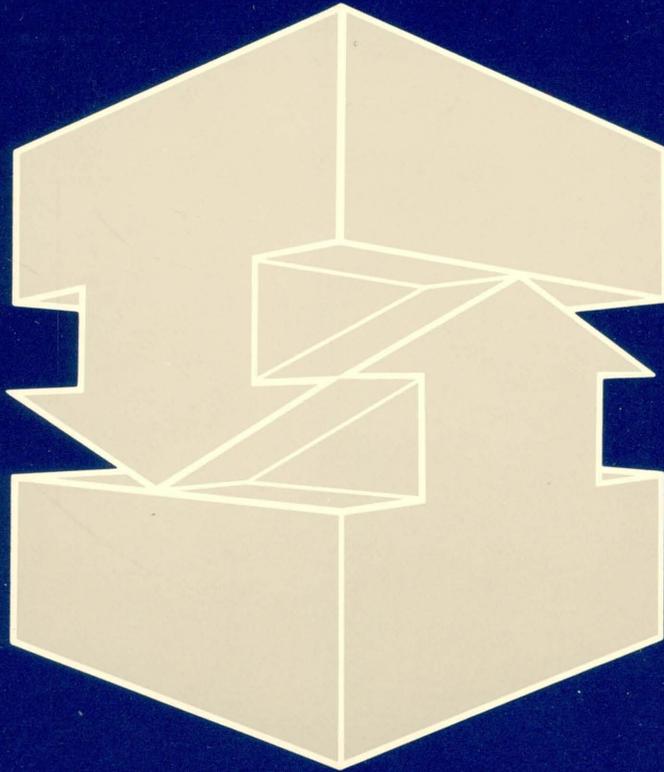




KEY OPERATOR USER'S REFERENCE



Key Operator User's Reference

Order Number: 138268-001

KEY OPERATOR USER'S REFERENCE

Order Number: 138268-001



This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A Computing Device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

Other Intel literature may be obtained from:

Literature Department
Intel Corporation
3065 Bowers Avenue
Santa Clara, CA 95051
(800) 548-4725

The information in this document is subject to change without notice.

Intel Corporation makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties to merchantability and fitness for a particular purpose. Intel Corporation assumes no responsibility for any errors that may appear in this document. Intel Corporation makes no commitment to update nor to keep current the information contained in this document.

Intel Corporation assumes no responsibility for the use of any circuitry other than circuitry embodied in an Intel product. No other circuit patent licenses are implied.

Intel software products are copyrighted by and shall remain the property of Intel Corporation. Use, duplication or disclosure is subject to restrictions stated in Intel's software license, or as defined in ASPR 7-104.9(a)(9).

No part of this document may be copied or reproduced in any form or by any means without the prior written consent of Intel Corporation.

The following are trademarks of Intel Corporation and its affiliates and may be used only to describe Intel products:

Above™	iLBX™	iRMX™	OTP™
BITBUS™	i _m ®	iSBC®	PC BUBBLE™
COMMputer™	iMDDX™	iSBX™	Plug-A-Bubble™
CREDIT™	iMMX™	iSDM™	PROMPT™
Data Pipeline™	Insite™	iSXM™	Promware™
FASTPATH™	Intel®	KEPROM™	QueX™
Genius™	intel®	Library Manager™	QUEST™
j®	intelBOS™	MAP-NET™	Quick-Pulse Program- ming™
Δ™	Intelelevision™	MCS®	Ripplemode™
1™	intelligent Identifier™	Megachassis™	RMX/80™
ICE™	intelligent Programming™	MICROMAINFRAME™	RUPI™
iCEL™	Intellec®	MULTIBUS®	Seamless™
iCS™	Intellink™	MULTICHANNEL™	SLD™
iDPB™	iOSP™	MULTIMODULE™	UPI™
iDIS™	iPDS™	ONCE™	VLSICEL™
I ² ICE™	iPSC™	OpenNET™	4-SITE™

REV.	REVISION HISTORY	DATE
-001	Original Issue.	09/86

PREFACE



This manual is written for the key operator of a System 286/310 node. It is organized as follows:

- Chapter 1, Introduction, provides an overview of the product and administrative responsibilities of the key operator.
- Chapter 2, Key Operator Menus, provides a detailed description of the key operator menus and the available selections.
- Chapter 3, Boot Up and Shutdown, takes you through the process of bringing the system up and shutting it down.
- Chapter 4, Printer Administration, provides hints for troubleshooting printer problems, and provides procedures for halting, restarting, deleting documents from a printer queue, showing documents in a printer queue, aligning printer paper, and Q-OFFICE* printer administration.
- Chapter 5, Port Administration, provides procedures for enabling and disabling serial ports, and “killing” activities that have caused a user’s terminal to hang up.
- Chapter 6, Saving and Restoring Workareas, provides procedures for choosing a backup device, saving and restoring workareas, and restoring units within a workarea.
- Appendix A, Serial Port Locations, provides illustrations of the back panels of four-, eight-, twelve-, and sixteen user systems.
- The Glossary provides a description of terms used in this manual.

Related Publications

Refer to the following documentation for additional information:

Getting Started with iDIS™, Order Number 136972

iBASE User's Reference, Order Number 137724

Key Operator Tutorial, Order Number 138267

XENIX Networking Software User's Guide, Order Number 135147

*Q-OFFICE is a registered trademark of Quadratron Systems, Inc.

CONTENTS



CHAPTER 1 INTRODUCTION

	Page
Introduction	1-1
Product Overview	1-1
Administrative Overview	1-1

CHAPTER 2 KEY OPERATOR MENUS

Introduction	2-1
Menu Format	2-1
Key Operator Menus	2-4
Aktop—Key Operator Functions	2-5
Akdsp—Key Operator Information Display	2-9
Aptr—Printer Operations	2-11
Akprt—Communications Port Operations	2-14
Aasave—Save/Restore Operations	2-16
Aasavep—Prepare Diskettes and Tape for Use	2-19

CHAPTER 3 BOOT UP AND SHUTDOWN

Introduction	3-1
System Placement	3-1
Booting Up the System	3-1
Faster Boot Up Methods	3-3
What To Do If the System Confidence Tests Fail	3-4
What To Do If a Board Initialization Fails	3-4
Booting After a Crash or Improper Shutdown	3-5
Shutting Down the System	3-7

CHAPTER 4 PRINTER ADMINISTRATION

Hints for Printer Administration	4-1
Halting a Printer	4-2
Restarting a Printer	4-2
Deleting Documents from a Printer Queue	4-3
Showing Documents in a Printer Queue	4-4
Aligning Printer Paper	4-4
Q-OFFICE Printer Administration Procedures	4-5

CHAPTER 5 PORT ADMINISTRATION

Enabling Serial Ports	5-1
Disabling Serial Ports	5-2
Killing Terminal Activity	5-2

CHAPTER 6 SAVING AND RESTORING WORKAREAS

The Importance of Saving Workareas	6-1
Backup Devices	6-1
Choosing a Current Backup Device	6-2
Saving and Restoring Workareas	6-2
Example of Saving a Workarea to Flexible Diskettes	6-4
Example of Restoring a Workarea from a Diskette	6-7
Example of Restoring a Workarea Unit	6-8

APPENDIX A SERIAL PORT LOCATIONS

Introduction	A-1
--------------------	-----

GLOSSARY**FIGURES**

2-1 Inserting a Diskette into a Flexible Disk Drive	2-20
2-2 Inserting an Archive Tape into a Tape Drive	2-21
A-1 Four-User System Serial Port Locations	A-1
A-2 Eight-User System Serial Port Locations	A-2
A-3 Twelve-User System Serial Port Locations	A-3
A-4 Sixteen-User System Serial Port Locations	A-4

1

INTRODUCTION



1.1 Introduction

This chapter provides an overview of the System 286/310, the iDIS™ menus, and the duties of the key operator. As a key operator, you will interface the system through the iDIS menu package. The iDIS product is a menu-driven application that simplifies certain XENIX* commands. The iDIS base package (iBASE) provides functionality for the standard iDIS user, as well as the administrative user. As a key operator, you will rarely (if ever) have to enter the XENIX operating system to perform your duties.

1.2 Product Overview

The System 286/310 is an “open” system that is designed for high performance, and easy expandability and configurability. It is called an open system because it can be easily upgraded or reconfigured to meet new requirements.

The typical System 286/310 application is within a networking environment. Using the OpenNET™ networking software packages, multiple System 286/310s can be tied together to share resources. In large networking environments, the network may be divided into multiple sub-networks. Dividing the network into sub-networks allows groups of users that have common needs to share several systems in an easy and efficient manner. The users on the sub-network still have the option of accessing other network systems that are not part of their particular sub-network.

1.3 Administration Overview

In a typical network environment, three levels of administrative duties can be defined: system manager, sub-network administrator, and key operator.

The duties of the key operator include:

- Booting up and shutting down the system

*XENIX is a trademark of Microsoft Corporation.

- Printer administration (halting, restarting, and aligning paper, etc.)
- “Killing” terminal activities that have caused a user’s terminal to hang-up
- Enabling/Disabling ports for terminals and serial printers
- Backing up/Restoring workareas
- Restoring units within a workarea
- Assisting users with day-to-day activities
- Reporting problems and requirements to the sub-network administrator or system manager

Depending upon your work environment, you may be responsible for one node or you may have responsibility for several nodes.

2

KEY OPERATOR MENUS



2.1 Introduction

This chapter provides a reference for the menus that are available to the key operator. The information presented describes the menu format, and actions and operations you can choose from each menu.

When you make a selection from a menu, one of three types of screen will appear:

- | | |
|---------------|---|
| Menus | characterized by the Menu title and Menu name (shown in parentheses), several menu selections in the middle of the screen, and the “Which action” line prompt. |
| Forms | characterized by fields that you must fill in with information for some specific purpose. For detailed information on the syntax and rules of operation for forms, refer to the <i>iBASE User's Reference</i> . |
| Dynamic Lists | characterized by a list of items to choose from. The items on the list range from printers to nodes you are responsible for. For detailed information on the syntax and rules of operations for dynamic lists, refer to the <i>iBASE User's Reference</i> . |

2.2 Menu Format

Certain functions appear on every menu. These functions are displayed in the sample menu and briefly defined in this section.

