Hardware menu is shown.
6. From the Configure Local Hardware menu, select option 7 (Optical devices). The Work with Device Descriptions display that is shown.

   The following shows the menus and options to select:



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

Note: If you are performing configuration for the first time, the optical unit description for the CD-ROM used to install the system already exists. It is called OPT01, if you are using the normal naming convention, or the naming convention that is based on the device address on your system.

7. 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.

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 that is 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.

Prompt Descriptions for Optical Units

The following is a description of each prompt and the valid choices:

Device type. Type the device type for this optical unit.

Use the *RSCRNAME value. The device type is determined by the resource name parameter.

Resource name. Type the resource name for this optical unit.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *STG that is specified on the TYPE parameter to determine the resource name.

Online at IPL. This entry determines whether the optical unit is automatically available for use at IPL.

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

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

Message queue and library. This entry specifies the message queue and library to which messages for this optical 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.)

Authority. This entry specifies the authority given to users:

- Who do not have specific authority to the device description.
- Who are not on the authorization list.
- Whose user group has not specific authority to the device description.

Text description. Type text that briefly describes the optical 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 optical unit description is created. The Work with Device Descriptions display is shown next. To verify that the optical device description has been created, press the F5 key. The optical device description you just created is shown in the list on this display.

If, for some reason, the optical unit description cannot be created, an error display is shown. From the error display, you can do one of the following:

- You can go back and correct the entries that are not valid.
- You can go back to the Work with Device Descriptions display and start over.

After you have created your first optical device description, you can continue creating other device descriptions from the Work with Device Descriptions display. Repeat this process for each optical unit you are configuring.

After you have created all your optical 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 optical libraries.

Creating Configuration Descriptions for Optical Libraries

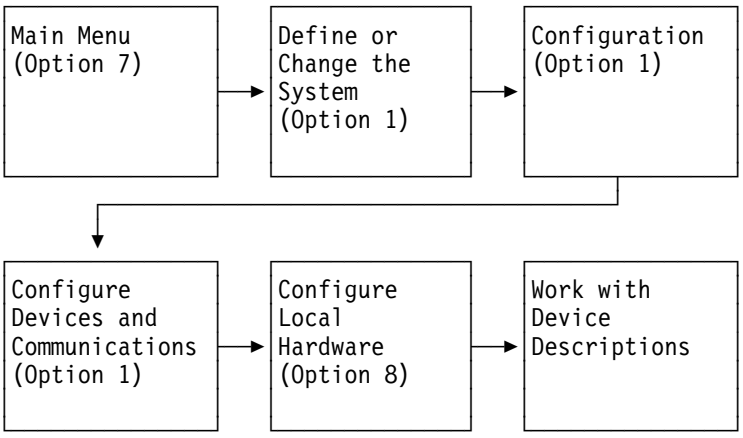
For each optical library you are configuring, you should have information filled out on the System Information Form. You also should have already filled in the resource name for each optical library you are configuring on the Form for Recording Resource Names (Form X1). Instructions for filling out these forms are in Chapter 2, “Preparing for Manual Configuration” on page 2-1.

For each optical library you are configuring, you will need the device name and resource name.

To configure your optical libraries, 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 8 (Media library devices). The Work with Device Descriptions display is shown.

   The following shows the menus and options to select:



   All the media library descriptions that have been created for your system are listed on this display. If this is the first media library you are configuring, no media library 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.

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 that are listed below may not appear on the display that is 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.

Prompt Descriptions for Optical Libraries

The following is a description of each prompt and the valid choices:

Device class. Type ***OPT** for optical library.

Resource name. Type the resource name for this optical library. A resource name must be provided before the device can be varied on.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with a TYPE value *STG to determine the resource name.

Device type. Type the device type for this optical library.

Possible values are:

- *RSCRNAME
- 3995: IBM 3995 Optical Library Dataserver

When the *RSCRNAME value is used, the device type is determined by the resource name parameter.

Online at IPL. This entry determines whether this optical library device is automatically available for use at IPL time.

Type ***YES** if you want to be able to automatically use this optical library device when you do an IPL.

Type ***NO** if you do not want to be able to automatically use this optical library device when you do an IPL.

Message queue and library. This entry specifies the message queue and library to which messages for this optical library are sent.

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

Type the qualified name of the message queue and library to which you operational messages sent. (If no library qualifier is given, *LIBL is used to find the queue.)

Unload wait time. This entry specifies the amount of time the system waits for another request to use the mounted volume before unloading the volume if there are outstanding requests for an available drive.

Type ***SYSGEN** to let the system determine the value.

Specify the number of seconds to wait. Valid values range from 1 through 120.

Maximum device time. This entry specifies the maximum amount of time a volume can remain mounted on an internal device if there are requests for other volumes.

Type ***SYSGEN** to let the system determine the value.

Specify the number of minutes the volume can remain mounted. Valid values range from 1 through 60.

Authority. This entry specifies the authority given to users:

- Who do not have specific authority to the device description.
- Who are not on the authorization list.
- Whose user group has no specific authority to the device description.

Text description. Type text that briefly describes the optical library 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 optical library device description is created. The Work with Device Descriptions display is shown next. To verify the optical library description that has been created, press F5, and the optical library description you just created is shown in the list on this display.

If, for some reason the optical library description cannot be created, an error display is shown. From the error display you can do the following:

- You can go back and correct the entries that are not valid.
- You can go back to the Work with Device Descriptions display and start over.

After you have created your first optical library description, you can continue creating other optical library descriptions from the Work with Device Descriptions display. Repeat this process for each optical library you are configuring.

After you have created all your optical library 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.

Chapter 6. Electronic Customer Support Configuration

If you have completed your tape controller, tape unit, and diskette unit configuration, continue with this chapter.

If this is not an initial configuration and your electronic customer support communications is already configured, go to Chapter 7, “Saving Your Configuration” on page 7-1.

If you do not have electronic customer support communications, go to Chapter 7, “Saving Your Configuration” on page 7-1.

Electronic Customer Support Configuration—Introduction

Electronic customer support is the 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
- Technical information exchange

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.

Planning for Electronic Customer Support

Before beginning this task, you, or the person responsible for planning your system, should have already used the *Physical Planning Reference* book 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 *IBMLink 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 *Communications Configuration* book.

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 6-1. 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 6-3. 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 6-4. When you have completed the necessary changes, refer to "Entering Additional Support Contact Information" on page 6-6.

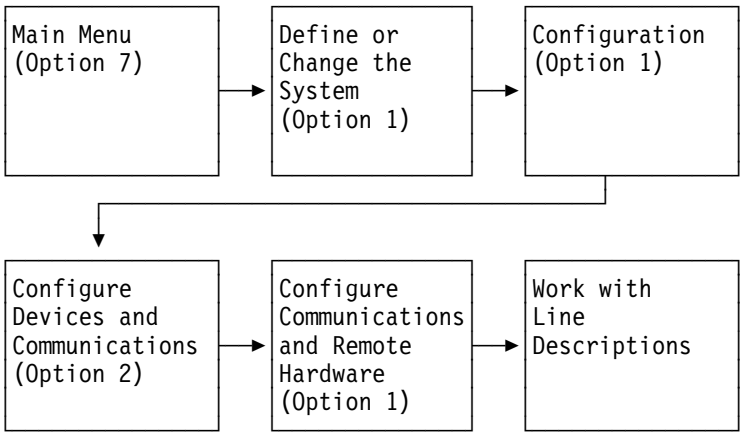
Changing Line Descriptions

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

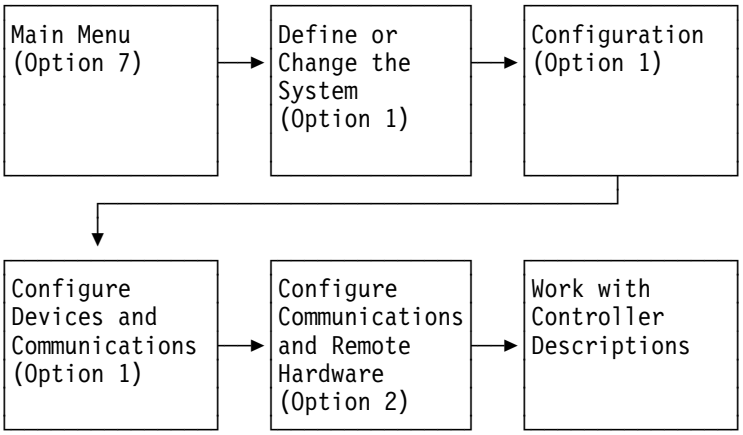
The following procedure guides you through the process for changing the communications controller descriptions QTICTL or QESCTL. You will need your Support Data sheet to complete the task.

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.

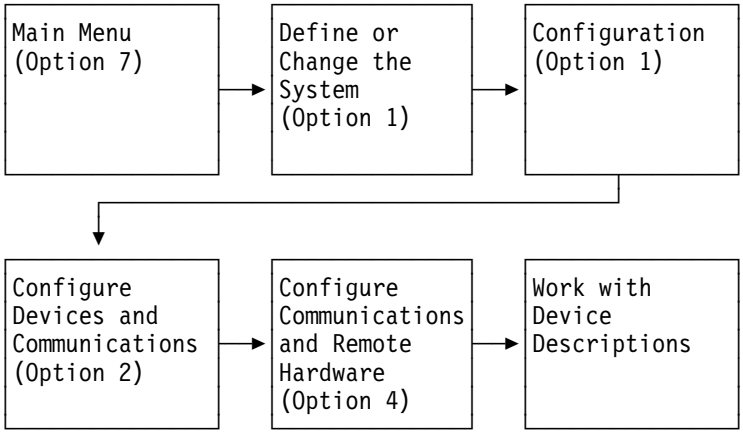
Once you have entered all the unique information for the controller description and pressed the Enter key, the Work with Controller Descriptions display is shown.

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” on page 6-6. 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 6-1 on page 6-2.

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.

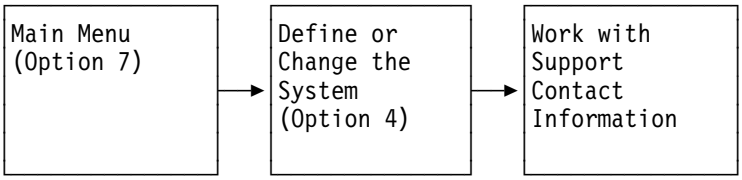
Entering Additional Support Contact Information

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.

Chapter 7. Saving Your Configuration

For additional information about saving your configuration continue with this chapter.

Saving Your Configuration—Introduction

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.

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, see “Saving Configured Objects.”
- Only the CL source for the configuration, see “Saving CL Source.”
- The entire system, see “Saving the Entire System Configuration” on page 7-2.

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. An **object description** includes the characteristics (such as name, type, and owner name) that describe the object. An **object authority** is a special authority that controls what system user can do with an entire object. For example, object authority includes deleting, moving, or renaming an object.

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 menu.
2. From the Save menu, select option 21 (Entire system).

Option 21 guides you through the following commands, if you select Y on the *Prompt for commands* prompt on the Specify Command Defaults display.

