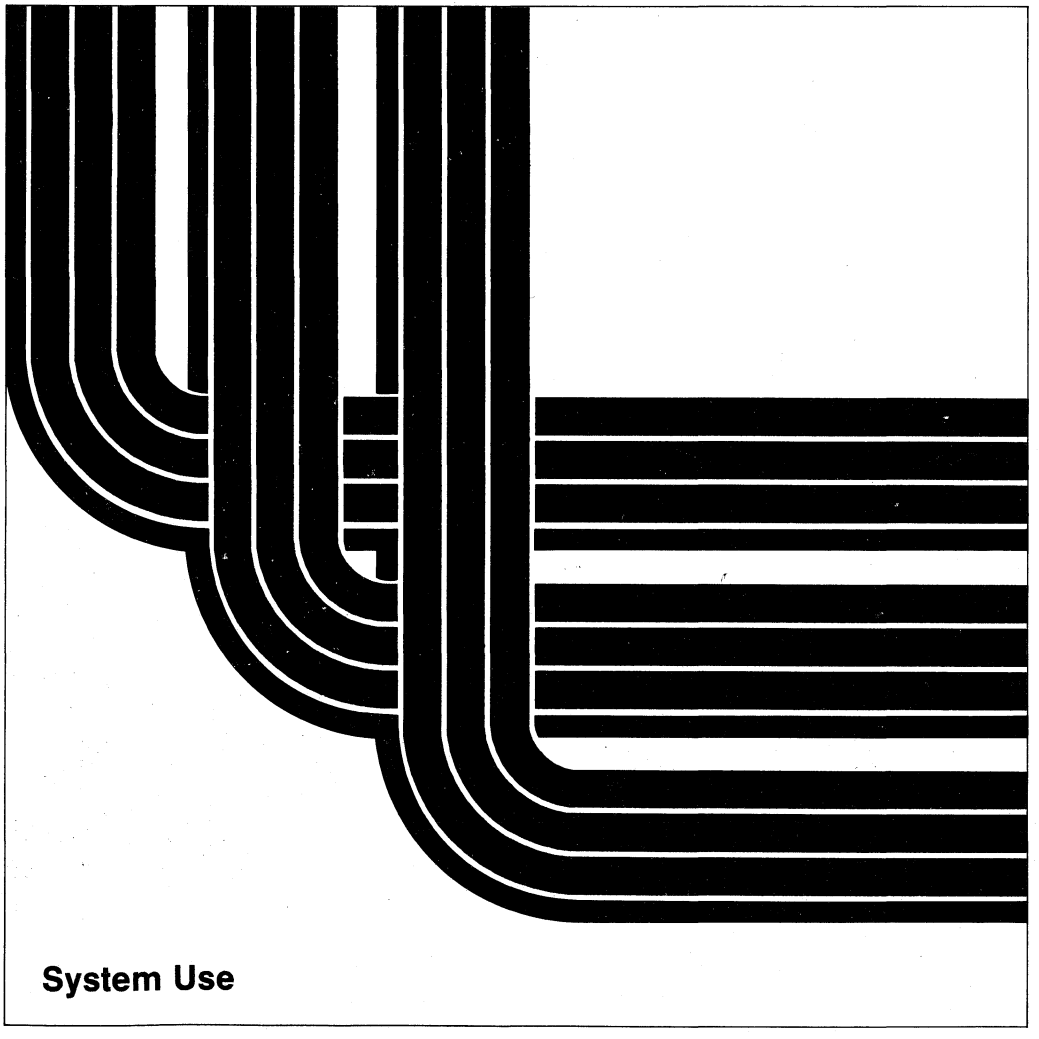
Application System/400

SC41-8200-01

PC Support/400: OS/2 User's Guide

Version 2



System Use

Application System/400

SC41-8200-01

PC Support/400: OS/2 User's Guide

Version 2

Take Note!

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

Second Edition (September 1992)

This edition applies to the licensed programs IBM PC Support/400 (Program 5738-PC1) and IBM Operating System/400 (Program 5738-SS1), Version 2 Release 2 Modification 0, and to all subsequent releases and modifications until otherwise indicated in new editions. This major revision makes obsolete SC41-8200-00. Make sure you are using the proper edition for the level of the product.

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Refer to the "Summary of Changes" on page x for a summary of changes made to the IBM PC Support/400 and how they are described in this publication.

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About This Guide

This guide explains how to use PC Support with OS/2 on a personal computer attached to an IBM AS/400 system.

Use this guide to learn how to use the PC Support product.

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

For a list of publications related to PC Support, see Table 1.

PC Support/400 Information

The following is a summary of the documentation available for PC Support/400. For a complete overview of the AS/400 system documentation, see the *Publications Guide*, GC41-9678.

Table 1. PC Support/400 Tasks and Publications

Tasks	Environment	Look in
Planning, Installation, Administration, Problem Analysis, and Customization	DOS	*PC Support/400: DOS Installation and Administration Guide*, SC41-0006
	DOS (DBCS)	*PC Support/400: DOS Installation and Administration Guide (PS/55)*, SC41-0008
	OS/2	*PC Support/400: OS/2 Installation and Administration Guide*, SC41-0007
	OS/2 (DBCS)	*PC Support/400: OS/2 Installation and Administration Guide (PS/55)*, SC41-0009
Using PC Support Functions	DOS	*PC Support/400: DOS User's Guide*, SC41-8199
	DOS (DBCS)	*PC Support/400: DOS User's Guide (PS/55)*, SC41-2414
	OS/2	*PC Support/400: OS/2 User's Guide*, SC41-8200
	OS/2 (DBCS)	*PC Support/400: OS/2 User's Guide (PS/55)*, SC41-2415
Education	All	• Tutorial System Support[1] • PC Support Introduction (PCSINTRO)[2]
Problem Analysis	All	• Online message help (PCSHELP) and extended help[2] • The PC Support error log (PCSLOG)[2] • The PC Support Installation and Administration Guide for your environment
Technical Information and Programming	All	• *PC Support/400: DOS and OS/2 Technical Reference*, SC41-8091 • *PC Support/400: Application Program Interface Reference*, SC41-8254

Notes:

1. To start online education, enter STREDU at the AS/400 command line.
2. For information about using these PC Support help features, see the chapter on "Getting Help When You Need It" in the *PC Support User's Guide*.

Summary of Changes

Transfer Function Requests

A new pull-down called Options is available on the Create a Transfer Request display. Chapter 15, "Saving, Recalling, Modifying, and Running Transfer Requests" on page 99 contains information on how to change your user-defined options for your transfer request.

Using Data Queues

For new data queue commands that are now supported, see the section called Part 9, "Using Data Queues with PC Support" on page 217.

PC Support Commands

Appendix A, "Using Commands with PC Support" on page 231 contains commands that are new for this release.

Terminology Changes

The phrase *action bar* has been changed to *menu bar* for this release.

Part 1. Getting Started with PC Support

Chapter 1. Taking Care of Business

This chapter contains information to help you:

- Understand PC Support
- Use proper command syntax when entering commands
- Learn the organization of this book

You do not have to read every word, but we do recommend skimming the information — especially the section on using correct command syntax. The information in this chapter could help you make decisions more quickly when using PC Support.

Defining PC Support

PC Support is a set of programs that allows you to:

- Share and store information in AS/400* folders, thus increasing the amount of information you have access to and decreasing the amount of information you must store on your personal computer.
- Transfer data from the AS/400 system to the personal computer and from the personal computer to the AS/400 system.
- Use printers attached to the AS/400 system as though they were PC printers.
- Use PC and AS/400 functions from the Organizer menu.
- Communicate with other users by sending and receiving messages.
- Work with PC and AS/400 commands.
- Perform PC Support host system tasks.
- Use AS/400 data queues.
- Display help information for any PC Support error message or informational message.
- View a log containing the most recent error messages and informational messages returned by the PC Support programs.
- Change the way PC Support operates by changing its configuration files.

Most of the PC Support functions are independent of each other. You can use one function or any combination of functions to satisfy your own data processing needs. For example, you might want to only use AS/400 printers with your other PC applications. Or, you might want to transfer data from the AS/400 system to your personal computer, process it with another PC application, and then print a report on an AS/400 printer.

Starting Off Right

To effectively use the information in this guide, you should:

- Have PC Support installed on both your personal computer and the AS/400 system
- Have PC Support configured to meet your specific needs (this is optional)
- Know how to use your personal computer
- Know how to use your personal computer's operating system

Using Correct Command Syntax

You can accomplish many tasks associated with PC Support by entering a command at a command line. But to be effective, you must enter the command using the correct command syntax.

Generally speaking, when you enter a command, you must be in the drive and directory containing the program the command is calling. If you are not, you must specify the drive and directory so your personal computer knows which path to follow to find the correct program. Also, most commands have parameters associated with them. Some of the parameters are required while others are optional. In this guide, any parameter placed within brackets ([and]) is optional. If you want to specify the parameter with the command, you do not need to enter the brackets, too.

Here is the general format for entering commands and the optional parameters associated with them:

```
[d:][path]command [/c] [/z]
```

where

d: Is the drive where the file is located. Unless a drive is specified, the default drive is assumed. If the file is on a different drive, type the drive letter followed by a colon.

path Is the path of the directory names. If you do not type a path, the default path is assumed. If the file is in a different directory, type the directory name followed by a backslash (\).

/c or /m Specifies which display mode to use. This value is optional. Enter an uppercase or lowercase C for a color display, or an uppercase or lowercase M for monochrome displays. If you enter this value in a command, it overrides (for that command only) the value set by your configuration file.

/z Tells PC Support to bypass the IBM logo displays. This value is optional. Enter an uppercase or lowercase Z to bypass the logo and other less meaningful messages.

Getting to Know This Guide

This section contains a brief overview of the organization of this manual. If you are looking for a specific piece of information, look in either the Table of Contents or the Index for information on finding what you need.

This manual contains multiple parts. Each part describes a certain function of the PC Support product. For example, there is a part on using folders, a part on transferring data, and a part on using printers.

Within each part, are two or more chapters describing the different tasks you can do using that function of PC Support. For example, in the part on using printers, there is a chapter explaining how to assign a printer and a chapter explaining how to release a printer. In most cases, representations of sample displays are included with the information. In some cases, examples are also provided.

Moving Right Along

Now that we have this preliminary information out of the way, we can get down to business and learn something about PC Support. Your next step depends on how much you already know about PC Support. This section explains where to go next.

If you are unfamiliar with PC Support, you should read the information in:

- Chapter 2, "Learning to Use PC Support Menus" on page 7
- Chapter 3, "Using PC Support Displays" on page 13
- Chapter 4, "Learning to Use the PC Support Keyboard" on page 27
- Chapter 5, "Getting Help When You Need It" on page 33

before continuing with the rest of this manual. You will need to know what the displays look like, how to use the keyboard, and how to get help. These chapters explain this information.

If you are already familiar with PC Support, you should read the information in Chapter 5, "Getting Help When You Need It" on page 33 before continuing with the rest of this manual. By reading this information before continuing, you will know how to display help information for almost any message you receive while using PC Support. You will also know how to display a log containing the PC Support messages you have received while using the product. This could be very helpful to you when tracing a problem.

Chapter 2. Learning to Use PC Support Menus

Depending on what was selected during the installation and configuration process, one of three menus may be shown when you start PC Support: the PC Support/400 Menu, the PC Support/400 Organizer menu, or a menu created specifically for your needs.

PC Support provides you with the PC Support/400 Menu and the PC Support/400 Organizer menu. You can use either of these menus to complete any PC Support task. This manual is written as if you were using the default PC Support/400 Menu.

Note: If a menu has been created for you, you should check with your system administrator for information about its appearance and options. Blank space has been provided for you to record information about any special menus you use. See "Notes On Using Your Own Menu" on page 12 to record your special instructions.

This chapter shows how each of the default menus appear. It also briefly describes the options on each of the menus and refers you to the appropriate chapter for more detail.

Using the PC Support/400 Menu

This section shows the PC Support/400 Menu and describes the options on the menu. You can use this menu to perform any task associated with PC Support.

The following display shows how the PC Support/400 Menu appears:

```
                          PC Support/400 Menu

Select one of the following

 Learn About PC Support
    View PC Support Introduction

 Perform PC Support Tasks
    Go to PC command prompt
    Use printers on host system
    Use folders on host system
    Transfer data
    Send and receive messages
    Go to Organizer menu
    Submit host system command

 Manage Your PC Support Environment
    Configure PC Support
    Administer PC Support
    View PC Support Error Log

_____________________________________________________________________

Enter   Esc=Cancel   F1=Help   F3=Exit
```

This manual describes most of the options on the PC Support/400 Menu. This manual does not describe how to use the options `Configure PC Support` or `Administer PC Support`. This manual assumes that PC Support is already set up and ready to use. For information on configuring PC Support or using the tasks created for the system administrator, see the manual *PC Support/400 OS/2 Installation and Administration Guide*.

The following information provides a brief overview of each option on the display. It also contains the appropriate chapter or manual to refer to for more information.

Viewing the PC Support Introduction

Select this option to view an online introduction to PC Support. The information contained in the introduction covers both basic and advanced topics in PC Support. For example, you could read basic information about assigning virtual printers or you could read advanced information about communications between your personal computer and the AS/400 system.

For more information about using the online introduction and other types of online help information, refer to Chapter 5, "Getting Help When You Need It" on page 33.

Going to the PC Command Prompt

Select this option to display the PC command prompt. You can do many things from the PC command prompt. For example, you can:

- Run a PC program
- Send AS/400 commands from your personal computer to your AS/400 system or to any AS/400 system in your network
- Assign an AS/400 folder to an available shared folders function drive
- Use data queues with your commands

Using Printers on the Host System

Select this option to work with printers attached to the AS/400 system.

PC Support allows you to use printers connected to the AS/400 system as though they were directly connected to your personal computer. An AS/400 printer used this way is called a **virtual printer**.

For information about assigning a personal printer as an AS/400 printer, see Chapter 24, "Printing on an AS/400 Printer with PC Support" on page 203.

Using Folders on the Host System

Select this option to work with information in AS/400 folders.

AS/400 folders are used on the AS/400 system to store information, such as text documents. By sharing folders with other PC and AS/400 users, you can increase the amount of information available to you. Storing information, such as PC programs, files, and text documents, in AS/400 folders rather than on your personal computer also makes your personal computer's storage space available for other uses.

The information in a folder can be used by both AS/400 and PC users, and the folder can be shared by more than one AS/400 or PC user at a time.

For information about working with folders, see Chapter 8, "Understanding the Concept of Shared Folders" on page 53.

Transferring Data

Select this option to either transfer data from your personal computer to the AS/400 system, or from the AS/400 system to your personal computer.

PC Support allows you to transfer data from the AS/400 system to the personal computer, and from the personal computer to the AS/400 system. In order to transfer data, you must create a **transfer request**. The transfer request tells PC Support everything it needs to know about the data you want to transfer.

For more information about transferring data, refer to Chapter 12, "Getting Ready to Transfer Data" on page 79.

Sending and Receiving Messages

PC Support allows you to communicate with other AS/400 users by sending and receiving messages. You can communicate with other display stations or personal computers attached to the AS/400 system. If you are on a network, you can communicate with other users on that network.

For more information, see Chapter 22, "Sending Messages" on page 191.

Going to the Organizer Menu

Select this option to go to the PC Support/400 Organizer menu. If you are already running the 5250 Work Station Feature but are not running the organizer, selecting this option starts the organizer. Once you start the organizer and display its menu, you can use any of the options on the Organizer menu.

The Organizer menu allows easy access to PC applications as well as OfficeVision/400* and data processing applications. For example, when you run the organizer, you can use the following:

- PC operating system and applications
- OfficeVision/400 functions
- AS/400 applications
- PC Support functions

When running the organizer, the following word processing applications are available:

- OfficeVision/400
- DisplayWrite*

The options on the PC Support/400 Organizer menu can be changed to display any AS/400 or PC application that you frequently use. You can also create your own menu using the OS/400* screen design aid (SDA).

For more information about using the Organizer menu, refer to Chapter 18, "Using the PC Support Organizer Menu" on page 171.

Submitting Host System Commands

Select this option to send commands from your personal computer to your AS/400 system. You can use this option to submit single commands or multiple commands contained in a file. You can send the commands to a remote system.

For more information about working with remote systems, refer to Chapter 19, "Getting Ready to Send Remote Commands" on page 183.

Using Data Queues with PC Support

PC Support provides several batch programs to help you use data queues with your applications. You can:

- Send data to a data queue with the SNDTAQ command
- Receive data from a data queue with the RCVDTAQ command
- Clear data from a data queue with the CLRDTAQ command
- Stop data queue conversations taking place with an AS/400 system using the STPDTAQ command

For more information about data queues, refer to Part 9, "Using Data Queues with PC Support" on page 217.

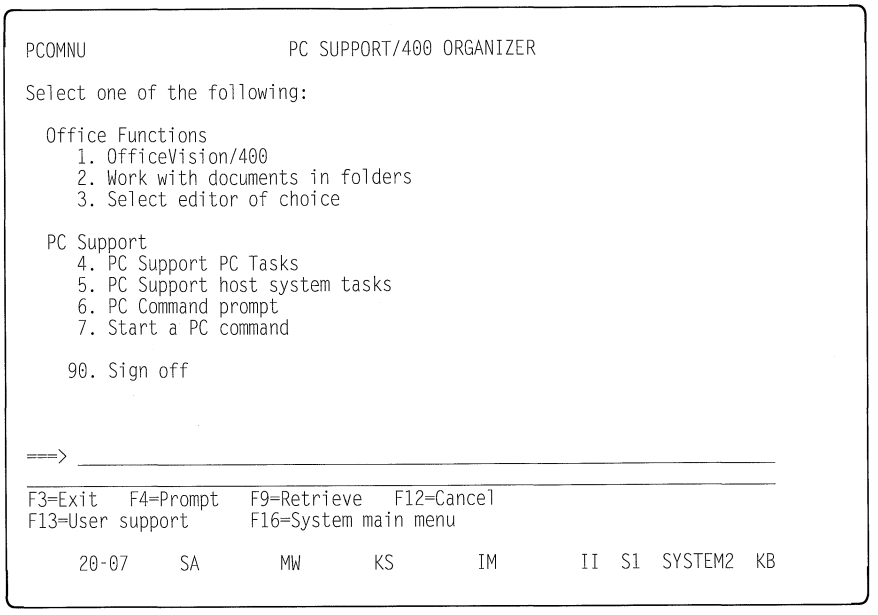
Using Your Personal Computer as an AS/400 Work Station

Though not a selectable option on the PC Support/400 Menu, the 5250 Work Station Feature of OS/2* Extended Edition Version 1.2 allows you to use your personal computer like an AS/400 display station and personal printers connected to your personal computer as AS/400 printers. A personal printer used in this way is called a **work station feature printer**.

Using the PC Support/400 Organizer Menu

This section describes the PC Support/400 Organizer menu. From the Organizer menu, you can run AS/400 applications as well as PC Support and other PC applications. It brings the functions of the host, and those of the personal computer, together on one organized menu.

If the organizer was selected when PC Support was installed, the organizer is started automatically for you when you start PC Support with the STARTPCS command. Unless you have made changes during installation, the AS/400 Sign On display is shown when the organizer is started. You must sign onto the AS/400 system before the organizer can continue. Once you have signed on, the PC Support/400 Organizer menu is shown. It should look similar to the following sample display:



Using OfficeVision/400

Select option 1 (OfficeVision/400) to work with any task associated with OfficeVision/400. For more information about using OfficeVision/400, refer to the appropriate manual in the OfficeVision/400 library.

Working with Documents in Folders

Select option 2 (Work with documents in folders) to access information contained in folders on the AS/400 system. For example, by selecting this option, you could either create a folder or store a document in a folder.

Selecting an Editor of Choice

Select option 3 (Select editor of choice) to choose the editor you want to use when working with documents. You can select OfficeVision/400 or one of the DisplayWrite editors. For detailed information about using any of these editors, refer to the appropriate manual in the OfficeVision/400 library or the DisplayWrite library.

Performing PC Support PC Tasks

Select option 4 (PC Support PC Tasks) to return to the PC Support/400 Menu. Once you have returned to the PC Support/400 Menu, you can perform any PC task listed on the menu.

Performing PC Support Host System Tasks

Select option 5 (PC Support host system tasks) to perform tasks associated with the AS/400 system.

While you are using your personal computer as an AS/400 work station, you can copy data either from an AS/400 database file to a PC document, or from a PC document to an AS/400 database file. You can also do these tasks from any other AS/400 work station.

If you have data stored in an AS/400 database file, you can use the Copy to PC Document (CPYTOPCD) command to copy the data to a document in a folder. Once you have copied the data to a document, you can work with it using a text editor.

If you have data stored in a document on the AS/400 system that you want to store in a database file on the AS/400 system, you can use the Copy from PC Document (CPYFRMPCD) command to copy the data. You can then work with the data using any of the AS/400 commands available for working with database files.

Using the PC Command Prompt

Select option 6 (PC Command prompt) to display the PC command prompt. You can enter an assortment of PC commands from the PC command prompt to accomplish tasks like starting a PC program, assigning a folder, or working with an AS/400 system.

When you enter a command from a PC command prompt, you remain at the command prompt when the command finishes. You should type `Exit` on the command line and press the Enter key to return to the PC Support/400 Organizer menu.

Starting a PC Command

Select option 7 (Start a PC command) to enter any PC command. When you enter a command using option 7, you are returned to the PC Support/400 Organizer menu when the command finishes.

Signing Off the AS/400 System

Select option 90 (Sign off) to sign off the AS/400 system. When you sign off the AS/400 system, the organizer is ended for you. If you want to start the organizer again, select the option `Go to AS/400 PC Organizer menu` on the PC Support/400 Menu.

Notes On Using Your Own Menu

If you are using a menu designed specifically for your needs, you can use this section to record any special instructions for displaying the menu.

Chapter 3. Using PC Support Displays

When using PC Support, you need to select options and respond to prompts on the display. To do this, you need to understand how the following parts of the display function:

- Cursor
- Arrows
- Windows
- Highlighting
- Action lists
- Option lists
- Prompts
- Item lists
- Help information
- List of keys
- Messages

As you read the descriptions of the parts of a display, pay special attention to the methods identified for making selections on the displays. In most cases, making a selection on a display is obvious. But, there are a few instances where it can get confusing. For example, when working with prompts containing lists (see "Prompts with Lists" on page 19), be sure to first highlight the option you want in the list, and then press the spacebar to select the option. If you do not press the spacebar, your selection will not be used.

You can operate the PC Support function displays using a keyboard or a mouse. If you are using a mouse, you can switch between the mouse and the keyboard at any time.

This guide assumes that you are familiar with the basic operation of a mouse. If you have a mouse installed on your personal computer, a mouse pointer should be on your display. Otherwise, a cursor should be on your display.

Cursor

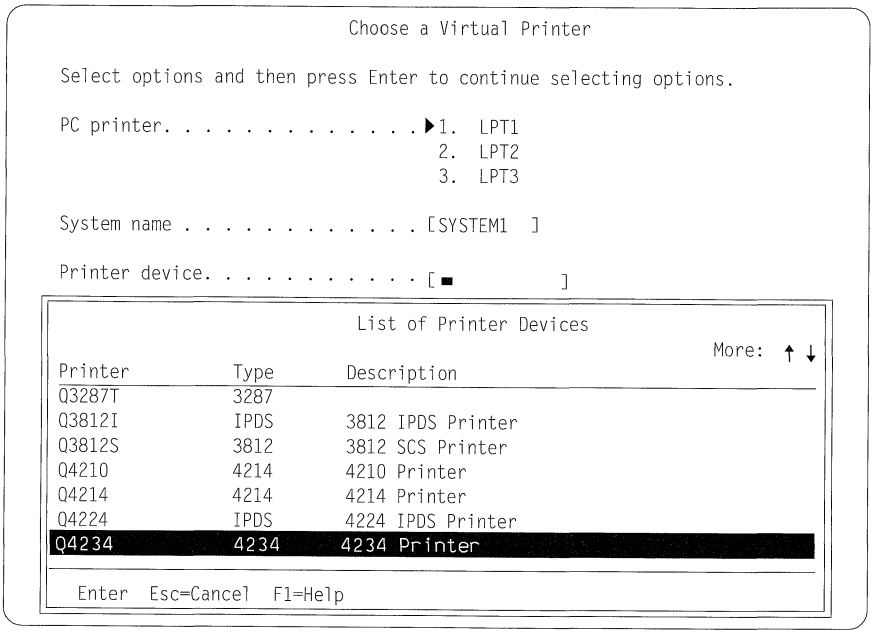
A cursor is a movable symbol on a display, often a blinking or solid block of light, that tells the user where to type, or identifies a choice to select. The cursor appears as a line or as a rectangle. When the cursor appears as a line, any existing characters are replaced by the characters you type. When the cursor appears as a rectangle, the characters you type are inserted between any existing characters at the cursor position.

Arrows

When all of the information does not fit on one display or in one window, the word More appears in the top right corner of the display or window.

When more information is *after* what is currently shown, a down arrow appears in the top right corner of the display or window. When more information is *before* what is currently shown, an up arrow appears in the top right corner of the display or window.

For example, the following display shows a window. The arrows indicate that more information is *before* and *after* what appears on the display.



RSLN381-3

To move forward or backward one page at a time, press the Page Down key or the Page Up key. To move forward one line at a time, press the Down Arrow or Up Arrow key.

When more information is to the left or right of a display or window, left or right arrows appear in the top left corner of the display or window. To move the display or window left or right one page at a time, press the Ctrl key and the Left Arrow key or the Ctrl key and the Right Arrow key. When transferred data records are displayed, you can move the display or window left or right one character position at a time by pressing the Left Arrow or Right Arrow key.

When you are using a mouse, you can move forward or backward one line at a time by placing the mouse pointer on the up or down arrow and then pressing and releasing the select button. To move rapidly through the information, place the mouse pointer on either arrow, and then press and hold the select button.

To move the windows left or right one character at a time using a mouse, place the mouse pointer on the left or right arrow, and then press and release the select button. To move rapidly to the right or to the left, place the mouse pointer on either arrow, and then press and hold the select button.

Windows

Windows display additional information, such as help information, selection lists, and messages. When a window is displayed, it temporarily overlays a portion of the display (depending on the amount of information) either above or below the line to which it applies.

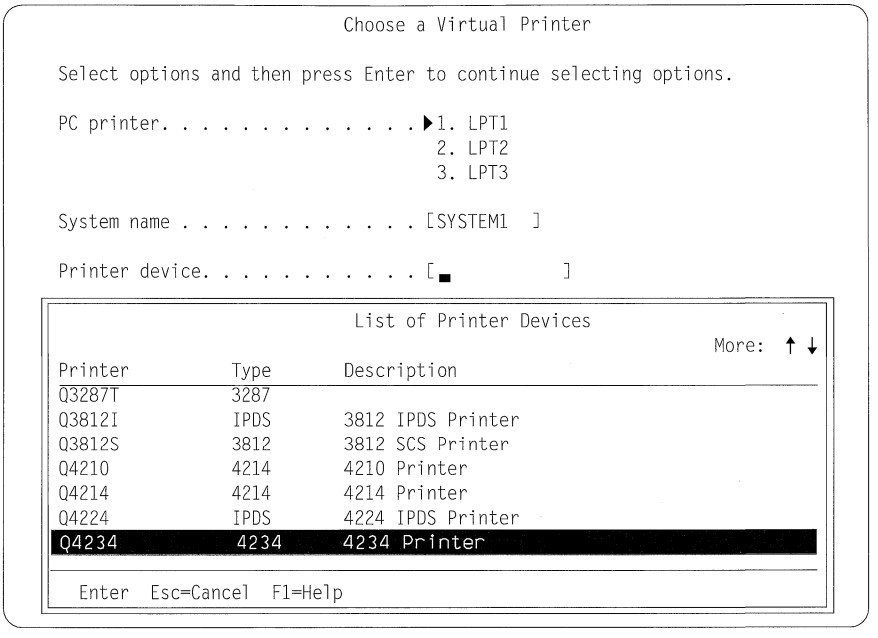
You can display a window by pressing F1 to request help, or by pressing F4 to request a list of choices for an input area. Sometimes PC Support automatically

displays a window to show you messages about errors that you must correct, or to let you know what is happening while a request is being processed.

When you are using a mouse, you can display a help window by placing the mouse pointer on F1=Help at the bottom of your display, and then pressing and releasing the select button. A help window appears containing information about the function you are using. When you want to display a list of choices for an input area, place the mouse pointer on F4=Prompt, and then press and release the select button.

Refer to "Function Keys" on page 30 for descriptions of the function keys that allow you to page, display, and remove windows.

The following display shows a list window:



RSLN351-2

Highlighting

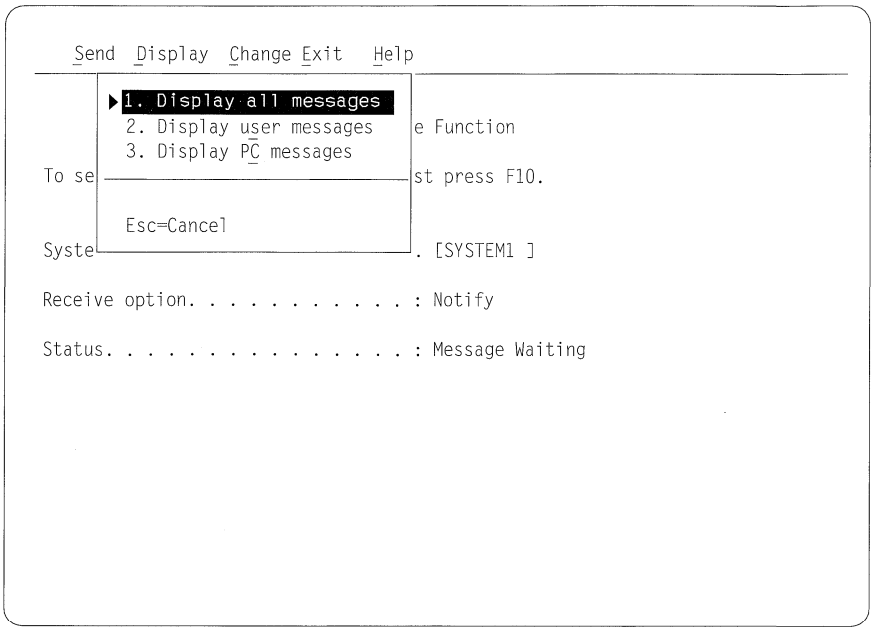
Highlighting indicates which item is to be selected in a list. You can highlight a different item by moving the cursor with a mouse or the arrow keys on your keyboard.

To use the arrow keys, press the Up Arrow or Down Arrow key to move the highlighting to the next selection in either direction.

When you are using a mouse, you can change your selection in these ways:

- Move the mouse pointer to the appropriate item, and then press and release the select button.
- Press and hold the select button, and move the mouse pointer over the items. Release the button when the appropriate item is highlighted.

The following display shows highlighting. When you press the Enter key, or press and release the select button on a mouse while the pointer rests on the highlighted option, option 1 (Display all messages) is selected.



RSLN376-5

Action Lists

Action lists show you the tasks you can perform from a display. The actions are listed at the top of the display and can be selected using a mouse or a keyboard.

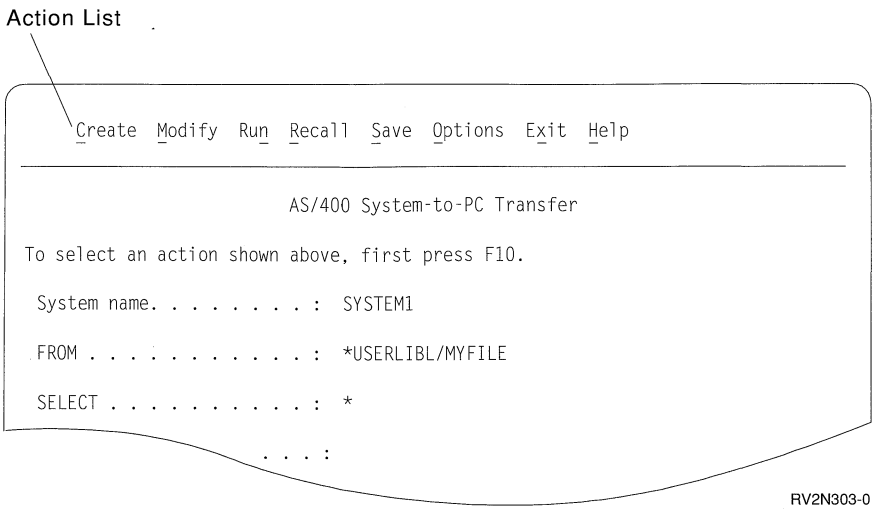
When you are using a keyboard, you must press F10 (Action) before you can select an action. After you press F10, the first action is highlighted.