<i>(MenuName)</i>
<div style="border: 1px solid black; display: inline-block; padding: 2px 10px; margin-bottom: 5px;">MENU TITLE</div> <i>environment message line</i>
<i>selections - Selection description</i>
<p>qdef - User Defined Actions: 1 2 3 4 5 6 7 8</p> <div style="text-align: right; margin-right: 50px;"> <div style="border: 1px solid black; padding: 2px 10px; display: inline-block;">Pending Transactions</div> </div>
<div style="display: flex; justify-content: space-between;"> <i>Time and Date</i> <i>Physical Login</i> </div>
<div style="border: 1px solid black; display: inline-block; padding: 2px 20px;"><i>universal menu command line</i></div>
<div style="display: flex; justify-content: space-between;"> Which action <div style="border: 1px solid black; padding: 2px 10px; display: inline-block;"><i>Mail Status</i></div> </div>

PPS1-686

- MenuName* This name is used throughout the software and the manual to identify the menu.
- MENU TITLE* The title, shown at the top of the screen, summarizes the functions offered on the menu.
- Environment Message Line* The current user name (login ID), workarea (individual, public, or group), and the node name where the workarea resides (for networked systems only) are displayed on this line.
- Selections* The selections are the functions available on the menu. Enter the first letter of the selection and <cr> to execute the function or proceed to the resulting menu.
- qdef* Select the qdef function to associate one of the number keys (1 through 8) with a particular menu selection. You can define up to eight such user actions and change those definitions at your discretion. User defined actions are shortcuts that allow you to execute a function from anywhere in the menu system. When you are defining a user defined action, you must spell the menu name exactly as it appears on the screen display, and you

must spell out the menu selection you wish to go to. You cannot choose a menu and selection that takes you to another menu. The valid menu/selections within the key operator menus are:

Aptr	Aasave	Aasavep
chnng	chnng	fmt
show	save	ret
xdel	work	
form	unit	
halt	xdel	
rest		

A function is defined by specifying the menu name and selection used to invoke the action. Only actions are allowed, selections used to bring up other menus are not allowed.

- 1 through 8** Once a user defined action has been defined with the qdef selection, choose the number to execute the function.
- Pending Transactions** Is displayed when an administrator performs a function that requires a batch update of system or network files.
- Date and Time** The date and time are updated each time the screen is refreshed.
- Physical login** This item only appears when your system is part of a network. This displays the name of the node where the terminal you are using is physically connected.
- Universal Menu Command Line** This help line displays commands used to navigate in the menus. Not all of the commands are available to all users, nor are all commands on all menus. The commands listed include:
 - .b** Go back to the previous menu.
 - !** Enter the XENIX operating system. To return to iDIS, enter **<CTRL-D>**.
 - :** Go to the site menu. The site menu lists some commonly used functions and is accessible from any menu.
 - .s** Go to the pinnacle menu. The pinnacle menu is the menu you first see when you log into iDIS.
 - .?** Go to the general help screen. Information helpful when using iDIS menus is provided.

- .1 Log out of iDIS. If you are in another menu system under iDIS (such as menu development), you will return to the base menu system.

Other universal commands not shown in the command line are available. (These commands are described in the general help file.)

- ? Display help for the currently selected menu or menu selection.
- .t Change the terminal type. If you log on and notice the terminal type is incorrect, enter .t for a list of supported terminals. Type in the correct terminal type. The terminal type is changed only for the current session.
- .r If the menu display is overwritten, scrolled, or erased (you turn your terminal off), .r will redraw the menu screen.

Prompt Line

The prompt “Which action?” displays on all menus. You may enter a universal menu command, the first letter of a menu selection, or the number of a user defined action at this prompt.

After using iDIS a few times, you may find you know what selections to choose to get from menu to menu. To skip a menu, you may “select ahead” by typing the first letter of each selection, separated by blanks, to get to the desired location. For example, to get to the Key Operator Information Display (Akdisp) menu, enter .s k d at the “Which Action” prompt.

Refer to the menu map to find the letters needed to select ahead.

Mail Status

The mail status displays “you have mail” when there is a message in your system mail box.

2.3 Key Operator Menus

This section provides a task-oriented description for the selections that appear on each key operator menu. The key operator menus are accessed through the “Key operator functions” selection on the Top menu.

Aktop—Key Operator Functions

KEY OPERATOR FUNCTIONS		(Aktop)
"user" in the <i>individual</i> workarea on node " "		
disp	-	Key operator information display
bcst	-	Broadcast a message
ptr	-	Printer operations
comm	-	Communications port operations
save	-	Save/Restore operations
time	-	Set system time/date
net	-	View status of OpenNET connection
qdef	-	Define user actions: 1 2 3 4 5 6 7 8
day date time		Physical login on node " "
.b-back a menu -enters 0S :-site menu .s-start .?-help .l-logout		
which action? _		you have mail

PPS1-708

Parent menu: Top
Select ahead (from Top): .s k

This is the main menu for the key operator functions. All key operator functions are invoked from this menu or from submenus which are invoked through this menu.

disp—Key Operator Information Display

This selection displays the Key Operator Information Display (Akdisp) menu which is used to display system status information. The following selections appear on the menu:

use - Display who is using the system
what - Display what is occurring on the system
disk - Display available disk space

bcst—Broadcast a Message

This selection allows you to send a message to all users that are logged into a node that you administrate. The message is immediately displayed on the screen of each user; it is not stored in the mail box. A list of all nodes you are responsible for is displayed when you choose this selection (this screen is not displayed if your node is not part of a network). Select a node by typing the node name or by using the arrow keys to move to the node name, then press `<cr>`. (Note that the left arrow key may not work for this purpose on some terminals.) To broadcast a message to multiple nodes, select the first node, press `<CTRL-f>`, and then move to the next node you wish to select and press `<CTRL-f>`. Continue this until all nodes have been selected. When a node is selected, a plus (+) sign appears in front of it. When you have selected all the nodes you want, press the `<cr>` key. A text editor is loaded and a new file is opened. When you have entered your message, exit the editor. You then have the option of broadcasting the message or returning to the menu.

You can use this selection when you need to send a message to all users and you want them to see it immediately. For example, you can notify users that you plan to shutdown the system at a certain time.

If a broadcasted message disturbs your screen, enter `.r` to redraw the screen.

ptr—Printer Operations

This selection displays the Printer Operations (Aptr) menu which is used to manage printer operations and display printer status information. The following selections appear on the menu:

```
chng - Change current printer from: printer_name
show - Show documents in printer queue
xdel - Delete documents from printer queue
form - Print forms alignment pattern on: printer_name
halt - Halt printer
rest - Restart printer
pcap - View a printcap
```

comm—Communications Port Operations

This selection displays the Communications Port Operations (Akport) menu which is used to manage the terminal and printer ports on the node. The following selections appear on the menu:

- kill - Kill terminal activity *CAUTION*
- dis - Disable a port
- ena - Enable a port

save—Save/Restore Operations

This selection displays the Save/Restore Operations (Aasave) menu which is used to backup and restore files in your workareas. The following selections appear on the menu:

- chng - Change current backup device from: *device_name*
- save - Save workarea to: *device_name*
- work - Restore workarea from: *device_name*
- unit - View/Restore unit from: *device_name*
- xdel - Delete archive file from hard disk *CAUTION*
- prep - Prepare diskettes and tapes for use

time—Set System Time/Date

This selection allows you to reset the system date and time. If the incorrect time or date was entered when the system was brought up, choose this selection. The current system date and time are displayed and you will be prompted to enter the correct date and time. Enter the new date and time in the following format:

yyymmddhhmm

where:

- yy is the year
- mm is the month
- dd is the day of the week
- hh is the hour using a 24-hour clock,(i.e., 2 p.m. is 1400, therefore, enter 14)
- mm is the minute

For example, if the current date and time is Tuesday, June 24, 1986, 2:15 p.m., enter:

8606241415<cr>

If the displayed system date and time are correct, press the <cr> key when prompted to enter the new time.

net—View Status of OpenNET Connection

(This selection is only available if your node is connected to a network.) This selection displays the network status. The following information is displayed:

- The OpenNET software version number
- The local node name
- Consumer enabled/disabled status
- Server enabled/disabled status
- Names of the Consumer nodes that have accessed your node via the network
- Names of the Server nodes that your node has accessed via the network
- The type of network connection (nfs—network file server, nfc—network file consumer, vts—virtual terminal server, vtc—virtual terminal consumer)
- The identification number assigned to each network connection
- The number of transactions executed over the network connection
- The date and time of the last activity on the network connection

Akdisp—Key Operator Information Display

```
(Akdisp)
KEY OPERATOR INFORMATION DISPLAY
"user" in the individual workarea on node " "

use - Display who is using the system

what - Display what is occurring on the system

disk - Display available disk space

qdef - Define user actions:  1  2  3  4  5  6  7  8

day date time                Physical login on node " "
.b-back a menu  !-enters OS  :-site menu  .s-start  .?-help  .l-logout
Which action? _                you have mail
```

PPS1-716

Parent menu: Aktop
Select ahead (from Top): .s k d

This menu allows you to display status information for the node and the network.

use—Display Who Is Using the System

If your node is connected to a network, a list of all nodes that you are the key operator of is displayed when you choose this selection. You have the option of displaying the information for one node or all nodes. To display the information for one node, select the node by typing the node name or by using the arrow keys to move to the name, and then pressing < cr > . (Note that the left arrow key does not work for this purpose on all terminals.) To display the information for all nodes, select the ALL option and then press < cr > . The login ID, terminal port, and login date and time for each person that is logged into the selected node is listed (if your node is not connected to a network, this information is displayed as soon as you

choose this selection). If you are connected to a network, the node that each person is logged into is also listed.

This information is useful if you have to “kill” a terminal activity (process) that is hung-up since you must enter the user’s terminal port name to kill the activity. It is also useful to see if anyone is logged in prior to shutting down the node.

what—Display What Is Occurring on the System

If your node is connected to a network, a list of all nodes you are the key operator of is displayed when you choose this selection. Select a node by typing the node name or by using the arrow keys to move to the node name, then press `< cr >`. (Note that the left arrow key does not work for this purpose on all terminals.) The terminal port, process number, login ID of the user, time the process started, and the command being executed is listed for every process that is currently occurring on the node (if your node is not connected to a network, this information is displayed as soon as you choose this selection).