- ENDSBS *ALL OPTION(*IMMED)
- SAVSYS
- SAVLIB LIB (*NONSYS) ACCPTH(*YES)
- SAVDLO DLO(*ALL) FLR(*ANY)
- STRSBS SBSD(controlling-subsystem)

If you want to save only 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 *Backup and Recovery* book.

Printing a Copy of the System Configuration

To print a copy of the system configuration, use the Display Hardware Resource (DSPHDWRSC) command. Refer to “Printing AS/400 System Configuration” on page 2-6 for more information.

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* book 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.

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.

Libraries Shipped with the System

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 *Security - Basic* book and *Security - Reference* book.
- 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.

System Security Functions Shipped with the System

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)

A **user profile** is an object with a unique name that contains the user's password, the list of special authority assigned to a user, and the objects the user owns. 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 *Security - Basic* book and the *Security - Reference* book.

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 *Security - Basic* book and the *Security - Reference* book for more information about security on your system.

Subsystems Shipped with the System

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 4 megabytes, 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* book contains more information on subsystems.

Output Queues Shipped with the System

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 *Printer Device Programming* book contains information for spooling support concerning printing.

System Values Shipped with the System

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 are contained in the *Work Management* book. You should review the system values to determine whether or not you want to change any of these attributes.

Chapter 8. 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 workstations. The customizing functions enable you to customize:

- ASCII printers
- ASCII display stations (including keyboards)
- ASCII printers attached to 3477 Model H, 3486, 3487, 3488, and 3489 twinaxial displays
- Keyboards for twinaxial display stations

Workstation customization is an OS/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 sequence are examples of characters that can be customized. More information about customizing workstations is in the *Workstation Customization Programming* book.

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.

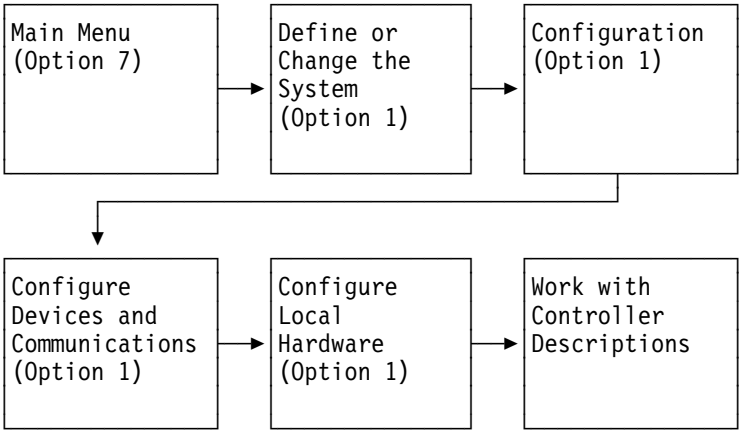
Notes:

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, media library, optical device, 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 workstation controller. You must create these new descriptions manually.) See Chapter 1, “Configuring Your System” on page 1-1, 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 Workstation 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:  SYSNAMxxx
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




                                                                      Bottom
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.

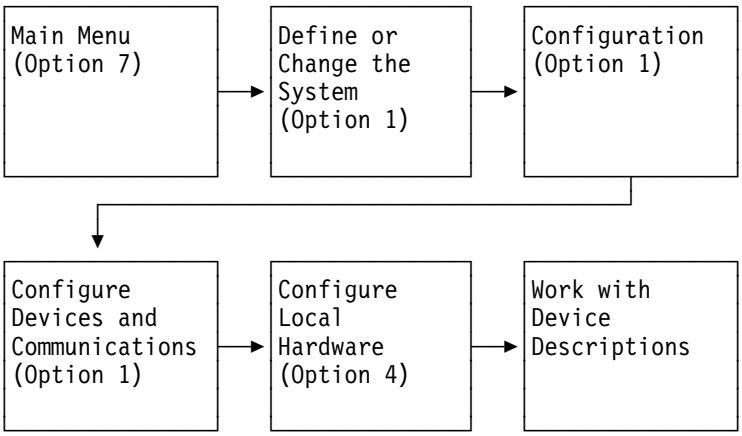
If, for some reason, the controller description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Controller Descriptions display and start over.

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 workstation 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:   SYSNAMxxx
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 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.

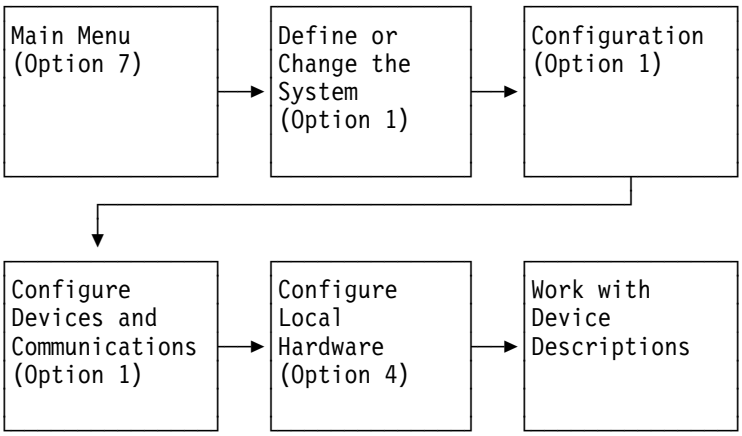
If, for some reason, the display station description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

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:   SYSNAMxxx
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.

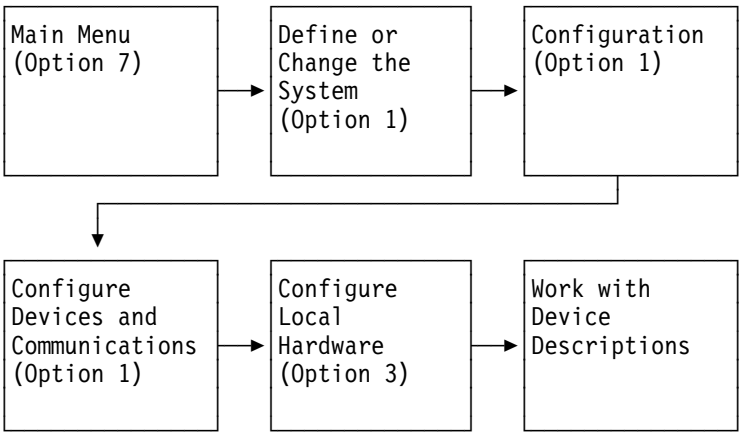
After changing the keyboard language type value, press the Enter key. The Work with Device Descriptions display is shown and the change is complete.

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:   SYSNAMxxx
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



                                                                        More...
Parameters or command
===>_____________________________________________________________________________
F3=Exit   F4=Prompt   F5=Refresh   F6=Create   F9=Retrieve   F12=Cancel
F14=Work with status
                                        (C) Copyright IBM Corp. 1980, 1997.
```

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.

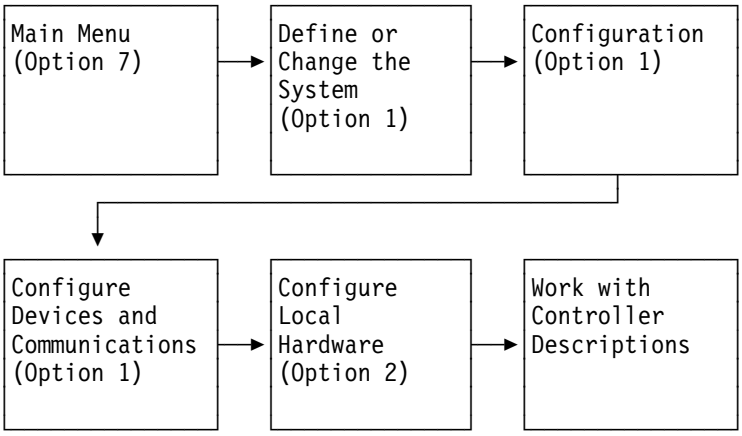
If, for some reason, the printer description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

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:   SYSNAMxx
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









                                                                        Bottom
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.

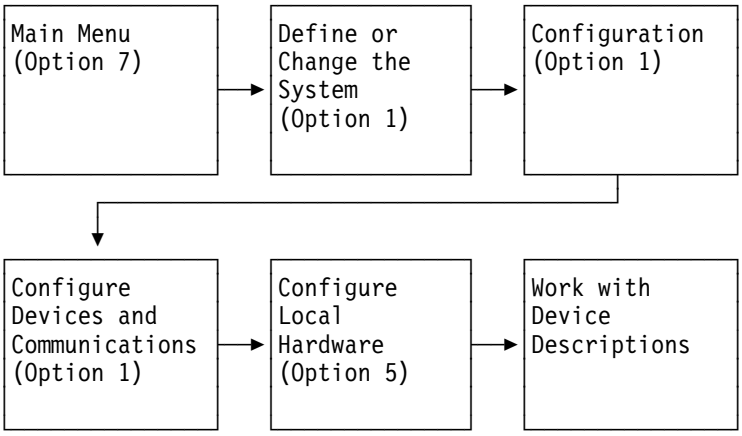
If, for some reason, the tape controller description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Controller Descriptions display and start over.

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:



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.

```
                        Work with Device Descriptions
                                                              System:   SYSNAMxxx
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
 _    TAP01        9347    1st tape unit
 _    TAP02        9346    2nd tape unit

                                                                        Bottom
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 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.

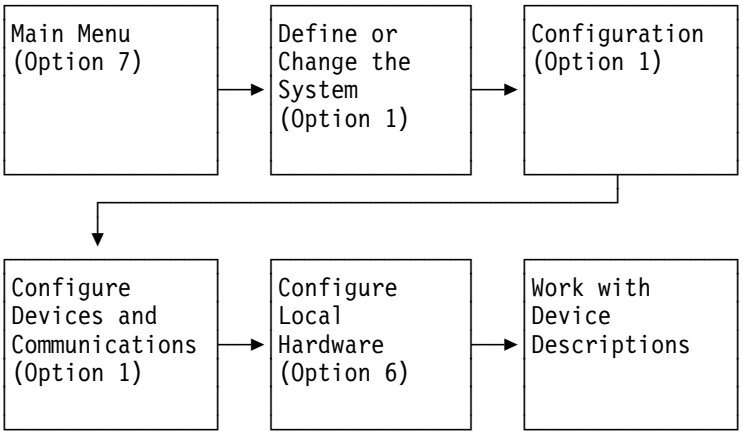
If, for some reason, the tape unit description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

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:   SYSNAMxxx
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
 _    DKT01        9331    1st diskette unit
 _    DKT02        9331    2nd diskette unit

                                                                        Bottom
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.

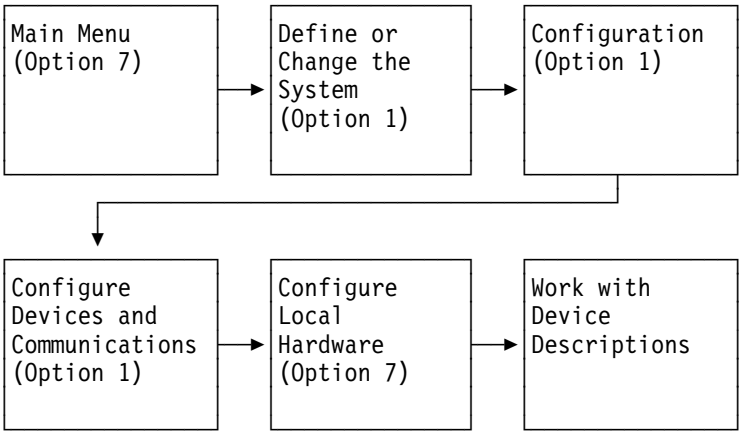
If, for some reason, the diskette unit description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

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.