When you are using a keyboard, you can select an action in these ways:

- Press either the Right Arrow key, Left Arrow key, or the Tab key until the action you want is highlighted, and then press the Enter key.
- Type the highlighted letter of the action you want.

When you are using a mouse, move the mouse pointer to the action you want to select, and then press and release the select button. An option list appears. To choose a different option list, move the mouse pointer to a different action. Press and release the select button; the new option list automatically appears. Once the desired option list is displayed, choose an option from the list by positioning the mouse pointer on the option and press the select button. To cancel an option list, move the mouse pointer away from the option list and then press the select button.

The following display shows an action list:



Option Lists

Option lists give you choices about the action you selected. After you select an action, a list of options appears below the action list. The options that you can select are numbered, and the first option you can select is highlighted.

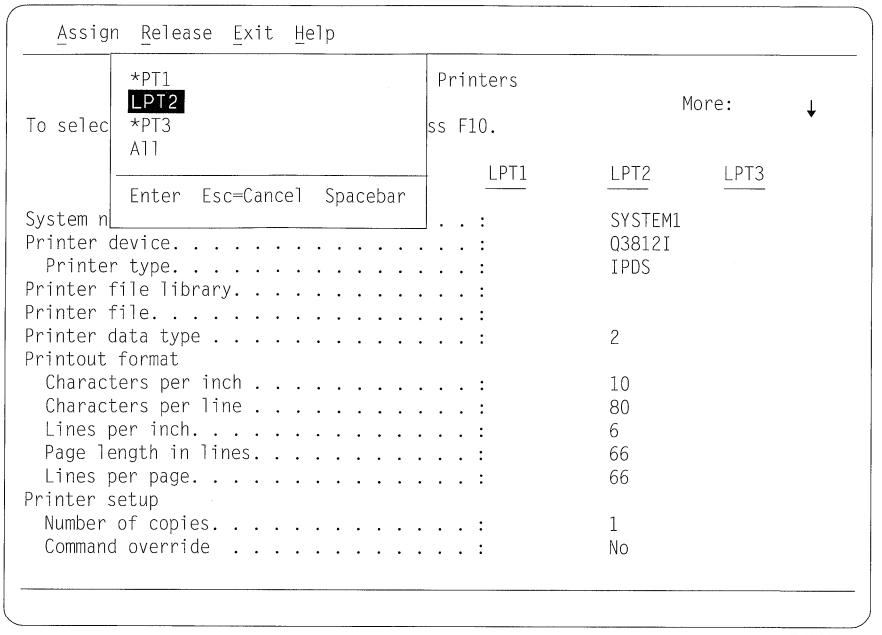
When you are using a keyboard, you can select an option in any of these ways:

- Press the Up Arrow or the Down Arrow key until the option you want is highlighted, and then press the Enter key.
- Type the highlighted letter of the option.
- Type the number of the option.

When you are using a mouse, you can select an option in either of these ways:

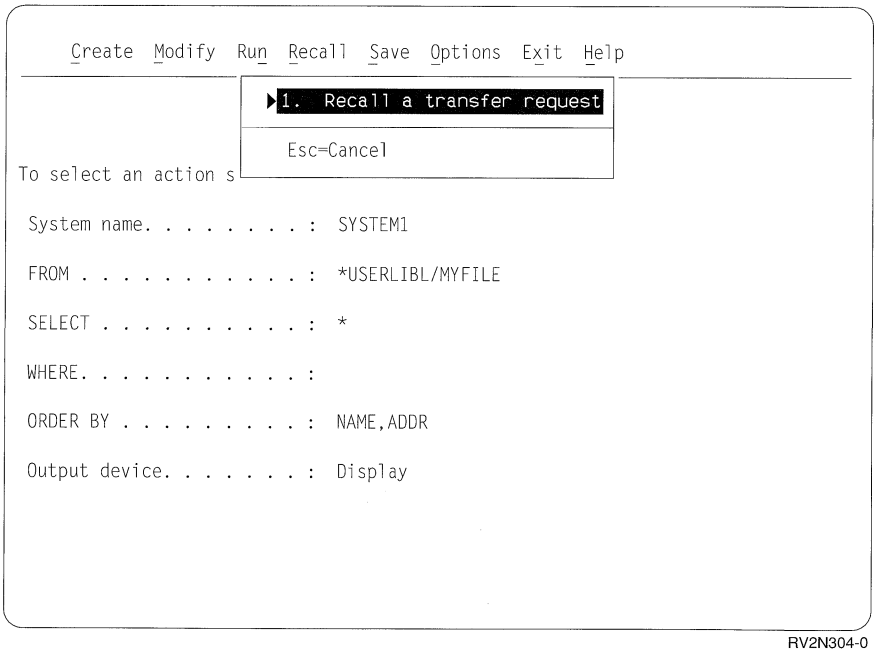
- Move the mouse pointer to the appropriate option, and then press and release the select button.
- Press and hold the select button, move the mouse pointer until the option you want is highlighted, and then release the select button.

Sometimes asterisks (*) appear in the first position of a list item to show which items cannot be selected at that time. The following display shows how the asterisks appear:



RSLN423-0

The following display shows the option list that appears after Recall is selected from the action list:



RV2N304-0

When you are using a keyboard, you can return to the action list by pressing the Esc key. While an option list is displayed, you may switch to other option lists by pressing the Left Arrow or Right Arrow key. When you are using a mouse, move the mouse pointer to a different action, and press and release the select button.

Prompts

Prompts ask you for specific information. They appear on the display followed by a list of choices or by an input area. When you use the interactive PC Support programs, prompts guide you through functions, such as creating a transfer request or assigning a virtual printer.

When you are working with a display that contains more than one prompt, use the Tab key or the Up and Down Arrow keys to move from one prompt to the next.

Before pressing the Enter key to save the values you selected, check all of the prompts on the display to see if the values are the ones you want. A down arrow in the upper right corner of the display indicates that additional prompts are on another display. Use the Page Down key to see the prompts on the next display.

Note: Do not press the Enter key until you have checked the values for all prompts.

Prompts with Lists

Some prompts are followed by a list of choices. If a choice is currently selected, a small arrow is shown to the side of the selection. When you change the selection, the arrow moves to indicate your new choice.

The choices you can select are numbered. Selecting from a list of choices is similar to selecting from option lists.

When you are using a keyboard, you can select an option in any of these ways:

- Press the Up Arrow or the Down Arrow key until the option you want is highlighted, and then press the spacebar.
- Type the highlighted letter of the option.
- Type the number of the option.

When you press the spacebar, or type the letter of the option, or type the number of the option, a small arrow appears next to the option you have selected.

When you are using a mouse, you can select an option in either of these ways:

- Move the mouse pointer to the option, and then press and release the select button.
- Press and hold the select button, move the mouse pointer until the option you want is highlighted, and then release the select button.

When you select an option with a mouse, a small arrow appears next to your selection.

If you select a choice you do not want, you can change your selection by repeating any of the steps listed above.

Prompts with Input Areas

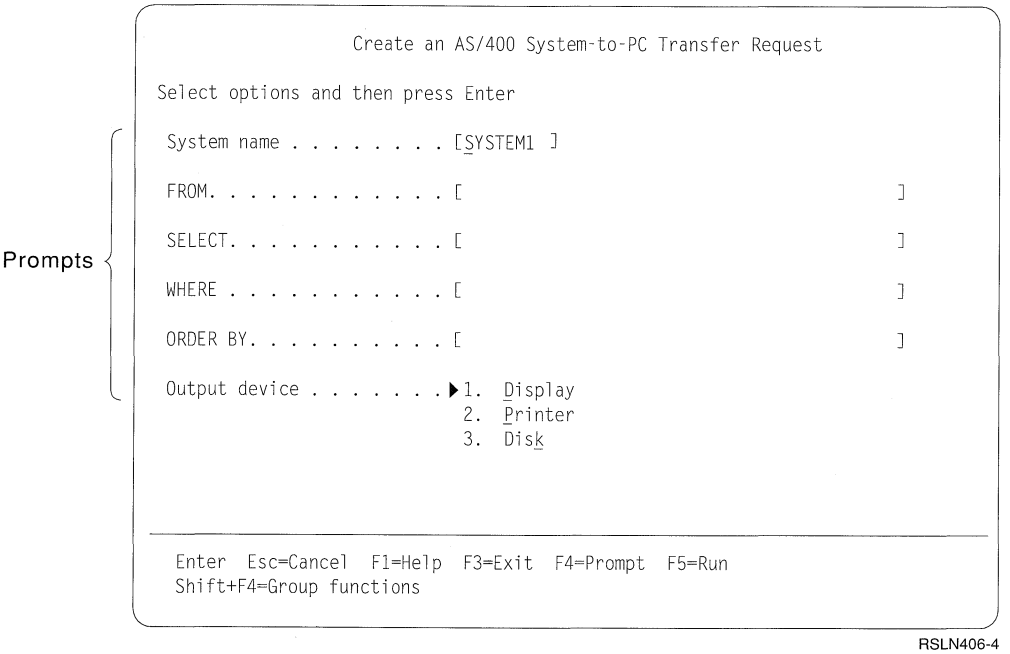
Some prompts are followed by input areas that show you where you can type information on the display. The input areas are indicated by square brackets ([ ]). Sometimes, input areas already have a value, as in these situations:

- You are changing a function that you have worked with before. For example, you could be changing characteristics of a virtual printer you previously assigned.
- You are using a function that automatically supplies a value.

If you want to change a value, type over it with the value you want to use. When you do not type a value, the program uses the value shown.

When F4=Prompt is shown at the bottom of the display and the cursor is in an input area, you can display a list of possible values for that area. See "Item Lists" for more information about these lists.

The following display shows several prompts:



RSLN406-4

Some input areas allow you to type more information than will fit on the display. In this case, instead of a square bracket ending the input area, a greater than (>) symbol is shown. As you type information in the input area, the existing text automatically moves to the left so that you can insert more information. A right square bracket ( ]) tells you when you have reached the end of the input area.

Sometimes a prompt is followed by a colon (:) rather than by square brackets. This means that the prompt is being shown only for your information and you cannot change it on the display.

Item Lists

When F4=Prompt is shown at the bottom of your display, you can request a list of possible choices for the input areas on the display.

When you are using a keyboard, position the cursor in the input area for which you want the list and then press F4.

When you are using a mouse, position the cursor so it is in the input area for which you want the list, move the mouse pointer to F4=Prompt, and then press and release the select button.

This display shows a list that might appear when you use F4 while the cursor is in the SELECT input area:

```
                Create an AS/400 System-to-PC Transfer Request

Select options and then press Enter

System name. . . . . .[SYSTEM1 ]

FROM . . . . . .[QIWS/QCUSTCDT                ]

SELECT . . . . . .[*                          ]

                                List for SELECT                  More: ↑ ↓
Field    Type    Length   Digits   Decimals   Description
CUSNUM   ZONED        6        6          0   Customer number field
LSTNAM   CHAR         8        0          0   Last name field
INIT     CHAR         3        0          0   First & middle initial field
STREET   CHAR        13        0          0   Street address field
CITY     CHAR         6        0          0   City field
STATE    CHAR         2        0          0   State field
ZIPCDE   ZONED        5        5          0   Zip code field
CDTLMT   ZONED        4        4          0   Credit limit field

Enter  Esc=Cancel  F1=Help  F9=Insert Line  Ctrl+Left  Ctrl+Right
```

RSLN407-2

When you are using a keyboard, you can select from the list by pressing the Up and Down Arrow keys to highlight the item you want, and then pressing the Enter key. Your selection is copied into the input area.

When you are using a mouse, you can select from the list in these ways:

- Move the mouse pointer to the appropriate item, and then press and release the select button.
- Press and hold the select button while moving the pointer over the options. When the option you want is highlighted, release the select button.

Help Information

When you need help while using PC Support, you can get online help information in several ways.

- F1 (Help)

  When you are using a keyboard and want to display help information about the function you are using, press F1 on the first display before you have pressed F10 to select an action. When you want to display help information about a part of the display or about a highlighted item, move the cursor to that part of the display and then press F1.

  When you are using a mouse and want to display help information about the function, move the mouse pointer to F1=Help at the bottom of your display and then press and release the select button.

- F2 (Extended Help)

  When F2 is shown at the bottom of a help window, you can select it to show instructions about selecting items from a list, supplying information for a prompt, or displaying additional information about the display.

  When you are using a keyboard, press F2 to display this information.

When you are using a mouse, move the mouse pointer to F2=Extended Help, and then press and release the select button.

- F5 (Introduction)

  When F5 is shown at the bottom of the PC Support/400 Menu, you can select it to display an online introduction to PC Support or search for specific help information. Highlighted words, commands, phrases, and related topics within the help text indicate that more information is available about that topic. To view the information, move the cursor to the highlighted phrase and press the Enter key. Using the Shift key with F6, you can display a list of all the topics you have selected.

- F9 (Keys)

  When F9 is shown at the bottom of a help window, you can select it to show information about the function keys you can use with the display.

  When you are using a keyboard, press F9 to display this information.

  When you are using a mouse, move the mouse pointer to F9=Keys, and then press and release the select button.

- F11 (Help Index)

  When F11 is shown at the bottom of your display, you can select it to display an alphabetical list of help topics.

  When you are using a keyboard, press F11 to display the information. Use the Up or Down Arrow keys to move forward or backward through the list. When you find the topic you want, press the Enter key to display the help information.

  When you are using a mouse, move the mouse pointer to F11=Help index, and then press and release the select button. When you find the topic you want, move the mouse pointer to the topic, and then press and release the select button to display the help information.

- Shift and F6 (View help list)

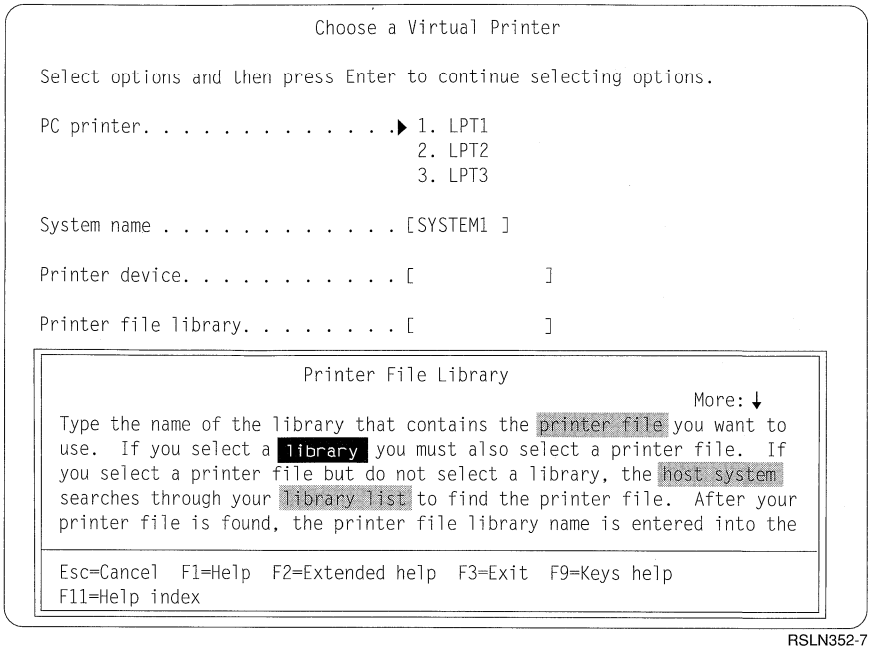
  When Shift + F6 (View help list) is shown at the bottom of your display, you can select it to display a list of topics you have already selected while using the introduction to PC Support.

  and hold the Shift key, and then press F6 to display this information.

  When you are using a mouse, move the mouse pointer to *Shift + F6=View help list* on the display, and then press and release the select button.

- Additional online information allows you to access specific information about a topic or term. When you want more information about a term, move to that highlighted term and press the Enter key.

The following display shows a help window with additional help options:



RSLN352-7

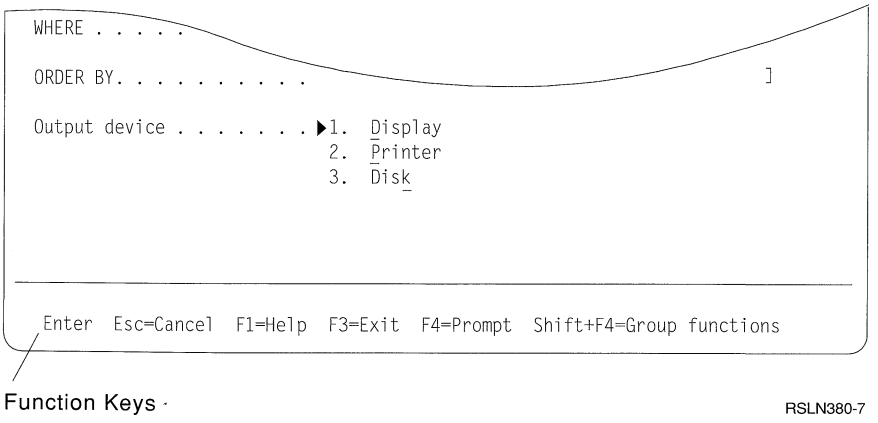
After reading through the help information, you need to remove it from the display. You cannot select choices on the display or type in an input area until this is done.

When you are using a keyboard, press the Esc key or F3 (Exit) to remove the window.

When you are using a mouse, move the mouse pointer to Esc=Cancel or F3=Exit, and then press and release the select button.

List of Keys

A list of keys shows you the functions you can perform from a display. Keys and the functions they perform are listed on the last line of the display or window. This list of keys may change as you move from one prompt to another. The following display shows a list of keys:



RSLN380-7

For a detailed description of the functions these keys perform, refer to "Function Keys" on page 30.

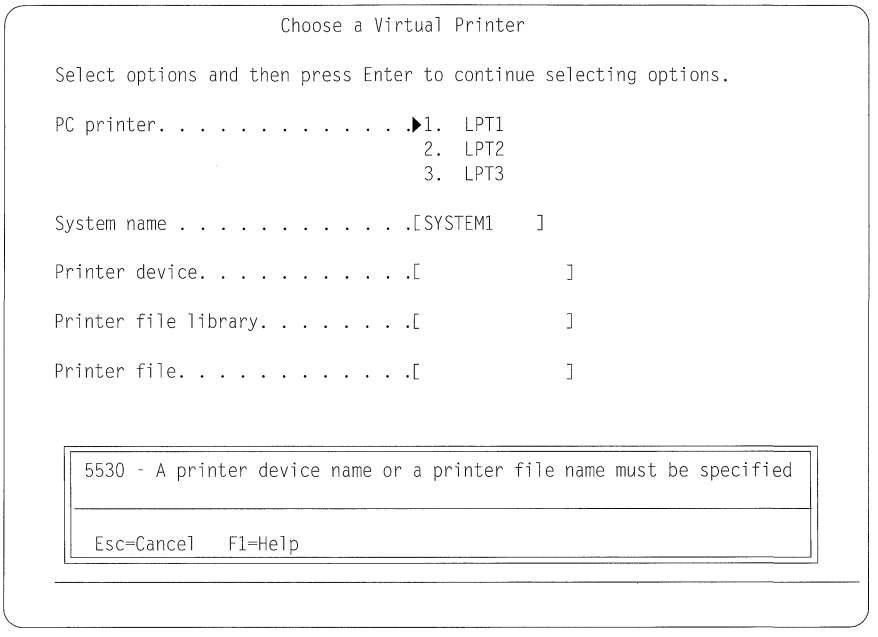
Messages

PC Support issues two types of messages:

- **Error messages**, which tell you that an error occurred and that processing cannot be done or was done incorrectly.
- **Informational messages**, which tell you what is happening during or after processing.

Error Messages

Error messages are shown inside windows on the display or on the bottom of the display. The following display shows an error message inside a window:

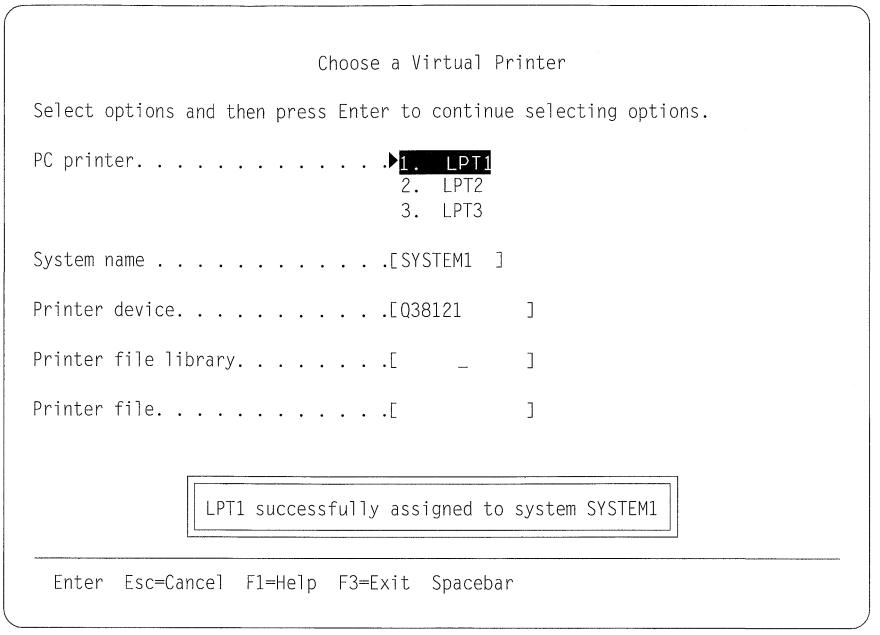


RV2N233-0

When you receive an error message, you can display its cause and recovery information by pressing F1 (Help) from the error message window. For instructions on how to do this, see Chapter 5, "Getting Help When You Need It" on page 33.

Informational Messages

Some messages are for your information only and require no recovery action. The following display shows an informational message:



RSLN355-5

Informational messages automatically disappear as you continue with your work.

Chapter 4. Learning to Use the PC Support Keyboard

Your keyboard functions differently depending on what is shown on your display. For example, the Tab key performs one function when a list is shown and another function when a prompt is shown. Be sure to read Chapter 3, "Using PC Support Displays" on page 13 to familiarize yourself with the different types of PC Support displays. Then, read the information in this chapter.

This chapter describes the functions of:

- Cursor movement and window movement keys
- Control keys
- Function keys

The information in these sections does not apply to your keyboard when you are using the 5250 Work Station Feature to make your personal computer imitate a display, graphics, or printer work station. For information about the functions of the keys while using work station function, refer to the manuals provided with the OS/2 Extended Edition program.

Cursor Movement and Window Movement Keys

The following keys control cursor and window movement for PC Support:

Key	Function
Tab (→|)	For a list, this key moves the highlighting to the next item so you can select it. For displays with prompts, this key moves the cursor to the first position of the next prompt. When the next prompt is not on the display, the display rolls forward to the next prompt, and the cursor moves to the first position of that prompt.
Backtab (|←)	To use the Backtab key, you must press and hold the Shift key and then press the Tab key. For a list, this key moves the highlighting to the previous item so you can select it. For displays with prompts, when the cursor is in the first position of a prompt, this key moves the cursor to the first position of the previous prompt. When the previous prompt is not on the display, the display rolls backward to the prompt on the previous display and the cursor moves to the first position of that prompt.
Backspace (←)	When the cursor is not in the first position of the input area, this key moves the cursor backward one position and deletes the character at that position.

Key	Function
Enter (↵)	For displays with prompts, the Enter key processes input and choices you make. **Note:** Do not press the Enter key until you are sure that ALL the values for prompts on the display (and on the next display, when an arrow indicates that there is more information following) are the ones you want. For lists, this key moves an item from a list to an input area. This key can also be used to respond to an error message.
Up Arrow (↑)	When there is a prompt above the cursor, this key moves the cursor to that prompt. When there is no prompt above the cursor, but there is a previous prompt that is not on the display, the display rolls backward and this key moves the cursor to that prompt. In a list, this key moves the highlighting up one line. When the highlighting is at the top of the window and there is an up arrow in the top right corner of the window, the window rolls backward one line.
Down Arrow (↓)	When there is a prompt below the cursor, this key moves the cursor to that prompt. When there is no prompt below the cursor, but there is a following prompt that is not on the display, the display rolls forward and this key moves the cursor to that prompt. In a list, this key moves the highlighting down one line. When the highlighting is at the bottom of the window, and there is a down arrow in the top right corner of the window, the window rolls forward one line.
Left Arrow (←)	This key moves the cursor one position to the left. When the cursor is in the first position of an input area, the cursor moves to the previous prompt on the display. When you are paging through transferred records and there is data to the left of the window, this key moves the window one position to the left.
Right Arrow (→)	This key moves the cursor one position to the right. When the cursor is in the last position of an input area, the cursor moves to the next prompt on the display. When you are paging through transferred records and there is data to the right of the window, this key moves the window one position to the right.
End	This key moves the cursor to the end of the data on the line where the cursor is located.
Escape (Esc)	This key ends the current display and shows the previous display. If you made changes to the current display but did not press the Enter key, the changes are not processed. When a window is displayed, this key removes the window from the display.
Page Up (Pg Up)	When there is an up arrow in the top right corner of the display or window, this key rolls the display backward one page.
Page Down (Pg Dn)	When there is a down arrow in the top right corner of the display or window, this key rolls the display forward one page.

Key	Function
Insert (Ins)	This key allows you to insert characters. The cursor changes to a blinking rectangle occupying a half-character position, which indicates you can insert characters where the cursor is positioned. Each character inserted moves the following characters in the field one position to the right. When you have finished inserting characters, press this key again. The cursor changes back to an underline.
Delete (Del)	This key deletes the character in the cursor position. The following characters in that field shift one position to the left.
Spacebar	This key selects an item in a prompt list.
Slash (/)	This key selects an item in a prompt list.

Control Keys

The following control keys are supported by PC Support:

Control Key	Function
Control (Ctrl) and Home	This key combination (press and hold the Ctrl key, then press the Home key) moves the cursor to the first position of the first prompt. When the first prompt is rolled off the top of the display, this key combination rolls the display backward to show the first prompt. If a window is displayed (for example, when you are paging through transferred records, help windows, or list windows), this key combination rolls the window backward to the first item, unless the first item is already shown.
Control (Ctrl) and End	This key combination (press and hold the Ctrl key, then press the End key) moves the cursor to the first position of the last prompt. When the last prompt is rolled off the bottom of the display, this key combination rolls the display forward to show the last prompt.
Control (Ctrl) and Left Arrow (←)	When there is a left arrow in the top right corner of a window, this key combination (press and hold the Ctrl key, and then press the Left Arrow key) moves the window left one page at a time.
Control (Ctrl) and Right Arrow (→)	When there is a right arrow in the top right corner of a window, this key combination (press and hold the Ctrl key, and then press the Right Arrow key) moves the window right one page at a time.
Control (Ctrl) and Page Up (Pg Up)	When you are transferring data from more than one AS/400 file to your personal computer, this key combination (press and hold the Ctrl key, and then press the Pg Up key) displays the fields of the previous file.
Control (Ctrl) and Page Down (Pg Dn)	When you are transferring data from more than one AS/400 file to your personal computer, this key combination (press and hold the Ctrl key, and then press the Pg Dn key) displays the fields of the next file.

Function Keys

The following function keys are supported by PC Support:

Function Key	Function
F1	This key displays online help information. The help information file must be in the same drive and directory from which you are running the PC Support function. The help file has the same file name of the program you are currently running, except the file name extension is HLP (*xxxxxxxx*.HLP, where *xxxxxxxx* is the name of the program you are using).
F2	When displaying help, this key allows you to display extended help.
F3	This key shows a window that allows you to exit the function. When displaying help, this key exits help.
F4	This key shows a list of items for an input area. When you are using the AS/400 system-to-PC transfer function, press and hold the Shift key, and then press F4 to add or remove the GROUP functions from the display. When you are using the PC Support configuration program (CFGPCS), this key prompts for values.
F5	When you use the PC Support/400 main menu, this key starts an online introduction to the PC Support functions as well as more advanced topics, such as memory management and performance tips. The topics cover strategies that help you decide the best way to use the PC Support functions. When you are using the transfer function, this key runs a transfer request. When you are using the PC Support configuration program (CFGPCS), this key marks an item. When you are using the shared folders, virtual printer, or message functions, this key refreshes the display to the current status.
F6	When you are working with the message function, press and hold the Alt key, and then press F6 to delete the message where the cursor is located. When you are using the PC Support configuration program (CFGPCS), hold the Shift key and then press F6 to remove all marks.
F7	In an input area, press and hold the Alt key, and then press F7 to remove all the data. When you are using the PC Support configuration program (CFGPCS), this key moves a mark.
F8	When you are using the PC Support configuration program (CFGPCS), this key copies a mark. When you are working with the message function, press and hold the Alt key, and then press F8 to delete all of your messages.

Function Key	Function
F9	When a help window is shown, this key allows you to display help for the function keys. When you are using the transfer function, this key displays a new input line. When you are using the PC Support configuration program (CFGPCS), this key inserts a new line. Press and hold the Shift key, and then press F9 to delete the line where the cursor is located. When you are submitting a remote command (RMTCMD) from the PC Support menu (PCSMENU), this key retrieves the previously entered command.
F10	This key allows you to select an action from the list of actions at the top of the display.
F11	When displaying help, this key allows you to display a list of help topics.
F12	This key ends the current display and shows the previous display. If you made changes to the current display but did not press the Enter key, the changes are not processed.

Chapter 5. Getting Help When You Need It

Chances are that you will want to use online help information while using PC Support. You can use several methods to retrieve help information. The method you choose depends on where you are in PC Support and what you want to achieve.

This chapter explains how to:

- Use the PC Support introductory information
- Use hypertext help information
- Use cause and recovery information for messages
- Use the error log information

Using the PC Support Introduction

Look at the PC Support/400 Menu.

```
                        PC Support/400 Menu

 Select one of the following

  Learn About PC Support
    View PC Support Introduction

  Perform PC Support Tasks
     Go to PC command prompt
     Use printers on host system
     Use folders on host system
     Transfer data
     Send and receive messages
     Go to PC Organizer menu
     Submit host system command

 Manage Your PC Support Environment
     Configure PC Support
     Administer PC Support
     View PC Support Error Log

 ____________________________________________________________________

 Enter   Esc=Cancel   F1=Help   F3=Exit
```

The menu contains an option called `View PC Support Introduction`. If you select this option, PC Support starts an informational tutorial that describes the different parts of the PC Support product. You can read through as much information as you like. You can exit the introduction at any time.

When you request to view the introduction, you can read either basic or advanced information about PC Support topics. The basic information provides conceptual information about PC Support. The advanced information provides various strategies for getting the most out of each function.

If you have never used PC Support before, read through some of the basic information. By reading it, you can familiarize yourself with the language and appearance of PC Support. Familiarity will help you move more quickly through this book and your tasks.

If you have used PC Support before, read through some of the strategies presented in this information. By reading it, you can gain a deeper understanding of the PC Support product.

The information presented in the introduction contains many highlighted words and phrases linked together to form hypertext help information. You should read through the section "Using Hypertext Help Information" to learn how to move through the information.

Using Hypertext Help Information

If you want the basics of using hypertext help information, read the information in the following box. If you want more information about what happens when you select help, read the text following the box.