You can see the user’s terminal port name and also see what processes are associated with their terminal. Note that a process is a system activity. Each user that logs in, software package that is loaded, or command that is issued, causes one or more processes to occur. Also, internal system processes occur continuously.

disk—Display Available Disk Space

If your node is connected to a network, a list of all nodes for which you are responsible is displayed when you choose this selection. Select a node by typing the node name or by using the arrow keys to move to the node name, then press `< cr >`. (Note that the left arrow key does not work for this purpose on all terminals.) The total number of kilobytes allocated for each file system, the number of kilobytes that are used, the number of kilobytes that are free (unused), the percentage of total space that is free, and the device that the file system is mounted on are listed (if your node is not connected to a network, this information is displayed as soon as you choose this selection). (A kilobyte is 1,024 bytes.)

The percentage and amount of free space available is the most important information here. If less than 10% of the Winchester disk space allocated to each user file system (i.e., `/usr`, `/usr2`) is free, any unused files should be copied onto diskettes or an archive tape. Then those files should be removed from the user file system to free up more of the Winchester disk drive. Refer to Chapter 6 for procedures on saving workareas.

Aptr—Printer Operations

```
(Aptr)
PRINTER OPERATIONS
"user" in the individual workarea on node " "

chgng - Change current printer from: printer name

show - Show documents in printer queue

xdel - Delete documents from printer queue

form - Print forms alignment pattern on: printer_name

halt - Halt printer

rest - Restart printer

pcap - View a printcap file

qdef - Define user actions:  1  2  3  4  5  6  7  8

day date time                Physical login on node " "
.b-back a menu  !-enters OS  :-site/menu  .s-start  .?-help  .l-logout
Which action? _                you have mail
```

PPS1-640

Parent menu: Aktop
Select ahead (from Top): .s k p

This menu allows you to manage printer operations. If a printer stops operating, make sure that it is **ONLINE**, that it has paper, and that the ribbon has not run out prior to using the selections available in this menu. Refer to Chapter 4 for printer administration procedures.

All users can access this menu via the System-Wide menu (refer to the *iBASE User's Reference* for more information). However, not all selections are available to a standard user.

chgng—Change Current Printer From: *printer_name*

Each new user must use this selection to choose a printer. This selection displays a list of all printers that have been assigned to you. You then select the printer you wish to use as your current printer. The printer you select will be your default until you change it using

this menu selection. This selection only allows you to select a printer for yourself. Standard users can change their printer by accessing this menu via the System-Wide menu (refer to the *iBASE User's Reference*).

show—Show Documents in Printer Queue

This selection displays a list of all printers that have been assigned to you. Select the printer whose queue you wish to examine. A list of all jobs (files) queued for that printer (for all users), the job status, size of the job, owner of the job, and the filename is displayed.

xdel—Delete Documents from Printer Queue

This selection allows you to cancel jobs that are in a printer queue. A list of all printers that have been assigned to you is displayed. Select which printer to delete documents (jobs) from. A list of all documents queued for that printer, the job number, the size of the job, owner of the job, and the filename is then displayed. To delete a job, type the number of the job or use the arrow keys to move to the job name, then press `<cr>`. (Note that the left arrow key does not work for this purpose on all terminals.) To delete multiple files, select the first file, press `<CTRL-f>`, and then move to the next file you want to delete. Jobs selected to be deleted will have a plus (+) sign in front of the job number. When all files have been selected, press `<cr>`. You can delete any job in the queue; not just your own. You are prompted to verify that you really want to delete the document before it is actually deleted.

Use this selection to cancel a print job that was accidentally sent to the printer, or a job that has caused the printer to hang-up.

form—Print Forms Alignment Pattern on: *printer_name*

Use this selection to line up a special form or to position printer paper. Before choosing this selection, you should first halt the printer to ensure that nobody will be able to start a print job while you are aligning the paper.

When you choose this selection, a list of printers assigned to you is displayed. Select the printer you wish to use. You will be prompted to enter the number of characters in a line. A line with the specified number of characters is then printed on the printer paper or form and can be used as a ruler to line up the page. You will be prompted to print the line again. You can continue to adjust the page and reprint the line until the page is properly positioned. This menu selection is not available to a standard user.

halt—Halt Printer

This selection halts a printer. The current print job, all jobs in the queue, and any jobs sent to the printer after it has been halted will be held until the printer is restarted. When you choose this selection, a list of all printers assigned to the you is displayed. Select the printer you wish to halt.

Use this selection prior to aligning a form or printer paper. This selection is not available to a standard user.

rest—Restart Printer

This selection allows you to restart a printer. You should restart the printer after you have deleted jobs from a print queue. You will also need to restart a printer after halting it. Once you restart a printer, any jobs that are waiting in the queue will immediately start on a first-come, first-serve basis.

When you choose this selection, a list of all printers assigned to you is displayed. Specify the printer to be restarted. This selection is not available to a standard user.

pcap—View printcap file

This selection displays the printcap file for the node specified. Although this selection is on a key operator menu, it is primarily used by the administrator when setting up the distributed resource manager.

Akport—Communications Port Operations

```
(Akport)
COMMUNICATIONS PORT OPERATIONS
" user" in the individual workarea on node " "

kill - Kill terminal activity *CAUTION*

dis - Disable a port

ena - Enable a port

qdef - Define user actions:  1  2  3  4  5  6  7  8

day date time Physical login on node " "
.b-back a menu |-enters OS :-site menu .s-start .?-help .l-logout
Which action? _ you have mail
```

PPS1-641

Parent menu: Aktop
Select ahead (from Top): .s k c

This menu allows you to enable and disable system ports and kill activities that have caused a terminal to become hung. Refer to Chapter 5 for port administration procedures.

kill—Kill Terminal Activity *CAUTION*

This selection allows you to kill (stop) terminal activity (process) associated with a specified port. When a terminal hangs (i.e., it will not respond to any keystrokes), you may have to kill the system processes to get the terminal to respond. However, when you kill a process, any work not yet saved at that terminal will be lost. Therefore, do not kill a process before trying the following actions at the user's terminal:

- Power the terminal off and on.
- Press the (Delete) key several times.

- Press `<CTRL-\ (the <CTRL> key and the \ key) to abort the current processing activity.`

If your node is connected to a network, a list of all nodes you are the key operator of is displayed when you choose this selection. Select the node by typing the node name or by using the arrow keys to move to the node name, then press `<cr>`. (Note that the left arrow key does not work for this purpose on all terminals.) You will then be prompted for the terminal name you want to kill (if your node is not connected to a network, this form will be displayed as soon as you choose this selection). (Use the “use” selection of the Akdisp menu to find the terminal port name assigned to the user.) All processes associated with the terminal are killed. A message will be sent to your screen showing the process number of each process as it is killed. After the processes have been killed, a “login:” prompt should be displayed at the user’s terminal.

dis—Disable a Port

This selection allows you to disable a system port. Once a terminal port is disabled, no users can log in at a terminal attached to that port. However, a serial printer or dial out modem will not function unless they are connected to a disabled port. (A modem must be enabled for dial-in, disabled for dial-out.)

When you choose this selection, the system prompts for the name of the port you wish to disable, i.e., `ttyc1`, `ttyc2`, etc. Note that you can only disable ports on the node you have logged into. You cannot disable a port over the network.

ena—Enable a Port

This selection allows you to enable a specified system port. A port must be enabled to allow a user to login at a terminal connected to that port. Dial-in modems must also be connected to an enabled port to function. Typically, you would enable all terminal ports.

When you choose this selection, the system prompts for the name of the port you wish to enable, i.e., `ttyc1`, `ttyc2`, etc. Note that you can only enable ports on the node you have logged into. You cannot enable a port over the network.

current device (the device to which you will save and restore your files). The current device will remain set until you change it using this selection.

The following backup device types are supported:

- 8-inch diskette
- 5.25-inch diskette
- streamer tape
- 9-track tape
- directory (hard disk, i.e., Winchester disk drive or SMD disk drive)

Not all systems are equipped with all devices. The list that is displayed when you choose this selection contains the devices you can choose; if it is not on the list, it is not available for use.

save—Save Workarea to: *device_name*

This selection copies the contents of a workarea to the current backup device. You are given the option to save the current workarea, an individual workarea, a group workarea, or a public workarea. As the key operator, you have the option of saving the individual workareas of any user on your node. If you specify an individual workarea, the system prompts you to enter the login ID of the user whose workarea you want to save. If the current backup device is a directory on a hard disk, you are prompted to specify an archive name. The workarea is saved under this name. If the current backup device is a flexible disk drive or a streamer tape, you can have the system estimate the number of diskettes or tapes needed to complete the backup. You can also elect to have your diskettes formatted or the tape retensioned.

work—Restore Workarea From: *device_name*

This selection copies an entire workarea from the current backup device to the system hard disk. You have the option of restoring the current workarea, an individual workarea, a group workarea, or a public workarea. As the key operator, you can restore the individual workarea of any user on your node. If the current backup device is a directory on a hard disk, you are prompted to enter the archive name assigned to the workarea you wish to restore. If the backup device is a flexible diskette or a tape, you are prompted to insert the diskette(s) or tape(s). If the device is a tape, you may retension the tape before restoring the workarea.

unit—View/Restore Unit From: *device_name*

This selection allows you to restore one or more selected units from the current backup device. Examples of “units” are databases, general file cabinet files, word processing documents, or directories within the general file cabinet.