Changing Optical Unit (CD-ROM) Descriptions

To change your optical 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 optical device 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 optical device descriptions listed. The options on this display allow you to change, copy, delete, display, and print your optical device descriptions; work with the status of your optical device descriptions; and retrieve the CL source for your optical device descriptions. You may, for example, want to view or print a particular description so that you know exactly how that optical device is configured before you make the changes.

To change an existing optical device description from this “Work with...” display, you need the name of the optical device you are planning to change. The “Work with...” display provides you with the name, type, and text associated with each optical device to help you identify the correct optical device.

Type 2 in the option field next to the entry for the optical 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 optical unit descriptions, you can type 2 in front of both of the description names. You are asked for the changes to each optical unit description one at a time, before the “Work with...” display is shown again.

```
                      Work with Device Descriptions
                                                              System:   SYSNAMxxx
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
 _    OPT01        6320    1st optical device









                                                                          Bottom
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 optical unit description along with the current values assigned for this optical 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.

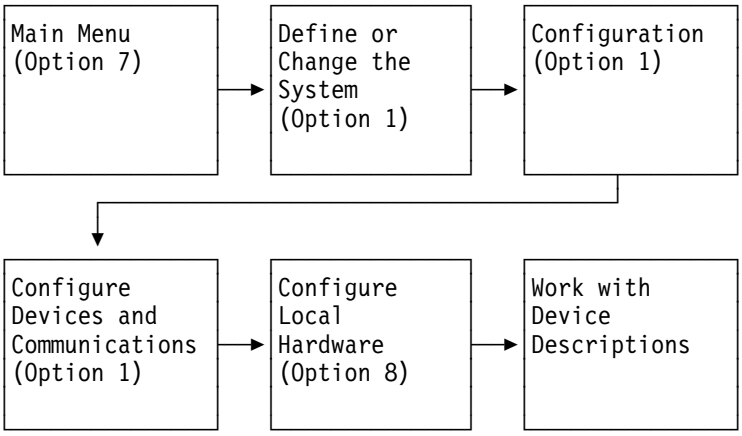
If, for some reason, the optical unit description cannot be changed, an error display is shown. From this display, you can go back and correct the entries that are not valid, or you can go back to the Work with Device Descriptions display and start over.

After changing your optical 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.

Changing Media Library Device Descriptions

To change your media library device 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 optical device descriptions listed. The options on this display allow you to change, copy, delete, display, and print your media library device descriptions; work with the status of your media library device descriptions; and retrieve the CL source for your media library device descriptions. You may, for example, want to view or print a particular description so that you know exactly how that media library device description is configured before you make the changes.

To change an existing media library device description from this “Work with...” display, you need the name of the media library device you are planning to change. The “Work with...” display provides you with the name, type, and text associated with each media library device to help you identify the correct media library device.

Type 2 in the option field next to the entry for the media library device 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 media library device descriptions, you can type 2 in front of both of the description names. You are asked for the changes to each media library device description one at a time, before the “Work with...” display is shown again.

```
                        Work with Device Descriptions
                                                              System:   SYSNAMxxx
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
 _    OPTMLB01     3995    1st optical library
 _    TAPMLB01     3994    1st tape library

                                                                          Bottom
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 media library device description along with the current values assigned for this media library. 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 media library device 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 media library device 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 media library device 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 2, "Preparing for Manual Configuration" on page 2-1. 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.

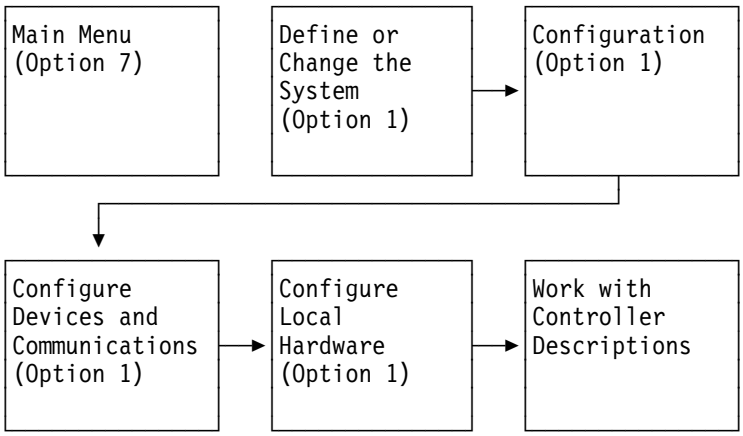
After you have completed configuration planning, follow the same procedure used to create new configuration descriptions. To review these procedures, refer to Chapter 2, "Preparing for Manual Configuration" on page 2-1, or Chapter 4, "Configuring Tape Controllers, Tape Units, Tape Libraries, and Diskette Units" on page 4-1. If you need to review these procedures for ASCII devices, refer to the *ASCII Work Station Reference* book. 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. See "Printing a Copy of the System Configuration" on page 7-2.

Adding a Local Twinaxial Workstation Controller

If you are using automatic configuration, configuration descriptions for new local controllers are created automatically for you. Go to Chapter 1, "Configuring Your System" on page 1-1, 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 workstation 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 workstation controller. For each new local workstation controller you are configuring on your system, you should have information filled in on the System Information Form. 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 2, “Preparing for Manual Configuration” on page 2-1.

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

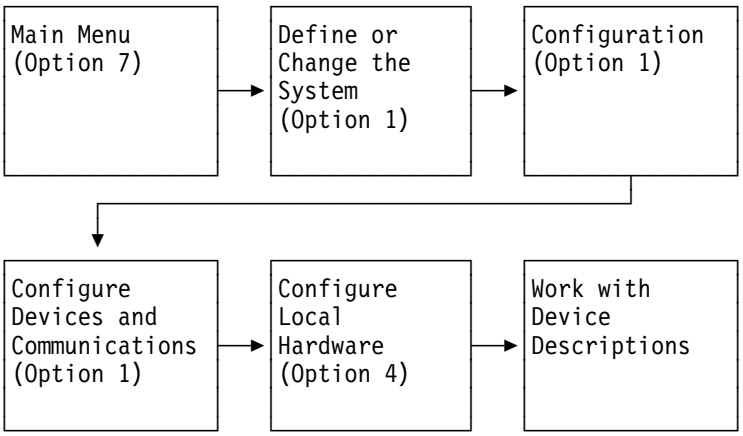
- *Controller type*
- *Controller model*
- *Resource name*
- *Online at* IPL
- *Device wait timer*
- *Auto-configuration controller*
- *Text description*

For more information on the prompts listed above, go to “Configuring Local Twinaxial Workstation Controllers” on page 3-1.

Adding a Display Station Attached to a Local Twinaxial Workstation Controller

If you are using automatic configuration, configuration descriptions for new local display stations are created automatically for you. Go to Chapter 1, “Configuring Your System” on page 1-1, 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 workstation 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 the System Information Form. For more information on filling out the planning forms, see Chapter 2, “Preparing for Manual Configuration” on page 2-1.

- *Device class* (*LCL)
- *Device type*
- *Device model*
- *Port number*
- *Switch setting* (display station device address)
- *Online at* IPL
- *Attached controller* (name of local workstation 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 “Configuring Local Twinaxial Display Stations” on page 3-5.

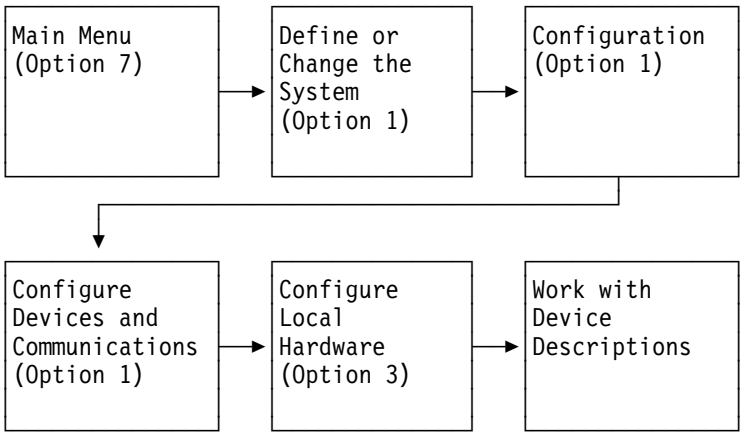
Note: If you are not shown a sign-on display on the display station after creating this description, make sure the display station is varied on, and that a work-station is entered in the subsystem description that is controlling this display station. You must have an entry for this type of display station (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 Programming* book.

Adding a Printer Attached to a Local Twinaxial Workstation Controller

If you are using automatic configuration, configuration descriptions for new local printers are created automatically for you. Go to Chapter 1, “Configuring Your System” on page 1-1, 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 workstation controller, use the menus for local printers:



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 the System Information Form. For more information on filling out the planning forms, see Chapter 2, “Preparing for Manual Configuration” on page 2-1.

- *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 workstation controller)
- *Font identifier* (for 3812, 3816, 3912, 3916, 3930, 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*

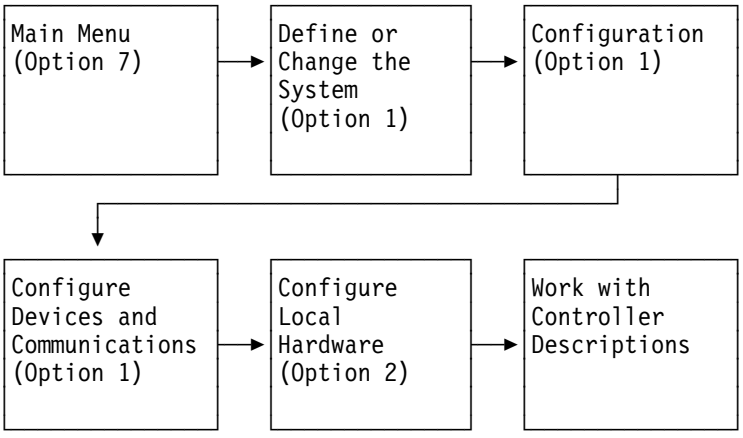
For more information on the prompts listed above, go to “Configuring Local Twinaxial Printers” on page 3-16.

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 1, “Configuring Your System” on page 1-1, 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 System Information Form. 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 2, "Preparing for Manual Configuration" on page 2-1.