The Fast Path to Hypertext Help

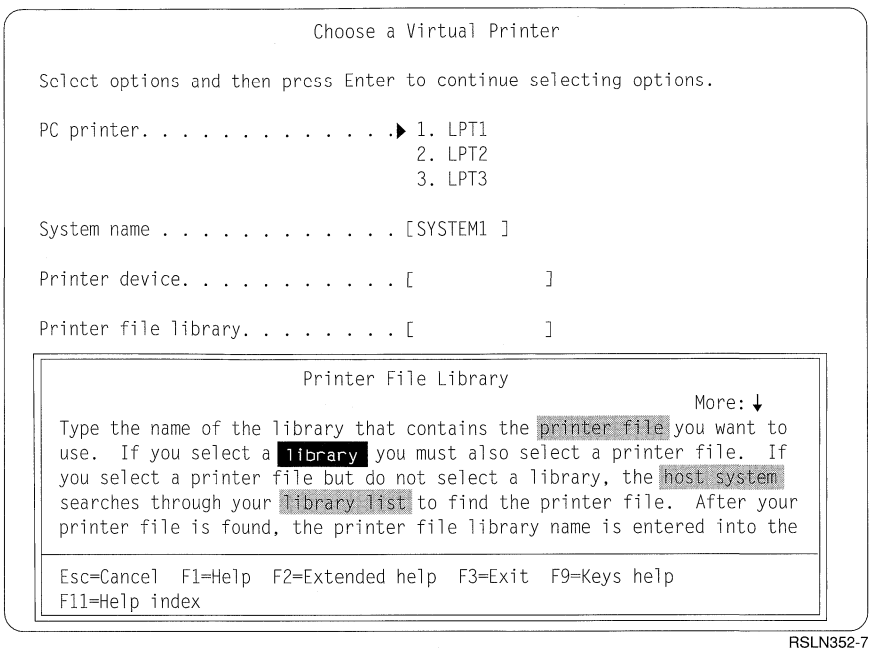
You can move through help information quickly if you remember the following things:

- Use the arrow keys or the Tab key, and then press Enter to select a highlighted word or phrase
- Press the Esc key to review help displays you have already read
- Select F6(View help list) to view a list of the topics you have read
- Press F11(Help index) to view an index of all topics related to the subject you are reading
- Select F3(Exit) to exit the introduction or any help display

Selecting Hypertext Help

When you press PF1 (Help) on any display or start the PC Support introduction, you are shown help information containing many highlighted words and phrases. These highlighted phrases represent hypertext links to other related help information. You can select the highlighted information to show more detailed information about a specific topic.

For example, look at the following sample display.



RSLN352-7

The phrases printer file, library, host system, and library list are highlighted. By pressing the arrow keys or the Tab key, you can move the cursor to the word or phrase you want. Then, press Enter to show the information about that topic.

As shown in the sample display above, many help windows also contain the word More followed by an arrow. This indicates that there is more information. The arrow indicates the direction you should go to show the information. If the arrow points down, page down; if the arrow points up, page up.

Reviewing Help Displays

You can review previous help displays by pressing the Esc key. When you press the Esc key, you back through the displays in the reverse order that you entered them. So, if you press the Esc key while on your sixth help display, you are returned to the fifth display, and so on.

For example, suppose you selected the following topics in the order shown.

1. Shared folders function
2. Assigning a drive
3. Drives
4. Folders
5. Releasing a drive

If you pressed Esc while on topic 5, Releasing a drive, you would be returned to topic 4, Folders. If you pressed Esc again, you would be returned to topic 3, Drives. This would continue until you returned to the point from which you started.

To help you keep track of the information you read, PC Support maintains a list of the topics you select during a help session. To view the list, press and hold the Shift key, and then press the F6 key. Or, if using a mouse, click on *Shift + F6=View help list* in the function key area of your display.

When you press Esc to return to a previous topic, the topic you are leaving is removed from the list. For example, in the list above, if you pressed Esc while on

topic 5, Releasing a drive, you would be returned to topic 4, Folders, and topic 5 would be removed from the list. Then, if you selected `View help list`, only the first 4 topics would be shown.

If you want to see all the topics related to the subject you are currently reading, select F11 (Help index). You can select any topic on the list.

Exiting a Help Display

You can exit the introduction or help information at any time by pressing F3 (Exit). When you select F3, you are returned to the point from which you started your search for help information.

If you would prefer to back out of the help information one display at a time, use the Esc key instead of the F3 key. When you do this, you exit in the reverse order that you entered the help information.

Getting Cause and Recovery Information for Messages

If you want the basics of getting cause and recovery information, read the information in the following box. If you want more information about what happens when you retrieve cause and recovery information, read the information following the box.

The Fast Path to Cause and Recovery Information

There are several ways to get cause and recovery information for messages. The method you use depends on where you are when you receive the error message.

- If you receive an error message while running a PC Support program, enter the following command at a command line to get the cause and recover information for that message:

  ```
  d:\path\PCSHELP xxxx
  ```

  where *xxxx* is the four-digit number identifying the message. These messages usually come from programs run from the command line or from a batch file.
- If you receive an error message in a window, press F1(Help) to view cause and recovery information about the message. These messages usually come from interactive programs.

Getting Help for Command Line or Batch Program Errors

In come cases, you may receive an error message after entering a command or running a batch program. When you do, the message is shown with a four-digit identification number.

To get more information about the error message, you can enter the following command followed by the four-digit identification number:

```
d:\path\PCSHELP xxxx
```

where xxxx is the four-digit identification number. When you enter the command, a display showing the cause and recovery information for the message is shown.

For example, if you enter the command STARTPCS to start PC Support, you may receive an error message similar to the following:

```
5140 Connection failed for SYSTEM1
```

To find out more about the error message, you would enter the following command while in the drive and directory containing the information:

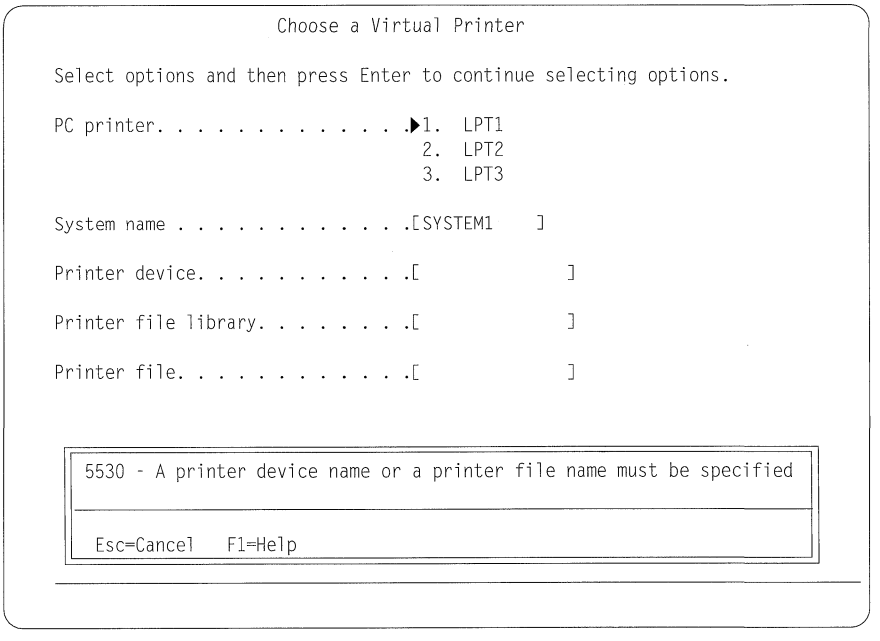
```
PCSHELP 5140
```

A full-screen display is shown with the cause and recovery information for message 5140. Press the Esc key to return.

If there are highlighted words or phrases on the display, you can select them for more details about the information. Follow the steps described in "Using Hypertext Help Information" on page 34.

Getting Help for Error Messages Shown in Windows

In some cases, you may receive error messages while selecting options or entering information on PC Support displays or menus. When you do, the error message is shown in a window on the display. It may look similar to this:



RV2N233-0

Press F1 (Help) to get cause and recovery information about the message. When you press F1, another window is shown containing the cause and recovery information. The window may cover part or all of the screen. Press the Esc key to return.

Getting Help When Entering Commands

If you cannot remember the proper syntax for entering a PC Support command, you can display the correct syntax by entering the following command:

```
d:\path\PCSHELP command-name
```

where *command-name* is the name of the command for which you need the correct syntax.

For example, if you want the correct syntax for the command to start the router, you would enter:

```
d:\path\PCSHELP STARTRTR
```

When you enter the PCSHELP command followed by a command name, a display is shown describing the proper command syntax. Press the Esc key to return.

If the display contains highlighted words or phrases, you can select them for more detailed information about the topic. See "Using Hypertext Help Information" on page 34 for information.

Using the PC Support Error Log

If you want the basics of using the PC Support error log, read the information in the following box. If you want more details, read the information following the box.

The Fast Path to the PC Support Error Log

- Enter the following command to display the error log:

  ```
  [d:][path]PCSLOG
  ```

  The most current message is shown at the bottom of the display.
- Use the Tab key or the arrow keys to move the cursor to a message number, and then press Enter to get the cause and recovery information for that message.
- Select `View` from the menu bar to change the type of messages shown on the PC Support/400 Error Log display.
- Select `Options` to move quickly to the top or the bottom of the messages shown on the PC Support/400 Error Log display.

While you use PC Support, any errors encountered are logged into an ASCII text file in the PC Support directory on your personal computer. Any informational messages pertinent to the error messages are also logged.

Log entries contain the following information:

- The date and time the message is logged
- The program that created the message
- The message text
- Any error codes that specifically identify a message

When PC Support is installed, the size of the error log file is set at 20KB. When the message log file is filled, the messages are automatically wrapped to the beginning of the file, writing over the oldest message in the file. You can change the size of the error log by using the PC Support configuration program (CFGPCS). See the *PC Support/400 OS/2 Installation and Administration Guide* for more information.

Displaying the Error Log

Use either of the following methods to display the error log:

- Select the option `View PC Support error log` from the PC Support/400 Menu or
- Enter the following command at any command line:

  `[d:][path]PCSLOG`

When you request to view the log, a display similar to the following is shown:

```
View  Options  Exit  Help
──────────────────────────────────────────────────────────────────────
                        PC Support/400 Error Log
                                                              More:  ↑
For additional help on error messages, position
cursor to message number, press Enter.


   11-02-90  09:20:40  STARTRTR
   Starting Token-Ring Network Router
   Version 2.0  Release 1.0  Level 00

   11-02-90  09:20:40  STARTRTR
   Processing: TRLI SYSTEM10,40004010046E4,,JOE

   11-02-90  09:20:56  STARTRTR
   Enter password for system user ID JOE:

   11-02-90  09:21:02  STARTRTR
5115 Security values can not be checked 0003 084C0000

   11-02-90  09:21:02  STARTRTR
5140 Connection failed for SYSTEM10
──────────────────────────────────────────────────────────────────────
  Enter  Esc-Cancel  F1-Help  F3-Exit  F10-Actions
```

All error messages and information messages are shown on the display. The most current error message is shown at the bottom of the display with the cursor resting on it.

When you display the error log, the word `More` followed by an arrow may be shown in the upper corner of the display. If `More` is shown, additional messages are available for you to read. To see the message, use:

- The appropriate page up or page down keys for your keyboard to move forward or backward one page at a time.
- The arrow keys to move forward or backward one line at a time
- The `Options` action to move quickly to the top or bottom of the message log.

Displaying Cause and Recovery Information for Error Messages

Cause and recovery information is available for any error message. An error message starts with a four-digit identifier.

To view the cause and recovery information for a specific error message displayed in the log, do the following:

1. Use the Tab key or the arrow keys to move the cursor to the message you are interested in.
2. Press the Enter key to display the cause and recovery information about the message.

To show cause and recovery information for any error message, do the following:

1. Press F10 (Actions) on the AS/400 PC Support Error Log display.
2. Select View from the menu bar. A window is shown containing several options.
3. Select option 3 (Specific message...). A window is shown requesting the message number for which you want help.
4. Enter the four-digit message identifier in the space provided in the window.
5. Press the Enter key.

In either case, when you press the Enter key, a full-screen display is shown containing the cause and recovery information for the message. The information may contain highlighted words and phrases. You can use the highlighted information to retrieve additional information about the message. See "Using Hypertext Help Information" on page 34 for more information.

To exit the help information, press F3 (Exit) or the Esc key.

Displaying Only Error Messages

The PC Support error log contains both error messages (those starting with a four-digit identifier) and informational messages. The informational messages correspond to particular error messages contained in the log.

When you display the error log, both error messages and informational messages are shown. You can view only the error messages by selecting the View action from the menu bar.

To see only error messages on the display, do the following:

1. Press F10 (Actions) on the AS/400 PC Support Error Log display.
2. Select View from the menu bar at the top of the display. A window is shown containing several options.
3. Select option 1 (Error messages).

To return to the initial arrangement of showing both error messages and informational messages, repeat the steps above, but select option 2 (All messages) instead of option 1 (Error messages).

Speed-Scrolling Through the Error Log

If there are a lot of messages in the error log, it could take some time to move between the beginning and the end of the log. You can select the Options action in the menu bar to move quickly from the beginning to the end of the error log.

To move quickly to the beginning or the end of the error log, follow these steps:

1. Press F10 (Actions).
2. Select Options from the menu bar. A window is shown.
3. Select option 1 (Top of log) or option 2 (Bottom of log).

When you select an option, the log scrolls to the first or the last message in the error log.

Exiting the Error Log

Follow these steps to exit the error log display:

1. Press F10 (Actions) and select Exit, or press the Esc key of F3 (Exit key). A window is shown.
2. Select one of the following options:

- Select option 1 (Exit error log) to exit the error log. When you choose this option, the messages in the log remain intact.
- Select option 2 (Clear error log and exit) to delete the messages in the error log, and then exit the error log. If you select this option, you are asked to confirm your request to clear the log and exit.
- Select option 3 (Resume error log) if you do not want to exit the error log.

When you exit the error log display, you are returned to the point from which you entered the display. This could be the PC Support/400 Menu or a command line.

Part 2. Starting and Stopping PC Support

Chapter 6. Starting PC Support

Many methods exist for starting PC Support. The method you use depends on how PC Support was installed and configured by the system administrator.

When PC Support is installed, a command file named STARTPCS is automatically created for you in the PC Support directory. You can change the STARTPCS file or create your own command files to automatically run specific PC Support functions.

Check with the system administrator to find out if the STARTPCS file has been changed. If it has, ask the system administrator for the steps you should follow to start PC Support. You can record those steps on "Notes on Starting PC Support" on page 47.

If the STARTPCS file has not been changed, continue with this chapter to learn how to start PC Support. The instructions in this chapter show you how to:

- Enter the STARTPCS command to start all of the PC Support functions selected during installation
- Enter individual commands to start selected PC Support functions

Regardless of the method you use to start PC Support, certain conditions must be met before you start PC Support. These conditions are:

- You must be in the drive and directory containing the PC Support programs.
- You must have a valid common user ID for the AS/400 system you want to use.
- The OS/2 Communications Manager must be running.
- If you want to use the organizer, the 5250 Work Station Feature of the OS/2 operating system must be running.

If you have installed secondary languages for PC Support, you can change your active language from the command line. For information on doing this, refer to the *PC Support/400 OS/2 Installation and Administration Guide*.

Starting PC Support with the STARTPCS Command

When you have met the conditions listed above, you are ready to start PC Support. To start PC Support, follow these steps:

1. Enter the following command at the command line:

   ```
   [d:][path] STARTPCS
   ```

   If you are already in the drive and directory containing your PC Support programs, it is not necessary to specify `d:` and `path`. You can specify additional optional parameters with this command. For information about these parameters, see "Using Correct Command Syntax" on page 4.
2. Enter your common user ID and password when requested to do so.

   You next step depends on what you selected during the installation process.
   - If you did not select the organizer during installation, press the Enter key to clear the IBM logo from the display and to show the PC Support/400 Menu.

Note: If you specified the optional /z parameter with the STARTPCS command, the IBM logo is bypassed and the PC Support/400 Menu is shown automatically.

- If the organizer was selected during the installation process, the AS/400 Sign On display is shown. Sign on to the AS/400 system using your common user ID and password. After you sign on to the AS/400 system, the PC Support/400 Organizer menu is shown. Select option 4 (PC Support) to go to the PC Support Menu.

Starting Selected Functions of PC Support

You can start selected PC Support functions by entering the specific command for the functions you want to start. For example, if you are only planning to work with folders, you could enter just the minimum commands necessary to start the shared folders function.

To start PC Support using individual commands instead of the STARTPCS program, do the following:

1. Make sure the OS/2 Communications Manager is running.
2. Make sure the 5250 Work Station Feature is running if you plan to use the organizer.
3. Make sure you are in the drive and directory containing your PC Support programs (for example, the PCSOS2 directory).
4. Assign drive `I` to the `QIWSOS2` folder by entering the following command at the command line:

   ```
   CFGFLR configuration-filename
   ```

   where `configuration-filename` is the name of the configuration file containing your folder assignments. In most cases, the configuration file name is CONFIG.PCS.

   The folder contains all of the PC Support programs that are stored on the AS/400 system. By assigning the folder, you can use any of the PC Support programs in the folder.
5. Enter the following command to display the PC Support/400 Menu:

   ```
   I:PCSMENU
   ```

   You can run any of the PC Support functions from the menu.

   Note: You do not have to display the PC Support/400 Menu to use the PC Support functions. You can start each function separately with the appropriate command. A list of commands is provided for you in Appendix A, "Using Commands with PC Support" on page 231. Remember, though, that some commands are dependent on others. If you want to be sure a function starts properly, select it from the PC Support/400 Menu.

When you start PC Support in this way, the PC Support organizer does not start automatically, even if you selected it when you installed PC Support. If you want to use the organizer function, select the option `Go to Organizer menu`. This starts the organizer and displays the PC Support/400 Organizer menu.

Notes on Starting PC Support

Record special instructions for starting PC Support here.

Chapter 7. Stopping PC Support

As with starting PC Support, there are many ways to end PC Support. Your system administrator may have set up one or more programs to help you end PC Support. If this is the case, turn to "Notes on Stopping PC Support" and record the specific steps you should follow to end PC Support.

If your system administrator did not set up special programs for you, you can follow these steps to stop PC Support.

Note: To prevent any communications errors and loss of data, it is important that you *do not* use the Ctrl-Alt-Del sequence of keys to stop PC Support.

To stop PC Support, do the following:

1. End any applications that are still running.
2. Release any virtual printers currently assigned.
3. End the message function if currently running.
4. Press F3 (Exit) to exit the PC Support/400 Menu.
5. Sign off all work station feature display sessions. This ends the Organizer.
6. Release any folder drives currently assigned.
7. End shared folders by running the Stop Shared Folders (STOPFLR.EXE) command.
8. Select the option *5250 Work Station Feature* from the Stop Communications menu.
9. Select the option *All* from the Work Station Feature Session to Stop menu.
10. Select the option *Stop communications* from the Communications Manager Main Menu.
11. Select *Normal stop* from the Stop Options menu.

Notes on Stopping PC Support

Part 3. Working with Folders on the AS/400 System

Chapter 8. Understanding the Concept of Shared Folders

You can increase the space available on your PC hard disk and increase the amount of information available to you by storing and sharing information in AS/400 folders. Sharing information includes:

- Multiple people using the same file if the application supports sharing
- Multiple people using different files stored in the same folder
- AS/400 users and personal computer users sharing files between each other

You can accomplish these things by using the PC Support shared folders function.

This chapter contains conceptual information about shared folders and the shared folders function. If you are not familiar with these topics, read through this chapter before continuing with the rest of the chapters in this part.

If you are familiar with these topics, you can continue with:

- Chapter 9, "Getting Started with Folders" on page 57, to learn how to assign a shared folders drive and how to work with an assigned drive as if it were another drive on your personal computer.
- Chapter 10, "Working with Documents in Folders" on page 65, to learn how to check documents in and out of folders and to display the status of documents stored in folders.
- Chapter 11, "Releasing Shared Folders Drive Letters" on page 73, to learn how to release a shared folders drive.

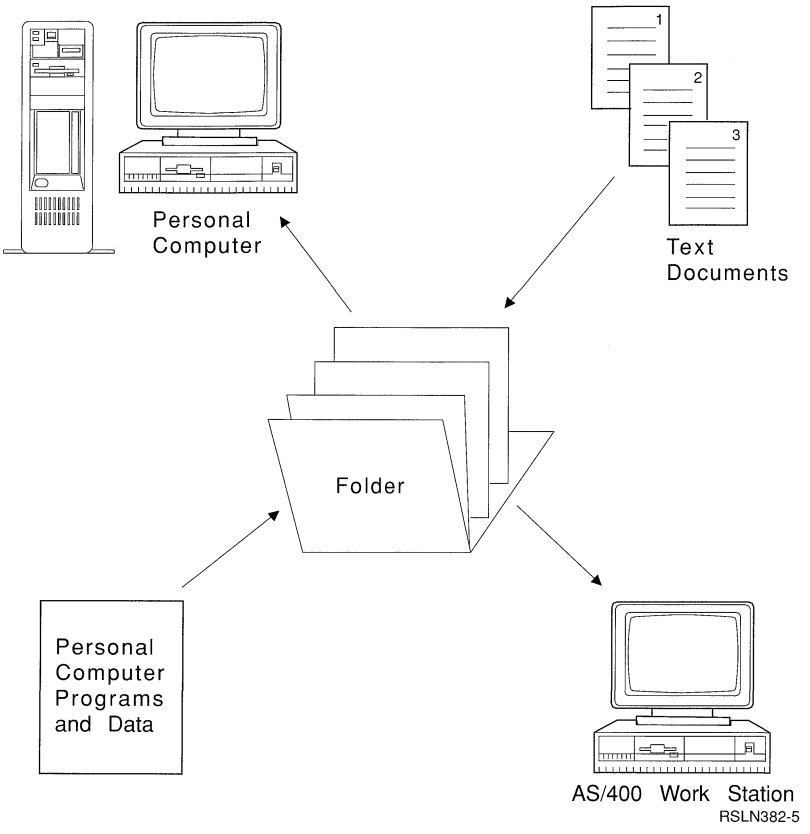
Introducing the Shared Folders Function

Suppose you are in a library. You want to check out a certain book, but it is stored on a shelf several feet above your head. You wonder how you can get the book. Then, you see a ladder. Using the ladder you are able to reach the book and check it out for your use.

In a way, your personal computer is like a library. It has to store a great deal of information for your use. However, if it only stored information within your reach, your personal computer would be limited in the amount of information it could offer you.

You can get around this by using the PC Support shared folders function to store and retrieve information on the AS/400 system. In effect, the shared folders function serves as your ladder to information beyond your personal computer's reach. This is beneficial because it increases the amount of information you can use and, just like in a library, when you are not using the information, other people can.

Sharing information on the AS/400 system with other PC and AS/400 users is easy to do. The information is stored in folders on the AS/400 system so that it is accessible to anyone with the proper security authorization to the folder. The following diagram shows how information can be stored and accessed by different people.



When you need to use the information stored in a folder, you assign a special PC drive letter to a folder using the shared folders function. The following section discusses folders and drive letters in more detail.

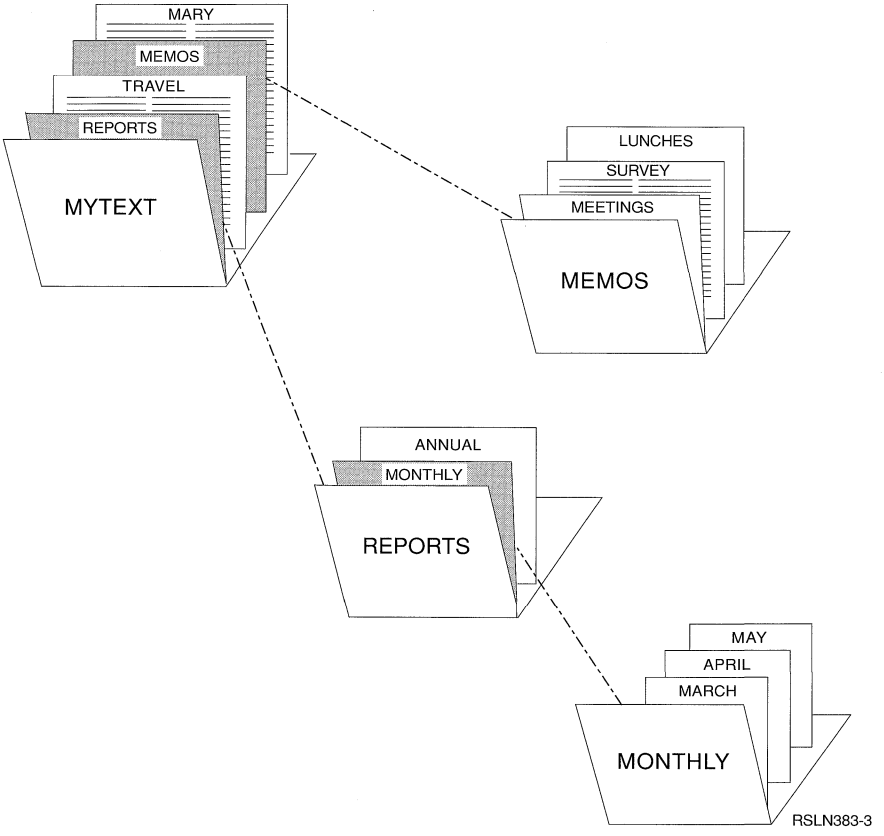
Understanding Folders

In a library, the librarian groups books according to a specific subject or author. The books are always put in the same spot. This makes it much easier for you to find the books you need.

Information can be grouped in a similar way on the AS/400 system. You can group text documents, notes, personal computer applications, and other data relating to a specific topic into AS/400 **folders**. A folder functions like a PC directory, pointing the way to the information within it. In addition to storing information, folders can also store other folders. A folder within a folder functions like a PC subdirectory.

Note: The maximum number of objects that can be stored in a shared folder (both files and subfolders) is approximately 65000.

The following diagram shows how folders can be grouped together.



In the example, the folder MYTEXT contains documents and the two folders (REPORTS and MEMOS). MEMOS is a folder that contains documents. REPORTS contains documents and also another folder, MONTHLY. MONTHLY contains documents called MARCH, APRIL, and MAY. To use the information stored within a folder, you must specify a **folder path**. A folder path is a set of directions made up of folder names telling the shared folders function where to find the information you need. Each folder name within the folder path must be separated by a backslash (\). A folder path cannot exceed 63 characters in length.

For example, to access the document, MAY, you would type the folder path as follows:

```
\MYTEXT\REPORTS\MONTHLY\MAY
```

The shared folders function helps you use these folders by supplying you with eight PC drive letters. These drive letter assignments function like the hard disk on your personal computer. By assigning a drive letter to a folder, you are able to use the information stored within the folder. It is as if the shared folders function has given you eight additional hard disks with which to work.

When a drive letter is assigned to a folder, you can work with the information in the folder as if it resided on your personal computer. You can use many of the same PC commands, like DIR, to work with the folder the same as you would to work with your PC hard disk or a diskette. However, some commands and programs do not work with a shared folders function drive. For information about command restrictions, refer to the manual *PC Support/400 Technical Reference for DOS and OS/2*.

Chapter 9. Getting Started with Folders

Before you can work with AS/400 folders, you must start PC Support and the shared folders function. This guide assumes that you start PC Support using the STARTPCS command. To review how to start PC Support, refer to Chapter 6, "Starting PC Support" on page 45.

Once PC Support is started, you can assign a shared folders drive from the PC Support/400 Menu or from the command line. After you assign a drive to a folder, you can use the information stored in the folder.

Folders are similar to directories on your personal computer. You can assign a drive letter to one folder on the AS/400 system, or you can assign a drive letter to all of the folders on the AS/400 system. Up to eight drives can be assigned with the shared folders function.

This chapter describes how to:

- Assign a drive from the PC Support/400 Menu
- Work interactively with assigned drives
- Work with assigned drives as if they are drives on your personal computer

You can only assign drive letters to the folders you are authorized to use.

Assigning Drives from the PC Support/400 Menu

Once you have started PC Support and displayed the PC Support/400 Menu, you are ready to assign a drive letter to a folder or to a system. Follow these instructions to assign a drive letter:

1. Select the option `Use folders on host system` from the PC Support/400 Menu. The Work with Folders menu is shown.

   If your default system name is SYSTEM2, the Work with Folders menu would look similar to the following display:

```
Assign  Release  Exit  Help
                                  Work with Folders

To select an action shown above, first press F10.

Drive   System Name   Assignment

  I     SYSTEM2       QIWSOS2




Enter  Esc=Cancel  F1=Help  F3=Exit  F5=Refresh  F10=Actions
```

RSLN396-4

This display shows that drive **I** is assigned to the AS/400 folder containing the programs shipped with PC Support.

From this display, you can assign drives to folders, release drives, or exit the shared folders function and return to the PC Support/400 menu.

2. Press F10 (Action) and select Assign from the list of actions at the top of the Work with Folders display. The following display is shown:

```
Assign  Release  Exit  Help
 ▶1. Assign a drive      Work with Folders
  Esc=Cancel             own above, first press F10.
Drive  System Name  Assignment

  I    SYSTEM2      QIWSOS2
```

RSLN397-3

3. Press the Enter key to select option 1 (Assign a drive). The following display is shown:

```
                              Assign a Drive

 Drive  System Name  Assignment

   I    SYSTEM2      QIWSOS2




 Select options, press Enter

 Drive . . . . . .[D]    (D E F G H I J K L M N O P Q R S T
                           U V W X Y Z)
 System name . . . . . .[SYSTEM1]

 Folder . . . . . .[                                      >




  Enter  Esc=Cancel  F1=Help  F3=Exit  F5=Refresh
```

RSLN398-4

4. Enter a drive letter in the *Drive* prompt.

   Choose a drive letter from the possible values displayed to the right of the prompt. The first available drive letter you can use is shown in the brackets on your display. In the sample display, F is the first available drive letter. You can choose the drive letter already displayed, or you can select a different drive letter by typing over the letter in the brackets.

   You can assign up to 8 drive letters concurrently. There may be up to 22 drive letters (D to Z) shown on the display, but you can only assign 8 of them. You can assign all of your drive letters to one system or to a combination of systems.

5. Enter a system name in the *System Name* prompt.

   Your personal computer might be connected to more than one system. This prompt allows you to specify the system on which the folder resides. Your default system name should be provided for you on your display. You can press the Tab key to select the system name provided for you, or you can type the name of another system over the value between the brackets. If you do not know the name of the system you want to use, press F4 (Prompt) to display a list of possible host system choices.

6. Enter the name of the folder you want assigned to the drive letter.

   You can assign a PC drive letter to AS/400 folders in one of the following ways:

   - As a *system drive*, which allows you to use all folders on a system. For example, you could assign drive L to all the folders on the AS/400 system. You can then use the PC command, Change Directory (CD), to change from one folder to another.

     When you are using a system drive, you cannot create a file to store information in the root directory. The root directory of a system drive can only contain folders.

     To assign all the folders on a system to the drive letter, leave the *Folder* prompt blank.

- As a *folder drive*, which allows you to assign a drive letter to a specific folder on the AS/400 system. The folder can be a folder within one or more folders. For example, you could assign drive D to folder DEPT24.

  If you are using a folder drive, you can store information in the root directory. The root directory of a folder drive is simply the folder.

  To assign a specific folder to the drive letter, enter the name of the folder in the *Folder* prompt.

Press F4 (Prompt) to see a list of the folders you can use. If you know the first few characters of the folder name, you can type them followed by an asterisk (*) to limit the number of folder names listed. For example, if you know the folder name begins with RPT, type RPT* and press F4.

If you want to display a list of the folders within a folder, type or select a folder name from the list and press F4 again. For example, if you display a list of folders and one of the names is RPTMAY, enter RPTMAY in the folder prompt and press F4 again. A list of the folders within the RPTMAY folder is shown.