If your current backup device is a hard disk directory, you will be asked to select an archive from a list. If your current backup device is a flexible disk drive or a tape, you will be prompted to insert the backup diskettes or tapes. If the device is a tape, you may retension the tape before restoring the workarea.

xdel—Delete Archive From Hard Disk *CAUTION*

This selection allows you to delete an archive from a hard disk directory. If your current backup device is not a hard disk, a list of all hard disks that have been assigned to you is displayed. Select the disk that contains the archive you want to delete. A list of all your files on the hard disk is then displayed. Select the files you want to delete. The system will prompt you to verify that you really want to delete the file. Be sure you really want to delete the file before responding.

prep—Prepare Diskettes and Tapes For Use

This selection displays the Prepare Diskettes and Tapes for Use (Aasavep) menu. Use this menu when you want to format a batch of diskettes or retension one or more streamer tapes. The following selections appear on the menu:

- fmt** - Format diskettes
- ret** - Retension streamer tape

Aasavep—Prepare Diskettes and Tapes for Use

```
(Aasavep)
PREPARE DISKETTES AND TAPES FOR USE
"user" in the individual workarea on node " "
Current device is device name

fmt - Format diskettes

ret - Retension streamer tapes

qdef - Define user actions:  1  2  3  4  5  6  7  8

day date time Physical login on node " "
.b-back a menu !-enters 0S :-site menu .s-start .?-help .l-logout
Which action? _ you have mail
```

PPS1-718

Parent menu: Aasave
Select ahead (from Top): .s k s p

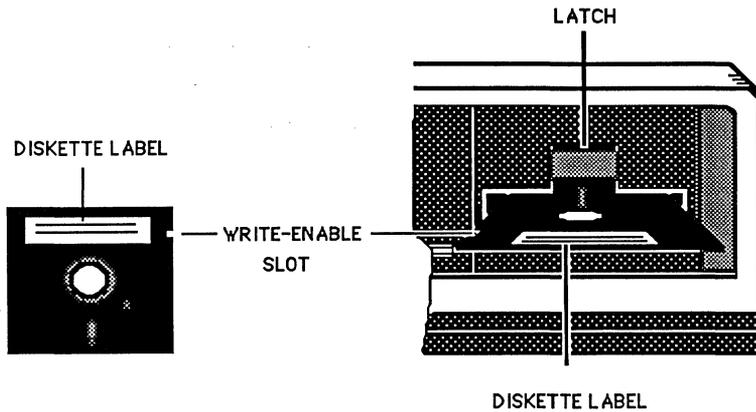
This menu allows you to format a batch of diskettes or retension one or more streamer tapes.

fmt—Format Diskettes

This selection allows you to format a batch of diskettes. Prior to using a diskette, it must be formatted. Note that formatting a diskette will erase any information that is already stored on it. Do not put a write protect tab on the diskette write-enable slot of a 5.25-inch diskette (see Figure 2-1). However, if you are formatting 8-inch diskettes, you must put a write-enable tab on the write-protect slot.

ret—Retension streamer tapes

This selection allows you to retension one or more streamer tapes. All new tapes should be retensioned. Retensioning rewinds the tape



PM8-983

Figure 2-1. Inserting a Diskette into a Flexible Disk Drive

and makes sure that it is wound tightly. Before you insert a tape into the drive, make sure that the write-protect arrow is not pointing to the word "SAFE" (see Figure 2-2). Note that retensioning can take up to six minutes per tape.

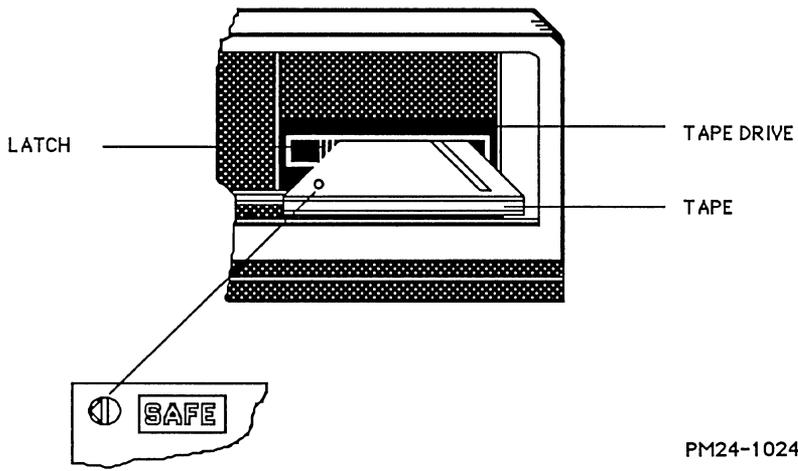


Figure 2-2. Inserting an Archive Tape into a Tape Drive

3

BOOT UP AND SHUTDOWN



3.1 Introduction

This chapter tells the key operator how to do the following tasks:

- Boot up the system after a normal shutdown
- Boot up the system after an improper shutdown
- Shut down the system

During normal system operation, the key operator must occasionally bring the system up and down for a variety of reasons. However, in a typical environment, the system power is left on at all times. Like any computer system, power cycling (turning on and off) causes additional wear. If it is necessary to bring your system down at night or on the weekends, the preferred method is to perform the XENIX operating system shutdown procedures outlined in this chapter without powering the system off. This will provide extra file system protection, without causing extra system fatigue.

NOTE

All procedures in this chapter must be run at the system console. Do not perform the procedures when other users are logged into the system.

3.2 System Placement

Your system should be located in an area where it will receive adequate air flow and ventilation. Storing too much electronic equipment in an area that doesn't have adequate cooling or air flow can cause intermittent problems.

3.3 Booting Up the System

Booting up a system is the process that enables the computer to begin operations. When the system is first powered on, the programs that the system needs to function are on the Winchester disk. These programs are part of the XENIX operating system and cannot be run until they have been loaded into system memory. Booting the

system loads the operating system from the Winchester disk into system memory.

There are several different methods you can use to boot your system. In most instances, you will use the autoboot method described below. However, if the system was improperly shut down, refer to the section called "Booting After a Crash or Improper Shutdown":

1. If the system was powered down, go to step a. If the XENIX operating system was shut down, but the System 286/310 was not powered off, go to step b.

- a. Restore system power as follows:

- Power on your system console terminal.
- Set the system on/off switch to the ON position. The switch is located on the upper right-hand corner of the system rear panel.
- If your system is equipped with a 311 peripheral expansion chassis, set the on/off switch to the ON position. The switch is located on the upper right-hand corner of the chassis rear panel.

- b. Press the RESET switch (red light with R on it) on the front, lower left-hand corner of the System 286/310.

2. An asterisk is displayed on the system console. After about 30 seconds the System Confidence Tests will run. After each test is run, a PASS/FAIL message is displayed. (If a test failure occurs, refer to the section called "What To Do If the Confidence Tests Fail".) When the confidence tests complete, the system will indicate:

Loading :w0:

3. The Intel licensing agreement, the XENIX buffer size message, and the board wake-up messages are displayed. (If a board name followed by NOT FOUND is displayed, refer to the section called "What To Do If a Board Fails To Initialize".) The following prompt is then displayed:

Type Ctrl-d to proceed with normal startup,
(or give root password for system maintenance):
(If there is no input in 30 seconds, the system
will automatically go into multi-user mode.)
Password:

4. You can either wait for 30 seconds or press the <CTRL> and D keys simultaneously to bring up XENIX in multi-user mode.

5. The current system time is displayed. Then the following prompt is displayed:

Enter new time ([*yy**mm**dd*]*hh**mm*):

If the date and time are correct, press the <cr> key.

If they are incorrect, type today's date and time,

where:

yy is the last 2 digits of the year

mm is the number of the month

dd is the date

hh is the hour in 24-hour format

mm is the minute

For example, if the date and time are:

April 17, 1986 1:32 PM

You would enter:

```
860417132<cr>
```

6. Messages are displayed as the software programs are enabled. Then a status message showing which file systems have been mounted and the amount of available memory in each system is displayed. The final message that appears in a normal autoboot is the login prompt.

This completes the autoboot procedure. You can now log into the system.

3.4 Faster Boot Up Methods

Autobooting is the easiest way to boot up. However, it takes the longest amount of time. Other methods of booting up are faster, although they do require more interaction.

One method that is somewhat faster is to press <SHIFT-U> (uppercase u) within 12 seconds after the asterisk is displayed on the console (refer to step 2 of the autoboot procedure). You will then be asked to enter a period (.) or press <cr>. Normally you would press <cr>. The system boots up the same as during the autoboot procedure. If you press the period, the system will enter the monitor after the confidence tests complete. Press **b**<cr> to boot from the monitor.

The fastest boot up method is to press the RESET switch, and then press the INTERRUPT switch (the switch next to RESET with the green light) within two seconds. The cursor moves to the right hand

side of the console screen. Press < **SHIFT-U** > to display the monitor prompt:

```
iSDM 286 Monitor, (IS0)Vx.y  
Copyright 1984 Intel Corporation
```

When you use this method the System Confidence Tests are not run. Once in the monitor, you can complete the system boot by pressing **b < cr >**. The boot up proceeds in the same way as it would during an autoboot.

3.5 What To Do If the System Confidence Tests Fail

The system confidence tests perform basic tests on the system hardware. The processor, memory, and peripheral devices are checked. These tests will indicate PASS or FAIL. If a test fails, the system will not continue with the autoboot. This may not mean that there is a hardware failure. Any of the following situations may have caused a test failure.

- Sometimes the Winchester takes a little longer than normal to spin up. This may cause the Winchester Subsystem test to fail. This is especially true in low power areas. Simply press RESET and give it another try. It should boot on the second attempt.
- If you have a flexible diskette in the drive, and it is not a boot diskette, the Flexible Disk Drive test will fail. Simply remove the diskette and press RESET to try again.
- If the system was shut down, but the power was not turned off, you may need to power the system OFF and ON to reset an unknown condition.

If the system confidence tests continue to fail, call your Intel Service Representative.

3.6 What To Do If a Board Initialization Fails

After the system successfully completes the confidence tests, it will start to load the XENIX operating system. The licensing agreement, and XENIX buffer size messages are displayed followed by the board initialization routines. Messages will appear indicating whether or not boards have been initialized. The exact messages that will appear depend on what boards are installed in your system.

If a board message indicates NOT FOUND, a problem exists. If this is not a newly installed system, continue with the boot procedure, shut down the system, and re-boot. If this is a new system, the XENIX operating system may have been incorrectly configured to expect a board that is not really in the system. Check with your network administrator to find out if the system was properly configured. If it was configured properly, continue with the boot procedure, shut down the system, and re-boot. If the board is still not found, call your Intel Service Representative.

3.7 Booting After a Crash or Improper Shutdown

If a power failure or system crash occurs or someone presses the RESET button by mistake, the system will shut down improperly. The next time you boot up the system, a recovery procedure is automatically run to repair any damage that may have occurred to your file system.