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

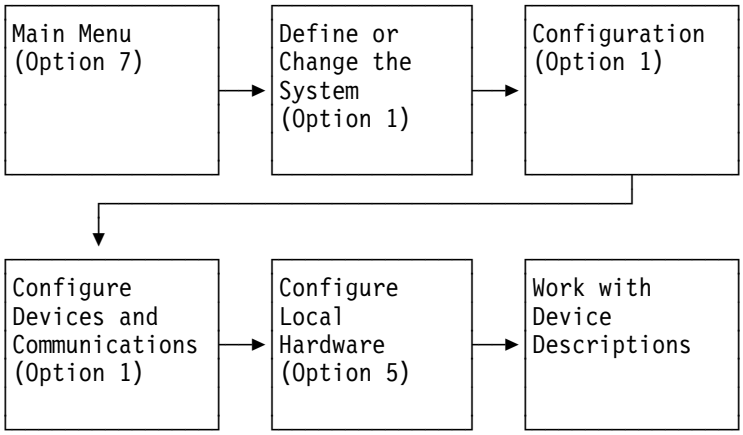
- *Controller type*
- *Controller model* (not needed when *RSRCNAME value is used).
- *Resource name*
- *Online at* IPL
- *Auto-configuration controller*
- *Text description*

For more information on the prompts listed above, go to " Configuring Tape Controllers for 3422, 3430, 3480, and 3490 Tape Units" on page 4-1.

Adding a Tape Unit

If you are using automatic configuration, configuration descriptions for new tape units are created automatically for you. Go to Chapter 1, "Configuring Your System" on page 1-1, 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 the System Information Form. 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 2, "Preparing for Manual Configuration" on page 2-1.

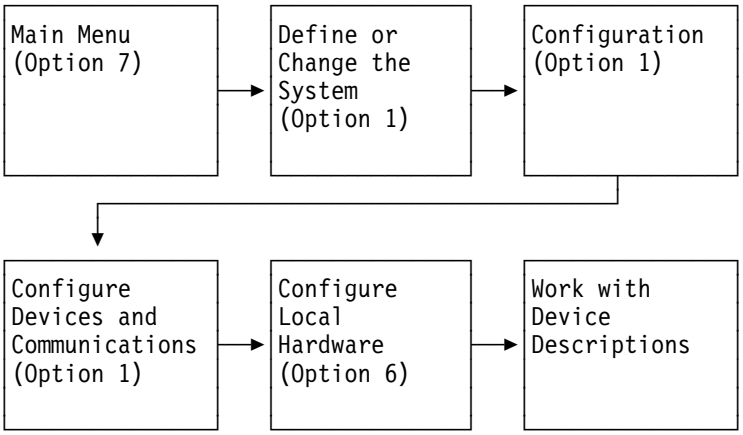
- *Device type*
- *Device model* (not needed when *RSCRNAME value is used)
- *Resource name* (for 2440, 6341, 6342, 6343, 6344, 6346, 6347, 6348, 6349, 6366, 6368, 6369, 6378, 6379, 6380, 6390, 7208, 9346, 9347, and 9348 device types)
- *Switch setting* (for 3422, 3430, 3480, and 3490 device types)
- *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 4-4.

Adding a Diskette Unit

If you are using automatic configuration, configuration descriptions for new diskette units are created automatically for you. Go to Chapter 1, “Configuring Your System” on page 1-1, 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 System Information Form. 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 2, “Preparing for Manual Configuration” on page 2-1.

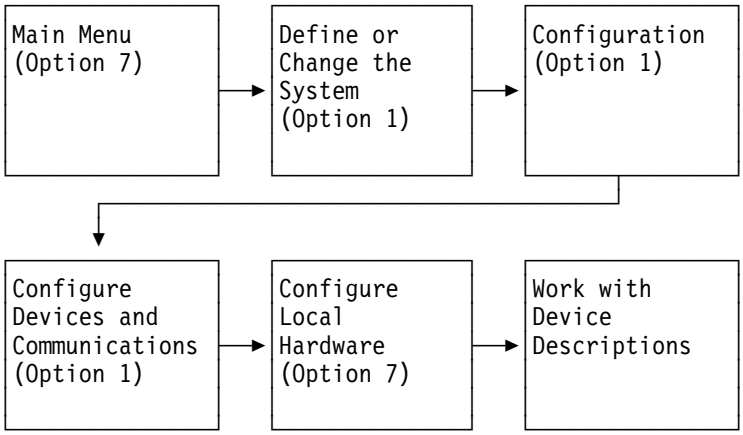
- *Device type*
- *Device model*
- *Resource name*
- *Online at* IPL
- *Text description*

For more information on the prompts listed above, go to “Creating Configuration Descriptions for Diskette Units” on page 4-8.

Adding an Optical Unit (CD-ROM)

If you are using automatic configuration, configuration descriptions for new optical units are created automatically for you. Go to Chapter 1, “Configuring Your System” on page 1-1, for more information on automatic configuration.

If you are not using automatic configuration, you must create configuration descriptions for new optical units. To add a new optical units, use the menus for optical units:



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

On the Create Device Description display, type the device name for the new optical devices. For the device type or class, *OPT is already filled in. Press the Enter key.

The following shows the prompts for an optical unit

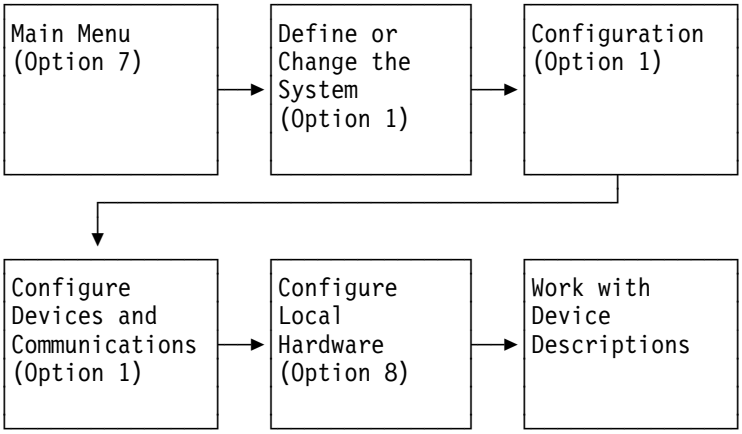
- *Resource name*
- *Device type*
- *Online at IPL*
- *Message queue*
- *Text description*

For more information on the prompts listed above, go to “ Configuring CD-ROM Optical Units for the AS/400 System” on page 5-1.

Adding a Media Library Device

If you are using automatic configuration, configuration descriptions for new media library devices are created automatically for you. Go to Chapter 1, “Configuring Your System” on page 1-1, for more information on automatic configuration.

If you are not using automatic configuration, you must create configuration descriptions for new media library devices. To add a new media library device, use the menus for media library devices:



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

On the Create Device Description display, type the device name for the new optical devices. For the device type or class, *MLB is already filled in. Press the Enter key.

Adding an Optical Library

The following shows the prompts for an optical library.

- *Device class* *OPT
- *Device type*
- *Resource name*
- *Online at IPL*
- *Message queue*
- *Text description*

For more information on the prompts listed above, go to “Creating Configuration Descriptions for Optical Libraries” on page 5-4.

Adding a Tape Library

The following shows the prompts for a tape library.

- *Device class* *TAP
- *Device type*
- *Resource name*
- *Online at IPL*
- *Message queue*
- *Text description*

For more information on the prompts listed above, go to “Creating Configuration Descriptions for Tape Libraries” on page 4-10.

Moving a Display Station Attached to a Local Twinaxial Workstation 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 workstation 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 workstation 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 Workstation 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 workstation 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 workstation 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 9. 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.

Local Configuration—Example

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
- One 6320 Optical Unit (CD-ROM)

Note: Some of the hardware used in this example is supported only on some AS/400 System Units. However, the configuration process is the same for all models of AS/400. Whatever 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, the book, *Physical Planning Reference* was 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

The System Information Form is very important during the configuration process. For this example, copies of the following, with the appropriate information filled in, are needed:

- The System Information Form with one filled in for each local work station controller that has devices attached to it. (Only one local work station controller is

used in this example, so one completed form is needed. Five ports are used in this example.)

- The System Information Form with a line filled in for the tape controller, each tape unit, and each optical 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 9-1 shows a floor plan for this example. A system diagram for this configuration might look like Figure 9-2 on page 9-3.

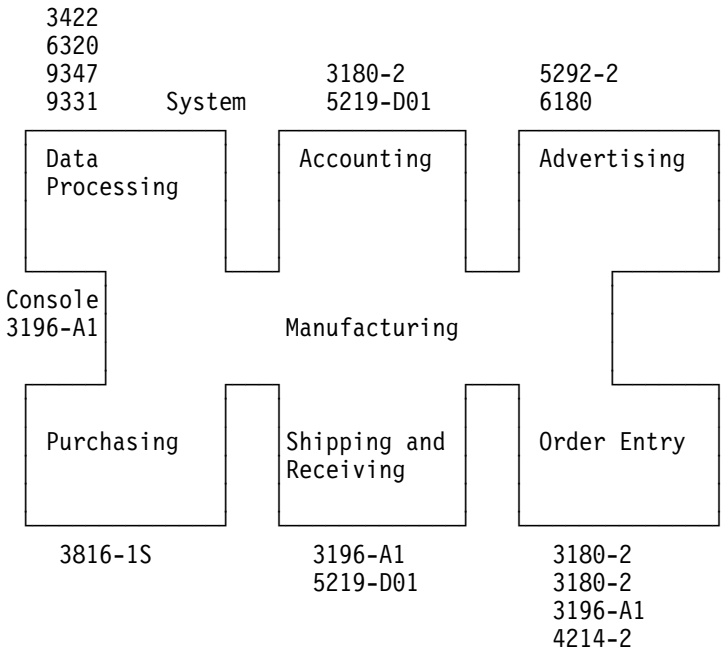


Figure 9-1. Local Configuration Example. A drawing of how the system is arranged including all devices attached to the system is needed.