If a folder is stored within another folder, or within several layers of folders, you need to specify the folder path. The folder path tells the personal computer how to find the specific folder you want to use. The folder path can be up to 63 characters long. For example, if the information you want is in a folder called JUNE that is stored in a folder called QUARTRLY which, in turn, is stored in a folder named RPT1988, the folder path would be:

```
RPT1988\QUARTRLY\JUNE
```

7. Press the Enter key to make the drive assignment take affect.

   You should see the new assignment shown on the Work With Folders display.

8. Press F3 (Exit) when you have finished assigning drives. You will return to the PC Support/400 Menu.

Working Interactively with Drives

Once you have started the shared folders function, you can:

- Check the status of your drive letter assignments
- Assign a shared folder drive letter
- Display help information about working with drives

Checking the Status of a Drive

You can use the FSPC command to check the status of all assigned shared folders function drives. To do so, enter the following command:

```
FSPC STATUS
```

All drives currently assigned and the folders or systems they are assigned to are shown on the display.

Assigning a Drive Interactively

PC Support provides you with two methods for assigning drives interactively. The first method is to use the FSPC command. The second method is to use the CFGFLR command.

Use the FSPC command when you want to assign one drive letter at a time. Use the CFGFLR command when you want to assign multiple drive letters at one time.

Using the FSPC Command to Assign a Drive

If you want to assign a single drive letter, use the FSPC command. You can use the FSPC command from a command line or put it in a batch file.

- To assign a drive letter, enter the following command at the PC command prompt:

  ```
  FSPC ASSIGN D:
  ```

  If you do not specify a drive letter, the next available drive is assigned.

- To assign a drive letter to a folder, enter the following command:

  ```
  FSPC ASSIGN D: MYFLDR
  ```

  where MYFLDR is the name of the folder to which you want to assign the drive letter. Be sure to include a space between the drive you are assigning and the folder name.

- To assign a drive letter to a folder within another folder, enter the following command:

  ```
  FSPC ASSIGN D: MYFLDR/JUNE
  ```

  where JUNE is a folder stored in the larger folder, MYFLDR.

- To assign a drive letter to a system, enter the following command:

  ```
  FSPC ASSIGN D: MYFLDR/JUNE  //CHICAGO
  ```

  where CHICAGO is the name of the system containing the folders, MYFLDR and JUNE. You must precede the system name with two slashes (//).

- To display the Work With Folders display, enter the following command:

  ```
  FSPC
  ```

  The Work With Folders display is described in "Assigning Drives from the PC Support/400 Menu" on page 57.

When you use a command file with the FSPC command, you can check the return codes using the IF ERRORLEVEL batch command. The batch return codes are as follows:

0 The function completed successfully.

10 The function completed successfully with informational messages.

20 The function completed with an error. An error message is displayed.

Using the CFGFLR Command to Assign a Drive

If you want to assign multiple shared folders drive letters at one time, use the CFGFLR command. You can use the CFGFLR command from a command line or you can put it in a batch file. This method requires the use of a configuration file, so if you do not want to get involved with configuration files, assign drive letters using either the options on the PC Support/400 Menu or the FSPC command.

The CFGFLR command differs from the FSPC command in that the FSPC command only allows you to assign a single drive letter while the CFGFLR command allows you to assign multiple drive letters.

The CFGFLR command is used with a configuration file containing information about the drive letter you want to assign. The information in the configuration file is in the form of a four-character identifier known as SFLR. The file contains one SFLR entry for every drive letter you want assigned. When you enter the CFGFLR command with the name of the configuration file the CFGFLR command processes all of the SFLR entries in the configuration file and assigns the drive letters specified by the SFLR entries. If you enter the CFGFLR command but do not specify a configuration file name, the default configuration file, CONFIG.PCS, is used.

To make this work, you have to add SFLR entries to the CONFIG.PCS file or to another configuration file of your choice. You can use the PC Support configuration editor to enter the information.

For example, let us say you have a folder named MYFLDR that contains some information that you only need to access once a month. The folder is maintained on a system named CHICAGO. You need to create a configuration file that will assign MYFLDR to drive D. We will call the configuration file CONFIG.CHI. The SFLR entries in CONFIG.CHI would look like this:

```
SFLR 1,D,MYFLDR,CHICAGO
```

where

SFLR Is the identifier

1 Specifies that you want the drive letter assigned (a 2 would mean you wanted it released)

D Specifies the drive letter you want assigned

MYFLDR Specifies the name of the folder to which you want the drive letter assigned

CHICAGO
Specifies the name of the system containing the folder

Once you have the information in the configuration file, all you have to do is enter the CFGFLR command with the configuration file name. To do so, enter the command in this manner:

```
CFGFLR CONFIG.CHI
```

where CONFIG.CHI is the name of the configuration file. Remember, if the CFGFLR command and the configuration file are not in the current drive and directory, you must specify the correct drive and directory when you enter the command.

Note: If you are using the default configuration file, CONFIG.PCS, you do not need to specify the configuration file name.

When you use a command file with the CFGFLR command, you can check the return codes using the IF ERRORLEVEL batch command. The batch return codes are as follows:

0 The function completed successfully.

10 The assignment of a drive other than drive **I** failed.

15 An error occurred when trying to assign drive **I**. For example, an SFLR entry exists for drive **I** but drive **I** could not be assigned.

20 The function completed with an error. A error message is displayed.

Displaying Help Information About Drives

You can display help information about working with drive letters by using the FSPC command.

- To view general help information about working with folders, enter the following command:

  ```
  FSPC HELP
  ```

- To view specific help information about assigning drives, enter the following command:

  ```
  FSPC ASSIGN HELP
  ```

- To view specific help information about displaying the status of drive letters, enter the following command:

  ```
  FSPC STATUS HELP
  ```

Working With Assigned Folder Drives

Once you have assigned a system or folder drive, you can use PC commands to work with the folders. In most cases, you can work with the information stored in folders on the AS/400 system just as you would if the information was stored on a hard disk on your personal computer. Here are a few examples of what you can do with PC commands and folders.

- You can use the PC command, Make Directory (MKDIR), to create a folder. This folder can either be in the root directory or an existing folder.
- You can use the PC command, Remove Directory (RMDIR), to remove a folder. Like removing a directory from your personal computer's hard disk, the folder must be empty before it can be removed.
- You can use the PC command, Change Directory (CD), to make a folder the current folder.
- You can use the PC command, COPY, to copy information in files on your PC hard disk to a folder on the AS/400 system.

  For example, to copy all information on a diskette in drive **A** to a folder named SAMPLTXT on drive **F**, enter the following command:

  ```
  C:>COPY A:*.* F:\SAMPLTXT
  ```

Although you can use AS/400 menus or commands to do these same tasks, it is more convenient to use PC commands if you are working in a PC session instead of an AS/400 session.

There are some restrictions when using certain commands. For a description of these commands and their restrictions, refer to the manual *PC Support/400 Technical Reference for DOS and OS/2*.

Chapter 10. Working with Documents in Folders

Suppose you are collaborating with a coworker on a report for the chief financial officer (CFO) of your company. The report is stored in a folder on your AS/400 system. Both you and your coworker use PC Support to download the report to your personal computers and use a PC editor to edit the report.

At ten o'clock in the morning, you receive a message from your coworker that she has completed her portion of the work on the report. Now, you can finish your portion. You decide to work through your lunch hour to finish the report.

In the meantime, your coworker returns from her lunch hour and suddenly remembers that she forgot to insert an important figure in the report. Thinking you are at lunch, she downloads the report from its folder, inserts the figure into the report, and uploads the report back to its folder.

Then, you finish your work and return your version of the report to its folder, erasing the changes your coworker just made. Unknowingly, you turn the report into the CFO without the important figure.

This is just one of the problems that can arise when using files that can be shared with other people. The potential is there to wipe out changes made by a coworker in the next office or across the country.

Preventing Problems That Arise from Sharing Folders

You can avoid the confusion and frustration of situations like these by using the check file (CHKFIL) program of PC Support. The CHKFIL program lets you get a file or document from an AS/400 folder and simultaneously mark it checked out to you. This prevents other PC users or OfficeVision/400 users from downloading and revising the same file or document while you are using it. When you are finished, you can use the CHKFIL program to put the file or document back in the folder and simultaneously release the file or document for use by others.

If you are a remote system user, you can also benefit from using the CHKFIL program. Once you link to your remote system, you can use the CHKFIL program to check out a file and copy it to your PC. Once the file is on your PC, you can end your connection to the remote system, thereby saving yourself the costs incurred by using the telephone line. While you are editing the file on your PC, it remains checked out to you on the remote system so other users cannot make changes. When you finish editing, simply connect to the remote system again and check the file back in.

In some cases, you can also improve the performance of certain applications by using the CHKFIL program. Some applications are slower when working with files stored in folders. By using the CHKFIL program to check out a file and copy it to your PC, you may be able to improve the performance of the application.

You can only use the CHKFIL program to work with files or documents stored in shared folders on the AS/400 system. You cannot use it to work with any other objects on the AS/400 system. To keep this discussion simple, *file* is used to mean both files and documents.

You can use the CHKFIL program to:

- Check files out of a folder
- Check files into a folder
- Display the status of all files in a folder
- Find out which files are checked out to a specific person
- Display help information about using the CHKFIL program

This chapter shows you how to use the CHKFIL program to accomplish each of these tasks.

Checking Files out of an AS/400 Folder

When you want to prevent other people from changing files stored in shared folders while you are using the files, use the CHKFIL program. When you check a file out, you have two options. You can:

- Check the file out, mark it as checked out to you, and make a copy of the file
- Check the file out, mark it as checked out to you, but not make a copy of the file

To check a file out, enter the following command at the command line:

```
CHKFIL OUT [F:][path]source-filename [D:][path][target-filename]
```

where:

F: Is the drive letter of the folder containing the file you want to check out. If you do not specify a drive letter, the current drive is used. The drive letter specified or, if you did not specify one, the current drive must be assigned as a shared folders drive.

path Is the path on the folder drive containing the file to be checked out. If you do not specify a path, the current path on the drive is used. The path specified or the current path must exist on the drive.

source-filename
Is the name of the file you want to check out. If you do not specify a name, all files in the specified path are checked out. You can use wildcard characters in the name.

D: Is the drive letter you want the file copied to when the file is checked out. If you do not specify a drive letter, but you do specify a path or a target-filename, or both, the current drive letter is used. The drive letter must be valid. If you do not want to copy the file back to the folder, do not specify a value for this parameter.

path Is the path you want the file copied in when the file is checked out. If you do not specify a path, but you do specify a drive letter or a target-filename, or both, the current path is used. The path must be a valid path on the drive. If you do not want to copy the file back to the folder, do not specify a value for this parameter.

target-filename
Is the name of the file you want the source file copied to when the source file is checked out. You can use wildcard characters in the name. If you do not specify a target-filename, but you do specify a drive letter or path, or both, the name of the source file is used. If you do not want to copy the file back to the folder, do not specify a value for this parameter.

Note: If the file already exists, it is overwritten without warning.

Checking Out a File from an AS/400 Folder: Examples

This section contains some common examples of checking out files.

Checking Out a File and Copying It to Your PC

When you check out a file, you have the option of making a copy of the file on your personal computer. This example illustrates this situation.

Suppose you have a file called MYFILE.NEW stored in the folder PERSONAL on drive F. You want to check the file out and copy it to the same file on the current path on drive C.

To do so, you would enter the following command:

```
CHKFIL OUT F:\PERSONAL\MYFILE.NEW C:
```

If no errors exist, a message is displayed showing the file is checked out and copied.

Checking Out a File without Making a Copy

Suppose you have a file called MYFILE.NEW stored in the folder PERSONAL on drive F. You want to check the file out, but you do not want to make a copy of it.

To do so, you would enter the following command:

```
CHKFIL OUT F:\PERSONAL\MYFILE.NEW
```

If no errors exist, a message is displayed stating the file is checked out.

Checking Out Similar Files Using Wildcard Characters

Suppose you have a variety of files with the extension .TXT. All of these files are stored in a folder that is currently assigned to drive F. You want to:

- Check out all of the files ending in .TXT
- Copy the files to drive D and path REPORTS with an extension of .OLD

To do so, you would enter the following command:

```
CHKFIL OUT F:*.TXT D:\REPORTS\*.OLD
```

If no errors exist, a message is displayed for each file checked out.

Checking Out a File and Copying It to Another Folder

Suppose you have a file called QUALITY. The file is stored in the folder currently assigned to drive F. You want to check the file out and copy it to a file called GOALS in the folder currently assigned to drive G.

To do so, you would enter the following command:

```
CHKFIL OUT F:QUALITY G:GOALS
```

If no errors exist, a message is displayed showing the file is checked out and copied.

Checking Files into an AS/400 Folder

When you have finished using a file checked out to you, you can check it back into its AS/400 folder using the CHKFIL program. When you check a file in, you have two options. You can:

- Mark the file in a folder as checked in and copy the file back to the folder.

  You can copy the file back to the folder regardless of whether you had made a copy of the file when you checked it out.

  Note: When you copy a file back to a folder, the CHKFIL program does not determine if the contents of the two file versions match.

- Mark the file as checked in, but not copy the file back to the folder.

To check a file in, enter the following command at the command line:

```
CHKFIL IN [D:][path]source-filename[ F:][path][target-filename]
```

where:

D: Is the drive letter on which the source file to be copied is located. If you do not specify a drive letter, but you do specify a path or a source file, the current drive is used. The drive letter specified or, if you did not specify one, the current drive must be a valid drive.

If you do not want to copy the file back to the folder, do not specify a value for this parameter.

path Is the path on the source drive containing the file to be copied. If you do not specify a path, but you do specify a drive letter or a source file, the current path on the drive is used. The path specified or the current path must exist on the drive.

If you do not want to copy the file back to the folder, do not specify a value for this parameter.

source-filename
Is the name of the file you want copied back to the folder. If you do not specify a name, but you do specify a drive letter or a path, all files in the specified path are checked in. You can use wildcard characters in the name.

If you do not want to copy the file back to the folder, do not specify a value for this parameter.

F: Is the drive letter of the folder containing the file you want to check in. If you do not specify a drive letter, the current drive letter is used. The drive letter must be assigned as a shared folders drive.

path Is the path on the folder drive containing the file to be checked in. If you do not specify a path, the current path is used. The path must be a valid path on the drive.

target-filename
Is the name of the file you want to check in. You must have specified this name on a CHKFIL OUT operation.

If you do not specify a value for the first 3 parameters, you must specify a value for this parameter. By specifying a value for this parameter, you mark the file as checked in, but you do not copy the file back to the

folder. If you use any wildcard characters in the command, all files matching the wildcard criteria are marked as checked in.

If you want to copy the file back to the folder when the file is checked in, but you do not specify a target file name, the source file name is used. If you want to copy the file back to the folder and you specify wildcard characters in the command, all files matching the wildcard criteria are copied to the folder.

Checking a File into an AS/400 Folder: Examples

This section contains some common examples of checking in files.

Checking In a File and Making a Copy

When you check in a file, you have the option of making a copy of the file. This example illustrates this situation.

Suppose you have a file called MYFILE.NEW in the folder PERSONAL on drive F. You have checked the file out to drive C on your personal computer. You want to check the file in and copy it to the folder.

To do so, you would enter the following command:

```
CHKFIL IN C:\MYFILE.NEW F:\PERSONAL
```

If no errors exist, a message is displayed showing the file is checked in and copied.

Checking In a File without Making a Copy

Suppose you have a file called MYFILE.NEW stored in the folder PERSONAL on drive F. You want to check the file in, but you do not want to make a copy of it.

To do so, you would enter the following command:

```
CHKFIL IN F:\PERSONAL\MYFILE.NEW
```

If no errors exist, a message is displayed stating the file is checked in.

Checking In Similar Files Using Wildcard Characters

Suppose you have a variety of files with the extension .OLD checked out in the directory REPORTS on your D drive. You want to:

- Check in all of the files ending in .OLD
- Copy the files ending in .OLD, in the path D:\REPORTS, to the folder, changing the extension on the files to .TXT

To do so, you would enter the following command:

```
CHKFIL IN D:\REPORTS\*.OLD F:*.TXT
```

If no errors exist, a message is displayed for each file checked in.

Checking In a File and Copying It to Another Folder

Suppose you have a file called GOALS. The file currently checked out to drive G. You want to check the file in and copy it to a file called QUALITY in the folder currently assigned to drive F.

To do so, you would enter the following command:

```
CHKFIL IN G:GOALS F:QUALITY
```

If no errors exist, a message is displayed showing the file is checked in and copied.

Displaying the Status of Files in a Folder

You can use the CHKFIL program to display status information about files stored in folders on the AS/400 system. When you use the CHKFIL program in this way, you can find out:

- The names of all files in a folder
- The size of each file in a folder
- The last date and time the file was changed (or, the date and time it was created if no changes have occurred)
- The user ID of anyone who currently has a file in the folder checked out, and the date and time it was checked out

To display the status of a file, enter the following command:

```
CHKFIL DIR [F:][path][file-name]
```

where:

F: Specifies the shared folders drive letter for which you want directory information. If you do not specify a drive letter, the current drive is used. The specified drive or, if one is not specified, the current drive must be assigned as a shared folders drive.

path Specifies the path on the shared folders drive for which you want directory information. If you do not specify a path, the current one is used. You must use a valid path on the drive.

file-name Specifies the specific file name or a subset of files on the drive for which you want directory information. You can use wildcard characters to display a subset of files. If a file name is not specified, all files on the drive are displayed, even those you do not have authority to.

Displaying File Status: An Example

Suppose you have a folder called MYFLDR assigned to drive F. You want to know the status of each of the files stored in the folder. To find out, enter the following command:

```
CHKFIL DIR F:
```

When you enter the command, a listing is shown on your display containing name of each file, the size of each file, the date and time each file was last changed, the user ID of anyone who currently has a file checked out, and the date and time the file was checked out.

Displaying the Files Checked Out to a Specific Person

You can use the CHKFIL program to find out what files are checked out to a specific person. There are two ways to do this. You can:

- Display all files within a specified directory that are checked out to a specific person. To do this, you use the USER function of the CHKFIL program.
- Display all files within a specified directory and within any of its subdirectories that are checked out to a specific person. To do this, you use the TREE function of the CHKFIL program.

Using the USER Function of the CHKFIL Program

Use the CHKFIL program with the USER function to find out which files in a certain directory are checked out to a specific person. To do this, enter the following command:

```
CHKFIL USER [F:][path][file-name] [Userid]
```

where:

F: Specifies the drive letter on which you want to look for files checked out to a specific person. If you do not specify a drive, the current one is used. The drive you specify must be assigned as a shared folders drive.

path Specifies the path on the shared folders drive on which you want to look for files checked out to a specific person. If you do not specify a path, the current one is used. The path must be valid.

file-name Specifies a file name or subset of files on the drive on which you want to look for files checked out to a specific person. You can use wildcard characters when specifying a name. If you do not specify a file name, all files in the directory are searched.

Userid Is the user ID of the person whose file status you want to check. You will receive a list of the files checked out to the person whose user ID you specify. If you do not specify a user ID, the user ID specified when the router was started is used.

When you enter the command, the following information is shown:

- The name of each file checked out to the user ID specified
- The size of each file
- The date and time each file was checked out
- The date and time each file was last changed

Using the USER Function of the CHKFIL Program: An Example

Suppose you want to find out all the names of all the files ending in .TXT on drive H that are checked out to the user ID BMC. You would enter the following command to display the information:

```
CHKFIL USER H:*.TXT BMC
```

Using the TREE Function of the CHKFIL Program

Use the CHKFIL program with the TREE function to find out which files in a directory and its subdirectories are checked out to a specific person. To do this, enter the following command:

```
CHKFIL TREE [F:][path][file-name][Userid]
```

where:

F: Specifies the drive letter on which you want to look for files checked out to a specific person. If you do not specify a drive, the current one is used. The drive you specify must be assigned as a shared folders drive.

path Specifies the path on the shared folders drive on which you want to look for files checked out to a specific person. If you do not specify a path, the current one is used. The path must be valid.

file-name Specifies a file name or subset of files on the drive on which you want to look for files checked out to a specific person. You can use wildcard characters when specifying a name. If you do not specify a file name, all files in the directory are be searched.

Userid Is the user ID of the person whose file status you want to check. You will receive a list of the files checked out to the person whose user ID you specify. If you do not specify a user ID, the user ID used when the router was started is used by the CHKFIL program.

When you enter the command, you receive a listing of the path and file name of each file checked out to the user ID specified.

Using the TREE Function of the CHKFIL Program: An Example

Suppose you want to find out the names of all the files in the folder REPORTS and any of its subdirectories on drive H that are checked out to the user ID BMC. Enter the following command to display the information:

```
CHKFIL TREE H:REPORTS BMC
```

In this example, all folders within the folder REPORTS are searched. If the folder REPORTS does not exist in the current directory of drive H, REPORTS is used as a file name. This would then give the path and file name for all files named REPORTS on drive H and within any of its subdirectories checked out to the specified user.

Displaying Help Information for the CHKFIL Program

If you ever need help with the CHKFIL program, enter the following command to display help information:

```
CHKFIL HELP
```

You can also display more specific information about the CHKFIL program. Enter one of the following commands to display help information about:

- Checking out files

  ```
  CHKFIL OUT HELP
  ```

- Checking in files

  ```
  CHKFIL IN HELP
  ```

- Displaying status information

  ```
  CHKFIL DIR HELP
  ```

- Finding out which files are checked out to a specific user in a specified directory

  ```
  CHKFIL USER HELP
  ```

- Finding out which files are checked out to a specific user within a directory and its subdirectories

  ```
  CHKFIL TREE HELP
  ```

Chapter 11. Releasing Shared Folders Drive Letters

When you finish working with folders, you should release the drive letters assigned to them. This chapter explains how to:

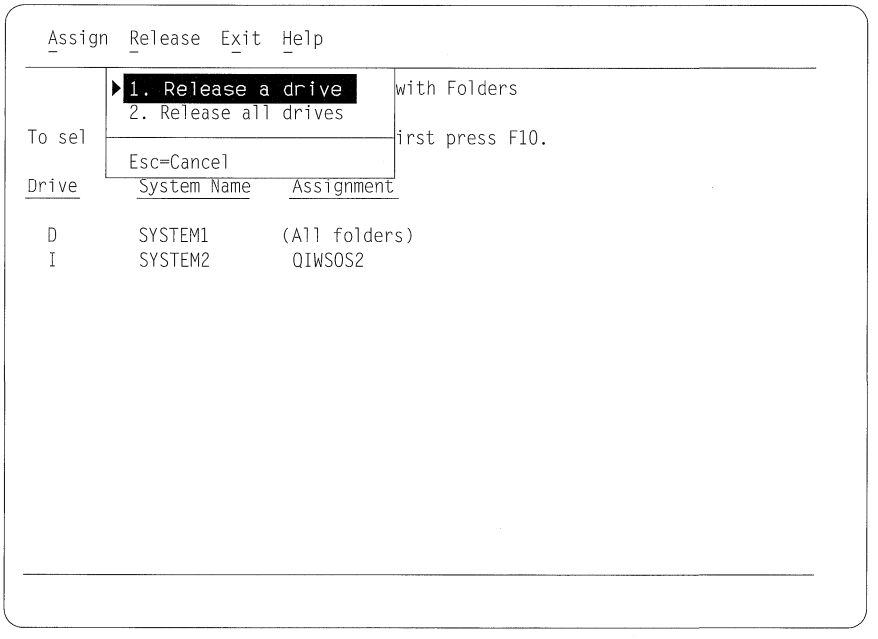
- Release drive letters using options on the PC Support/400 Menu
- Release drive letters interactively using the FSPC command or the CFGFLR command

Releasing Drive Letters from the PC Support/400 Menu

To release drive letters using the options on the PC Support/400 Menu, follow these steps:

1. Select the option `Use folders on host system`. The Work with Folders display is shown.
2. Press F10 (Actions) and select `Release` from the list of options at the top of the display.

   The following display is shown:



RSLN399-3

3. Select option 1 (Release a drive) to release a single drive letter or option 2 (Release all drives) to release all assigned drive letters.

   A display similar to the following is shown:

```
                              Release a Drive

Drive   System Name   Assignment

  D     SYSTEM1       (All folders)
  I     SYSTEM2       QIWSOS2




Select options, press Enter

Drive . . . . . .[ ]    (D I)




     Enter  Esc=Cancel  F1=Help  F3=Exit  F5=Refresh
```

RSLN400-4

The top portion of this display shows the drives that are assigned. The bottom portion of the display allows you to choose the drive you want to release.

4. Type the letter of the drive you want to release between the brackets and press the Enter key.

Drives can only be released when all of the following conditions occur:

- No programs are using the drive.
- No open files exist on the drive.
- No searches are taking place for information about the files on a drive.

If you have finished using AS/400 folders at this time, press the Esc key to return to the Work with Folders display. Then select Exit from the list of actions at the top of the display. You are returned to the PC Support/400 Menu.

Releasing Drive Letters Interactively

PC Support provides you with two methods for releasing drives interactively. The first method is to use the FSPC command. The second method is to use the CFGFLR command.

Use the FSPC command when you want to release one drive letter at a time. Use the CFGFLR command when you want to release multiple drive letters at one time.

Using the FSPC Command to Release a Drive Letter

If you want to release a single drive letter, use the FSPC command. You can use the FSPC command from a command line or put it in a batch file.

- To release a drive letter, enter the following command at the PC command prompt:

  ```
  FSPC RELEASE D:
  ```

- To release all drive letters currently assigned, enter the following command:

```
FSPC RELEASE *
```

The asterisk (*) indicates that all drive letters should be released.

- To display help information about releasing drives, enter the following command:

  ```
  FSPC RELEASE HELP
  ```

- To display the Work With Folders display, enter the following command:

  ```
  FSPC
  ```

  You can release any drive letters by selecting options on this display. The Work With Folders display is described in "Assigning Drives from the PC Support/400 Menu" on page 57.

Using the CFGFLR Command to Release a Drive Letter

If you want to release multiple shared folders drive letters at one time, use the CFGFLR command. You can use the CFGFLR command from a command line or you can put it in a batch file.

This method requires the use of a configuration file, so if you do not want to get involved with configuration files, release the drive letters using either the options on the PC Support/400 Menu or the FSPC command.

The CFGFLR command differs from the FSPC command in that you can use a single CFGFLR command to release multiple drive letters. The FSPC command only allows you to release a single drive letter at a time (unless you use the asterisk (*) option with the FSPC command, which releases all assigned drive letters).

The CFGFLR command tells the CFGFLR program to process a configuration file that contains information about the drive letter you want to release. The information in the configuration file is in the form of a four-character identifier known as SFLR. You need to include one SFLR entry for every drive letter you want released. You can use the PC Support configuration editor to enter the information in the following format:

```
SFLR 2,D
```

where

SFLR Is the identifier.

2 Specifies that you want the drive letter released (a 1 would mean you wanted it assigned).

D Specifies the drive letter you want released. You can also use an asterisk (*) to indicate that you want to release all drive letters currently assigned.

Once you have the information in the configuration file, all you have to do is enter the CFGFLR command with the configuration file name. To do so, enter the command in this manner:

```
CFGFLR CONFIG.CHI
```

where CONFIG.CHI is the name of the configuration file. Remember, if the CFGFLR command and the configuration file are not in the current drive and directory, you must specify the correct drive and directory when you enter the command.

Part 4. Transferring Data Between Host and PC

Chapter 12. Getting Ready to Transfer Data

PC Support allows you to transfer data from the AS/400 system to your personal computer, or from your personal computer to the AS/400 system. This chapter contains some basic concepts about transferring data. It prepares you for creating the transfer requests necessary for uploading or downloading data in later chapters.

If you are already familiar with transferring data and want to learn more complicated techniques of creating transfer requests, see Chapter 16, "Creating Complicated Data Transfers" on page 109.

Understanding the Transfer Function

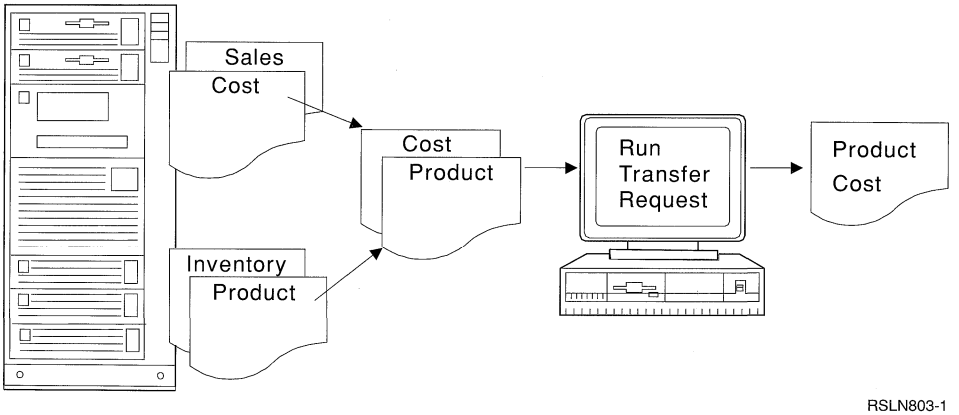
To understand the transfer function, you need to understand the data that can be transferred. Data can be source programs, records, or any information that is:

- Organized for analysis
- Used for decision making
- Suited for computer processing

For example, a spreadsheet may use inventory data to produce a cost analysis report. Without a means to get the data to a personal computer, you would have to print the data from the host system and then type the information again into the personal computer file. With the transfer function, you can access the inventory database directly, select only the data needed for the report, perform any required processing that is necessary, and have a complete report using that data.

Data can also be sent from the personal computer to the host system for processing by AS/400 applications. For example, other personnel within the same company that have access to your AS/400 system, even those in remote locations, may be interested in your cost analysis report to compare their progress with yours.

For example, this diagram shows that you can join two files and transfer that information to the personal computer to create a customer summary report.



Understanding AS/400 and PC Data Concepts

To transfer data using PC Support, you must create a transfer request. A transfer request provides the necessary information about the data you want to transfer. Therefore, it is necessary for you to understand basic AS/400 and PC data concepts.

When you create a transfer request, you provide answers to such questions as:

Where is the data located?
How much of the data do you want to transfer?
How should the data be sorted?
Where do you want the data to be transferred?

When you transfer data from the AS/400 system to your personal computer, you can tell the system what data to transfer and whether it is to be displayed, printed, or stored in a file on your personal computer. PC Support allows you to transfer any of the following to your personal computer:

- An entire AS/400 file
- Parts of an AS/400 file
- Data combined from two or more AS/400 files (this is called *joining* files)
- Information about a group of records from an AS/400 file

PC Support allows you to save a transfer request in a PC file so that the same information can be used the next time you want to transfer data. If you save a transfer request, you can recall and modify it or run it again.

PC Data Formats

Data can be stored in diskette or hard disk files on your personal computer. The type of data that can be transferred and how it is stored varies depending on the data format used. For details on these data formats, see the manual *PC Support/400 Technical Reference for DOS and OS/2*.

Introducing AS/400 Files

Before you can transfer data, you need to know a little bit about AS/400 files. The following sections tell you only what you need to know to transfer data to and from the personal computer.

Libraries

An AS/400 library organizes related objects into a meaningful collection, such as all the programs and files for your accounts receivable. A library is used to group objects and to find objects by name. The transfer function uses libraries to find files on the AS/400 system.

Files

The AS/400 files you work with are made up of a description of the file and the data in the file. PC Support works with AS/400 files called database files. Database files can be either physical or logical files.

A **physical file** is a database file that contains data stored in records. A description of the record format is included in the physical file, as well as the data itself.

A **logical file** is a database file through which data stored in one or more physical files can be accessed. Like a physical file, a logical file contains a file description. A logical file does not contain data. Instead, a record format contained in the logical file description is used to access fields in one or more physical files. When a logical file is transferred from the AS/400 system to your personal computer, data is actually taken from one or more physical files; you need only identify the logical file as the file you want to transfer. The AS/400 system knows which physical files contain the actual data to be transferred.

Note: You cannot transfer data from your personal computer to a logical file.

Members

Data records within a database file are grouped into members. A file must contain at least one member.

When data is transferred to and from the AS/400 system, the actual transfer of data takes place to and from members of files. For example, if a PC file is transferred to the AS/400 system, the file becomes a new member within a new or existing AS/400 file, or it replaces an existing member in an existing AS/400 file.