The following procedure tells you how to boot up the XENIX operating system if it has crashed or been shut down improperly:

1. Press the RESET switch on the front, lower left-hand corner of the System 286/310.
2. An asterisk is displayed on the system console. After about 30 seconds the System Confidence Tests will run. As each test is run, a PASS/FAIL message is displayed. (If a test failure occurs, refer to the section called "What To Do If the Confidence Tests Fail".) After the confidence tests complete, the following message is displayed:

```
Loading :w0:
```

3. The Intel licensing agreement, the XENIX buffer size message, and the board wake-up messages are displayed. (If a board name followed by NOT FOUND is displayed, refer to the section called "What To Do If a Board Fails To Initialize".)
4. After the board initialization routines, the system prompts:

```
The system was not shutdown properly, and the  
root file system should be cleaned.  
(Cleaning will occur automatically in 30 seconds.)
```

```
Proceed with cleaning (y/n)?
```

```
Type y followed by the <cr> key.
```

5. You will see the following messages:

```
/dev/root
** Phase 1 -- Check Blocks and Sizes
** Phase 2 -- Check Pathnames
** Phase 3 -- Check Connectivity
** Phase 4 -- Check Reference Counts
** Phase 5 -- Check Free Blocks and Cylinder Groups
```

If there are any problems with the file system, there will be additional messages that appear such as:

```
UNREF FILE I=## OWNER=username MODE=#####
SIZE=##### MTIME=date time year
CLEAR?
```

```
Cylinder Group #: MISSING BLKS IN FREE LIST
BAD FREE LIST
SALVAGE?
```

6. Answer **yes** to these questions. Note that under certain rare conditions, files may be deleted. If an essential system file is deleted, it may cause a fatal crash that will require that XENIX be reinstalled.
7. If the system runs through the clean-up with no errors, then the clean-up will be repeated for any user file systems that you have on your system. If you have any file systems that are not cleaned automatically, notify your sub-network or network administrator.
- Occasionally, if there has been a severe crash, running this clean-up program can hang the system again. If this occurs repeatedly, contact your sub-network or network administrator.
8. After the system has run through the clean-up routine successfully, the following prompt will appear:
- ```
Type Ctrl-d to proceed with normal startup,
(or give root password for system maintenance):
```
9. Press the **<CTRL>** and **D** keys simultaneously to bring up XENIX in multi-user mode.
10. The current system time is displayed. Then the following prompt is displayed:
- ```
Enter new time (yyymmddJhhmm):
```
- If the date and time are correct, press the **<cr>** key. If they are incorrect, type today's date and time.
11. Messages are displayed as the software programs are enabled. Then a status message showing which file systems have been mounted and the amount of available memory in each system is displayed. The final message that appears is the login prompt.

This completes the boot up procedure. You can now log into the system.

3.8 Shutting Down the System

Typically you will not need to power down the system. However, if you do need to power it down, **you must always shutdown the XENIX operating system before you remove system power.** Shutting down the XENIX operating system terminates all currently running system processes in an orderly and cautious manner. First, all users logged on to the system are notified that they must log off the node by a broadcast message. Then, all file systems are updated before the system is stopped. This must be done before powering down the system or rebooting to insure file system integrity. If you do not shutdown the XENIX operating system, files may be modified or lost.

There may also be times when you do not want to power down the system, but you want to shut down the XENIX operating system. For example, it is a good idea to shut down the XENIX operating system over the weekend or during any long period when the system will not be used. This is a precautionary measure to protect the system files in the event of a power failure, etc.

Perform the following procedure to shut down the XENIX operating system and power down the system.

1. When the “login:” prompt is displayed at the system console, type:

```
shutdown<cr>
```

2. When the “password:” prompt is displayed, type the password (if you do not know the password, contact your sub-network administrator or network manager).
3. The shutdown program is automatically invoked. You will be prompted to enter the number of minutes to wait before shutting down the XENIX operating system. The default value is 5 minutes. To select the default value press the <cr> key.

If you would like to change the amount of time until shutdown, enter the number of minutes (if you are going select a smaller number, be sure that all users have logged off the system).

4. A message is broadcast to all users that are logged on to save their work and logout.

5. When the shutdown is complete, the following message is displayed:

**** NORMAL SYSTEM SHUTDOWN ****

After this message is displayed, you can power down the system. The best way to power down is to remove power from all printers, 311 peripheral chassis, etc., before powering off the System 286/310.

4.1 Hints for Printer Administration

Most of the tasks the key operator needs to perform for printer administration can be done using the selections on the Aptr menu. However, if you have a printer that is not functioning, you should always check the following list before attempting any other solutions:

- Make sure the printer is ONLINE (check the switch settings on the printer).
- Make sure the printer has paper, and that the paper has not come off the track of a track-feed printer. If the paper has come off the track, try to find out why. Is it being restrained by a cable, etc.? Was it loaded properly?
- Make sure the ribbon has not run out.
- Check the cable connections. It should be securely fastened to the printer connector and the System 286/310 rear panel connector.
- Try resetting the printer by powering it on and off.
- If you have an extra printer cable available, try swapping the printer cable.
- If you are using a serial printer, make sure the port is disabled. (Refer to the procedure in Chapter 5.)

If none of the items listed above is the problem, try restarting the printer. This removes any locks on the printer queue. If the printer still does not print, try deleting jobs in the printer queue. Sometimes a file that you are trying to print can hang up the print queue. If the printer still does not print after deleting documents from a printer queue, you can try halting and then restarting the printer. Refer to the procedures in this chapter to reset, delete documents from the printer queue or halt a printer. If you have tried all the suggested procedures, and the printer still doesn't work, contact your sub-network administrator or network manager.

NOTE

Some vendor-supplied packages use their own print queue. Most of the procedures in this chapter won't work with those packages. This chapter provides printer administration procedures for use with the Q-OFFICE software package.

4.2 Halting a Printer

Occasionally, you may need to halt a printer to allow you to align a form or printer paper without having people attempt to print. You may also try to halt your printer as a last resort when you are having problems getting it to print. Any documents that are currently in the print queue are held until the printer is restarted. Remember that you must restart the printer after halting it.

NOTE

Halting the printer will not prevent users of some vendor software (such as Q-OFFICE) from printing.

The procedure for halting a printer follows:

1. From the Top menu, select ahead to choose the “halt” selection from the Aptr menu by typing:

```
k p h<cr>
```

2. A list of printers that are allocated for your use is displayed. Select the printer you wish to halt.
3. The following messages are displayed:
Printer has been halted. - *printer_name*
- Press RETURN for menu or select ahead >
4. Press the <cr> key to redisplay the Aptr menu.

NOTE

Any jobs sent to the printer after it is halted will be held in the print queue until it is restarted.

4.3 Restarting a Printer

Typically you would only use the Aptr menu restart selection to restart a printer that has been halted, or to clear a printer queue that appears to be locked.

The procedure for restarting a printer follows:

1. From the Top menu, select ahead to choose the “rest” selection from the Aptr menu by typing:

```
k p r<cr>
```

2. A list of printers that are allocated for your use is displayed. Select the printer you wish to restart.

3. The following message is displayed:
Printer has been restarted. - *printer_name*
- Press RETURN for menu or select ahead >
4. If you restarted a printer that was halted, any files that were in the printer queue should begin printing.

4.4 Deleting Documents from a Printer Queue

Occasionally, you may need to delete a document in a printer queue. You may send a file to be printed and then realize that you do not want to print it after all. Another circumstance is when a printer hangs up. First, check for all the problems listed at the beginning of this chapter. If the printer still won't print, you can try deleting documents from the print queue to see if they have caused the queue to hang up.

NOTE

This procedure deletes documents sent to the print queue by iDIS, iWORD, and all other iDIS software features. However, this procedure does not work for some word processing software including Q-OFFICE and Lyrix documents. Q-OFFICE uses its own print queue. Refer to the Q-OFFICE procedures at the end of this chapter.

The procedure for deleting documents from a printer queue follows:

1. From the Top menu, select ahead to choose the "xdel" selection from the Apr menu by typing:

```
k p x<cr>
```

2. A list of printers that are allocated for your use is displayed. Select the appropriate printer.
3. A list showing the document names, owner's login ID, process number and rank in the queue is displayed.
4. Select the document you wish to remove from the queue. You can delete more than one document if you move your cursor to the first document, press <CTRL-f>, move to the next document, press <CTRL-f>, etc., and then press <cr> after the final document has been selected.

If you are deleting documents to try to get a printer to start printing, delete the document that is ranked 1st. If the printer still does not begin printing, reselect the "xdel" selection from the Apr menu and delete the next document.

The document you selected will not be deleted until you verify that you really do want to delete it.

7. Press the <cr> key to redisplay the Apr menu.

4.5 Showing Documents in a Printer Queue

When you send a document to the printer, it goes into the queue of the current printer. If the printer is free at that time, the document is printed immediately. However, if another document is being printed, your document is queued along with any other documents waiting to be printed. Documents are printed on a first-in, first-out basis. To display the status of documents in a printer queue, perform the following procedure:

NOTE

Files printed via Q-OFFICE are sent to a different print queue. Therefore, they will not be listed when you display this print queue. To see which files are in the Q-OFFICE print queue you must use the Q-OFFICE menus (refer to the procedures at the end of this chapter.)

1. From the Top menu, select ahead to choose the “show” selection from the Aprt menu by typing:

```
k p <cr>
```

2. A list of the printers that are allocated for your use is displayed. Select the appropriate printer.
3. The job number, status, size, owner, and filename of each job in the queue are displayed in the following format:

```
          PRINTER QUEUE -printer_name
job status   size   owner   filename
-----
18  active  2570   jsmith  weekly.rpt
19  1st     5718   mlewis  test.pln
20  2nd     3987   jdavis  spec.new
```

In this example, three jobs are in the queue. The job with the active status is currently being printed. The job that is 1st will be printed as soon as the first job is finished. The job that is 2nd will be printed after the active job and 1st job have been printed.

NOTE

If there are no jobs in the queue, only the header information is displayed.

4.6 Aligning Printer Paper

Occasionally, you may need to realign the printer paper because you need to print a document onto a special form or you have installed new paper into the printer. Before you perform a forms alignment,

you should halt the printer to prevent other users from sending a job to the printer while you are aligning the paper. Refer to the section on halting a printer before beginning the forms alignment procedure.

The procedure for aligning a form or printer paper follows:

1. Install the form or printer paper. Make sure that the printer is powered on and ONLINE.
2. From the Top menu, select ahead to the "form" selection of the Aprt menu by typing:

k p f<cr>

3. A list of all printers that are allocated for your use is displayed. Select the appropriate printer.
4. The following prompt is displayed:

PRINTER FORM ALIGNMENT

How many characters wide?

5. Enter the number of characters in a line for the form or paper you are aligning (i.e., a standard 8½ x 11 page is 80 characters wide, wide printer paper is 133 characters wide).
6. A line is printed on the printer paper or form in the following format:

....+....1....+....2....+....3....+....4....+....5....+....6....+

7. Using the line as a guideline, adjust the paper or form to line up properly.
8. The following prompt is displayed:
again? (y,n)
9. Press **y** and **< cr >** to output the line again. Continue this process until the paper or form is properly aligned. When you are satisfied with the alignment, press **n** and the **< cr >** key in response to the "again?" prompt.
10. You must now restart the printer. Refer to the procedure in this chapter.