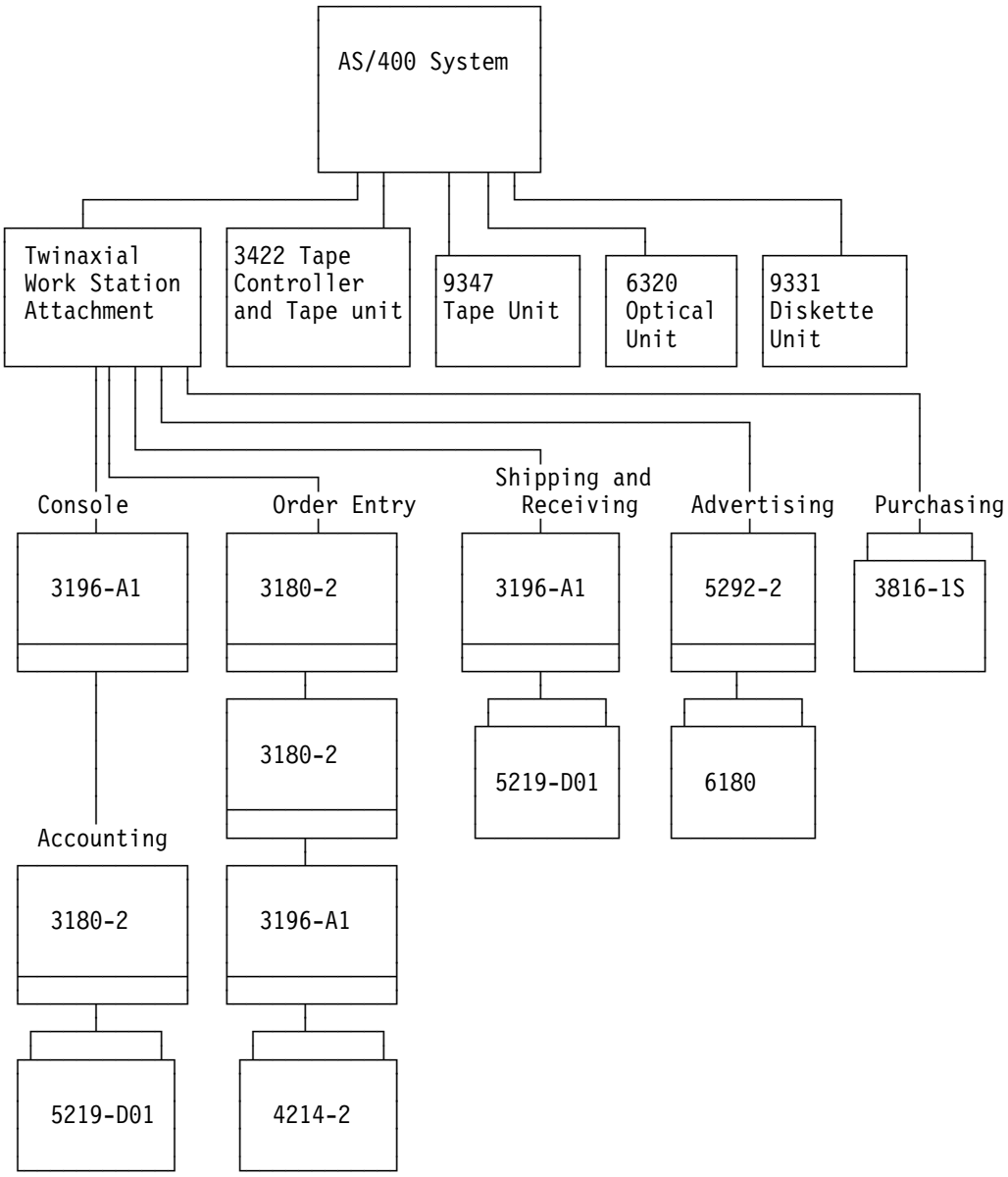


Figure 9-2. Physical Representation. This provides a physical representation of the information given to the system through configuration.

Also, other tasks to be done before configuration takes place are:

- The system is already set up. This includes having a local workstation 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 *Software Installation* book.
- All the devices are set up and offline tests have been performed as directed in the individual setup manuals for the devices. **Offline** pertains to the operation of a functional unit that is not under the continual control of the system.
- 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 column of the System Information Form 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.

Configuring the 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 System Information Form for this controller. This form can still be kept as a record.

Also, the System Information Form are filled in for each port on the workstation 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 workstation 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).

Configuring the Local Devices

First, the twelve local devices that attach to the local workstation 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. In the AS/400 Business Graphics Utility, a **plotter** is a device for drawing a chart on paper. 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:

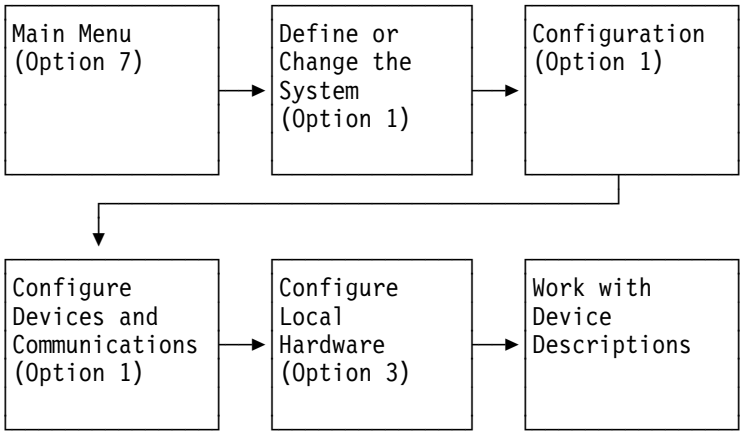
- Console (3196 Model A1)
  - *Device description*: DISPLAY01

- *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. The System Information Form contains the planning information for the other local devices. One row is filled in for each local device.

Configuring the 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 System Information Form.

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 workstation 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 workstation 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 workstation 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

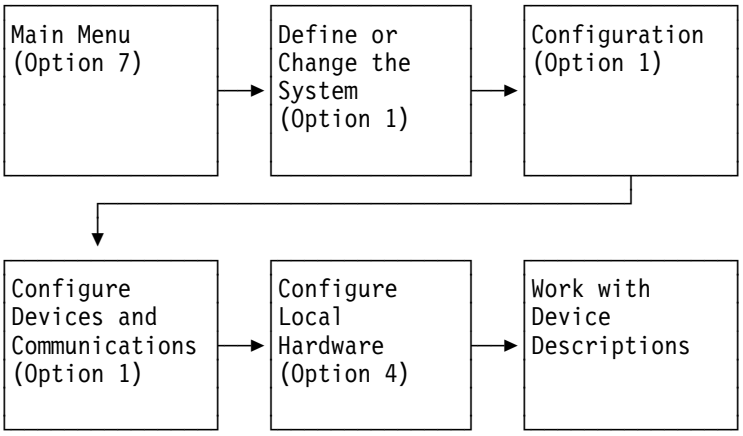
- *Attached controller*: CTL01
- *Font identifier*: 011
- *Form feed*: *AUTOCUT
- *Separator drawer*: *FILE
- *Separator program*: *NONE
- *Printer error message*: *INQ
- *Message queue/library*: *LIBL/MREED
- *Maximum pending requests*: 8
- *Form definition and library*: *LIBL/F1C10110
- *Text description*: 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 workstation 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.

Configuring the Local Displays

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 System Information Form.

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 workstation 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 workstation 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.

Configuring the Tape Controller, Tape Units, and Diskette Units

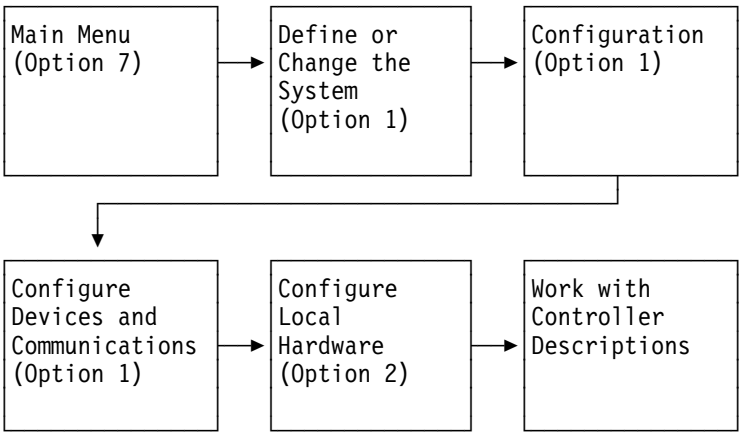
Next, the tape controller, tape units, and the diskette unit should be configured.

Note: The 3422 Tape Unit is attached to a 3422 Tape Controller. The 9347 Tape Unit does not require a tape controller.

The System Information Form contain the planning information for these devices.

Configuring the Tape Controller

To configure the tape controller, the menus for tape controllers are used.



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 System Information Form.

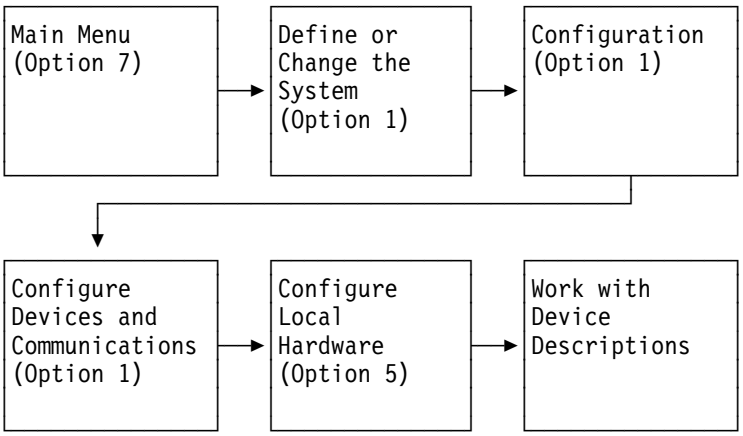
The following shows the values entered for the tape controller in this example:

- 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.

Configuring 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 System Information Form.

The following shows the values entered for the tape units in this example:

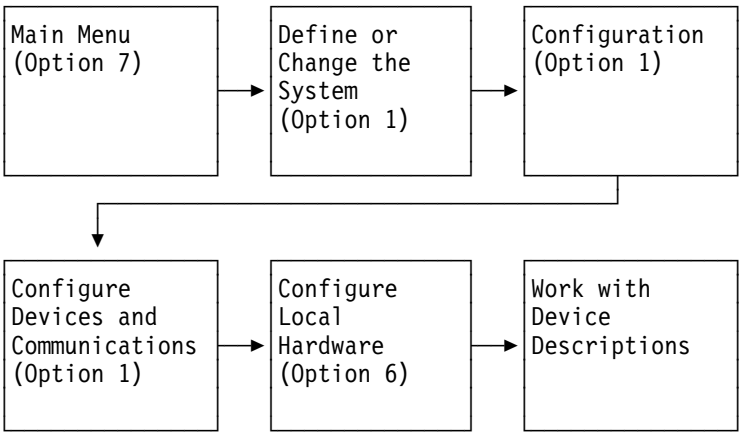
- First tape unit (3422 Model A01)
  - *Device description*: TAPE01
  - *Device type*: 3422
  - *Device model*: A01
  - *Switch setting*: 1
  - *Online at IPL*: *YES
  - *Attached controller*: TAPCTL01
  - *Message queue and library*: *LIBL/QSYSOPR
  - *Text description*: First tape unit

  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.

Configuring Diskette Units

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 System Information.

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

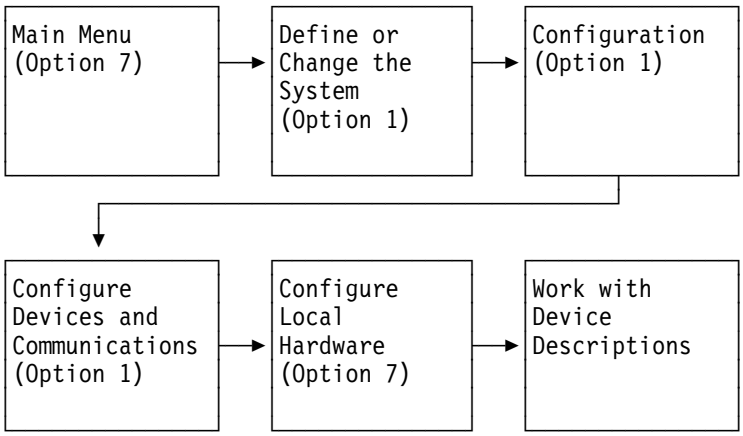
This 9331 Diskette Unit has the name DISKETTE01. The resource name created by the system is DKT01. This diskette unit is varied on at IPL.