Record Formats

A record format describes the fields in the records of a file and the order in which those fields appear in the records. Record formats are stored within a file description. Physical and logical database files can have one or more record formats.

Now that you have familiarized yourself with some of the basic concepts of transferring data, go on to Chapter 13, "Downloading Data to Your PC" on page 83 to learn how to create a transfer request for transferring data to your personal computer.

Chapter 13. Downloading Data to Your PC

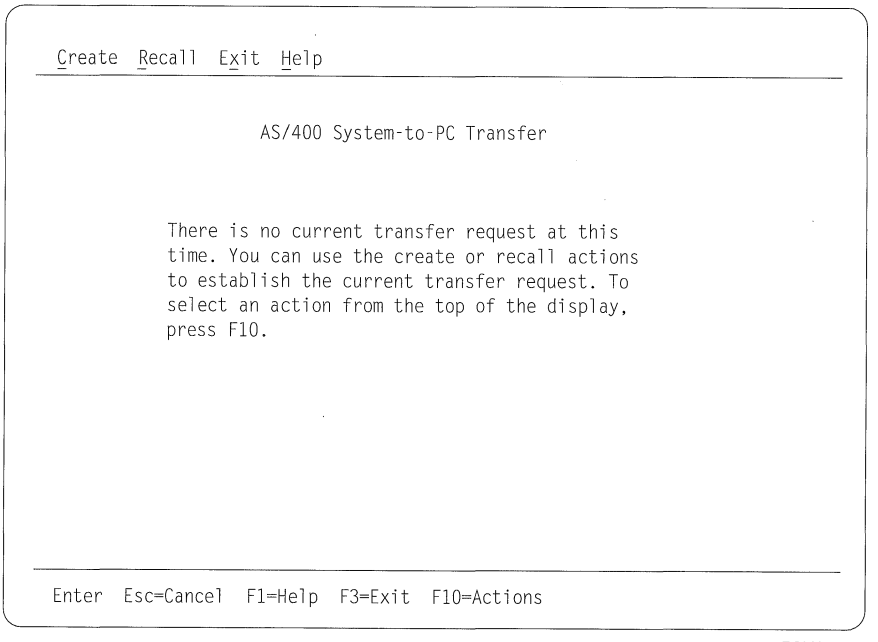
If you have not already done so, you should familiarize yourself with the information in Chapter 12, "Getting Ready to Transfer Data" on page 79 before proceeding with this chapter. This chapter shows you how to create a simple transfer request to transfer data from your AS/400 system to your personal computer. If you want to learn more advanced techniques of data transfer, refer to Chapter 16, "Creating Complicated Data Transfers" on page 109.

Setting Up an AS/400 System-to-PC Transfer Request

The easiest way to learn how to transfer data is to create your own transfer request. You can practice by starting PC Support on your personal computer and performing the steps in this section. You can use a sample file named QCUSTCDT in the library QIWS to practice transferring data. This sample file was shipped with PC Support and stored on the AS/400 system when PC Support was installed. This chapter shows pictures of the displays so you can easily follow the steps for creating a transfer request.

Follow these steps to set up a transfer request:

1. Select the option Transfer data on the PC Support/400 Menu. The following display is shown:

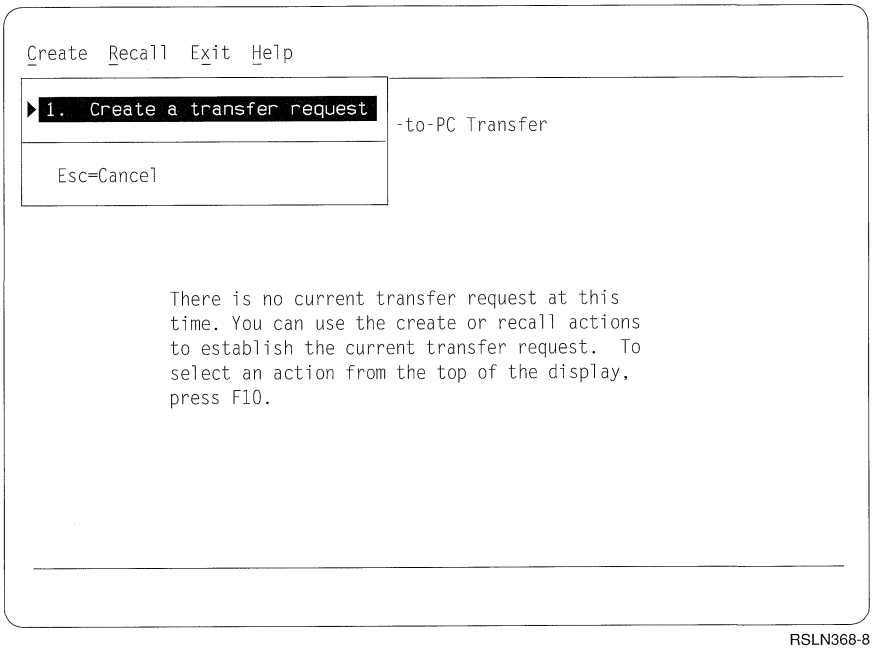


RSLN367-6

From this display, you can create or recall a transfer request, or exit the transfer function and return to the PC Support/400 menu, or display help information.

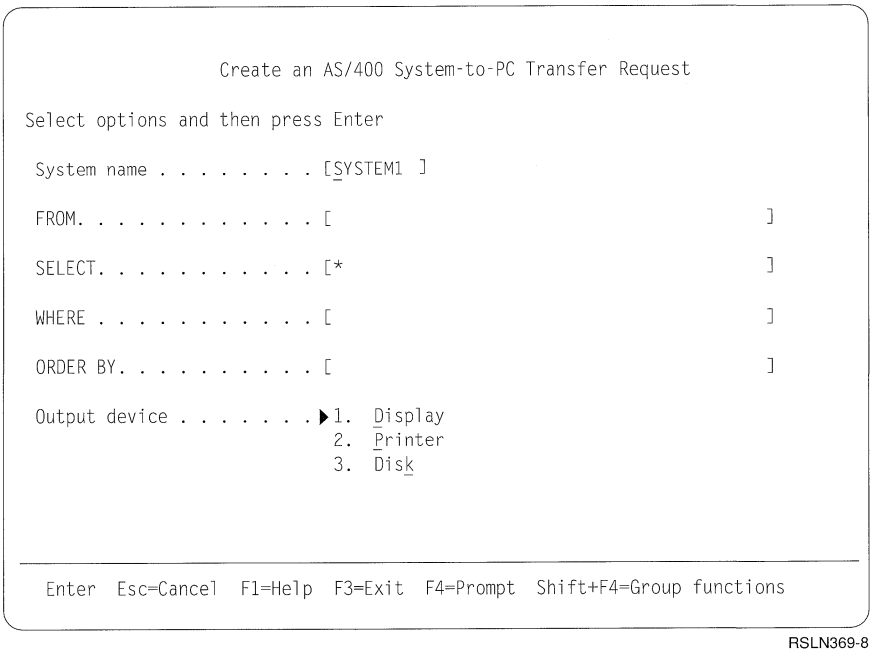
The transfer request transfers a copy of the data to your personal computer. The original file on the AS/400 system remains unchanged.

2. Press F10 (Actions) and select Create from the list of actions at the top of the display. The following display is shown:



RSLN368-8

3. Press the Enter key to continue. The following display is shown:



RSLN369-8

This display contains the prompts you need to create an AS/400 system-to-PC transfer request.

4. Enter a value for each of the prompts on the display. The rest of this chapter explains what each prompt means.

System Name

Your personal computer might be connected to more than one system. The *System name* prompt allows you to specify the system from which the data is transferred. Your default system is automatically provided for you. You can press the Tab key to select this system, or you can type the name of another system over it. If you do not know the name of the system you want to use, press F4 to display a list of available options.

For practice, leave the value that appears on the display. Press the Tab key to move to the next prompt.

FROM

The *FROM* prompt specifies which file or files on the system contain the data you want transferred. You must enter the file name in the following format:

```
library-name/file-name(member-name,record format-name)
```

You are required to provide only a file name. The AS/400 system searches for the library, member, and record format for you.

Each name you provide must be 10 characters or less in length. The first character must be A through Z, $, #, or @. The remaining characters can be 0 through 9, underscore (_), or period (.). You can use quotation marks (" ") around lowercase names unless they are format names.

library-name

Type the name of the library that contains the AS/400 file from which you want to transfer data. If you do not specify a library name, the system searches for the file in all libraries in the user portion of the AS/400 job library list (*USRLIBL). If you enter a library name, you must type a slash to separate the library name from the file name.

If you do not know the library name, you can press F4 to list all the libraries in the user portion of the AS/400 job library list (*USRLIBL).

If the *FROM* prompt is blank, or if you have typed a comma to start another file name, press F4 to display a list of all libraries defined in the user portion (*USRLIBL) of the AS/400 job library list. You can personalize the user portion of the library list by using the Change Job Description (CHGJOBD) command on the AS/400 system.

file-name

Type the name of the AS/400 file from which you want to transfer data. You must type the name of at least one file.

If you do not know the name of the file you want to use, you can press F4 after typing a library name and a slash. If you do not type a library name followed by a slash, the system lists library names rather than file names. You can also type part of the file name followed by an asterisk (*) and press F4 to list all the file names beginning with the characters you entered.

For a list of all files in the libraries that are defined in the user portion of the AS/400 job library list, type *USRLIBL/ and press F4.

If you are transferring data from more than one file, separate the file names with a comma. For example, you might have:

```
file-name,file-name
```

Or if you entered a library name, you might have:

```
library-name/file-name,library-name/file-name
```

You can display the list of library names again by pressing F4 after typing the comma. You can display the list of file names in the library by pressing F4 after typing the slash. You can specify up to 32 files.

member-name

Type a left parenthesis and the name of the AS/400 member from which you want to transfer the data. If you do not type a member name, the first member in the file is used. The left parenthesis separates the member name from the file name. A right parenthesis is required after the member name. For example, you might have:

```
library-name/file-name(member-name)
```

You can press F4 after typing the file name for a list of member names you can use. You can also type a left parenthesis, part of the member name followed by an asterisk (*), and a right parenthesis, and then press F4 to list all of the member names beginning with the characters you entered. For example, if your library name is QIWS, your file name is TEMPCDT, and you want a list of all member names starting with CUST, you would enter the following and then press F4:

```
QIWS/TEMPCDT(CUST*)
```

record format-name

If the file you plan to transfer data from has more than one record format, you must specify a record format name. Type a comma (,) and the name of the record format in the file from which you are transferring data. The comma separates the record format name from the member name. You must specify a member name if you want to specify a record format name. For example:

```
library-name/file-name(member-name,format-name)
```

To display a list of format names, type a closing right parenthesis after the member-name, and then press F4. For example:

```
library-name/file-name(member-name)
```

Or, you can type part of the format name followed by an asterisk (*) and the closing right parenthesis, and then press F4 to list all of the format names beginning with the characters you entered. For example:

```
library-name/file-name(member,xyz*)
```

For practice, use the sample file called QCUSTCDT in the library QIWS. Type the name of the file in the *FROM* prompt as follows:

```
QIWS/QCUSTCDT
```

When you have completed the *FROM* prompt, press the Tab key to continue.

SELECT

The *SELECT* prompt tells the system which fields and record type you want to transfer. The fields you specify must be defined in the record format you specified in the *FROM* prompt. If you do not change the value for this prompt, an asterisk (*) is used. The asterisk means that you want to transfer all of the fields in a record.

Note: PC Support does not allow you to transfer more than 256 fields. Therefore, if more than 256 fields are defined for the file, you cannot use the asterisk. Instead, you must specify in the *SELECT* prompt which fields you want to transfer.

If you want to select certain fields in the file to transfer, type the field names in the order you want them arranged. You can add one or more blanks between the names of the fields to make the *SELECT* prompt easier to read. However, the field names must be separated by commas, as follows:

```
LSTNAM, STREET, CITY
```

You can transfer either of two record types, detail or summary, depending on the functions you specify in the *SELECT* prompt.

Detail records: When you transfer detail records, data from every record in the host file that fits the conditions in the *WHERE* prompt is transferred. To transfer detail records, type the name of the field or fields that you want to transfer, or press F4 to list the fields in the file you selected.

Summary records: When you transfer summary records, you specify how you want the data calculated by selecting one of the following functions:

AVG Transfer the average value of the field.
MIN Transfer the lowest value of the field.
MAX Transfer the highest value of the field.
SUM Transfer the total value of the field.
COUNT Count and transfer the number of detail records that make up a summary record.

Note: COUNT can be used only if you specify an asterisk rather than a field name.

For example, if you wanted to find the minimum (MIN) balance due (BALDUE), the maximum (MAX) balance due, and the total (SUM) balance due, you would enter the following in the *SELECT* prompt:

```
MIN(BALDUE),MAX(BALDUE),SUM(BALDUE)
```

You can also perform calculations on more than one field. To find the minimum balance due, the maximum credit due (CDTDUE), and the average (AVG) credit limit (CDTLMT), enter the following in the *SELECT* prompt:

```
MIN(BALDUE),MAX(CDTDUE),AVG(CDTLMT)
```

This format returns one summary record containing all three values.

For practice, leave the asterisk (*) to transfer all fields in the detail record. Press the Tab key to continue.

WHERE

The *WHERE* prompt is optional. You can use it to specify one or more conditions to be met by the record in order for it to be transferred. If you leave it blank, all of the records in the file are transferred.

A **condition** specifies a test against which the records in the file member are applied. All of the records in the file member are tested against the conditions you specify, and only the records that pass the test are transferred.

The format of a condition is:

```
field-name test value
```

where:

field-name

Is the name of a field or substring of a field defined in the record format. If you do not know the field names, you can press F4 to list them.

You can specify one of the supported functions to manipulate a field or a constant and use the result on the comparison. The supported functions and examples of their usage are:

SUBSTR Returns the specified portion of a character string. This function has three parameters: field-name, starting position, and length of the substring to be returned. The following example specifies that 20 characters from the field FULLNAME starting with the tenth character is retrieved.

SUBSTR(FULLNAME 10 20)

VALUE Returns the first nonnull value from a list of parameters (if all parameters are null, then null is returned):

VALUE(DEPOSIT WITHDRAW BALANCE)

CURRENT

Returns the current system DATE, TIME, TIMEZONE, or TIMESTAMP:

CURRENT(TIMEZONE)

DIGITS Returns the character string representation of a numeric field:

DIGITS(EMPLOYEE#)

CHAR Returns the character string representation of a date, time, or timestamp field. The second parameter is used to specify the Systems Application Architecture* (SAA*) format of the returned string (USA, EUR, ISO, or JIS are the allowed values):

CHAR(DATEHIRE USA)

DATE Returns the date portion of a timestamp field:

DATE(TIMECRTD)

TIME Returns the time portion of a timestamp field:

TIME(TIMECRTD)

TIMESTAMP

Returns the timestamp of a pair of date and time fields:

TIMESTAMP(DATESEND TIMESEND)

YEAR Returns the year portion of a date field or a timestamp field:

YEAR(DATEHIRE)

MONTH Returns the month portion of a date field or a timestamp field:

MONTH(DATEHIRE)

DAY Returns the day portion of a date field or a timestamp field:

DAY(DATEHIRE)

DAYS Returns the number of days from January 1, 0001 of a date field or a timestamp field:

DAYS(DATEHIRE)

HOUR Returns the hour portion of a time field or a timestamp field:

HOUR(TIMESEND)

MINUTE Returns the minute portion of a time field or a timestamp field:

MINUTE(TIMESEND)

SECOND Returns the second portion of a time field or a timestamp field:

SECOND(TIMESEND)

MICROSECOND
Returns the microsecond portion of a timestamp field:

MICROSECOND(TIMECRTD)

test Is the type of comparison to be applied to the field or substring. See the following section for the tests you can use.

value Is the name of a field or a constant. The constant can be either a number or a character string. A character string must be enclosed in apostrophes (for example, 'JOHN').

If you specify a character field or a substring for the field name, the value must be the name of a character field or a character string constant. If the lengths of the field and value are not equal, blanks are added to the right end of the shorter field. If a numeric field is specified for the field name, the value must be a numeric field, a numeric constant, or an expression (+, -, *, or /).

If you specify a date field for the field name, the value must be the name of a date field, a character field (when the CHAR function is used to convert the date field), or a character string constant. When a character string constant is used, the value should be in a non-SAA format (USA, ISO, EUR, JIS).

Tests: The following are the tests you can use. They can be preceded or followed by one or more blanks:

=	Equal
<> or ><	Not equal (see note)
>	Greater than
>=	Greater than or equal
<	Less than
<=	Less than or equal
LIKE	Searches the field for a character pattern
BETWEEN	Searches the field for a character string or a number that is equal to or between specified constants
IN	Searches the field you specified for a character string or for a number in a list
IS	Field contains null values
ISNOT	Field does not contain null values

Note: The PC keyboard does not support the NOT sign (¬) for not equal (¬=). Instead, you must type the less than and greater than symbols together (<> or ><).

For example, to specify all last names (LSTNAM) after C but before CZZZZZZZZ, you would type the following in the *WHERE* prompt:

```
LSTNAM BETWEEN 'C' AND 'CZZZZZZZZ'
```

For practice, type the following in the *WHERE* prompt:

```
CUSNUM > 5000
```

This transfers all records in which the customer number is greater than 5000. Press the Tab key to continue.

ORDER BY

The *ORDER BY* prompt tells the system the order in which the transferred records are to be sorted. You do not have to type a value for this prompt. If you do not specify an order, the records are transferred in no special order; the order may vary each time you run the transfer request.

Records are sorted by the first field specified. Records with duplicate values in the first field are sorted by the second field specified, and so forth. For example:

```
DEPT,NAME,TELE
```

sorts the records first by DEPT. The records with the same DEPT are sorted by NAME. Records with the same DEPT and NAME are sorted by TELE.

Unless you used the asterisk in the *SELECT* prompt, the fields in the *ORDER BY* prompt must also be in the *SELECT* prompt. You can press F4 to list all of the fields that you typed in the *SELECT* prompt.

Each field can be sorted in ascending or descending order. To do this, type the field name followed by a blank, and then ASC for ascending or DESC for descending order. ASC is the default value. For example:

```
DEPT DESC, NAME ASC
```

sorts first by DEPT in descending order, then by NAME in ascending (or alphabetical) order.

For numeric fields, you can also specify ABS for absolute value. To do this, type the field name followed by a blank and then ABS. If any of the fields have negative values, the negative sign is ignored and the absolute value is used instead. For practice, type the following:

```
CUSNUM
```

This tells the AS/400 system to sort the records by customer number. Press the Tab key to continue.

Output Device

The *Output device* prompt allows you to choose how you want the data handled on the personal computer. You can choose to have the data displayed, printed, or stored in a disk or diskette file. If you do not change the value for this prompt, the data is displayed.

Display When you run the transfer request, the transferred data appears on your display.

Printer When you run the transfer request, the transferred data is printed. When you choose to print the data, you must also complete additional prompts about how you want the data to be printed.

Disk When you run the transfer request, the data is stored in a file on a PC diskette or hard disk. If you choose to store the data, you are prompted for more information.

For practice, select option 3 (Disk). Press the Tab key to continue.

Sending output to a disk file: When you select option 3 (Disk) for *Output device*, the following prompts appear:

- *TO*. Type the name of the PC disk or diskette file to receive the transferred data. For practice, type the following:

  ```
  A:CUFILE.TRY
  ```

  Press the Tab key to continue.

  Note: The example above assumes you have a diskette in drive A to receive the transferred data. If you want to transfer the data to another diskette or hard disk drive, use that drive letter instead of A.

- *Replace old file*. This prompt lets you tell the personal computer whether you want the transferred data to replace old data if the file already exists. For practice, select option 2 (No) and press the Tab key to continue.

- *PC file type*. This is the type of file you are using to receive the transferred data. For practice, select option 2 (DOS random) and press the Tab key to continue. Refer to the manual *PC Support/400 Technical Reference for DOS and OS/2* for a description of PC file types.

- *Show format of transferred data*. Select whether you want to see the detailed format of the data being transferred. For practice, select option 3 (None) and press the Tab key to continue.

- *Save transfer description*. This prompt lets you choose whether you want to save a description of the file in a PC file. This description tells the personal computer how the data appears. If you plan to transfer the file back to the AS/400 system, you must have a file description. Option 1 (Yes) is already selected for you. For practice, leave Yes and press the Tab key to continue.

- *Description file name*. Type the name of the PC file to contain the transfer description. The standard extension for PC file descriptors is FDF. For practice, use the default:

  ```
  A:CUFILE.FDF
  ```

  This file (A:CUFILE.FDF) is used to create a PC-to-AS/400 system transfer request later in this chapter.

Press the Enter key to complete the transfer request. You can now save, run, or modify it. If you want to end the transfer function without saving the request and return to the PC Support/400 menu, press F10 and select Exit from the top of the display.

Chapter 14. Uploading Data to the AS/400 System

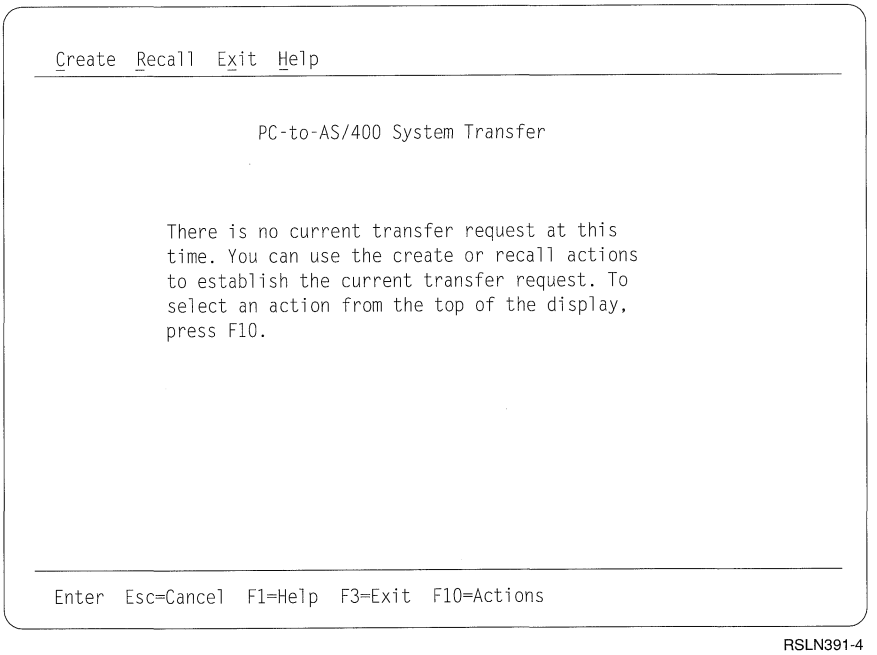
If you have not already done so, you should familiarize yourself with the information in Chapter 12, "Getting Ready to Transfer Data" on page 79 before proceeding with this chapter. This chapter shows you how to create a simple transfer request to transfer data from your personal computer to the AS/400 system. If you want to learn more advanced techniques of data transfer, refer to Chapter 16, "Creating Complicated Data Transfers" on page 109.

Setting Up a PC-to AS/400 System Transfer Request

The easiest way to learn how to transfer data is to create your own transfer request. You can practice by starting PC Support on your personal computer and performing the steps in this section. You can use a sample file named QCUSTCDT in the library QIWS to practice transferring data. This sample file was shipped with PC Support and was stored on the AS/400 system when PC Support was installed. This chapter shows pictures of the displays so that you can easily follow the steps for creating a transfer request.

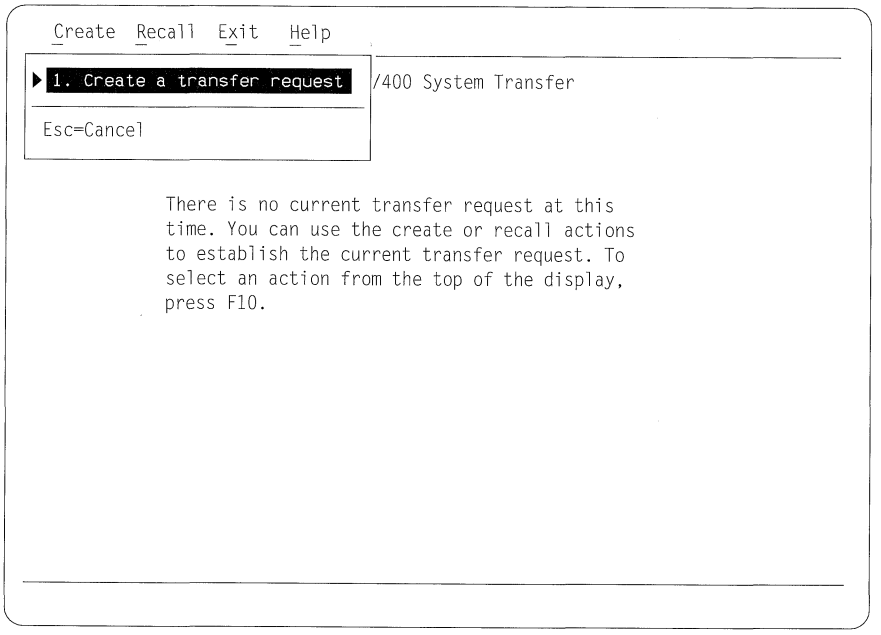
Follow these steps to set up a transfer request:

1. Select the option `Transfer data` on the PC Support/400 Menu. The following display is shown:



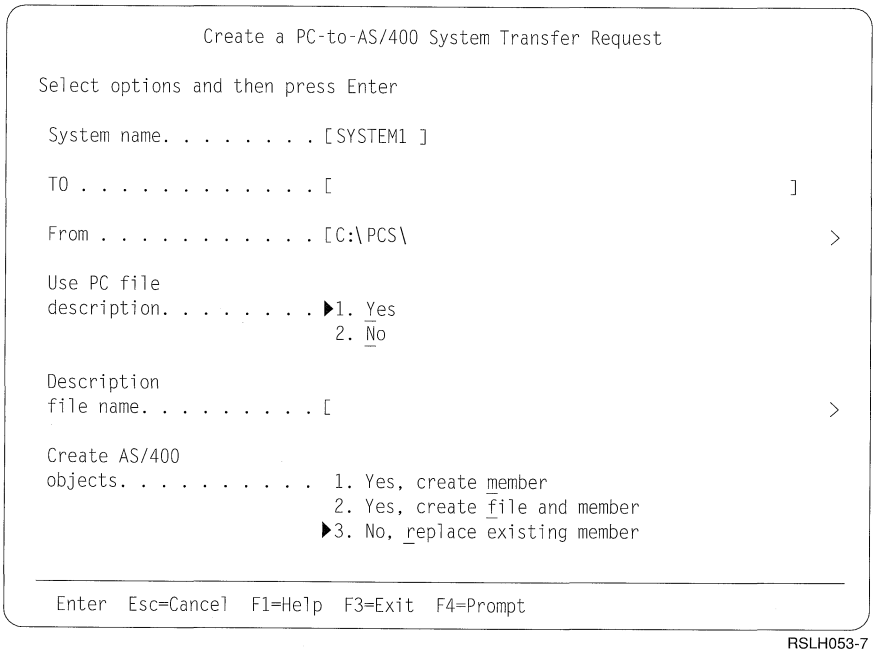
RSLN391-4

2. Press F10 (Actions) and select `Create` from the list of actions at the top of the display. The following display is shown:



RSLH062-4

3. Press the Enter key to continue. The following display is shown:



RSLH053-7

This display contains the prompts you need to create a PC-to-AS/400 system transfer request.

4. Enter values for each of the prompts on the display. The rest of this chapter explains what each prompt means.

System Name

The *System name* prompt allows you to specify the system to which the data is transferred. For practice, leave the value that appears on the display. Press the Tab key to move to the next prompt.

TO

The *TO* prompt names the AS/400 file to which the data is to be transferred. This file must be a physical database file. If the file does not already exist, it is created.

You must enter the file name using the following format:

```
library-name/file-name(member-name,record format-name)
```

Each name you provide must be 10 characters or less in length. The first character must be A through Z, $, #, or @. The remaining characters can be 0 through 9, underscore (_), or period (.). You can use quotation marks (") around lowercase names unless they are format names. You can use quotation marks (") around lowercase Katakana names unless they are format names.

library-name

Type the name of the library that contains the AS/400 file to which you want to transfer data. If you do not enter a library name, then *LIBL is used. If the file you want to transfer the data to does not exist, you must enter a library name as well as a file name. You must type a slash to separate the library name from the file name.

If you do not know the library name, you can press F4 to list all of the libraries in the user portion of the AS/400 job library list (*USRLIBL).

file-name

Type the name of the AS/400 file to which you want to transfer data. To create a new file, type the file name. If you transfer data to an existing file, the newly transferred data replaces the data already in the file.

For a list of the files you can use, do one of the following:

- For files in all of the libraries in the user portion of the AS/400 job library list, type *USRLIBL followed by a slash, and then press F4. If you do not type a library name followed by a slash, the system lists library names rather than file names.
- For files in a particular library, type a library name and a slash, and then press F4. You can also type part of the file name followed by an asterisk (*) and press F4 to list all of the file names beginning with the characters you entered.

member-name

Type a left parenthesis and the name of the AS/400 member to which you want to transfer the data. If you do not type a member name, the first member in the file is used. The left parenthesis separates the member name from the file name. A right parenthesis is required after the member name. For example, you might have:

```
library-name/file-name(member-name)
```

You can type a new member name, or the name of an existing member in the file. If you transfer data to an existing file member, the newly transferred data replaces the data already in the file.

You can press F4 after typing the file name to display a list of member names in the file. You can also type a left parenthesis, part of the member name followed by an asterisk (*), and a right parenthesis, and then press F4 to list all of the member names beginning with the characters you entered. For example, if your library name is QIWS, your file name is TEMPCDT, and you want a list of all member names starting with CUST, you would enter the following and then press F4:

```
QIWS/TEMPCDT(CUST*)
```

record format-name

The record format name is optional unless the physical file has more than one record format. Most physical files have only one record format. If you are transferring data to a new member, a record format name of QDFTFMT is automatically used, unless otherwise specified. You must specify a member name before you can specify a record format name.

If you transfer data to an existing file and you do not specify a record format name, it is assumed that only one format is in the file and the existing record format is used.

For practice, create a temporary file on the AS/400 system called TEMPCDT. Since the file does not exist, you must specify a library name. Type the following in the *TO* prompt:

```
QIWS/TEMPCDT
```

The file you have created is new, so you do not have to worry about changing or damaging any data in an existing AS/400 file. When you are finished with this section, you should delete the file from the AS/400 system.

Note: You must have authority to create and delete files on the AS/400 system. If you do not have the correct level of authority, see your AS/400 system administrator.

When you have completed the *TO* prompt, press the Tab key to continue.

FROM

The *FROM* prompt names the PC file from which you are transferring data. For practice, type the name of the file to which you transferred data earlier in Chapter 13, "Downloading Data to Your PC" on page 83:

```
A:CUFILE.TRY
```

Press the Tab key to continue.

Use PC File Description

This prompt lets you tell the AS/400 system whether you want to transfer the data using a PC file description file. For practice, select option 1 (Yes). Press the Tab key to continue.

Description File Name

Type the name of the PC file that contains the description of the file you are transferring. For practice, type the following:

```
A:CUFILE.FDF
```

This will be the default. Press the Tab key to continue.

Create AS/400 Objects

This prompt tells the AS/400 system whether the member named in the *TO* prompt is new. If so, it tells the AS/400 system whether the file containing the member is also new. For practice, select option 2 (Yes, create file and member). When you select this option, additional prompts are displayed. Press the Tab key to continue.

AS/400 File Type

This is the type of file you want to create. For practice, select option 2 (Data). Press the Tab key to continue.

Field Reference File Name

This prompt tells the AS/400 system which file contains the field descriptions for the file you are creating. For practice, type the following:

```
QIWS/QCUSTCDT
```

This tells the AS/400 system that you want to create the new file using the same field descriptions that were used to create QCUSTCDT. This is the file from which you transferred the data earlier in Chapter 13, "Downloading Data to Your PC" on page 83. Press the Tab key to continue.