4.6 Q-OFFICE Printer Administration Procedures

The Q-OFFICE package uses its own print queues. Therefore, most of the commands on the Aprt menu will not effect printing with Q-OFFICE. If you are having a problem printing with Q-OFFICE, perform the following procedures:

1. From the Quadratron Systems Word Processing Menu, select Supervisory Functions.

2. The Quadratron Systems Supervisory Functions Menu is displayed.
3. Select Clean a Print Queue. You will be prompted to enter the number of the print queue you wish to clean. Type the print queue number. (If you do not know which print queue it is, the printer number is displayed when you chose the Printer Control selection from the Quadratron Systems Supervisory Functions Menu. Use this number.) Press the < **CANCEL** > key to redisplay the Quadratron Systems Supervisory Menu.
4. If the printer still doesn't print, try deleting jobs from the printer queue. Select the Printer Control selection. Delete jobs that are listed by using the arrow keys to select a job, then press the < **DEL** > key. You are prompted to press the < **EXECUTE** > key to kill the job.
5. If the printer still doesn't print, exit Q-OFFICE. When you are back in the iDIS menus, press .s to redisplay the Top menu.
6. The final thing you can try is restarting the printer. Refer to the procedure in this chapter.

If the printer still does not work, notify your sub-network administrator or network manager.

5

PORT ADMINISTRATION



The Akport menu allows the key operator to enable and disable serial ports. It also allows you to “kill” a terminal activity that has caused a terminal to “hang up”. This chapter contains procedures for using the selections on the Akport menu.

5.1 Enabling Serial Ports

A serial port must be enabled to allow a terminal or dial-in modem that is connected to it to access the System 286/310. When you connect a terminal to a disabled port, you must enable the port to allow the user to log into the node.

You can find out whether or not the port is enabled by simply connecting the terminal and powering it on. If the port is enabled, a login prompt should be displayed on the terminal. You can also find out which ports are enabled by using the “what” selection on the Akdisp menu (select ahead from the Top menu by typing **k d w < cr >**). An enabled port will be listed in the Terminal column with either the name of a user that is currently logged in on that port or “root” listed in the login ID column. Note that you cannot enable a port over the network. You can only enable ports on the node you logged into.

NOTE

Before you can enable a port, you have to know the port identifier, i.e., ttyc2. If you do not what it is, refer to Appendix A.

The procedure for enabling a port follows:

1. Log into the system. From the Top menu type:

```
k c ecr>
```

to select ahead and choose the enable a port selection from the Akport menu.

2. The following prompt is displayed:

Please enter the name of the port which you want to enable:

3. Type the port name. For example, ttyc2. A message saying that the port was enabled is displayed.

4. You can connect a terminal or dial-in modem to the port. If you connect a terminal and power it on, a login prompt will be displayed.

5.2 Disabling Serial Ports

A serial port must be disabled if you are connecting a dial-out modem or serial printer to it. You may also want to disable any unused ports.

You can find out whether or not the port is disabled by using the “what” selection on the Akdisp menu (select ahead from the Top menu by typing `k d w < cr >`). A disabled port will not be listed in the Terminal column of the display. Note that you cannot disable a port over the network. You can only disable ports on the node you logged into.

NOTE

Before you can disable a port, you have to know the port identifier, i.e., `ttyc2`. If you do not know what it is, refer to Appendix A.

The procedure for disabling a port follows:

1. Log into the system. From the Top menu type:

```
k c d<cr>
```

to select ahead and choose the disable a port selection from the Akport menu.

2. The following prompt is displayed:

```
Please enter the name of the port which you want to disable:
```

3. Type the port name. For example, `ttyc2`. A message saying that the port was disabled is displayed.
4. You can connect a dial-out modem or serial printer to the port. If you connect a terminal or dial-in modem to the port, it will not be able to access the system.

5.3 Killing Terminal Activity

Occasionally a user’s terminal hangs up (i.e., it fails to respond to any keystrokes). When this occurs, you may have to “kill” the system processes associated with that terminal to get it to respond. However, when you kill a process, you will often lose any work not yet saved at that terminal. Therefore, do not kill a process before trying the following actions at the user’s terminal:

- Power the terminal off and on.

- Press the **** (Delete) key several times.
- Press **<CTRL-****>** (the **<CTRL>** key and the **** key) to abort the current processing activity.

If the terminal is still hung-up after trying these actions, you must kill the system processes associated with the terminal.

The procedure for killing a terminal activity follows:

1. Before you can kill an activity associated with a terminal, you must know which system port the user's terminal is connected to. From the Top menu, type the following to select ahead to the "use" selection from the Akdisp menu:

```
k d u<<<>
```

2. If your system is part of a network, a list of nodes you are responsible for is displayed. Select the node the user is logged into.
3. Find the login ID of the user and note the name of the terminal port associated with it (i.e., ttyc2, etc.).
4. Press **.b** to display the Aktop menu.
5. Type the following to select ahead and choose the "kill" selection from the Akport menu:

```
c k<<<>
```

6. If your system is on a network, a list of nodes you are responsible for is displayed. Select the appropriate node.
7. You are then prompted to enter the terminal name you wish to "kill". For example, ttyc2. Verify that you entered the correct characters; then press **<cr>**.
8. A message is displayed as each process associated with the terminal is killed. When all processes have been killed, the following prompt is displayed at the bottom of the screen:
 - Press RETURN for menu or select ahead >
8. Press **.b** and **<cr>** to redisplay the Aktop menu.

6

SAVING AND RESTORING WORKAREAS



6.1 The Importance of Saving Workareas

One of the most important tasks the key operator performs is saving workareas onto a backup device. When you save a workarea, all files in that workarea are copied onto the current backup device. This guards against losing files, directories, etc., in the event your system crashes or a hardware failure occurs. If a failure occurs, you can restore the workarea or selected units within a workarea as required. This is done by copying the files from the backup device back to the system hard disk. Note that the files that are restored will only reflect those changes made prior to saving them. Any changes made after you performed the backup procedure cannot be recovered. Thus, it is important to backup your workareas frequently.

You should save the public and group workareas on a weekly basis. You should also save your individual workarea on a daily basis. As key operator you can save any workarea on your node. However, you should encourage all users on your node to save their individual workareas themselves (via the System Wide menu) on a daily basis. This operation is particularly important in areas with frequent power failures or fluctuations.

You should encourage users to copy any files that they do not plan to change to their backup device. The files can then be deleted from their workarea. (If they need to be worked on a later date, restore them using the "Restore a Workarea Unit" section of this chapter.) This is especially important if less than 10% of the total disk space allocated to a user file system is free. Use the "disk" selection from the Akdisp menu to see how much disk space is free (select ahead from the Top menu by typing `k d d < cr >`). If users do not remove old files from their workareas, you may eventually run out of system disk space.

6.2 Backup Devices

The backup device can be a flexible diskette, a streamer tape, a 9-track tape, or a directory on a hard disk. However, the devices you can select are defined by the sub-network administrator or system manager. Typically individual users will be assigned flexible disk drives or a directory on a hard disk as backup devices. The key operator may be assigned a streamer tape to use to save all group,

public, and possibly individual workareas for the node. You may also have a flexible disk drive or directory on a hard disk to use for daily backup of your individual workarea.

The following paragraphs contain procedures for choosing a current backup device, saving and restoring workareas, and restoring individual units within a workarea.

6.3 Choosing a Current Backup Device

The current backup device selection is displayed in the first four menu selections of the Aasave menu. The first time you access the Aasave menu, you will notice that the current backup device is “unassigned”. You must choose a current backup device before you can save a workarea. Perform the following steps to select a current backup device:

1. From the Top menu, select ahead to choose the “chng” selection from the Aasave menu by typing:

```
ks cchng
```

2. The Aasavec list is displayed, listing the names and type of backup devices you can use.
3. Select the backup device you wish to use.

NOTE

If files are stored on removable media (flexible diskettes, tapes, etc.) anyone may copy the files into their workarea. No security is available.

4. The Aasave menu is redisplayed. Note that the device you selected is listed as the backup device in the top four menu selections.

6.4 Saving and Restoring Workareas

The procedures for saving and restoring workareas are the same regardless of the backup device used and the workarea you are saving or restoring. However, the system prompts vary for the different device types and workareas. The specific information you need to know regarding devices follows.

Directory on a Hard Disk

- You must select a name for the directory. (The files are stored in tar format and cannot be accessed as a normal file.)

Flexible Diskettes

- You are given the option of formatting your diskettes. New diskettes must be formatted before they can be used. Note that formatting a diskette with data on it erases all data on that diskette. If you are not sure whether or not a diskette has been formatted, use the "unit" selection from the Aasave menu to read the files on the diskette. If the diskette has data on it, the file cabinets will be listed. Press the < DEL > key to cancel the restore unit procedures. If your diskette is blank, the following message is displayed:

There are no file cabinets in the archive - Press RETURN to continue.

- If you need more than one diskette to save the workarea, you must label each diskette. We recommend the following method, "1 of x", "2 of x", etc., with x being the total number of diskettes you will use for this particular save operation. This is very important; when you restore the workarea from the archive diskettes, they must be installed in the same order you used during the save operation.
- Do not install a write-protect tab onto your 5.25-inch diskettes until you have saved your workarea. However, 8-inch diskettes require a write-enable tab.

Streamer Tapes

- You will be prompted for the cartridge size. If you do not know what size it is, specify 40MB.
- You are given the option of retensioning your tape cartridge(s). If they are new tapes that have never been retensioned, it is a good idea to retension them.
- If you need more than one tape to save the workarea, you must label each tape as soon as it is full. We recommend the following method, "1 of x", "2 of x", etc., with x being the total number of tapes you will use for this particular save operation. This is very important; when you restore the workarea from the archive tapes, they must be installed in the same order you used during the save operation.

9-Track Tape

- You will be prompted for the length of the tape reel (in feet).
- You must know the operating procedures for the 9-track tape unit.
- If you need more than one tape to save the workarea, you must label each tape as soon as it is full. We recommend the following method, "1 of x", "2 of x", etc., with x being the total number

of tapes you will use for this particular save operation. This is very important; when you restore the workarea from the archive tapes, they must be installed in the same order you used during the save operation.

The information you need to know about workareas follows.