Configuring the Optical Unit (CD-ROM)

Next, the optical unit should be configured.

Configuring the Optical Unit

To configure the optical unit, the menus for optical devices are used.



From the Work with Device Descriptions display, the optical device description can be created. After pressing F6 (Create) on that display, prompts need to be filled in with the information that makes up the optical unit description. Some of the information comes directly the System Information Form.

The following shows the values entered for the optical unit in this example:

- Optical unit (6320 Model 002)
  - *Device description*: OPT01
  - *Device model*: *RSCRNAME
  - *Resource name*: OPT01
  - *Online at IPL*: *YES
  - *Text description*: CD-ROM device

This optical unit was assigned the name OPT01. The resource name created by the system is also OPT01. This optical unit is varied on at IPL.

Saving the Configuration

After all the configuration descriptions for this example have been created, the Save Configuration (SAVCFG) command or the Save System (SAVSYS) command can be used to save your configuration on tape. The SAVCFG command saves only the system configuration. The SAVSYS command saves the entire system including the system configuration.

For more information on saving the system, go to Chapter 7, “Saving Your Configuration” on page 7-1.

Appendix A. Configuration of Double-Byte Character Set Devices

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 *Communications Configuration* book.

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 workstation controllers on your system.

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

Actual Device Type	Actual Device Model	Configured as Device Type	Configured as Device Model
Personal System/55 or ThinkPad running 5250 PC	All models	5555	B01, C01, G01, G02
Personal System/55 or ThinkPad running 5250 work station program	All models	5555	B01, C01
Personal System/55 running 5250 PC/2 AD	All models	5555	B01, C01
Personal System/55 or ThinkPad running Personal Communications/5250	All models	5555	B01, C01
Personal System/55 or ThinkPad running Personal Communications/5250 + 3270	All models	5555	B01, C01

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

Actual Device Type	Actual Device Model	Configured as Device Type	Configured as Device Model
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.

Table A-2. Printer Device Types and Models

Actual Device Type	Actual Device Model	Configured as Device Type	Configured as Device Model
5583	200	5583	200
Twinaxial DBCS Capable Printers except 5583	-	5553	B01
Personal System/55, 5295 and 3477 Attached Printers	-	5553	B01

Double-Byte Character Set Feature (IGCFEAT) Prompt

This prompt specifies which DBCS sort 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 5250 Work Station Feature for OS/2 Client Access/400	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
	5407-001 Printer	5553-B01	2424J2 68FE
	5417-001 Printer	5553-B01	2424J2 68FE
	5427-001 Printer	5553-B01	2424J2 68FE
Japanese 32x32 Printers	5337-001 Printer	5553-B01	3232J0
	5583-200 Printer	5583-200	3232J0
	Attached to Personal System/55	5553-B01	2424J1 68FE
Japanese 48x48 Printer	Attached to Personal System/55	5553-B01	2424J1 68FE
	5586-H02 Printer attached to Personal System/55	5553-B01	2424J1 68FE
	5588-H02 Printer attached to Personal System/55	5553-B01	2424J1 68FE
Korean Display Stations	All Display Stations	5555-B01	2424K0

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
Korean 24x24 Printers	Attached to 5295 Display Stations or InfoWindow 3477-K Display Stations	5553-B01	2424K0
	Attached to Personal System/55	5553-B01	2424K0
	5407-002 Printer	5553-B01	2424K2 D3FE
	5417-002 Printer	5553-B01	2424K2 D3FE
	5427-002 Printer	5553-B01	2424K2 D3FE
Traditional Chinese Display Stations	All Display Stations	5555-B01	2424C0
Traditional Chinese 24x24 Printers	Attached to 5295 or InfoWindow 3477-T Display Stations	5553-B01	2424C0
	Attached to Personal System/55	5553-B01	2424C0
	5407-003 Printer	5553-B01	2424C2 91FE
	5417-003 Printer	5553-B01	2424C2 91FE
	5427-003 Printer	5553-B01	2424C2 91FE
Traditional Chinese 32x32 Printers	Attached to Personal System/55	5553-B01	2424C0
Simplified Chinese Display Stations	All Display Stations	5555-B01	2424S0
Simplified Chinese 24x24 Printers	Attached to 5295 Display Stations or InfoWindow 3477-S Display Stations	5553-B01	2424S0
	Attached to Personal Systems	5553-B01	2424S0
	5407-005 Printer	5553-B01	2424S2 6FFE
	5417-005 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 1.5 or earlier, 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 Reconfigured

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 (Model 001)	5337 (32 x 32) Printer	2424J1 55FE	3232J0
Korean (Model 002)	5407 (24x24) Printer	2424K0	2424K2 D3FE
	5417 (24x24) Printer	2424K0	2424K2 D3FE
	5427 (24x24) Printer	2424K0	2424K2 D3FE
Traditional Chinese (Model 005)	5407 (24x24) Printer	2424C0	2424C2 91FE
	5417 (24x24) Printer	2424C0	2424C2 91FE
	5427 (24x24) Printer	2424C0	2424C2 91FE
Simplified Chinese (Model 005)	5407 (24x24) Printer	2424S0	2424S2 6FFE
	5417 (24x24) Printer	2424S0	2424S2 6FFE
	5427 (24x24) Printer	2424S0	2424S2 6FFE

DBCS Devices That Should Be Reconfigured

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.

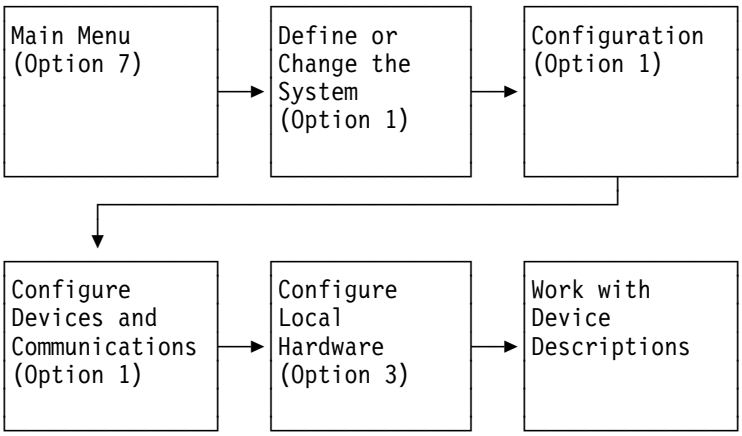
Table A-5. DBCS Devices for which Manual Reconfiguration is Recommended

Language	Type of DBCS Device	Auto-Config Supplied DBCS Feature	Recommended Change to DBCS Feature
Japanese	Personal System/55 or ThinkPad running 5250PC	2424J4 55FE	2424J4 68FE
Japanese	All Printers attached to 5295, 3477 and Personal System/55 Display Stations	2424J1 55FE	2424J1 68FE
Japanese (Model 001)	5407 (24x24) Printer	2424J1 55FE	2424J2 68FE
Japanese (Model 001)	5417 (24x24) Printer	2424J1 55FE	2424J2 68FE
Japanese (Model 001)	5427 (24x24) Printer	2424J1 55FE	2424J2 68FE

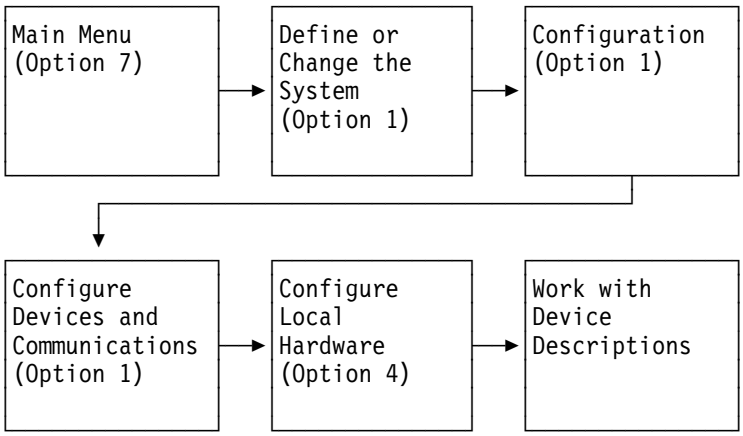
Changing the DBCS Feature

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. **Extended binary-coded decimal interchange code (EBCDIC)** is a coded character set consisting of 8-bit coded characters. 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 3-6 on page 3-14.

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 workstations to a workstation controller.
- How you might attach local Korean, Simplified Chinese, and Traditional Chinese DBCS workstations to a workstation controller.

The controller and device descriptions used for the devices shown follow each illustration.

Local Configuration Example for Japanese DBCS Workstations

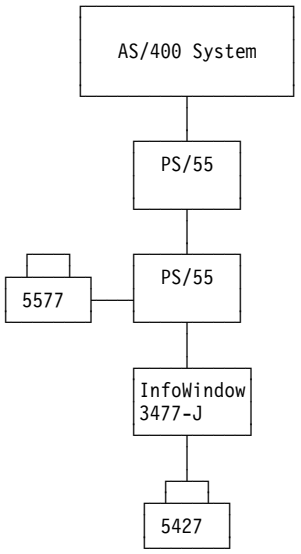


Figure A-1. Local Configuration Example for Japanese DBCS Workstations

The configuration consists of two PS/55 workstations and a InfoWindow Model 3477-J display station. One PS/55 workstation has a 5577 printer attached. The InfoWindow display station followed by a 5427 printer are attached.

Type the following information for the prompts to create the controller and device descriptions:

- Local workstation 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 workstation 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 Other DBCS Workstations

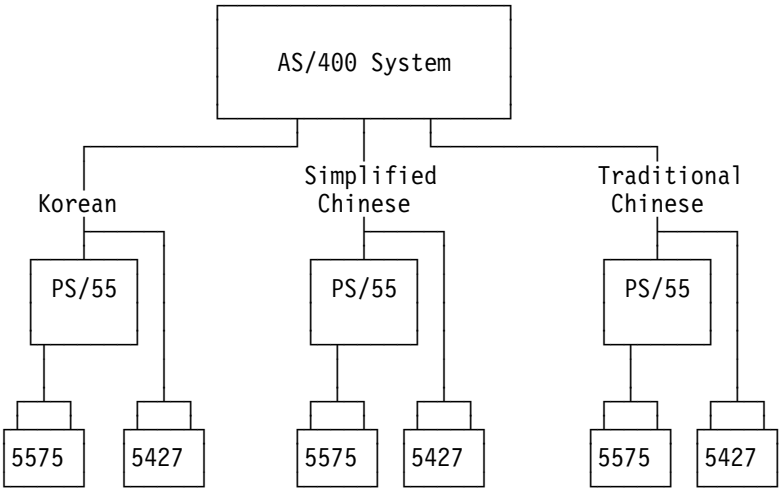


Figure A-2. Local Configuration Example for Other DBCS Workstations

Type the following information for the prompts to create the controller and device descriptions for Korean, Simplified Chinese, and Traditional Chinese DBCS workstations.