Authority

This prompt tells the AS/400 system whether you want to allow other users to use the file you are creating. For practice, select option 1 (Read/Write). Press the Tab key to continue.

File Text

You can use this prompt to type a description of the new file. You do not have to type a description, but doing so helps you to remember what the new file contains. For practice, type:

```
Practice Transfer File
```

Press the Tab key to continue.

Member Text

You can use this prompt to type a description of the new member. You do not have to type a description, but doing so helps you to remember what the new member contains. For practice, type:

```
Practice Transfer Member
```

Press the Enter key. This completes the PC-to-AS/400 system transfer request.

You can now save, recall, modify, or run the transfer request. If you run the transfer request, you may want to delete the file from the AS/400 system when you are finished.

If you want to end the transfer function without saving the request and return to the PC Support/400 menu, press F10 and select Exit from the top of the display.

Chapter 15. Saving, Recalling, Modifying, and Running Transfer Requests

This chapter provides information on:

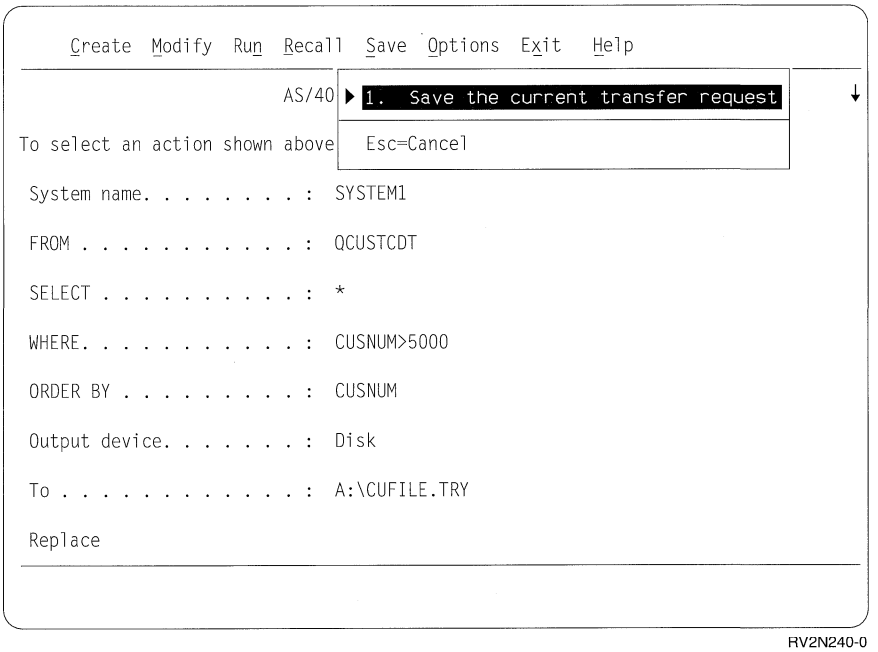
- Saving transfer requests
- Recalling transfer requests
- Modifying transfer requests
- Running transfer requests
- Changing user-defined options for transfer requests

Saving a Transfer Request

You should save your transfer request if you plan to transfer the same data more than once. This prevents having to create a new transfer request each time you want to transfer the same information.

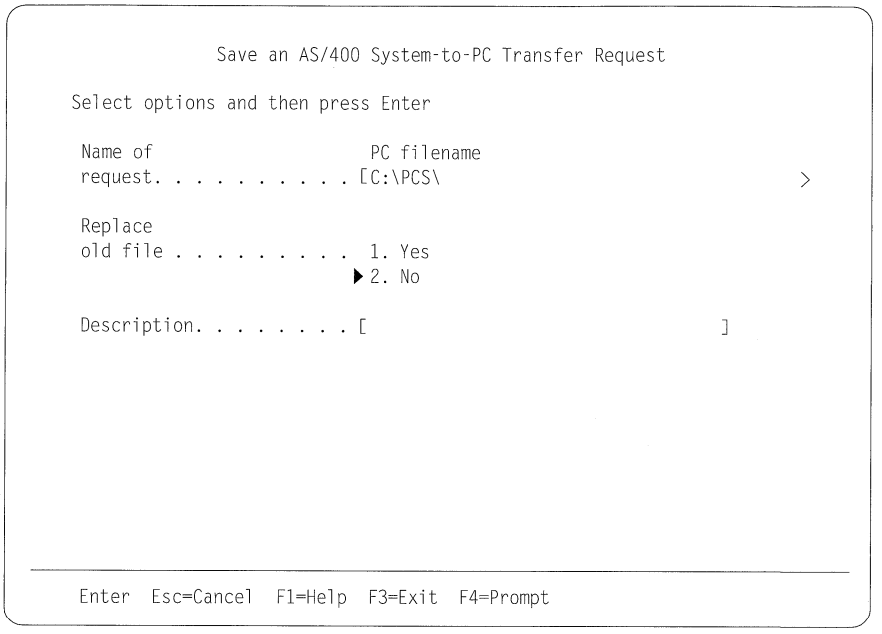
To save a transfer request, follow these steps:

1. Press F10 (Actions) and select Save from the list of options at the top of the AS/400 System-to-PC Transfer display. The following display is shown:



RV2N240-0

2. Press the Enter key to continue. The following display is shown:



RSLN370-7

3. Enter values for each of the prompts on the display. The remainder of this section explains what each of the prompts means.

Name of Request

Type the name of the disk or diskette file in which you want to save the transfer request. Use the following format:

```
[d:][path]file-name[.ext]
```

d: Is the drive where the file is located. The default drive is displayed. If you want to use a different drive, type a letter followed by a colon.

path Is a path of directory names.

If you want to save the transfer request in a specific directory, type the directory names, separated by backslashes (\). The file name should be separated from the last directory name by a backslash. For example, \DIR1\DIR2\FILE. The first backslash is optional; it tells your operating system to begin with the root directory.

file-name Is the name of the file. In this case, it is the name you give to your transfer request. You must type a file name. This name can be from 1 to 8 characters.

.ext Is an optional file name extension. You can type a period (.) followed by 1 to 3 characters after the file name to help you identify the file. If the transfer request is an AS/400 system-to-PC transfer request and you do not type an extension, .TTO is automatically used. The extension .TTO identifies the file as an AS/400 system-to-PC transfer request.

For practice, insert a blank, formatted diskette in drive A and type:

```
A:PRACTICE.TTO
```

You can press F4 to list all of the transfer request files on your disk or diskette. If you do not specify an extension, the file names listed are limited to those with an extension of .TTO. Press the Tab key to continue.

Replace Old File

If a file with the name you chose already exists, you need to decide whether the existing file should be replaced by the new one when it is saved. You can select Yes or No. For practice, select No. Press the Tab key to continue.

Description

If you want, you can type a short description of the transfer request in this prompt. This description can be up to 40 characters long. This description is saved with the transfer request and is displayed when the transfer request names are listed to help you identify the transfer request. For practice, type a short description of your transfer request, such as:

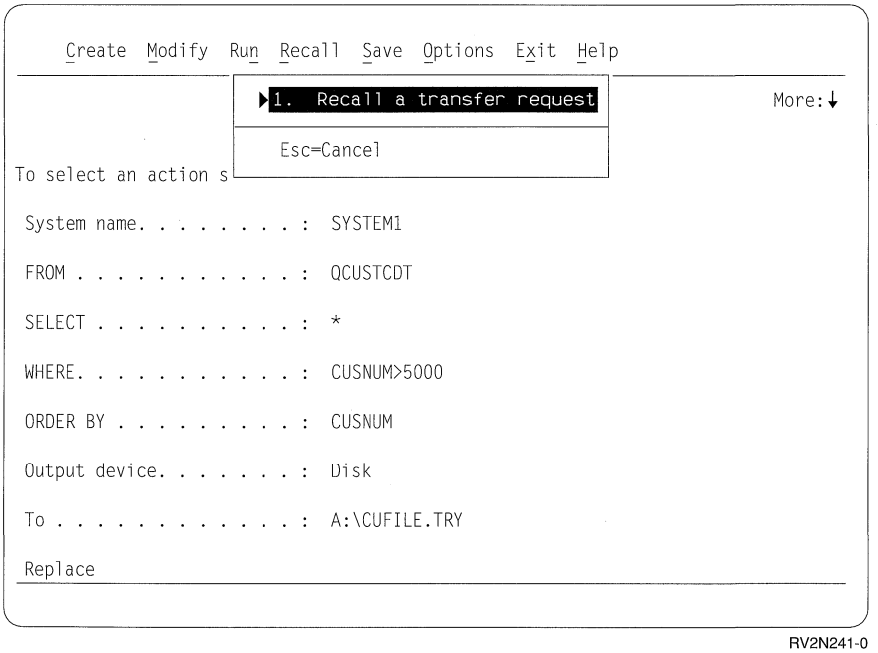
```
Practice transfer request
```

Press the Enter key. The transfer request is saved with the name that you gave it. You can now recall and modify the transfer request or run it.

Recalling a Transfer Request

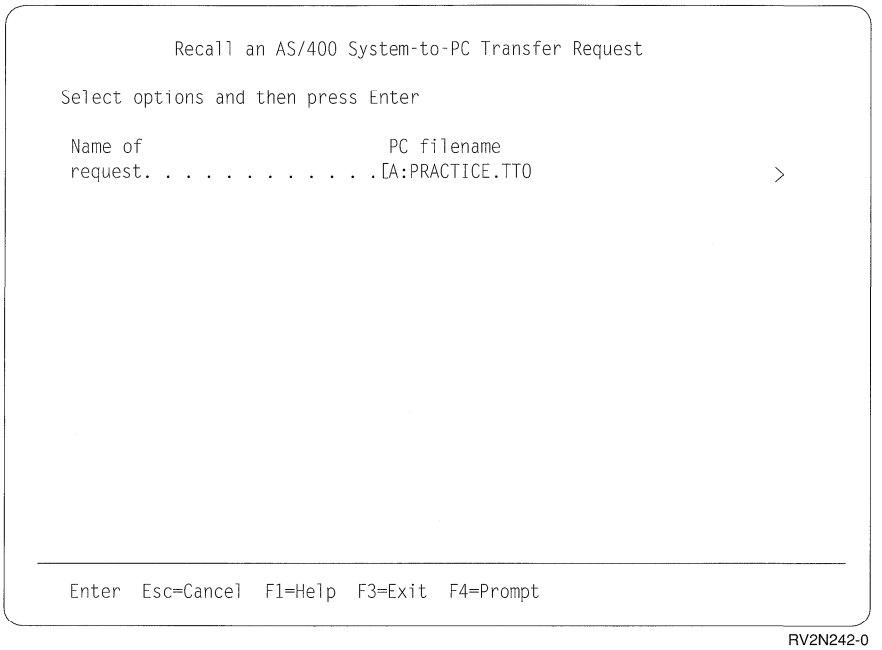
After you have saved a transfer request, you can recall it so that you can modify it or run it. To recall a transfer request, follow these steps:

1. Press F10 (Actions) and select `Recall` from the list of actions at the top of the display. The following display is shown:



RV2N241-0

2. Press the Enter key. The following display is shown:



RV2N242-0

3. Enter a value for the *Name of request* prompt.

   Type the name of the transfer request you want to recall. If you do not know the name, press F4 for a list. You can then select a transfer request name from the list. For practice, use the name of the transfer request you created earlier:

   A:PRACTICE.TTO

When you press the Enter key, your transfer request is displayed. You can now modify it, run it, or save it again.

Modifying a Transfer Request

After you create a transfer request, you can modify it. To modify a transfer request, press F10 and select Modify from the list of actions at the top of the display. The following display is shown:

```
Create  Modify  Run  Recall  Save  Options  Exit  Help
                ▶1.  Modify the current transfer request          More:↓
                  Esc=Cancel
To select

 System name. . . . . :  SYSTEM1

 FROM . . . . . :  QCUSTCDT

 SELECT . . . . . :  *

 WHERE. . . . . :  CUSNUM>5000

 ORDER BY . . . . . :  CUSNUM

 Output device. . . . . :  Disk

 To . . . . . :  A:\cufile.try

 Replace
```

RV2N243-0

Press the Enter key. The following display is shown:

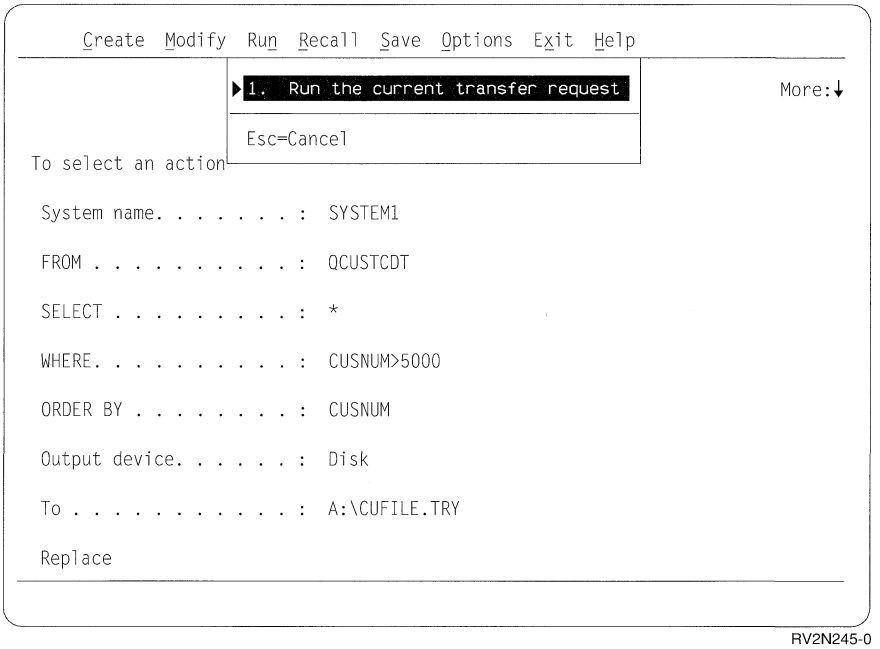
```
                    Modify an AS/400 System-to-PC Transfer Request
                                                                  More:↓
Select options and then press Enter

 System name. . . . . [SYSTEM1  ]

 FROM . . . . . [QCUSTCDT                              ]

 SELECT . . . . . [*                                   ]

 WHERE. . . . . [CUSNUM>5000                           ]

 ORDER BY . . . . . [CUSNUM                            ]

 Output device. . . . . 1.  Display
                        2.  Printer
                      ▶ 3.  Disk

 To . . . . . A:\CUFILE.TRY                           >

 Replace
 old file . . . . . 1.  Yes

   Enter  Esc=Cancel  F1=Help  F3=Exit  F4=Prompt  F5=Run
   Shift+F4=Group functions
```

RV2N244-0

You can now change any of the values you specified for the transfer request. For information about the values you can use, see Chapter 13, "Downloading Data to Your PC" on page 83. When you have finished changing the transfer request, press the Enter key.

Running a Transfer Request

Once you have created your transfer request, you are ready to run it. To run the transfer request, press F5 if F5=Run appears at the bottom of your display. If not, press F10 and select Run from the list of actions at the top of the display. The following display is shown:



RV2N245-0

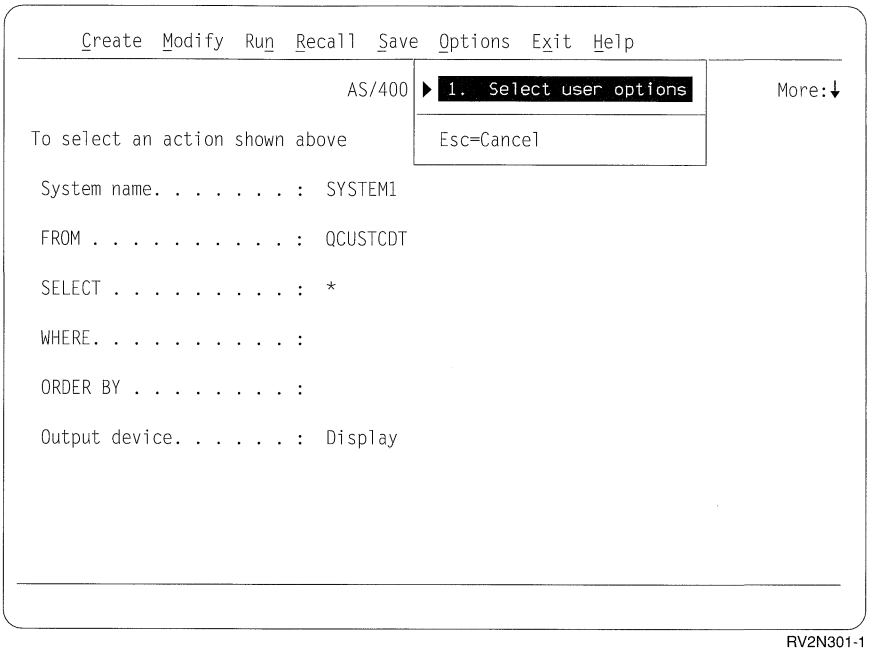
Press the Enter key. The data you requested is transferred to your display, printer, or disk file as specified in your transfer request.

Changing User-Defined Options for a Transfer Request

After you created your transfer request, you can change some of the attributes of your transfer request.

To change the user-defined options for a transfer request, follow these steps:

1. Press F10 (Actions) and select Options from the list of actions at the top of the AS/400 System-to-PC Transfer display. The following display is shown:



RV2N301-1

2. Press the Enter key. The following display is shown:

```
     Select options for an AS/400 System-to-PC Transfer Request

Select options and then press Enter

 Ignore decimal data
 errors if encountered. . . . . .  1. Yes
                                  >2. No

 Time format. . . . . . . . . . . . [HMS]

 Time separator . . . . . . . . . . [:]

 Date format. . . . . . . . . . . . [MDY]

 Date separator . . . . . . . . . . [-]

 Decimal separator. . . . . . . . . [.]


  Enter  Esc=Cancel  F1=Help  F3=Exit  F8=Reset  Spacebar
```

3. Enter a value for the user options you want to change.

   The rest of this chapter explains what each prompt means.

Ignore Decimal Data Errors if Encountered

This prompt allows you to indicate whether you want to ignore any decimal data errors found in a packed or zoned field when the request is being run. You can save a significant amount of time running a request by specifying NO to ignore decimal data errors and use existing indexes. Specifying YES takes more time because the transfer function rebuilds the indexes and fixes any decimal data errors that are encountered.

Time Format

You can specify the desired time format for selected fields that have an AS/400 field type of *Time*. If you don't specify a time format, the default value is obtained from the country information file present on the personal computer when the transfer function is started or from an existing transfer request when it is recalled.

The valid time formats are:

HMS Hour, minute, second (hh:mm:ss)
ISO International Standards Organization (hh.mm.ss)
USA USA standard (hh:mm AM or PM)
EUR IBM European standard (hh.mm.ss)
DDS Format given by AS/400 file attribute
DFT Format given by AS/400 job

Time Separator

You can specify a valid time separator for selected fields that have an AS/400 field type of *Time* with a format type that allows you to specify a separator.

If you don't specify a time separator, the default value is obtained from the country information file present on the personal computer when the transfer function is started or from an existing transfer request when it is recalled.

The valid time separators are:

Colon (:)
Period (.)
Comma (,)
Blank ( )
Null (N) – Absence of any separator
Default (D) – AS/400 job default

Date Format

You can specify a desired date format for selected fields that have an AS/400 field type of *Date*.

If you don't specify a date format, the default value is obtained from the country information file present on the personal computer.

The valid date formats are:

MDY Month, day, year (mm/dd/yy)
DMY Day, month, year (dd/mm/yy)
YMD Year, month, day (yy/mm/dd)
Julian (yy/ddd)
ISO International Standards Organization (yyyy/mm/dd)
USA USA standard (mm/dd/yyyy)
EUR IBM European standard (dd.mm.yyyy)
JIS Japanese Industrial Standard Christian Era (yyyy-mm-dd)
DDS Format given by AS/400 file attribute
DFT Format given by AS/400 job

Date Separator

You can specify a desired date separator for selected fields that have an AS/400 field type of *Date* with a format type that allows you to specify a separator.

If you don't specify a date separator, the default value is obtained from the country information file present on the personal computer when the transfer function is started or from an existing transfer request when it is recalled.

The valid date separators are:

Slash (/)
Dash (–)
Period (.)
Comma (,)
Blank ( )
Null (N) – Absence of any separator
Default (D) – AS/400 job default

Decimal Separator

You can specify a desired decimal separator for selected fields that have an AS/400 field type of packed decimal or zoned decimal.

If you don't specify a decimal separator, the default value is obtained from the country information file present on the personal computer when the transfer function is started or from an existing transfer request when it is recalled.

The valid decimal separators are:

Period (.)
Comma (,)
Default (D) – PC default when the transfer request is run

Chapter 16. Creating Complicated Data Transfers

This chapter contains advanced topics related to transferring data. If you have not done so already, you should familiarize your self with the information in the previous chapters of this part before going on with this chapter.

This chapter:

- Provides more details about the transfer function
- Introduces more advanced data concepts
- Shows you how to create a more complicated AS/400 system-to-PC transfer request and a PC-to-AS/400 system transfer request
- Shows you how to use the interactive transfer function programs

Introducing the Transfer Function

The PC Support transfer function is a set of programs that allows you to transfer data to or from the personal computer. Before you can operate the transfer function, you must start PC Support.

Transferring data from the AS/400 system to the personal computer and from the personal computer to the AS/400 system requires separate sets of programs. You can choose from the following:

- Interactive programs

  The **interactive** transfer programs use displays and prompts to lead you step-by-step through creating, modifying, running, or recalling a transfer request. You can save the transfer request so that it can be recalled later and used again.

  You use the interactive programs when you are doing a one-time transfer request. You also use the interactive programs to create or modify a transfer request to be used by the automatic transfer function programs.

  To start the interactive programs, select either the transfer option to transfer data from the host system to the personal computer, or the transfer option to transfer data from the personal computer to the host system on the PC Support/400 menu.

  Another way to start the interactive programs is to type RTOPC or RFROMPC at the PC command prompt.

- Automatic programs

  The **automatic** transfer programs run a transfer request without prompting. You must have previously created and saved the transfer request using an interactive transfer program. You are not asked for information; the transfer function uses the information supplied in the previously created transfer request.

  You might want to use the automatic transfer programs when you often require the same information to be transferred. To use the automatic transfer function programs, type RTOPCB to send a transfer request to the personal computer, or type RFROMPCB to send a transfer request from the personal computer to the AS/400 system.

For example, if you are required to create a daily report using current data on the AS/400 system, you could use the automatic AS/400 system-to-personal computer transfer function to run the required transfer request and transfer the current data to your personal computer each day. That data could then be used by a personal computer application to create the report you need.

The automatic transfer programs can be useful when you need to maintain the integrity of the data being transferred. When the automatic transfer program runs, no prompts or displays appear; therefore, you cannot create or change a transfer request while the automatic transfer program is running.

Introducing Data Concepts

The basic elements of data management are files, records, and fields. A file is a collection of records referred to by a single name. Each record in that file contains one or more pieces of related information. Each piece of information is called a field.

The AS/400 system and the personal computer use different functions to store, sort, and format data.

Learning about Personal Computer Files

When you transfer files from the personal computer to the AS/400 system, the transfer function uses a special personal computer file called a **file description file**; this file ensures that data is stored in the correct format and that the data is changed to the correct types.

The file description file identifies the format of the personal computer data file and describes the fields contained in the data file. The file description file lists the names of all the fields in the data file; this list reflects the order in which the fields appear in the data file. The data type, length, and number of decimal positions of each field are also described. This information allows the transfer function to determine not only how the data should be changed, but also where a particular field exists in a file record.

If you transfer data from the AS/400 system to the personal computer, the transfer function can automatically create a file description file for you. The information contained in the file description file is, in this case, a result of the file descriptions contained in the AS/400 file.

If you want to transfer a personal computer data file to the AS/400 system, and that file does not have the same file description file (created by you or created by the transfer function), you must first create the file description file. For more information on creating a file description file, refer to the *PC Support/400 Technical Reference for DOS and OS/2*.

Introducing Distributed Data Management (DDM) File Concepts

Distributed data management (DDM) is an AS/400 system function that allows you to access database files that are physically located on a remote AS/400 system or System/38. These files can be accessed with the transfer function by specifying the DDM file name as the AS/400 file to be used for the transfer. See the *DDM Guide* for more information on using DDM files.

Transferring Data from the AS/400 System

The AS/400 system-to-personal computer transfer function allows you to transfer data from the AS/400 system to the personal computer. You can specify the data to be transferred and whether it is to be displayed, printed, or stored in a file on a diskette or hard disk. Common ways of transferring data are:

- Transferring a complete AS/400 file to the personal computer.
- Transferring portions of an AS/400 file to the personal computer.
- Joining data from two or more AS/400 files and transferring the data to the personal computer.
- Grouping records from an AS/400 file and transferring information about each group to the personal computer.

The following example, based on an inventory file and a suppliers file, describes the different ways of transferring data from an AS/400 system.

The INVENTORY file contains information about the inventory of various parts. The parts are identified by a 3-digit number called PARTNUM. For each part, the file contains a description of the part (DESCRIPTION) and the quantity on hand (QONHAND).

```
      File: INVENTORY
Field names: PARTNUM  DESCRIPTION  QONHAND
             -------  -----------  -------
   Record 1:     209          CAM       50
          2:     221         BOLT      650
          3:     222         BOLT     1250
          4:     231          NUT      700
          5:     232          NUT     1100
          6:     207         GEAR       75
          7:     241       WASHER     6000
          8:     285        WHEEL      350
          9:     295         BELT       85
```

The SUPPLIERS file contains information about the suppliers of various parts. The suppliers are identified by a 2-digit number called SUPPNO. For each supplier, the file contains the part numbers that are supplied (PARTNO), the price (PRICE), delivery time (DELIVTIME), and the number of parts on order (QONORDER). The parts listed in the SUPPLIERS file are the same parts that are listed in the INVENTORY file.

```
      File: SUPPLIERS
Field names: SUPPNO   PARTNO   PRICE   DELIVTIME   QONORDER
             ------   ------   -----   ---------   --------
   Record 1:     51      221     .30          10         50
          2:     51      231     .10          10          0
          3:     53      222     .25          15          0
          4:     53      232     .10          15        200
          5:     53      241     .08          15          0
          6:     54      209   18.00          21          0
          7:     54      221     .10          30        150
          8:     54      231     .04          30        200
          9:     54      241     .02          30        200
         10:     57      285   21.00          14          0
         11:     57      295    8.50          21         24
         12:     61      221     .20          21          0
         13:     61      222     .20          21        200
         14:     61      241     .05          21          0
         15:     64      207   29.00          14         20
         16:     64      209   19.50           7          7
```

Use the following prompts on the Create an AS/400 System-to-PC Transfer Request display to define your transfer request:

- To identify the AS/400 system from which the data will be transferred, use the *System name* prompt.
- To identify the file or files you want to transfer from the AS/400 system to the personal computer, use the *FROM* prompt.
- To specify the conditions under which the records from files are combined, use the *JOIN BY* prompt.
- To group records having a common value for a particular field, use the *GROUP BY* prompt.
- To select fields to be transferred, use the *SELECT* prompt.
- To remove records, use the *WHERE* prompt.
- To remove groups of records, use the *HAVING* prompt.
- To specify fields by which records are sorted, use the *ORDER BY* prompt.

Transferring a Complete AS/400 File

The simplest way to transfer data from the AS/400 system to the personal computer is to transfer a complete AS/400 file. All of the data in each record and all of the records in the file are transferred. You specify the name of the AS/400 file and some information about how the data is to be displayed, printed, or stored on the personal computer.

You must specify a *System name* if you are transferring data from a system other than the router default system. You must specify the name of the AS/400 file in the *FROM* prompt. The *SELECT* and *WHERE* prompts allow you to specify what portions of the file are to be transferred. Because the whole file is being transferred, nothing needs to be specified for the *WHERE* prompt. The *SELECT* prompt must have an asterisk (*), which indicates that all fields are transferred, or you can list every field in the AS/400 file. You can optionally specify in the *ORDER BY* prompt how the records are to be sorted. This prompt can be left blank and no sorting is done (data is transferred in the same order as it appears in the AS/400 file).

For example, if you specify INVENTORY for the *FROM* prompt and an asterisk (*) for the *SELECT* prompt, and leave blank the *WHERE* and *ORDER BY* prompts, all

of the data in the AS/400 file INVENTORY is transferred to the personal computer. Additional prompts allow you to specify how to display, print, or store the data on the personal computer.

Transferring Portions of an AS/400 File

Sometimes you may need to transfer only a portion of an AS/400 file to the personal computer. The transfer function allows you to specify which portions of the file you want to transfer.

Use the *SELECT* prompt to specify the fields you want to transfer.

Use the *WHERE* prompt to specify which records you want to transfer. The *WHERE* prompt allows you to specify conditions that the information contained in the record must meet for the record to be transferred.

You can optionally specify in the *ORDER BY* prompt how the records are to be sorted. To do this, specify the names of the fields by which the records are to be sorted. The records are placed in order such that the fields you specify are in ascending or descending order.

In the following example:

FROM	INVENTORY
SELECT	PARTNUM, QONHAND
WHERE	QONHAND < 100
ORDER BY	PARTNUM

The identified portions of the INVENTORY file are transferred. Only the part number (PARTNUM) and quantity on hand (QONHAND) fields are transferred from records where the quantity on hand is less than 100 (QONHAND < 100). The records are transferred in ascending order by the part number (PARTNUM).

Using the data in the INVENTORY file as shown previously, the following data would be transferred:

```
  Fields:  PARTNUM  QONHAND
           -------  -------
Record 1:      207       75
       2:      209       50
       3:      295       85
```

Creating an AS/400 System-to-Personal Computer Transfer Request

When you have decided which data you want to transfer from the AS/400 system, you need to create a transfer request.

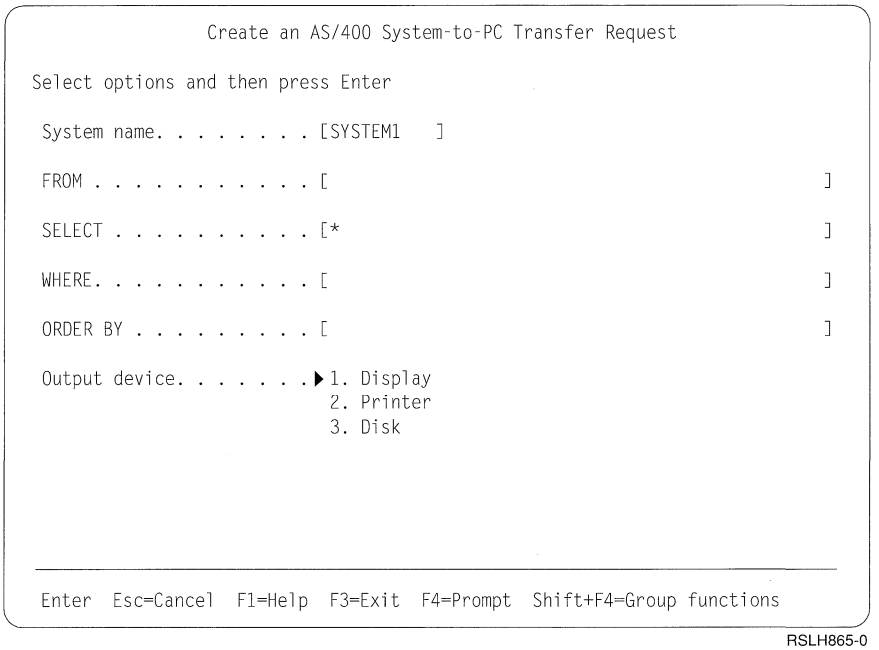
After you create a transfer request, you can use the action list to modify, save, or run it. The transfer request you create remains the current transfer request until you specify Create, Recall, or Exit.

Note: If you want to save the current transfer request, you must save it before you create or recall another transfer request or end the transfer function. Otherwise, the current transfer request is deleted.