Current Workarea

- When you select the current workarea, you will save or restore whatever workarea you are currently in. This can be your individual workarea, a group workarea, or a public workarea.

Individual Workareas

- You must enter the login ID of the individual whose workarea you wish to save or restore.

Group Workareas

- You must enter the name of the group workarea you wish to save or restore.

Public Workareas

- You must enter the name of the public workarea you wish to save or restore.

6.4.1 Example of Saving a Workarea to Flexible Diskettes

The following procedure assumes that you have just logged into the system and you are in your individual workarea. Perform the following to save your individual workarea to a flexible diskette:

1. From the Top menu, select ahead to choose the “save” selection from the Aasave menu by typing:

```
k's s<cr>
```

2. The following message is displayed:

```
You are using the device_name unit on node node_name
```

```
Current work area is the individual work area.
```

```
Please enter the type of work area which you want to save
```

```
(c=current i=individual g=group p=public):
```

NOTE

The phrase, “on node *node_name*” is displayed only if your system is connected to a network.

3. Type **c** and press **<cr>** to select the current workarea.

4. The following prompt is displayed:
 Do you want an estimate of the number of diskettes needed? (y or n)
5. Type **y** and press **< cr >**. The following messages are output:
 Estimating the number of diskette(s) needed. Please wait...
6. When the program determines how large your workarea is and how many diskettes are needed to copy that workarea, the following messages are displayed:
 You will need about **x** diskette(s).
 Do you want to format your diskettes? (y or n)
7. If your diskettes are not formatted, type **y** and press the **< cr >** key. (If your diskettes are formatted, go to step 11.) The following messages are output:
 You are formatting diskettes on the *device_name* drive on node *node_name*
 When you format a diskette any data it contains is erased. It is possible to view the contents of the media by the "unit" menu selection. If you wish to cancel the format operation press the **< DEL >** key.
 Please insert a diskette to be formatted.
 Press return to start.
8. Insert a diskette into the disk drive as shown in Figure 2-1; then close the disk drive latch.
9. Press the **< cr >** key to start formatting the diskette.
10. As the diskette is formatted, the following messages are output:
 formatting.....
 Formatted 80 tracks: 0 thru 79, interleave 4.
 format another? (y or n)
 (Formatting an 8-inch diskette results in a different message because of the difference in the number of tracks.)
 If the following message is displayed:
 formatting.
 Formatted 0 tracks.
 format another? (y or n)
 the diskette did not format. Check the following list to determine why it did not format:
 - the drive latch was not closed,
 - a write-protect tab is covering the write-enable slot on the diskette,

- the diskette was placed in the drive upside down,
- the diskette was placed in the drive backwards,
- the diskette was placed in the wrong drive or not placed in the drive at all,
- the diskette is defective.

If none of the reasons listed above caused the problem, consult your sub-network administrator or network manager.

11. Press **y** and the **< cr >** key if you have more diskettes to format.
12. Press **n** and the **< cr >** key if you have formatted all of your diskettes. The following messages are displayed:

**Ready to save the workarea now.
Please insert a formatted diskette.
Press return when ready.**

13. Before you start to save your workarea, label all of your formatted diskettes. We recommend the following method, “1 of *x*”, “2 of *x*”, etc., with *x* being the total number of diskettes you will use for this particular save operation. This is very important; when you restore the workarea from the archive diskettes, they must be installed in the same order you used during the save operation.
14. Insert formatted diskette “1 of *x*” into the flexible disk drive; close the drive door and press the **< cr >** key to begin copying the workarea files onto the diskette. The name and size of each file displays on the screen as it is copied onto the diskette.
15. If more than one diskette is needed to backup the workarea, the following message is displayed when the first diskette becomes full:

tar: please insert new volume, then press RETURN.

Wait until the red light on the front of the flexible disk drive goes out, then remove the diskette and insert the second diskette. (This diskette should be labeled “2 of *x*”.) Press the **< cr >** key to begin copying workarea files onto the second diskette.

Repeat this step until the entire workarea is saved.

16. When the entire workarea has been saved, the following message is displayed:
 - **Press RETURN for menu or select ahead**
17. Press the **< cr >** key to redisplay the Aasave menu.

You have now copied (saved) your workarea onto flexible diskettes. Store the diskettes in a safe place. Note, these archive diskettes have

no security; any user can read the contents into their workarea and view the data on their terminal.

6.4.2 Example of Restoring a Workarea from a Diskette

Perform the following example to copy all files from the archive diskette back into your individual workarea. This example assumes that you are currently in your individual workarea. Note that you normally would do this procedure only when you have lost all files in your workarea. If you only need to restore a single file or directory, refer to the next section entitled “Restoring a Workarea Unit”.



Restoring a workarea will over-write any files in that workarea that have the same name as a file on the archive diskettes.

1. From the Top menu, select ahead to the “Restore workarea from: *device_name*” by typing

```
k s ucr)
```

The following message is displayed:

One moment please ...

You are using the *device_name* unit on node *node_name*

Current work area is the individual work area on the *node_name* node.

Please enter the type of work area which you want to restore
(c=current i=individual g=group p=public):

2. Type **c** and press **< cr >** to select your current workarea. The following messages are displayed:

Please insert the first backup diskette.

Press return when ready.

3. Insert the first diskette into the drive; then press the **< cr >** key. (If you have more than one diskette, insert the one labeled “1 of *x*”.) The name and size of each file is displayed as it is copied into your individual workarea. When all files have been copied from the diskette, the following prompt is displayed:

Are there more backup diskettes in the set? (y or n)

4. If there are more diskettes, remove the first diskette, and insert the diskette labeled “2 of *x*”; then type **y** and press the **< cr >** key. Repeat this step until all diskettes in the set have been copied.

If there are no more diskettes in the set, type **n** and press the **< cr >** key.

5. When all diskettes in the set have been copied into your work-area, the following prompt is displayed:
 - Press RETURN for menu or select ahead >
6. Press the < cr > key to redisplay the Aasave menu.

6.4.3 Example of Restoring a Workarea Unit

Perform the following example to copy an individual unit from the backup diskettes into your individual workarea. Note that a unit is the smallest piece of an archived workarea which can be individually restored. In some cases it may be a file; in others it may be a directory or a database. This procedure does not restore an entire workarea.

1. From the Top menu, select ahead to choose the "View/Restore unit from: *device_type*" by typing:

```
k s u t c r >
```

The following messages are displayed:

```
One moment please ...
```

```
You are using the device_name unit on the node node_name
```

```
Please insert the first backup diskette.
```

```
Press return when ready.
```

2. Insert the first diskette (1 of *x*) into the drive, close the drive latch, and press the < cr > key.
3. When all the information has been read from the first diskette, the following prompt is displayed:

```
Are there more backup diskettes in the set? (y or n)
```

4. If you have more than one diskette in the set, type *y* and press < cr >. The following prompt is then displayed:

```
Please remove the current diskette and insert the next one.
```

```
Press return to continue.
```

After you have inserted the next diskette into the drive (2 of *x*) and closed the drive latch, press the < cr > key.

Repeat this step until the complete set of archive diskettes has been loaded.

5. The program looks at the types of files on your archive diskette. It then organizes everything into file cabinets, drawers, etc. When it has finished analyzing the file structure, a list of your file cabinets is displayed.
6. Choose the file cabinet that contains the unit you wish to restore either by typing the name of file cabinet or by using the arrow

keys; then press `< cr >`. The next screen that is displayed depends on which file cabinet you chose. For example, if you chose the GENERAL, iDB, iPLAN, HOST JOB, OTHER-iDIS, Non-iDIS, or HOST-OUTPUT file cabinet, a list of units in that cabinet is displayed. However, if you chose the iWORD or ASW file cabinet, a list of drawers is displayed. To display the units for these cabinets, choose the drawer you wish to open. A list of units in that drawer is displayed.

7. Select the units you wish to restore. To restore a unit, simply use the arrow keys to move through the list. If you want to restore only one unit from the list, press `< cr >` when the name is highlighted. If you want to select more than one unit, move to the first unit, press `< CTRL-f >` (the `< CTRL >` key and the `f` key), then move to the second unit and press `< CTRL-f >`, etc., until you have selected all but the last unit. Then move to the last unit and press the `< cr >` key. (If you change your mind about a unit you have selected, move to that unit and press `< CTRL-u >` to deselect it.) If you don't want to restore any units in the list, press `< cr >` without highlighting any units.
8. When you press `< cr >`, the previous list is displayed (file cabinets or drawers). You can browse through and select units in other drawers or file cabinets at this time. When you have selected all units you wish to restore, press `< cr >` when the list of file cabinets is displayed.
9. The following messages are displayed:

Please wait ...

Current work area is the individual work area on the *node_name* node.

Please enter the type of work area into which you want to restore (c=current i=individual g=group p=public):
10. Type `c` and press the `< cr >` key to select the current workarea. The following messages are displayed:

Please insert backup diskette volume I.

Press return when ready.
11. Press the `< cr >` key to begin restoring the units. The filenames and size are displayed as they are copied from the diskette to your workarea. When all the units have been restored, the following prompt is displayed:

- Press RETURN for menu or select ahead >
12. Press the `< cr >` key to redisplay the Aasave menu.

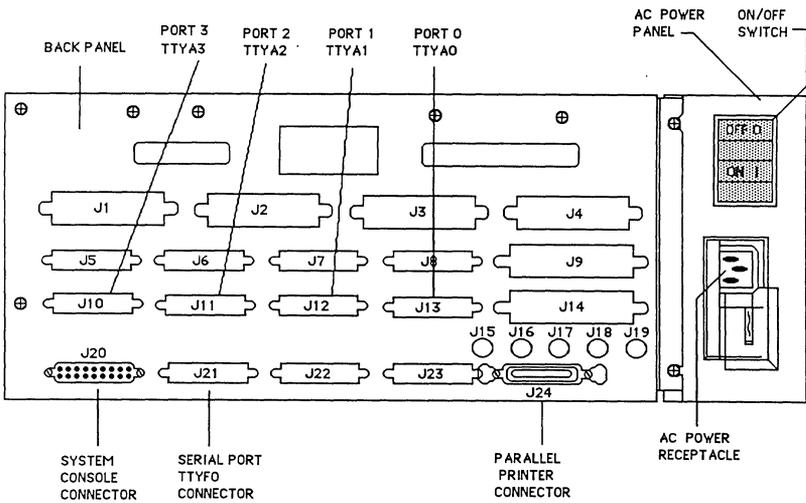
A

SERIAL PORT LOCATIONS



A.1 Introduction

The following figures show the location of the serial ports on 4-, 8-, 12-, and 16-user systems.