- Local workstation 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 workstation 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
  - *Port number*: 0
  - *Switch setting (device address)*: 1
  - *Attached controller*: DBCSWC5
  - *DBCS feature*: 2424K0
  - *Text description*: 1st Korean printer
- 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 D3FE

  - *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
- 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. Form X1 Recording Resource Names

Table B-1. Form X1. Recording Resource Names

Lines	Line Name	Location/Card Position	Resource Name

Work Station Controllers	Controller Name	Location/Card Positions	Resource Name

Tape Controllers	Controller Name	Serial Number	Resource Name

Tape, Diskette, and Optical Units	Device Name	Serial Number	Resource Name

Media Library Devices (Tape or Optical)	Device Name	Serial Number	Resource Name

Note: You may copy as necessary.

One copy of the form is included in this appendix. You may make as many copies of this form 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.

Appendix C. 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 any AS/400 system model to any AS/400 system.

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 to upgrade your AS/400 9402, 9404, or 9406 system.

When you upgrade your AS/400 system, a tool used by the hardware service representative, automatically reconfigures your system resource names and resource types. 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 C-10 to reconfigure your system resource names and resource types.

This appendix includes the following sections:

- System Resource Names
- Device Configuration Changes
- 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
- Optical units
- Media library devices (optical and tape Libraries)
- Network servers
- Communications ports
- Local ASCII workstation controllers
- Local twinaxial workstation 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 workstation controller in the process of adding a communications product. The address of the workstation 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 workstation controller would be incorrect after the hardware service representative installed the new communications product. It would be undesirable to install the new communications product and disturb any attached workstation 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. Resource names can now be changed by you if you want to set specific resource names.

The device configuration objects that need resource names are:

- Local workstation controller descriptions (CTLD)
- Tape controller descriptions (CTLD)
- Line descriptions (LIND) not connected to network interface descriptions or network server descriptions
- Network server descriptions (NWSD)
- Network interface descriptions (NWID)
- Diskette unit device descriptions (DEVD)
- Device descriptions (DEVD) for tape units that do not have tape controllers
- Optical unit device descriptions (DEVD)
- Device Descriptions (DEVD) for tape and optical libraries

Table C-1 on page C-3 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 C-14.

Note: The Table C-1 on page C-3 shows the system resource names that are provided by the system. Resource names can be changed using the Hardware Service Manager.

Table C-1. Resource names and device configuration

Object	Resource Name[1]	Associated Commands
CTLD	CTLnn	CRTCTLLWS CHGCTLLWS
CTLD	TAPCTLnn	CRTCTLTAP CHGCTLTAP
LIND	CMNnn	CRTLINxxx[2] CHGLINxxx
NWID	NWInnm	CRTNWIISDN CHGNWIISDN CRTNWIFR CHGNWIFR
NWSD	NWSnn	CRTNWSD CHGNSWD
DEVD	TAPnn	CRTDEVTAP CHGDEVTAP
DEVD	DKTnn	CRTDEVDKT CHGDEVDKT
DEVD	TAPMLBnn OPTMLBnn	CRTDEVMLB CHGDEVMLB
DEVD	OPTnn	CRTDEVOPT CHGDEVOPT

1 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.

2 XXX refers to any supported line description.

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 (DSPHDWRSC) command with parameters specified as follows:

```
DSPHDWRSC TYPE(*LWS) OUTPUT(*PRINT)
DSPHDWRSC TYPE(*STG) OUTPUT(*PRINT)
DSPHDWRSC TYPE(*CMN) OUTPUT(*PRINT)
DSPHDWRSC 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 C-2 on page C-10
- Table C-3 on page C-10
- Table C-4 on page C-11

- Table C-5 on page C-11
- Table C-6 on page C-11
- Table C-7 on page C-12
- Table C-8 on page C-13

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 change the old device description, FIRSTTAPE, to use the new resource name, TAP03. 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 C-6 on page C-11).

Using the Work with Hardware Products (WRKHDWPRD) Command

Because of the complexity of upgrading a system (adding or changing hardware to the system), a tool is available for use by you and the hardware service representative.

Hardware changes can disrupt existing device configurations. Before the upgrade begins, the hardware service representative uses the Work with Hardware Products (WRKHDWPRD) command to display or assign description labels. Description labels are used by the system to identify the hardware. After the physical upgrade is completed, the hardware service representative or you can use the Work with Hardware Products (WRKHDWPRD) command again to update the configuration description label in the system to match the information that appears on the (physical) label that is attached to the cable or device.

The hardware service representative gives you a Label Location work sheet to assist you with the upgrade process.

The Work with Hardware Products (WRKHDWPRD) menu is used to do the following:

- Display description locations and the labels of the hardware before a hardware upgrade takes place. You can also print a copy of this information.

  On the Display Description Label Locations display, press the F17 key to create a printout. Pressing the F17 key places a copy of the label locations in the system print spool if a printer is not available. This allows the label locations to print at another time or at another printer location. You can continue by copying the information from the displays onto a piece of paper.

- Change description locations and the labels of the hardware after a hardware upgrade takes place. You can also print a copy of this information.

  On the Change Description Label Locations display, press the F17 key to create a printout.

Note: The special authority *SERVICE is needed to work with this menu.

What You Need to Do

1. On the command line of the AS/400 Main Menu, type the following and press the Enter key:

   ```
   wrkhdwprd
   ```

2. The Work with Hardware Products display appears.

   Select the *Change description label locations* option and press the Enter key.

3. The Change Description Label Locations display appears.

   Note: You might see more displays, depending on the number of cables and devices on your system.

```
                          Using Change Label Locations
                                                              System:  SYSNAMxxx
The following displays are used to update each device or cable location
that has a label attached that does not match the label displayed. The
device or cable location information needs to be updated with the actual
labels found in order for the system to function properly after the
upgrade.

Perform the following:
 o  Inspect one of the following:
     -  Each location for the physical label listed.
     -  The Label Location Work Sheet.
 o  Select only those locations where the displayed Label column entry
    does not match the actual label or the entry is *INCORRECT.
     -  Label *NONE matches if no actual label was found.
 o  Search the next displays to find and select the actual label that
    was found.
 o  Verify the updated displays after all of the changes are processed.

Press Enter to continue.


F3=Exit   F12=Cancel
```

```
                    Change Description Label Locations
                                                              System:  SYSNAMxxx
System type-model/serial . . . . . :   9402-400 / 10-145FA

Select locations where the label on the actual machine or Label Location
Work Sheet does not match the label listed below, press Enter.
  2=Change

     ----------------Location-----------------
     Frame    EIA      Device     Card
Opt   ID    Location  Position  Position  Port  Label
 _                                 1        0    TSATRNLAN, ZDWCTRNLIN
 _                                 2             *INVALID
 _                                 2        0    ETHLINE, ZTRNLINE
 _                                 3             *INVALID
 _                                 3        0    ISDN1, TRNLINE
 _                                 4A       0    TSASDLC, ZDWCSDLC2
 _                                 4B       0    JLLASC1, JLLAUTO1, ...
 _                                 4C            CTL09
 _                                 5             CTL02, CTL07, ...
 _                                 5B       0    JLLX251, ZDWCDDI1, ...
                                                                      More...
F3=Exit   F11=Display types/serial numbers   F12=Cancel   F17=Print
```

```
                    Change Description Label Locations
                                                              System:  SYSNAMxxx
System type-model/serial . . . . . :   9402-400 / 10-145FA

Select locations where the label on the actual machine or Label Location
Work Sheet does not match the label listed below, press Enter.
  2=Change

     ----------------Location-----------------
     Frame    EIA      Device     Card
Opt   ID    Location  Position  Position  Port  Label
 _                                 8        0    JLLISDN1, ZJAHISDN, ...
 _                      6                       TAPING2, TAP01
 _    SA       ..       ..        ...      ..   DKT01









                                                                      Bottom
F3=Exit   F11=Display types/serial numbers   F12=Cancel   F17=Print
```

If you want to display the types and serial numbers, press F11.

```
Change Description Label Locations
                                                          System:  SYSNAMxxx
 System type-model/serial . . . . . :   9402-400 / 10-145FA

 Select locations where the label on the actual machine or Label Location
 Work Sheet does not match the label listed below, press Enter.
   2=Change

      ----------------Location-----------------
      Frame     EIA      Device     Card
 Opt   ID     Location  Position  Position  Port  Label
  _                                 1        0    TSATRNLAN, ZDWCTRNLIN
  _                                 2             *INVALID
  _                                 2        0    ETHLINE, ZTRNLINE
  _                                 3             *INVALID
  _                                 3        0    ISDN1, TRNLINE
  _                                 4A       0    TSASDLC, ZDWCSDLC2
  _                                 4B       0    JLLASC1, JLLAUTO1, ...
  _                                 4C            CTL09
  _                                 5             CTL02, CTL07, ...
  _                                 5B       0    JLLX251, ZDWCDDI1, ...
                                                                    More...
 F3=Exit   F11=Display types/serial numbers   F12=Cancel   F17=Print
```

```
Change Description Label Locations
                                                          System:  SYSNAMxxx
 System type-model/serial . . . . . :   9402-400 / 10-145FA

 Select locations where the label on the actual machine or Label Location
 Work Sheet does not match the label listed below, press Enter.
   2=Change


                Serial
 Opt  Type-Model Number                        Label
  _    2617      10-5003183                    TSATRNLAN, ZDWCTRNLIN
  _    6055      10-4208031                    *INVALID
  _    2619      10-4208031                    ETHLINE, ZTRNLINE
  _    6055      10-4351018                    *INVALID
  _    2619      10-4351018                    ISDN1, TRNLINE
  _    2605      10-4135005                    TSASDLC, ZDWCSDLC2
  _    2613      10-5040031                    JLLASC1, JLLAUTO1, ...
  _    6054      BB-00000                      CTL09
  _    2661      10-4204011                    CTL02, CTL07, ...
  _    2612      10-4174369                    JLLX251, ZDWCDDI1, ...
                                                                    More...
 F3=Exit   F11=Display location information   F12=Cancel   F17=Print
```

```
                    Change Description Label Locations
                                                          System:  SYSNAMxxx
System type-model/serial . . . . . :   9402-400 / 10-145FA

Select locations where the label on the actual machine or Label Location
Work Sheet does not match the label listed below, press Enter.
  2=Change


                Serial
Opt  Type-Model Number                        Label
 _    2665      10-3182005                    JLLISDN1, ZJAHISDN, ...
 _    6380-001  00-2031292                    TAPING2, TAP01
 _    9331-012  53-00000                      DKT01