The following explains a transfer request for detailed records from only one AS/400 file. You are led step-by-step through displays and prompts to create the transfer request.

To start creating an AS/400 system-to-personal computer transfer request, select the option Transfer data from the PC Support/400 menu.

Press F10 to go to the action list, select Create, and press the Enter key. The create transfer request option list appears. Press the Enter key and the Create an AS/400 System-to-PC Transfer Request display appears:



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System name

This prompt contains the default system name if the router is active. The input line is blank if the router is not active.

Place the cursor on the System name prompt and press F4 to see a list of the possible system names. Move the cursor to the system name you want and press the Enter key. The name you selected is inserted in the System name prompt input area, and the list is removed.

Notes:

1. As you move the cursor from prompt to prompt on this display, one line of help frequently appears over the prompt line. Additional help is available by pressing F1.
2. F4 (Prompt) can be used for all of the prompts on this display except for the *Output device* prompt.

FROM

This prompt is required. It identifies the name of the file or files where the data you want to transfer is stored. If you specify more than one file, you must separate them with commas and use the JOIN BY prompt that appears after you leave the FROM prompt. The only name you have to specify is the file name. Do not use a comma as a character in a file name. If you do not specify the optional values, they are automatically supplied. For example, *LIBL for library name, *FIRST for member name, and *ONLY for the format name. When the cursor is in the FROM input field, you can use F4 to get a list of libraries, files, members and formats.

Note: To transfer data from an AS/400 physical file, you must have *USE authority for that file. To transfer data from an AS/400 logical file, you must have *OBJOPR authority for the logical file and *READ authority for each based file.

To specify the AS/400 file from which records are transferred, you must use the following format:

```
[library-name/]file-name[(member-name[,record format-name])]
```

where:

library-name
Is the name of the AS/400 system library that contains the AS/400 file. This file contains the data that you want to transfer from the host system to your personal computer. If you do not specify a library, then *LIBL is used. If you do not know the library name, you can press F4 to display a list of all of the libraries defined in the user portion (*USRLIBL) of the AS/400 job library list. You can personalize the user portion of the library list by changing your job description using the CHGJOBD command on the AS/400 system.

file-name
Is the name of an AS/400 physical, logical, or DDM file from which you want to transfer data. A file name is required. If a library name is also specified, it must be separated from the file name by a slash (/). If you do not know the name of the file you want to use, you can press F4 after a library name and a slash to see a list of the files in that library. For a list of all the files in the libraries that are defined in the user portion of the AS/400 job library list, type *USRLIBL/ and press F4.

member-name
Is either the name of the AS/400 member from which you want to transfer data, or *FIRST. If you do not specify a member name, *FIRST is assumed, and the first member in the file is used.

record format-name
Is either the name of the record format in the specified AS/400 file, or *ONLY. You must specify a member name or *FIRST as the member name before you can specify a record format name. If you do not specify a record format name, *ONLY is assumed, and the only record format in the file is used. If a record format name is specified, it must be separated from the member name by a comma (,).

If the specified AS/400 file has more than one record format, you must specify a record format name. If you do not specify a file member name, you cannot specify a record format name.

Notes:

1. The library name, file name, file member name, and record format name each can have a maximum of 10 characters. The first character in each name must be A through Z, $, #, or @. All remaining characters can also be 0 through 9, underscore, or period.
2. The library name, file name, and file member name must be all uppercase characters. Lowercase characters may be included in the name if the name is enclosed in quotation marks. For example, "ItemLib." Each name

must be enclosed individually. Format names cannot contain lowercase characters.

3. If the FROM prompt is blank, or you have typed a comma to start another file name, you can press F4 to display a list of the libraries defined in the user portion (*USRLIBL) of the AS/400 job library list.
4. If you type a partial file name, member name, or record format name followed by an asterisk (*), press F4 to display a list of names beginning with the partial name.

Example: Assume that you want to get records from the file member ITEMMBR1 (the first member) in the file ITEMMAST, in the library ITEMLIB. ITEMFMT is the only record format. You can specify:

```
ITEMLIB/ITEMMAST(ITEMMBR1,ITEMFMT)
```

or

```
ITEMLIB/ITEMMAST
```

SELECT

This prompt is required. It identifies which fields in the record to transfer. The fields you specify must be defined in the record format you previously specified in the *FROM* prompt.

If you want to transfer all the fields in the record, leave the asterisk (*) in the input field. (The asterisk specifies a transfer of all the fields in the record.)

Note: You can transfer up to 256 fields. If there are more than 256 fields defined for the file, you cannot specify the asterisk. You must specify the names of the fields you want to transfer.

If you want to transfer selected fields in the record, type the names of the fields in the order that you want them arranged. One or more blanks can be added between the names of the fields to improve the readability of the *SELECT* prompt. However, the names must be separated by commas, as follows:

```
ITEMNO,  QONHAND,  PRICE
```

or

```
ITEMNO,QONHAND,PRICE
```

If you are transferring records from an AS/400 source file, specify an asterisk (*) to transfer all the fields in the file except the sequence number field and the date field. (If you want to also transfer the sequence number field and the date field, you must specify the names of all the fields, including the data fields.)

You can specify the same field more than once if desired. However, the maximum number of fields that you can select is 256. You can press F4 to display a list of names.

If all the names of the fields do not fit on one *SELECT* prompt input area line, the transfer function automatically creates another line, or you can create another line by pressing the F9 key. When continuing the *SELECT* prompt on another input area line, a field name must be typed entirely on one input line. A field name cannot be split between two input area lines.

WHERE

This prompt is optional. It identifies which records are to be transferred. You can use this prompt to specify one or more conditions that must be met by the record in order for it to be transferred.

A **condition** specifies a test against which the records in the file member are to be applied. All of the records in the file member are tested against the conditions you specify, and only the records that pass the test are transferred.

If you do not specify the *WHERE* prompt, all of the records in the specified file member are transferred.

The format of a condition is:

```
fieldname test value
```

where:

fieldname
Must be the name of a field or a substring of a field defined in the record format.

You can specify one of the supported functions to manipulate a field or a constant and use the result on the comparison. The supported functions and examples of their usage are:

SUBSTR Returns the specified portion of a character string. This function has three parameters: field-name, starting position, and length of the substring to be returned. The following example specifies that 20 characters from the field FULLNAME starting with the tenth character is retrieved.

```
SUBSTR(FULLNAME 10 20)
```

VALUE Returns the first nonnull value from a list of parameters (if all parameters are null, then null is returned):

```
VALUE(DEPOSIT WITHDRAW BALANCE)
```

CURRENT
Returns the current system DATE, TIME, TIMEZONE, or TIMESTAMP:

```
CURRENT(TIMEZONE)
```

DIGITS Returns the character string representation of a numeric field:

```
DIGITS(EMPLOYEE#)
```

CHAR Returns the character string representation of a date, time, or timestamp field. The second parameter is used to specify the Systems Application Architecture (SAA) format of the returned string (USA, EUR, ISO, or JIS are the allowed values):

```
CHAR(DATEHIRE USA)
```

DATE Returns the date portion of a timestamp field:

```
DATE(TIMECRTD)
```

TIME Returns the time portion of a timestamp field:

```
TIME(TIMECRTD)
```

TIMESTAMP
Returns the timestamp of a pair of date and time fields:

```
TIMESTAMP(DATESEND TIMESEND)
```

YEAR Returns the year portion of a date field or a timestamp field:

YEAR(DATEHIRE)

MONTH Returns the month portion of a date field or a timestamp field:

MONTH(DATEHIRE)

DAY Returns the day portion of a date field or a timestamp field:

DAY(DATEHIRE)

DAYS Returns the number of days from January 1, 0001 of a date field or a timestamp field:

DAYS(DATEHIRE)

HOUR Returns the hour portion of a time field or a timestamp field:

HOUR(TIMESEND)

MINUTE Returns the minute portion of a time field or a timestamp field:

MINUTE(TIMESEND)

SECOND Returns the second portion of a time field or a timestamp field:

SECOND(TIMESEND)

MICROSECOND
Returns the microsecond portion of a timestamp field:

MICROSECOND(TIMECRTD)

test
Is the type of comparison to be applied to the field or function. See "Using Tests in a Transfer Request" on page 161 for a list of tests you can use.

value
Can be the name of a field or a constant. The constant can be either a number or a character string enclosed in single quotes. Do not use commas within numbers because commas are treated like decimals.

If you specify a character field or a substring for the field name, *value* must be the name of a character field or a character string constant. If the lengths of the field and value are not equal, blanks are added to the right end of the shorter field.

If a numeric field is specified for the field name, *value* must be the name of a numeric field, a numeric constant, or an expression. The transfer function compares numeric fields by aligning the fields on the decimal point. Zeros are added where numbers are missing.

If you specify a date field for the field name, the value must be the name of a date field, a character field (when the CHAR function is used to convert the date field), or a character string constant. When a character string constant is used, the value should be in a non-SAA format (USA, EUR, ISO, or JIS).

For more information on constants, expressions, and tests, refer to "Specifying Values in a Transfer Request" on page 160.

ORDER BY
This prompt is optional. It identifies the order in which the records you request are to be sorted. If you do not respond to the *ORDER BY* prompt, the records are transferred in no special order.

Records are sorted by the first field specified. Records with same values as the first field specified are, in turn, sorted by the second field specified, and so forth. Records with null values are sorted after all other records with nonnull values.

For example:

```
DEPT,NAME,PHONE
```

Specifies that the records are to be sorted first by DEPT. Next, the records with the same DEPT are sorted by NAME. The records with the same DEPT and NAME are then sorted by PHONE.

The names of fields specified in the *ORDER BY* prompt must also be specified in the *SELECT* prompt, or SELECT * must be specified.

Each field can be sorted in ascending or descending order. To do this, type the field name followed by a blank, then ASC or DESC. ASC is the assumed value. For example:

```
DEPT DESC, NAME ASC
```

means to sort by DEPT in descending order first, then by NAME in ascending (or alphabetical) order.

For numeric fields only, you can also specify absolute value (ABS). To do this, type the field name followed by a blank, then ABS. If any of the fields have negative values, the negative sign is ignored and the absolute value is used instead.

The sum of the lengths of the fields specified must not be greater than 120.

If all the names of the fields do not fit on one line, the transfer function automatically creates another line, or you can create another line by pressing the F9 key. When continuing the *ORDER BY* prompt on another line, a FIELDNAME must be typed entirely on one line. A FIELDNAME cannot be split between two input lines. Likewise, ASC, DESC, and ABS must be typed entirely on one line.

Specifying the Output Device to Receive Transferred Data

After you complete the *FROM, SELECT, WHERE*, and *ORDER BY* prompts, you can continue to select the output device you want on the options list.

You can specify any of the following:

- Display specifies that the personal computer display is to receive the output.
- Printer specifies that a personal computer printer or a virtual printer is to receive the output.
- Disk specifies that a personal computer disk or diskette is to receive the output.

Display is the assumed value.

Sending Output to the Display

If you specify Display for the output device and press the Enter key, the transfer request is created.

To display the output, select Run on the action list, and either press the Enter key or press F5 (Run). The transfer request runs, and the output appears on your personal computer display. Fields with a null value appear as a dash (–).

Sending Output to the Printer

You can send transferred data to a personal computer printer or to a virtual printer. The following prompts allow you to specify how you want the printed output to look. If you are printing the data on a virtual printer, you should consider the following when you respond to the prompts:

- The value you enter for the *Line length* prompt should be the same as the characters per line you specified for the virtual printer.
- The virtual printer should be set up to print six lines per inch.
- The value you enter for the *Page length* prompt should be the same as page length and the number of lines per page you specified for the virtual printer. (The page length and number of lines per page must be equal for the virtual printer.)

This ensures that the output is printed on the virtual printer just as if you had printed it on the personal computer printer.

When you specify Printer for the *Output device* prompt and press the spacebar, the following display appears:

```
              Create an AS/400 System-to-PC Transfer Request
                                                                More:  ↓
Select options and then press Enter

 System name. . . . . . . . [SYSTEM1 ]

 FROM . . . . . . . . . . . [INVENTORY                              ]

 SELECT . . . . . . . . . . [*                                      ]

 WHERE. . . . . . . . . . . [                                       ]

 ORDER BY . . . . . . . . . [                                       ]

 Output device. . . . . . .  1. Display
                           ▶ 2. Printer
                             3. Disk

 Printer. . . . . . . . . . ▶ 1. LPT1
                             2. LPT2
                             3. LPT3

 Enter  Esc=Cancel  F1=Help  F3=Exit  Shift+F4=Group functions  Spacebar
```

RSLH043-5

Printer

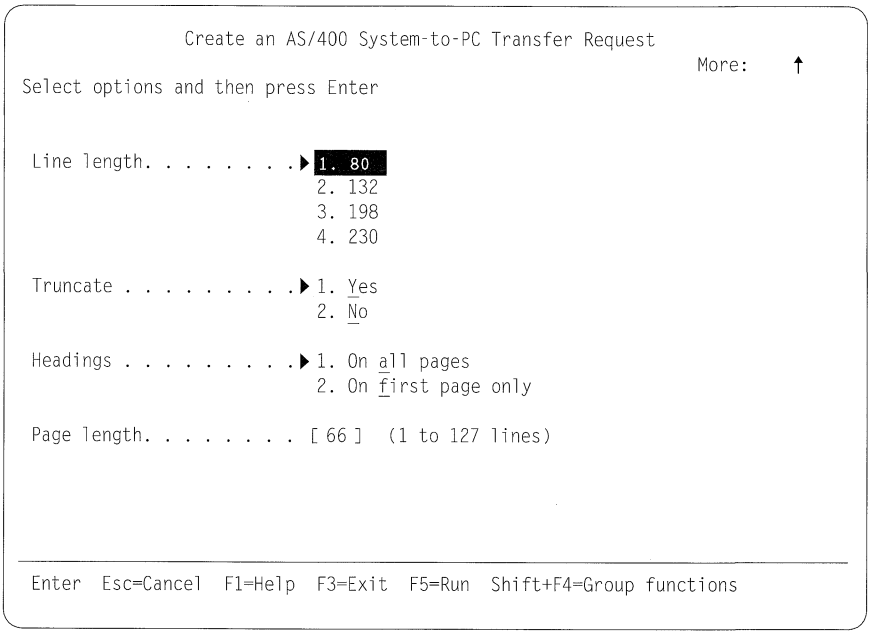
This prompt is required. It allows you to specify which of the three available printers should receive the output. One of the following must be specified:

Printer LPT1
Printer LPT2
Printer LPT3

LPT1 is the supplied value.

The manual for your personal computer's operating system has a description of LPT1, LPT2, and LPT3.

After you complete the *Printer device* prompt, the following display appears:



RSLH044-4

Line length

This prompt is required. It specifies the length of the print line, in characters.

The supplied value is 80 characters per line.

Truncate

This prompt is required. A transferred record may require more print positions than are available on one print line.

This prompt allows you to specify if you want to print as much of the record as possible on one line and truncate the remaining information, in which case you select Yes, or if you want to print the record on more than one line, in which case you select No.

The supplied value is Yes.

Headings

This prompt is required. It specifies whether column headings are to be printed. Column headings are the field names you specified in the *SELECT* prompt.

The supplied value is `On all pages`.

Page length

This prompt is required. It specifies the number of lines on one printed page. The page length can be from 1 to 127 lines, depending on the size of the paper.

Six lines are printed per inch. To determine the page length in lines, multiply the page length (from perforation to perforation) in inches by six. For example, if the length of a page measures 11 inches and you multiply by six, the page length is 66.

Specify a number from 1 to 127; 66 is the supplied value.

After you complete the *Page length* prompt, you proceed to the AS/400 System-to-PC Transfer Request display. From this display, you can change,

save, or run the transfer request. Fields with null values appear on the printout as dashes (–).

Sending Output to a Disk

If you specify Disk for the output device and press the spacebar, the following display appears:

```
              Create an AS/400 System-to-PC Transfer Request
                                                              More:    ↓
Select options and then press Enter

 System name. . . . . . . . [SYSTEM1 ]

 FROM . . . . . . . . . . . [INVENTORY                              ]

 SELECT . . . . . . . . . . [*                                      ]

 WHERE. . . . . . . . . . . [                                       ]

 ORDER BY . . . . . . . . . [                                       ]

 Output device. . . . . . .  1. Display
                             2. Printer
                           ▶ 3. Disk

 To . . . . . . . . . . . . [C:\                                    >

 Replace
 old file . . . . . . . . .  1. Yes

 Enter  Esc=Cancel  F1=Help  F3=Exit  Shift+F4=Group functions  Spacebar
```

RSLH045-5

TO

This prompt is required. It identifies the name of the personal computer disk or diskette file to receive the transferred records.

Specify the file name using the following format:

```
[d:][path] filename [.ext]
```

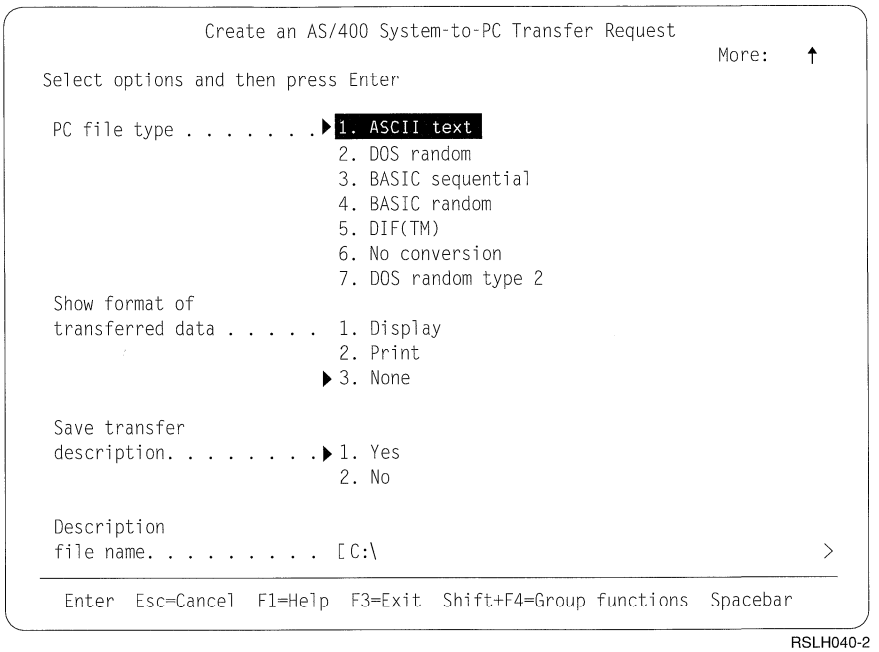
Replace old file

This prompt is required. It indicates that you want the file specified in the *To* prompt replaced with the transferred records. Choose one of the following:

- Yes, if the file should be replaced (if it exists)
- No, if the file should not be replaced

The supplied value is No. If you specify No and the file exists, you are given a chance to cancel the transfer request or continue replacing the file when the transfer request is run.

After you complete the *Replace old file* prompt, the following display appears:



RSLH040-2

PC file type

This prompt is required. It identifies the type of personal computer disk or diskette file to receive the transferred records.

ASCII text is the supplied value.

Refer to the *PC Support/400 Technical Reference for DOS and OS/2* for a description of the PC file types.

Show format of transferred data

This prompt is required. It specifies whether you want to see the detailed format of the data records to be transferred and, if so, if you want to see it on the personal computer display or the personal computer printer.

The supplied value is None.

The format of a transferred data record shows the name of each field in the record, and the data type, size in bytes, number of digits, and number of decimal positions on the AS/400 system and on the personal computer. This information can be used to help you write a personal computer program to process the data in the personal computer file.

You need only display or print the format of transferred data once for each transfer request. If you change the *FROM* or *SELECT* prompt for the transfer request, you must get a new copy of the format of transferred data by specifying Display or Printer.

If you specify Printer, the format of transferred data is printed on printer LPT1.

Save transfer description

This prompt is required. It specifies whether you want to save the personal computer file description in a personal computer file. The file description describes the transferred data and may be needed later if you transfer the data back to the AS/400 system.

The supplied value is Yes.

Description file name

This prompt is required. It appears only if you specified Yes for the *Save transfer description* prompt. The *Description file name* prompt specifies the name of the personal computer disk or diskette file to receive the file description.

This prompt automatically contains the recommended file name, which is the same name you specified in the *TO* prompt, except that the extension .FDF has been added. The extension .FDF identifies the file as a file description file.

If you want to use your own file name, it is recommended that you use the extension, .FDF. The file name for this prompt is specified using the same format that was used in the *TO* prompt, which is:

```
[d:][path] filename [.ext]
```

After you specify No for the *Save PC file description* prompt, or after you specify a name for the *PC file description name* prompt, you can press the Enter key to return to the AS/400 System-to-PC Transfer Request display. From this display, you can change, save, or run the transfer request.

Joining Records from More Than One AS/400 File

This section describes the prompts used for transferring data from more than one AS/400 file to the personal computer. Although this section describes only the prompts used for transferring data from records of more than one AS/400 file, you can also specify other prompts as described elsewhere in this chapter.

Before you read this section, you should be familiar with the concepts of transferring records from only one AS/400 file.

Following is a summary of the prompts used for creating a transfer request that transfers data from more than one AS/400 file:

- Use the *FROM* prompt to specify the names of all the files from which data is transferred.
- Use the *JOIN BY* prompt to specify how data from the files is joined or combined.
- Use the *Return records with missing fields* prompt to specify if records with missing fields are transferred.

FROM

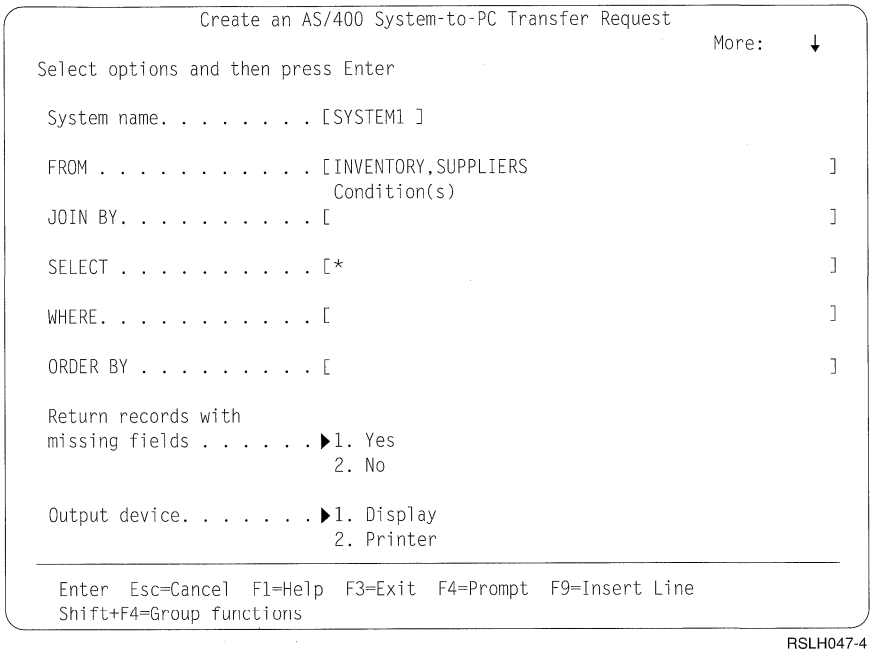
Use the *FROM* prompt to specify the AS/400 files from which you want to transfer data. Separate the file names by commas, in the following form:

```
[library-name/]file-name [(member-name[,format-name])],
[library-name/]file-name [(member-name[,format-name])], . . .
```

You can specify up to 32 files. For more detailed information about specifying a file name, see "Creating an AS/400 System-to-Personal Computer Transfer Request" on page 113.

If the name of a file does not fit on one *FROM* prompt input area line, the transfer function automatically creates another input line, or you can create another line by pressing the F9 key. When continuing the *FROM* prompt on another input area line, the name of the file must be typed entirely on one input line. The name of a file cannot be split between two input area lines.

The following is an example of specifying two files using the *FROM* prompt:



RSLH047-4

When transferring records from more than one file, you can use F4 to show lists of available libraries, files, members, and record formats, just as you can when you transfer records from only one file. You should, however, be aware of the following:

- If you specify a library name, a file name, a member name, and a record format name for the *FROM* prompt and press F4, the transfer function assumes you have specified a complete file name and that you want to specify another file name. If you select a library from the list, it is copied to the *FROM* prompt and is separated by a comma from the previously specified file name. You can then continue using F4 to help you complete the next file name.

  Note: To display a list of all the libraries defined in the user portion (*USRLIBL) of the AS/400 job library list, press F4. You can personalize the user portion of the library list by changing your job description using the Change Job Description (CHGJOBD) command on the AS/400 system.

- If you specify a file name and a member name for the *FROM* prompt and want to show a list of libraries for the next file name, type a right parenthesis and a comma after the member name, and then press F4.
- If more than one file name is specified and one of them is not complete (for example, a member name is not specified), you can show a list of items to help you complete that file name. Move the cursor to the incomplete file name and press F4.

JOIN BY

The *JOIN BY* prompt is required if you specify more than one file name in the *FROM* prompt. If you specify only one file name in the *FROM* prompt, the *JOIN BY* prompt is not displayed.

The *JOIN BY* prompt identifies how to combine or join records from the files specified in the *FROM* prompt. Each file specified in the *FROM* prompt must be joined to at least one other file in the *FROM* prompt.

Use the *JOIN BY* prompt to specify one or more join conditions. A join condition identifies how two files are alike and, therefore, which records are to be joined from the two files.

The format of a join condition is:

```
fieldname = fieldname
```

where:

fieldname is the name of a field defined in a record format specified in the *FROM* prompt. In a join condition, you must specify two field names, one field from each file that is joined.

The field names must be separated by one of the following:

=	Equal
<> or ><	Not equal
>	Greater than
>=	Greater than or equal
<	Less than
<=	Less than or equal

In the following example, two files, ITEMMAST and ITEMTEMP, are joined using the item number fields ITEMNO and ITEMNUM:

```
ITEMNO = ITEMNUM
```

Field ITEMNO is in file ITEMMAST and field ITEMNUM in file ITEMTEMP. In the example, whenever the contents of field ITEMNO equals the contents of field ITEMNUM, data is transferred from either or both records depending on the fields specified in the *SELECT* prompt.

The fields you specify in the *JOIN BY* prompt must follow these rules:

- A numeric field must be joined to a numeric field. The field lengths or types do not have to be the same.
- A character field must be joined to a character field. The lengths do not have to be the same.

If a field name you specify is defined in more than one of the files specified in the *FROM* prompt, a file qualifier must come before the field name every time you use the field in any of the following prompts:

- *JOIN BY*
- *GROUP BY*
- *SELECT*
- *WHERE*
- *HAVING*
- *ORDER BY*

A file qualifier is the character T (upper or lowercase) followed by a 1- or 2-digit number. Use T1 for fields defined by the first record format, T2 for the fields defined by the second record format, and so on. The file qualifier and the field

name are separated by a period (.). For more information about file qualifiers, refer to "Using File Qualifiers" on page 129.

If you do not know the names of the fields in the files specified in the *FROM* prompt, press F4 when the cursor is in the *JOIN BY* input area. A list of the file qualifiers and field names for each file appears.

The first line of the list heading identifies the file qualifier and file name for the field currently highlighted.

You can use the Ctrl PgUp and Ctrl PgDn keys to position the highlighting on the first field of the previous file or the first field of the next file.

You must use more than one join condition if you want to join more than two files or if you want to join together two files by more than one common field. If you need to specify more than one join condition, the conditions must be connected with AND. For example:

```
T1.EMPNO = T2.EMPNO AND T2.EMPNO = T3.EMPNO
```

means that records with the same value for EMPNO are joined from the first file and the second file specified in the *FROM* prompt, and then from the second and third files specified in the *FROM* prompt.

You can specify a maximum of 32 join conditions. If all of the join conditions do not fit on one input line, the transfer function automatically creates another line, or you can create another line by pressing the F9 key. When continuing the *JOIN BY* prompt on another line, a field name must be typed entirely on one line. A field name cannot be split between two lines.

After you complete the *JOIN BY* prompt, you can complete the *SELECT*, *WHERE*, and *ORDER BY* prompts as described in this chapter. Remember that, if you refer to a field name that is defined in more than one file, a file qualifier must come before the field name.

Return records with missing fields

It is possible, while joining records from more than one file, that a record cannot be found to complete the join. Use this prompt to specify if you want to transfer a record with missing fields.

If you choose to return records with missing fields, values are transferred for the missing fields. Usually, the value for a character field is a blank and the value for a numeric field is a zero.

If you do not choose to return records with missing fields, records having missing fields are not transferred.

Specify one of the following:

- Yes, if you want data records to be transferred that contain values for missing fields.
- No, if you do not want data records that contain values for missing fields to be transferred. Only data records created from records found in all of the files specified in the *FROM* prompt are transferred.

Joining Records from More Than One AS/400 File: Example

Sometimes the data that you want to transfer exists in two or more AS/400 files. There might be relationships between these files that you can use to link or *join* them together as if the data were all in one file. When the files have been joined together, they can be transferred to the personal computer. The AS/400 system-to-personal computer transfer function allows you to do this join-and-transfer function in one step.

For example, you have two AS/400 files, INVENTORY and SUPPLIERS, as shown in this chapter on page 111. Notice that records in both files contain a part number field. The INVENTORY file contains inventory information for each part, while the SUPPLIERS file contains information used in purchasing and ordering each part.

Assume that you want to transfer information about the parts you can order from supplier 51, including the part number, part description, and part price. The fields that you want to transfer are PARTNO (from file SUPPLIERS), DESCRIPTION (from file INVENTORY), and PRICE (from file SUPPLIERS).

Looking at the data contained in the INVENTORY and SUPPLIERS files, you can see that supplier 51 supplies part numbers 221 and 231, and that these parts have a description of BOLT and NUT and a price of 30 cents and 10 cents respectively. The following summarizes this information:

```
Fields:   PARTNO   DESCRIPTION   PRICE
          ------   -----------   -----
Record 1:    221   BOLT            .30
       2:    231   NUT             .10
```

You can use the AS/400 system-to-personal computer transfer function to join the data from these two files and get the same result. To do this, you need to specify both files (INVENTORY and SUPPLIERS) in the *FROM* prompt. In the *SELECT* prompt, you specify the fields you want transferred (PARTNO, DESCRIPTION, and PRICE). In the *WHERE* prompt, you specify which records you want transferred (records where SUPPNO = 51).

A new prompt, *JOIN BY*, specifies the relationship between the two files. When you worked out the result above, you first noticed, by examining the SUPPLIERS file, that part number 221 was supplied by supplier 51 for a price of 30 cents. However, to determine the part description, you had to examine the INVENTORY file to find part number 221 and its description. Notice that you joined data from a record in the SUPPLIERS file and a record in the INVENTORY file, and that both records had the same part number. Therefore, in order to join two records in these files, the part numbers must be equal.

In summary, specify the following to get the information described above:

FROM	SUPPLIERS, INVENTORY
JOIN BY	PARTNO = PARTNUM
SELECT	PARTNO, DESCRIPTION, PRICE
WHERE	SUPPNO = 51
ORDER BY	PARTNO

Using File Qualifiers

When joining records from more than one AS/400 file, you must join on the same type of field.

For example, if PARTNO is the name of the part number field in both the INVENTORY file and the SUPPLIERS file, then whenever the PARTNO field is specified, you must identify which file contains the specific part number field you want to use. You do this using a **file qualifier**.

A file qualifier is an uppercase or lowercase T, followed by a 1- or 2-digit number, and separated from the field name by a period (.). In the join example, the PARTNO field names must be qualified with T1. and T2.. T1. refers to the first file in the *FROM* prompt, and T2. refers to the second file in the *FROM* prompt.

To get the same information as described in the previous example, specify the following:

FROM	SUPPLIERS, INVENTORY
JOIN BY	T1.PARTNO = T2.PARTNO
SELECT	T1.PARTNO, DESCRIPTION, PRICE
WHERE	SUPPNO = 51
ORDER BY	T1.PARTNO

T1.PARTNO refers to the PARTNO field in SUPPLIERS, and T2.PARTNO refers to the PARTNO field in INVENTORY.