PM8-427

Figure A-1. Four-User System Serial Port Locations

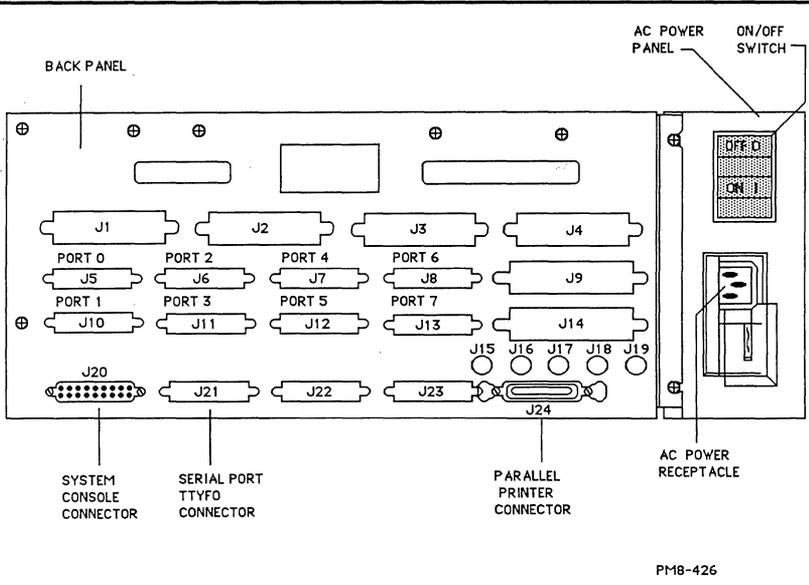
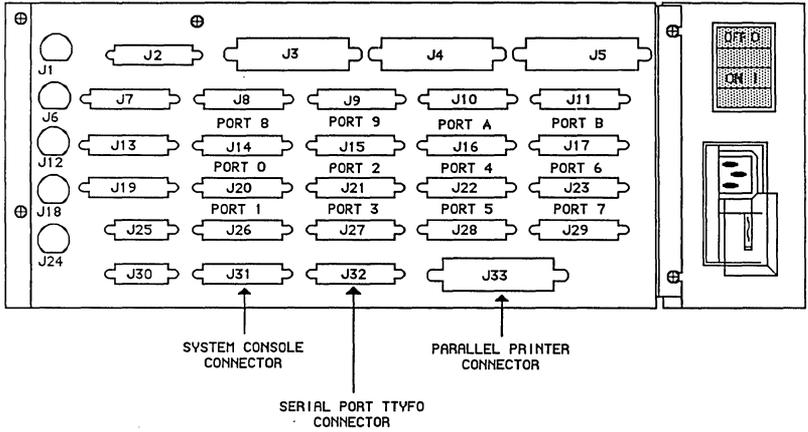


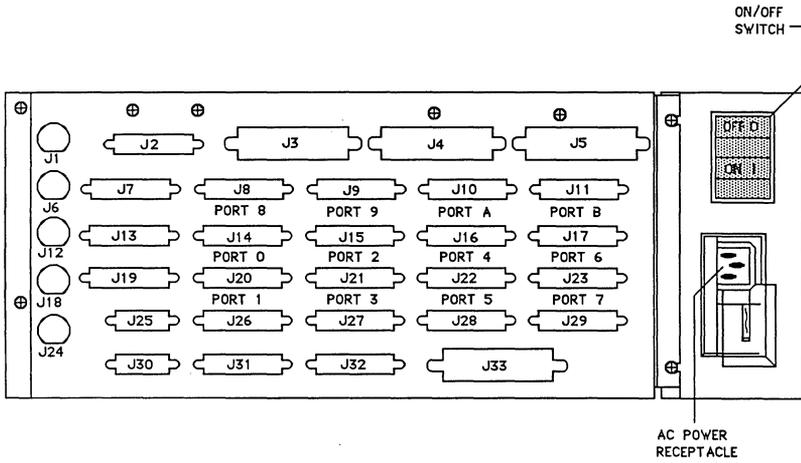
Figure A-2. Eight-User System Serial Port Locations



PM16-953

NOTE:
 TTYCA = PORT A
 TTYCB = PORT B, ETC
 PORT NUMBER=TTYC NUMBER

Figure A-3. Twelve-User System Serial Port Locations



NOTE:
 TTYCA = PORT A
 TTYCB = PORT B, ETC.
 PORT NUMBER = TTYC NUMBER

PM3-1047

Figure A-4. Sixteen-User System Serial Port Locations

GLOSSARY



Alias: A name you choose to represent a local user, remote user, or group of users. The alias is used in place of a login ID when sending mail.

Drawer: The way we group files together. Similar to a drawer in an office file cabinet.

Dynamic List: A list of items such as files or drawers, from which you can choose those you want to open or work in.

File: A collection of information (report, document, mail message, etc.).

File Cabinet: A workarea storage facility composed of several drawers.

Form: A part of the iDIS menu system. A predesigned screen in which you fill in the fields. Similar to paper forms.

Full Network: A group of individual systems or sub-networks connected and configured so that they may share resources.

Group: A collection of iDIS users who have access to a common workarea.

Hard Disk: Both Winchester disk drives and SMD disk drives.

Key Operator: Typically, the person who performs the routine administrative functions that must be performed on an individual node.

Local Node: The node you are logged into.

Maintenance Mode: The single-user mode of the System 286/310 accessible only by root. This mode is used for software installation and system maintenance.

Multi-User Mode: The normal operating mode of the System 286/310. More than one person can login and use the system at one time.

Network Manager: Typically, the person who provides the planning of the network, installation and administration of public server nodes, the installation of sub-network master nodes, and updating of the network personnel directory.

Node: An individual system on the network (or a standalone system that is not on a network).

OpenNET: The hardware and software which establishes and maintains permission for users or nodes to access resources on other nodes.

Peripheral Expansion Chassis: This is a separate system chassis that contains additional peripherals, such as a Winchester disk, flexible disk drive and/or archive tape drive. This is an optional piece of equipment.

Print Queues: A facility that allows users to share a single printer. Print jobs (files) are sent to a queue where they are printed on a first-come, first-serve basis. The queues also permit you to perform other work without waiting for your print job to complete.

Root User: The system superuser. The root user has a special login and password that allows him to perform operating system maintenance, and permits him to access all system files.

Sub-Network Administrator: The person who manages an individual sub-network. Duties include initializing users, groups, and public workareas, controlling resources, and performing software feature installations and sub-network node administration.

SNR (Sub-Network Receiver): A sub-network node which all mail between the full network and the sub-network must pass through.

Sub-Network: A group of networked systems with a common set of users who have access to all the nodes in the group.

Standalone System: A system that is not connected to a network.

System Console: This is typically the key operator's terminal. It is plugged into connector J20 on the rear panel of single-, four-, and eight user systems, and connector J31 on the rear panel of 12-user systems. This is the terminal that must be used to shutdown and bring-up the system.

System Processes: All system software activities. Each user that logs in, software package that is loaded, or command that is issued causes one or more system process to occur.

Virtual Terminal: A software feature that allows a user to login to a remote node. The node responds to the user exactly the same as it would if the user's terminal were physically connected to it.

Workarea: A place where file cabinets are stored. There are three types of workareas: individual, group, and public. An individual workarea is the area where your personal files are stored; other users cannot access these files. A group workarea is an area where members of a pre-defined group can share files; only members in the group can access these files. Files in a public workarea can be accessed by any user on the network. When you login to the system, you automatically come up in the individual workarea.

XENIX: The multi-user operating system on the System 286/310. It controls the system activities and allows you to login to the system.

- Aasave, 2 16
- Aasavep, 2 19
- Akdisp, 2 9
- Akport, 2 14
- Aktop, 2 5
- aligning printer paper, 4 4
- Aprt, 2 11
- available disk space, 2 10

- backup devices, 6 1
- boot up, 3 1 thru 3 7
- broadcast a message, 2 6

- disable a port, 2 15, 5 2

- enable a port, 2 15, 5 1

- format a diskette, 2 19

- halting a printer, 4 2

- kill terminal activity, 2 14, 5 2

- menus, 2 2

- Aasave, 2-16
- Aasavep, 2-19
- Akdisp, 2-9
- Akport, 2-14
- Aktop, 2-5
- Aprt, 2-11

- qdef, 2-2
- Q-OFFICE printer administration, 4-5

- port administration, 5-1
- printer administration, 4-1
- printer operations, 2-11
- printer queues, 2-12, 4-3, 4-4
- product overview, 1-1

- restarting a printer, 4-2
- restore files, 2-17, 6-6 thru 6-7
- retention a tape, 2-19

- save to backup device, 2-17, 6-4
- serial port locations, A-1
- shut down, 3-7



WE'D LIKE YOUR OPINION

Please use this form to help us evaluate the effectiveness of this manual and improve the quality of future documents.

To order publications, contact the Intel Literature Department (see page ii of this manual).

Fill in the squares below with a rating of 1 through 10:

POOR			AVERAGE				EXCELLENT		
1	2	3	4	5	6	7	8	9	10

- Readability
- Technical depth
- Technical accuracy
- Usefulness of material for your needs
- Comprehensibility of material
- OVERALL QUALITY OF THIS MANUAL

If you gave a 4 or less (in any category), please explain here:

What suggestions would you have for improving this manual?

If you would like us to call you for more specifics about this book, provide the following information. Please print clearly.

Name _____

Phone Number (_____) _____

Address _____

Thanks for taking the time to fill out this form.



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS

PERMIT NO. 79

HILLSBORO, OR

POSTAGE WILL BE PAID BY ADDRESSEE

Intel Corporation
ISO Technical Publications, MS: EY2-06
5200 N.E. Elam Young Parkway
Hillsboro, Oregon 97124-9987





INTEL CORPORATION
3065 Bowers Avenue
Santa Clara, California 95051
(408) 987-8080

JAPAN
Intel Japan K.K.
5-6 Tohkohdai, Toyosato-cho,
Tsukuba-gun, Ibaraki, 300-26
Japan

FRANCE
Intel
5 Place de la Balance
Silic 223
94528 Rungis Cedex
France

UNITED KINGDOM
Intel
Pipers Way
Swindon
Wiltshire, England SN3 LRJ

WEST GERMANY
Intel
Seidlstrasse 27
8000 Muenchen 2
West Germany