                                                                      Bottom
F3=Exit   F11=Display location information   F12=Cancel   F17=Print
```

Press the F17 key to print a work sheet. If a printer is not available, continue the procedure by noting the information from the displays onto a piece of paper.

Note: Do not use the printout from the Display Description Label Locations display.

4. Use the Change Description Label Locations display and the work sheet to compare the information that is on the work sheet with the name that appears in the Label column.
   - Label information matches if the following occurs:
     a. The name on the label that is attached to the cable or device is the same as the information found in the Label column on the display.
   - Label information does not match if the following occurs:
     a. There is information in the Label column, but no label is attached to the cable. (The following steps of this procedure instruct you to create a label.)
     b. The label that is attached to the cable does not match the information found in the Label column. (The following steps of this procedure instruct you to change the system label.)
     c. *NONE appears in the Label column and there is a label attached to the cable. (The following steps of this procedure instruct you to change the system label.)
     d. *INCORRECT appears in the Label column.

        This indicates that the label that is attached to the cable does not match the information found in the Label column. (The following steps of this procedure instruct you to change the system label.)

5. Does all of the label information match?

   Note: It is normal for the resource names to change during the upgrade process. Do not use the resource name information from other displays to match the labels.

   No **Yes**

   ↓ The system label information is the same as the (physical) label.

   Press the F17 key on the Change Description Label display to request a printout of the new information for your records.

   This ends the procedure.

6. Do you need to change the description label information in the system?

   Yes **No**

   ↓ The system label information is the same as the (physical) label information on the work sheet. Go to step 12 of this procedure.

7. On the Change Description Label Locations display, type *2* in the Opt column for each location that requires a label change.

   Press the Enter key.

   Note: You may make more than 1 selection at a time, but if `More...` appears on the bottom of the screen, do not press the Enter key. Page forward to select the remaining labels.

8. The Change Description Label display appears.

   A list of possible label names is shown for the first item you selected.

   To select the label name (on the display) that matches the label that is on the work sheet, perform the following:

   a. Type *1* in the Opt column for each location that you want to change.

   b. Press the Enter key.

   Note: If you cannot find the label (on the display) that matches the label on the work sheet, contact your hardware service representative.

9. If you chose to change more than one item, the Change Description Label display appears for the next label.

   A message at the bottom of the display indicates whether the previous change was successful.

10. For all of the labels that require a change, repeat steps 6 through 9.

11. After you change the last label, the Change Description Label Locations display appears with the updated information.

    A message at the bottom of the display indicates whether the last change was successful.

    If `More...` appears on the bottom of the screen, scroll forward to view more information.

12. Press the F17 key on the Change Description Label display to request a printout of the new information for your records.

13. Verify that the labels on the printout match the labels in the Label column of the Label Location work sheet.

14. If you find any errors, go to step 6 and repeat the instructions through step 13.

    Attention: Do not exchange cards for problem analysis purposes. Card and device serial numbers are tied to the customer's configuration records.

    This ends the procedure.

Updating Device Configuration Objects

Use this procedure to manually reconfigure the system.

Note: You must have the Application Development Tools (ADT) licensed program installed to use the Source Entry Utility (SEU) in the following procedures.

See “Descriptions of Related AS/400 System Commands” on page C-14 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 C-3.

Table C-2. Changing the Network Server Description Resource Names

Step	Action
1	Select the WRKCFGSTS command to work with the status of the network server description.
2	Vary off the network server description by selecting option 2 (Vary off) on the Work with Configuration Status display. All attached network interfaces, lines, controllers and devices must be varied off.
3	Select option 8 (Work with description) to work with the network server description.
4	Select option 2 (Change) on the Work With Network Server Descriptions display to change the network server description.
5	On the Change Network Server Description display, specify the correct resource name (RSRCNAME parameter) for the network server description.
6	Press the Enter key to change the network server description.
7	Press the Enter key again to return to the Work with Configuration Status screen.
8	Vary on the network server description by selecting option 1 (Vary on) on the Work With Configuration Status display. This also varies on all attached network interfaces, lines, controllers and devices.

Table C-3 (Page 1 of 2). Changing the Network Interface Description Resource Names

Step	Action
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.

Table C-3 (Page 2 of 2). Changing the Network Interface Description Resource Names	
Step	**Action**
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.

Table C-4. Changing the Line Resource Names	
Step	**Action**
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.

Table C-5. Changing the Controller Resource Names	
Step	**Action**
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.
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 C-6 (Page 1 of 2). 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.

Table C-6 (Page 2 of 2). Changing the Device Resource Names	
Step	**Action**
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 C-7 (Page 1 of 2). Changing the Local Workstation 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.
8	Select option 5 (Display) to determine whether there is a twinaxial data link control (TDLC) line description attached to the workstation controller description. If there is, do the following: 1. Select the WRKCFGSTS command to work with the status of the TDLC line description. 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. 3. Select option 8 (Work with description) to work with the line description. 4. Select option 9 (Retrieve source) to retrieve the CL source for the line description. 5. On the Retrieve Configuration Source display, specify the name and library of a source file (SRCFILE parameter). 6. Specify the name of a source file member in which the CL source is to be placed (SRCMBR parameter). 7. Specify *OBJ for the retrieve option (RTVOPT parameter). 8. Press F10 (additional parameters). 9. Specify *ADD for the member option (MBROPT parameter). 10. Press the Enter key to retrieve the source of the controller description. 11. Select the DSPOBJAUT command to find the ownership and authority of the TDLC line description.
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.

Table C-7 (Page 2 of 2). Changing the Local Workstation Controller Type	
Step	**Action**
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.
29	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.
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.

Table C-8 (Page 1 of 2). Changing the Diskette Unit Type	
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 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.

Table C-8 (Page 2 of 2). Changing the Diskette Unit Type	
Step	**Action**
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	Change the TYPE and MODEL parameters in the CL source for the device description to the correct values.
18	Change the resource name (RSRCNAME parameter) to the correct value for the device description.
19	Press F3 to exit the Edit display.
20	Press the Enter key to change the source file member.
21	Use the CRTCLPGM command to create a CL program from the source file member.
22	On the Create Control Language Program display, specify the name and library of the source file (SRCFILE parameter).
23	Specify the member name (SRCMBR parameter).
24	Press the Enter key to create the CL program.
25	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 just created).
26	Use the CHGOBJOWN command to update the object ownership.
27	Use the EDTOBJAUT command to update the object authorities.
28	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
- Network server 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

CHGDEVOPT Change Device Optical

CHGDEVTAP Change Device Tape

CHGDEVMLB Change Device Media Library

CRTDEVDKT Create Device Diskette

CRTDEVOPT Create Device Optical

CRTDEVMLB Create Device Media Library

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

CHGLINFAX Change Facsimile (FAX) Line Description

CHGLINFR Change Frame Relay (FR) Line Description

CHGLINSDLC Change SDLC Line Description

CHGLINWLS Change Wireless 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

CRTLINFAX Create Facsimile (FAX) Line Description

CRTLINSDLC Create SDLC Line Description

CRTLINTRN Create Token-Ring Line Description

CRTLINWLS Create Wireless 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

Network Server Description Commands

CHGNWSD Change Network Server Description (NWSD)

CRTNWSD Create Network Server Description (NWSD)

WRKNWSD Work With Network Server Description

Other Related Commands

RTVCFGSRC Retrieve Configuration Source

VRYCFG Vary Configuration

WRKCFGSTS Work With Configuration Status

WRKMLBSTS Work with Media Library Status

Bibliography

The IBM publications listed here provide additional information about topics described or referred to in this book:

The AS/400 System

For general information about the AS/400 system, see the following books:

- *ASCII Work Station Reference*, SA41-3130, for information on how to set up and attach ASCII devices to the AS/400 system.
- *Central Site Distribution*, SC41-5308, for information on installing multiple systems.
- *Data Management*, SC41-5710, 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.
- *Printer Device Programming*, SC41-5713, for information about spooling support concerning printing.
- The *IBM InfoWindow 3477 User's Guide*, GA18-2923, for information on how to set up and use the 3477 display station.
- *CL Reference*, SC41-5722, for detailed information on the configuration commands.
- *Work Management*, SC41-5306, for complete information about subsystems.
- *National Language Support*, SC41-5101, for more information on language identifiers and keyboard types.
- *Publications Reference*, SC41-5003, for information about other manuals in the AS/400 library.
- *Optical Support*, SC41-5310, for information about the functions that are unique to Optical Support on AS/400.

Configuring Communications

For additional information about configuring communications and remote devices, see the following books:

- *Physical Planning Reference*, SA41-5109, for information about attaching cables to all the models.
- The *CBXII 8000 Installation Manual*, 30041, for information about the 5250 Link Protocol Converter.
- *APPC Programming*, SC41-5443, for information about mode descriptions and class-of-service descriptions.
- *ISDN Support*, SC41-5403, for information about working with ISDN networks.
- *LAN and Frame Relay Support*, SC41-5404, for information about configuring a token ring or Ethernet network. This includes information on the 8209 LAN Bridge.
- *Communications Management*, SC41-5406, for information about using AS/400 communications such as work management, communications status, error handling, aggregate line speed, and subsystem storage.
- *Communications Configuration*, SC41-5401, for information about creating remote configuration descriptions and configuring objects for communications.
- *X.25 Network Support*, SC41-5405, for information about configuring X.25 network support.
- *Remote Work Station Support*, SC41-5402, for information about remote workstations.
- 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.
- The *IBM 5209 Model 1 3270-5250 Link Protocol Converter User's Guide*, SA21-9869, for information on 3270-5250 devices that attach to the 5209 Link Protocol Converter.
- The *IBM 5250 Information Display System Planning and Site Preparation Guide*, GA21-9337, for information about remote workstations.
- 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.
- *Workstation Customization Programming*, SC41-3605, for information about customizing your workstations.

- *System API Programming*, SC41-5800, for information about configuring objects for user-defined communications support and other communications-oriented system programming interfaces.
- *TCP/IP Configuration and Reference*, SC41-5420, for information about configuring and using AS/400 TCP/IP support. The applications included are: Network Status (NETSTAT), Packet Internet Groper (PING), TELNET, File Transfer Protocol (FTP), Simple Mail Transfer Protocol (SMTP), line printer requester (LPR), and line printer daemon (LPD). The TCP and UDP Pascal application program interface (API) is also discussed.
- *Using the IBM Cabling System with Communications Products*, GA27-3620, for information about the IBM cabling system.
- The *IBM 5394 Remote Control Unit User's Guide*, GA27-3852, for information about the 5394-1, 2 Remote Work Station Controller.
- The*5259 Migration Data Link User's Guide*, SA21-9551, for information about the 5259 Migration Data Link.

System Operations

For information about system operations, see the following books:

- *Backup and Recovery*, SC41-5304, for detailed information on AS/400 backup and recovery for the experienced user.
- *Backup and Recovery*, SC41-5304, for detailed information on AS/400 backup and recovery for the novice and intermediate user.
- *Security - Basic*, SC41-5301, and *Security - Reference*, SC41-5302 , for complete information about site security.
- *Software Installation*, SC41-5120, for information on installing your operating system and other licensed programs.
- *System Operation for New Users*, SC41-3200, for information on how to use your display stations when attached to the AS/400 system.
- *Basic System Operation, Administration, and Problem Handling*, SC41-5206, for information on how to operate the AS/400 system before the operating system is available.

Personal Computers

For information about personal computers, see the following books:

- The *Japanese 5250 PC User's Guide* (that you received with your 5250 PC), for information about display station DBCS support.
- *Client Access/400 for DOS with Extended Memory Setup*, SC41-3500; *Client Access/400 for DOS with Extended Memory Setup (DBCS)*, SC41-3502; *Client Access/400 for DOS with Extended Memory User Guide*, SC41-3501; or *Client Access/400 for OS/2 User Guide*, SC41-3521, for information on configuring personal computers using the work station function.

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