The DESCRIPTION, PRICE, and SUPPNO field names do not have to be qualified because they are only found in one of the files. However, for clarity, they could also be qualified as follows:

```
T2.DESCRIPTION, T1.PRICE, T1.SUPPNO
```

The remaining topics on joining two or more AS/400 files covers more advanced techniques. At this point, you have enough knowledge to join two files. If you want to learn more about joins, continue with the following topics.

Joining Records with Missing Fields

It is possible, while joining records from more than one file, that a record cannot be found to complete the join. For example, assume that the INVENTORY file does not have a record for part number 221. There is no record in the INVENTORY file that can be joined with the first, seventh, and twelfth records in the SUPPLIERS file. In this case, the PARTNO and PRICE fields can be determined for part number 221, but the DESCRIPTION field cannot. The DESCRIPTION field is missing.

Use the *Return records with missing fields* prompt to specify if you want to transfer a record with missing fields.

If you choose to return records with missing fields, supplied values are transferred for the missing fields. The supplied value for a character field is blanks, and the supplied value for a numeric field is zeros. For example, if the INVENTORY file does not contain a record for part number 221, the result for the previous example is as follows:

```
  Fields: PARTNO   DESCRIPTION   PRICE
          ------   -----------   -----
Record 1:    221                   .30
       2:    231   NUT             .10
```

If you do not choose to return records with missing fields, records with missing fields are not transferred. For example, if the INVENTORY file does not contain a record for part number 221, the result for the previous example is as follows:

```
  Fields: PARTNO   DESCRIPTION   PRICE
          ------   -----------   -----
Record 1:    231   NUT             .10
```

Joining Records with Records in the Same File

It is possible to join records with records in the same file, that is, the files that are specified in the *FROM* prompt can be the same. This can be used, for example, to compare information in the records of a file.

For example, in the SUPPLIERS file, notice that there are several suppliers of the same part. You may want to know which supplier has set a price at least twice as high as another supplier for the same part. To transfer the desired information to the personal computer, you could specify the following:

FROM	SUPPLIERS, SUPPLIERS
JOIN BY	T1.PARTNO = T2.PARTNO
SELECT	T1.PARTNO, T1.SUPPNO, T1.PRICE, T2.SUPPNO, T2.PRICE
WHERE	T1.PRICE > 2 * T2.PRICE
ORDER BY	T1.PARTNO

The same file has been specified twice in the *FROM* prompt. The *JOIN BY* prompt specifies to join records having the same part number. This creates joined records containing information about two suppliers of the same part. These joined records can be tested to identify those where one supplier's price is more than twice that of the other supplier.

One record in the SUPPLIERS file is compared to every record (including itself) in the SUPPLIERS file. When the part numbers are equal, the two records are joined. This occurs for each record in the SUPPLIERS file.

The price of the first supplier is compared with the price of the second supplier in each record. Only records where the price of the first supplier is at least twice as much as the price of the second supplier are kept.

The final result is the following:

```
  Fields: T1.PARTNO   T1.SUPPNO   T1.PRICE   T2.SUPPNO   T2.PRICE
          ---------   ---------   --------   ---------   --------
Record 1:       221          51        .30          54        .10
       2:       231          51        .10          54        .04
       3:       241          53        .08          54        .02
       4:       241          61        .05          54        .02
```

Summarizing Groups of Records

A summary record is one record that summarizes a group of records. When you transfer summary records, one record is transferred for every group of records.

Following are the prompts used for transferring summary records from one or more AS/400 files:

- Use the *GROUP BY* prompt to group the records into more than one group. If you want all of the records in only one group, leave the *GROUP BY* prompt blank.
- Use the *SELECT* prompt to create the summary records. The *SELECT* prompt can only specify field names used in the *GROUP BY* prompt.
- Use the *WHERE* prompt to specify conditions that each record must meet before it can be grouped. If you want all of the records to be grouped, leave the *WHERE* prompt blank.
- Use the *HAVING* prompt to determine which summary records are to be transferred. If you want all of the summary records transferred, leave the *HAVING* prompt blank.
- Use the *ORDER BY* prompt to order the summary records. You can specify only field names and functions used in the *SELECT* prompt.

GROUP BY

This prompt is required only if you want to separate the records from the AS/400 files into more than one group. If you do not specify a value for the *GROUP BY* prompt, the records are treated as one group.

If the *GROUP BY* prompt is not currently displayed, press the Shift+F4 key to see the *GROUP BY* prompt. Although the *GROUP BY* and *HAVING* prompts are displayed together, you can specify one, both, or neither of the prompts.

If the *GROUP BY* and *HAVING* prompts are displayed and you do not want to use them, you can press the Shift+F4 key again to have these two prompts removed from the display.

If you want to separate records into more than one group, specify the field or fields by which you want the records grouped. Records are grouped by the first field specified, then by the second field specified, and so on. For example,

```
SHIFT, DEPTNO
```

groups records first by SHIFT so that all the records in a particular group have the same value for SHIFT. Then, records in each group are grouped again by DEPTNO. If there is only one record with a particular SHIFT value, then only one record appears in the group.

The field names must be separated by commas and, optionally, blanks; you can specify up to 50 field names. The fields must be defined in a record format specified in the *FROM* prompt.

If you do not know the names of the fields, press F4 to display a list of all the fields in the record.

If all the names of the fields do not fit on one *GROUP BY* input area line, the transfer function automatically creates another line, or you can create another line by pressing the F9 key. When continuing the *GROUP BY* prompt on another input area line, a field name must be typed entirely on one input line. A field name cannot be split between two input area lines.

If you specify the *GROUP BY* prompt, the *SELECT* prompt is required to transfer a summary record for each group.

SELECT

This prompt is required. Use this prompt to specify functions that identify the kind of summary information you want transferred.

When transferring summary records, you cannot leave the input area blank or specify the value, * (unless all fields in the files specified in the *FROM* prompt are specified in the *GROUP BY* prompt). The field names you specify for the *SELECT* prompt (not specified with a function) must also have been specified for the *GROUP BY* prompt.

The functions and fields you specify for the *SELECT* prompt return the actual summary information about each group. Type the field names and the functions in the *SELECT* prompt in the order that you want them to appear.

Note: Null values are not included in the function. If all values are null, the output of the function is null except COUNT, which is 0.

The format of a function is:

```
function(field-name)
```

where:

function

Is one of the following:

AVG Transfers the average value of the specified field for each group of records. This function is allowed only for numeric fields.

MIN Transfers the minimum, or lowest, value of the specified field for each group of records.

MAX Transfers the maximum, or highest, value of the specified field for each group of records.

SUM Transfers the sum, or total, value of the specified field for each group of records. This function is valid only for numeric fields.

COUNT Transfers the total number of records in each group of records after the records pass the WHERE conditions. Must be specified as COUNT(*).

field-name

Is any field defined by a record format specified in the *FROM* prompt.

Each function returns only one value for each group of records. More than one function can be specified in the *SELECT* prompt; functions must be separated by commas. For example:

```
SUPPNO, AVG(PRICE), MIN(PRICE), MAX(PRICE)
```

means to select SUPPNO and then calculate the average, minimum, and maximum value of PRICE for each supplier. A summary record is transferred because functions are selected. Because SUPPNO is not used within a function, SUPPNO must be specified in the *GROUP BY* prompt.

For additional information on how to use the *SELECT* prompt, refer to the *SELECT* prompt on page 116.

WHERE

This prompt is optional. When transferring summary records, this prompt identifies which records are used for grouping, before the records are grouped. You can use this prompt to specify one or more conditions that must be met by the record in order for it to be included in a group. If you do not specify the *WHERE* prompt, all of the records are grouped. For more information about the WHERE prompt, refer to page 116 in this chapter.

HAVING

This prompt is optional. This prompt identifies which summary records are to be transferred.

Note the difference between the *HAVING* and *WHERE* prompts. Whereas the *WHERE* prompt works on each of the records in a group, the *HAVING* prompt works only on the summary records (records that contain summary information about each group).

You can use this prompt to specify one or more conditions that must be met by each summary record in order for it to be transferred.

A condition specifies a test to be done on a summary record. All of the summary records are tested against the conditions you specify, and only summary records that pass the test are transferred. If you want to transfer all of the summary records, leave the *HAVING* prompt blank.

The format of a condition is:

```
function(field-name) test value
```

where:

function

Is one of the functions allowed in the *SELECT* prompt. For additional information on functions, refer to the *SELECT* prompt described in this section.

field-name

Is any field defined by a record format specified in the *FROM* prompt. The field-name you specify need not be specified in the *SELECT* prompt.

test

Is the type of comparison to use on the function:

=	Equal
<> or ><	Not equal
>	Greater than
>=	Greater than or equal
<	Less than
<=	Less than or equal

value

Is a function on a field or a constant. For more information on constants, expressions and tests refer to "Specifying Values in a Transfer Request" on page 160. Do not use commas within numbers because commas are treated like decimals.

Test conditions can be connected with a logical AND or OR. When both AND and OR are specified, AND comparisons are made first. You can

specify up to 50 comparisons. You may also use parentheses to change the order of the operation or to explain the operation. For example:

```
COUNT(*) >=2 AND MAX(PRICE) > 100
```

Means only summary records that have at least two records in their group and a maximum price that is greater than 100 are transferred.

If you do not know the names of the fields you want, press F4 to display a list of all the names of the fields in the record.

If a comparison does not fit on one *HAVING* input area line, the transfer function automatically creates another line, or you can create another line by pressing F9. However, when continuing a comparison on another input area line, a function or a field-name must be typed entirely on one input line. A function or a field-name cannot be split between two input area lines.

The types of values, lengths, number of digits, and number of decimals returned for the functions are:

	Type	Length	Digits	Decimals
SUM	Packed	16	31	(Same as field tested)
AVG	Packed	16	31	31 (total digits in field, decimals in field)
COUNT	Binary	4	10	0
MAX	(Same as field tested)			
MIN	(Same as field tested)			

ORDER BY

This prompt is optional. It identifies the order in which the summary records are to be sorted. Summary records are sorted by the fields and functions specified. You can use ascending (ASC) or descending (DESC) to indicate the order. ASC sorts from low to high and DESC sorts from high to low. If no order is specified, ascending order is assumed.

For example:

```
SUPPNO, AVG(PRICE)
```

specifies that the summary records are sorted first by SUPPNO. Next, the records with the same SUPPNO are sorted by the average value of PRICE.

The field names or functions specified in the *ORDER BY* prompt must also be specified in the *SELECT* prompt.

For a list of field names, you can press F4. The functions are listed as they appear in the *SELECT* prompt. Functions are validated when the transfer request is run.

Specifying Which Records to Include in a Group

Sometimes you may want to limit the records that are included in groups. You can use the *WHERE* prompt to do this. For example, the following transfers the average and minimum price for each part, considering only records whose delivery time (DELIVTIME) is less than 30 days:

FROM	SUPPLIERS
GROUP BY	PARTNO
SELECT	PARTNO, AVG(PRICE), MIN(PRICE)
WHERE	DELIVTIME < 30

The result of this transfer is:

```
 Fields: PARTNO   AVG(PRICE)   MIN(PRICE)
         ------   ----------   ----------
Record 1:   221          .25          .20
       2:   231          .10          .10
       3:   222          .23          .20
       4:   232          .10          .10
       5:   241          .07          .05
       6:   209        18.75        18.00
       7:   285        21.00        21.00
       8:   295         8.50         8.50
       9:   207        29.00        29.00
```

Note that the conditions specified in the *WHERE* prompt are checked first, and only records satisfying those conditions are included in the groups.

Specifying Which Summary Records Are Transferred

Sometimes you might want to transfer only the summary information that meets specific conditions. The *HAVING* prompt allows you to select which summary records are transferred. Whereas the *WHERE* prompt applies to particular records in a group, the *HAVING* prompt applies only to the summary records.

The following example transfers the maximum and minimum price for each part. However, only summary records having a maximum price of more than 10.00 are transferred.

FROM	SUPPLIERS
GROUP BY	PARTNO
SELECT	PARTNO, MAX(PRICE), MIN(PRICE)
HAVING	MAX(PRICE) > 10.00

The final result, after using the *HAVING* prompt to remove unwanted summary records, is the following:

```
  Fields: PARTNO   MAX(PRICE)   MIN(PRICE)
          ------   ----------   ----------
Record 1:    209        19.50        18.00
       2:    285        21.00        21.00
       3:    207        29.00        29.00
```

It is possible to transfer one summary record for the whole file. This can be done by specifying only summarizing functions in the *SELECT* prompt and nothing in the *GROUP BY* prompt. This treats the whole file as one group and transfers one summary record for that group.

You can use the concepts of summarizing groups and joining records from more than one file together. Follow these steps to get the desired result:

1. The records from the files specified in the *FROM* prompt are joined using the join conditions specified in the *JOIN BY* prompt.
2. The conditions specified in the *WHERE* prompt are used to remove records that are not desired.
3. The remaining records are grouped by the fields specified in the *GROUP BY* prompt.
4. Summary records are created using the functions specified in the *SELECT* prompt.

5. The conditions specified in the *HAVING* prompt are used to remove summary records that are not desired.
6. The final summary records are sorted by the items specified in the *ORDER BY* prompt.

Running an AS/400 System-to-Personal Computer Transfer Request

Before you run a transfer request, you must have previously created, recalled, or modified the transfer request. To run a transfer request, specify Run on the action list and press the Enter key. If the action list is not on the display, you can run a transfer request by pressing F5 (Run). The following appears:

RV2N305-0

Select option 1, press the Enter key, and the transfer request is run.

If the transfer request runs successfully, one of the following occurs:

- If you specified Display as the output device, the transferred records are displayed.
- If you specified Printer as the output device, the transferred records are printed.
- If you specified Disk as the output device, the format of the transferred data (if requested) is sent to the output device (display or printer) you specified for the *Show format of transferred data* prompt. The personal computer file description file (if requested in the *Save transfer description* prompt) is written to a personal computer disk or diskette file, and the transferred records are written to a personal computer disk or diskette file.

You can press the Esc key to cancel running the current transfer request at any time (except while the file description is being written to a disk or diskette). Any records remaining to be transferred are ignored. If data is being written to a personal computer disk or diskette file, the file is closed.

If you specified *Display for the output device* prompt when you created or modified the current transfer request, the transferred records are sent to the display. The records appear, one record per line on the display.

The output is in column format. Column headings are the *SELECT* field names. The following shows displayed records:

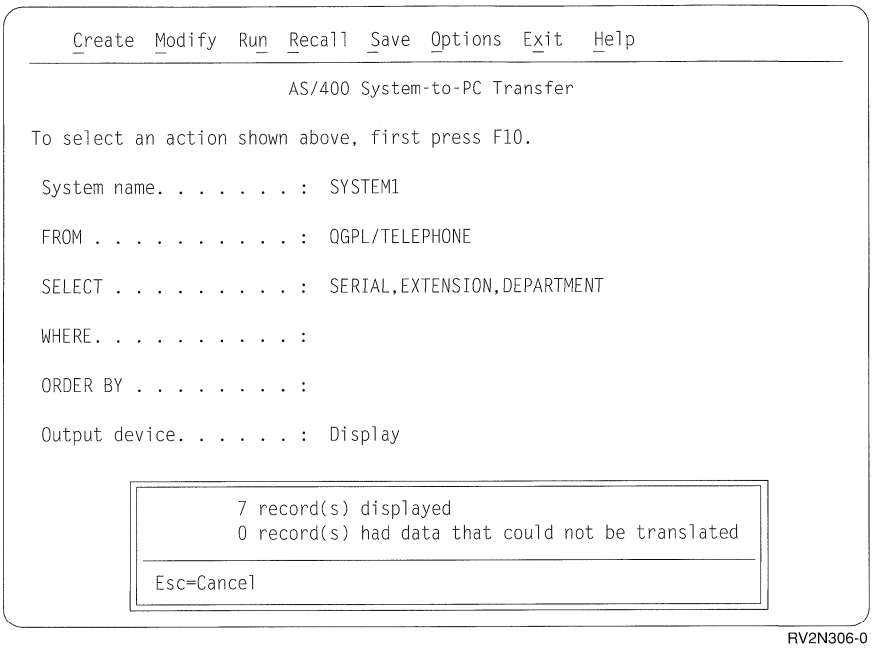
```
                Run an AS/400 System-to-PC Transfer Request


System name. . . . . . . . [SYSTEM1 ]

FROM . . . . . . . . . . . [QGPL/TELEPHONE                          ]

SELECT . . . . . . . . . . [SERIAL,EXTENSION,DEPARTMENT             ]

WHERE. . . . . . . . . . . [                                        ]

                                Transferred Data                More:  ↓
 SERIAL  EXTENSION  DEPARTMENT
 551492  258-8534   59Z
 760334  258-6235   433
 803550  258-2343   765
 342834  258-5457   Z15
 036592  258-9956   3X4
 847853  258-5780   123
 349676  258-9876   222

 Esc=Cancel  Ctrl+Left  Ctrl+Right  PgDn PgUp
```

RSLH049-3

Each field of a transferred record is changed from the AS/400 data type to personal computer ASCII. If a field cannot be changed, the field is displayed and the character positions that could not be changed are highlighted.

Note: The personal computer receives records from the AS/400 system sequentially, and it stores as many of the records in personal computer memory as possible. If you try to page up past the first record displayed, the transfer request may be resubmitted by the transfer function in order to display previous records. This may affect performance.

You can press the Esc key to stop displaying the records. The display then shows the total number of records that were displayed and the number of displayed records that had data that could not be changed.



RV2N306-0

You can press the Esc key again to remove the totals window. The transfer request stops running.

If you specified `Printer` for the *Output device* prompt when you created or modified the current transfer request, the transferred records are sent to the printer. The printer is set to the values that were specified in the transfer request.

The output is in column format. Column headings are the *SELECT* field names.

Each field of a transferred record is changed from the AS/400 data type to personal computer ASCII. If a field cannot be changed, the field is printed with rectangles occupying the character positions that could not be changed.

If you want to stop printing the transferred records before all of the records are printed, you can press the Esc key. The display then shows the total number of records printed and the number of printed records that had data that could not be changed.

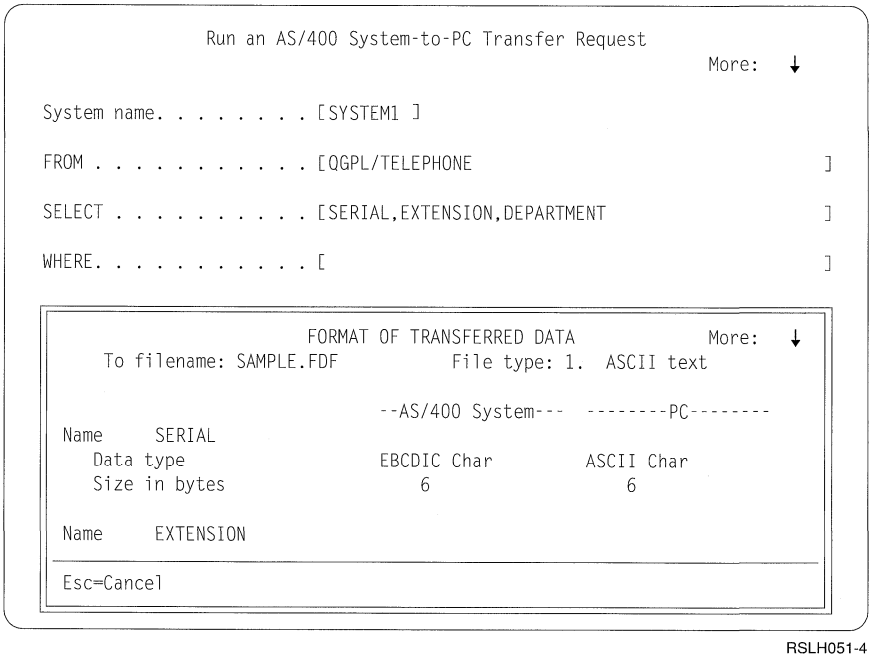
You can press the Esc key again to remove the totals window. The transfer request stops running.

If you specified `Disk` for the *Output device* prompt when you created or modified the current transfer request, the following steps occur:

1. The format of the transferred data is displayed or printed, as requested in the *Show format of transferred data* prompt. (If you specified No for the *Show format of transferred data* prompt, this step does not take place.)
2. The personal computer file description is written to a personal computer disk or diskette file, as requested in the *Save transfer description* prompt. (If you specified No for the *Save transfer description* prompt, this step does not take place.)
3. The transferred records are written to a personal computer disk or diskette file.

Displaying or Printing the Format of Transferred Data

If you requested that the format of the transferred data be displayed, the following display appears:



RSLH051-4

The format of transferred data lists the names of the fields as they appear in the *SELECT* prompt. The format contains the following information for each field that is specified in the *SELECT* prompt. (The fields appear in the order they were entered in the *SELECT* prompt.)

Name The name of the field in the transferred records.

Data Type The AS/400 data type and the personal computer data type.

The following are AS/400 or personal computer data types and their meaning:

Data Type	Meaning
Binary	Binary
EBCDIC Char	EBCDIC character
EBCDIC-Zoned	Zoned decimal in EBCDIC format
EBCDIC-Packed	Packed decimal in EBCDIC format
ASCII Char	ASCII character
ASCII Zoned	Zoned decimal in ASCII format
ASCII Packed	Packed decimal in ASCII format
BASIC SP	BASIC single-precision number
BASIC DP	BASIC double-precision number
BASIC Integer	BASIC integer
ASCII Numeric	Numeric field in ASCII format

Data Type	Meaning
Date	Date in ASCII character format
Time	Time in ASCII character format
Timestamp	Timestamp in ASCII character format

Size in bytes This identifies the size (in bytes) of the field on the AS/400 system and on the personal computer.

Null capable This identifies whether or not a null value can exist for a particular field. The null value is a special value that is distinct from all nonnull values and denotes the absence of a value.

Variable length This identifies a character field as a variable length field up to a maximum length of 32740 (32739 if the field is null capable).

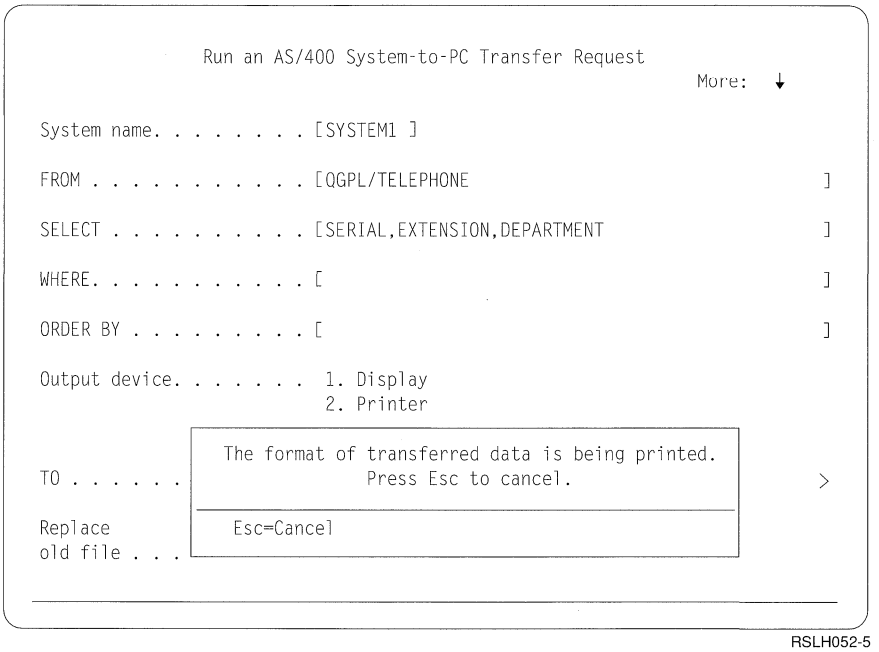
Digits For numeric fields (EBCDIC-zoned, EBCDIC-packed, or binary), this identifies the number of digits in the number. If the number has a decimal point, the number of digits on both sides of the decimal point are included. (Digits applies only to AS/400 data.)

Decimal positions This identifies the number of decimal positions in a numeric field. It is shown for AS/400 EBCDIC-zoned, EBCDIC-packed, and binary fields, and for personal computer ASCII zoned, ASCII packed, ASCII numeric, or binary fields.

Note: Because the data is not all the same size, the decimal positions and size in bytes are not displayed for personal computer fields when the file type is BASIC sequential or DIF.

You can press the Esc key to remove the list. The transfer request continues running.

If you requested that the format of the transferred data be printed, the following display appears:

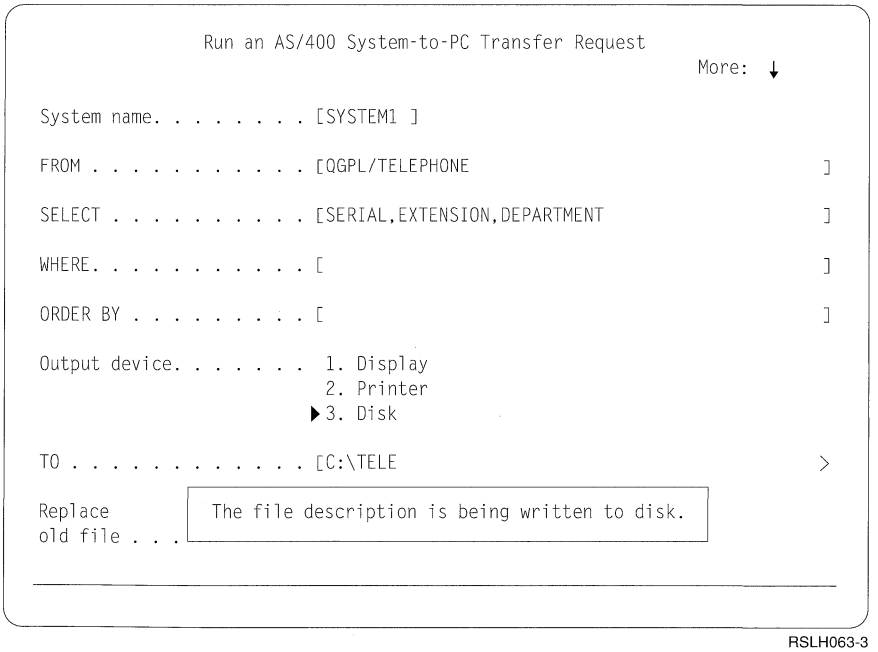


RSLH052-5

If you want to stop printing the records before they are all printed, press the Esc key. After the format of transferred data is printed, the window containing the message is removed and the transfer request continues running.

Saving the Transfer Description

If you specified Yes for the *Save transfer description* prompt, the following display appears:

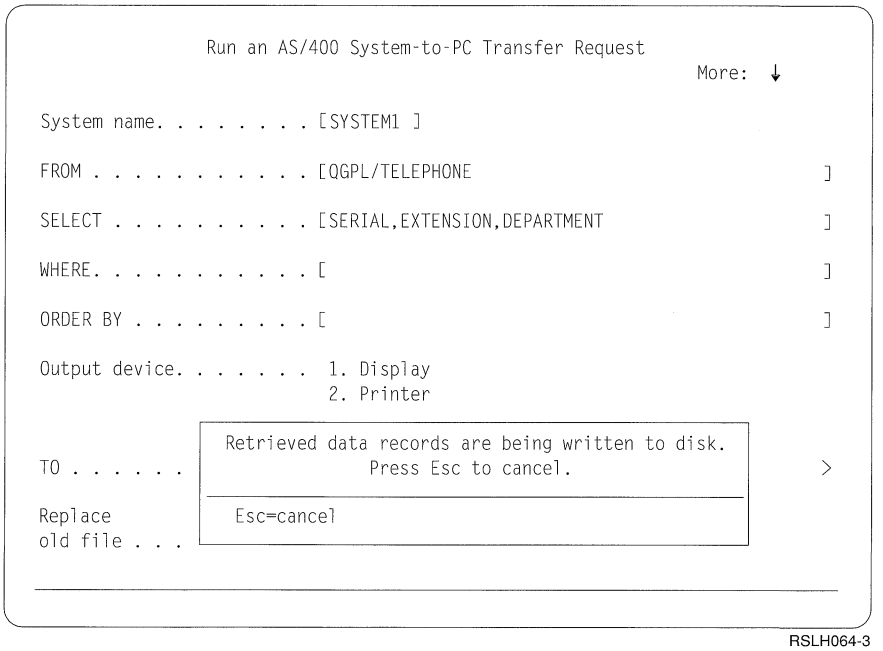


RSLH063-3

The personal computer file description is written to the personal computer disk or diskette file that you specified in the *Description file name* prompt. After the personal computer file is written, the transfer request continues running.

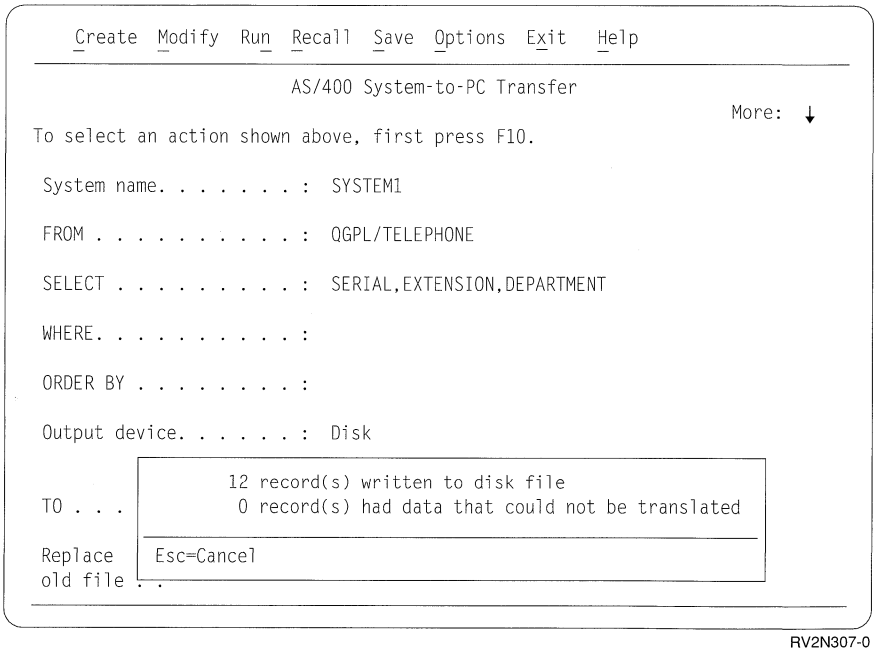
Writing Transferred Records

While records are being written to your disk or diskette, the following display appears:



RSLH064-3

When the system has completed the writing of the records, the following display appears:



RV2N307-0

The display shows the total number of records written to the personal computer disk or diskette file, and the number of records that contained data that could not be changed.

You must press the Esc key to remove the message window before you can go to the action list. Pressing the Esc key also stops the transfer request from running.

Transferring Data to the AS/400 System

The personal computer-to-AS/400 system transfer function allows you to transfer data from the personal computer to an AS/400 physical file. The entire personal computer file must be transferred. You can transfer data:

- To an existing member in an existing AS/400 physical file.
- To a new member in an existing AS/400 physical file.
- To a new member in a new AS/400 physical file.

Note: Data cannot be transferred from a personal computer file to an AS/400 logical file.

Transferring Data to Existing Members

Before you transfer data from a personal computer file to an existing AS/400 member, you should be aware of several things:

- Data already in the member is replaced by the data from the personal computer when you transfer data to the existing member.
- You will receive a warning message indicating that the data in the member will be replaced by the data you are about to transfer if data already exists in the AS/400 member.
- The effects of transferring data to the AS/400 system that was originally transferred from the AS/400 system (for example, using the personal computer to make updates to an AS/400 master file) should be considered.

  It is possible that an AS/400 system-to-personal computer transfer request might transfer only a subset of the fields in an AS/400 file. If that data is then transferred back to the AS/400 system, the file will then contain only a subset of the data originally contained in the file. Any other fields that are not transferred, but are defined for this file, are filled with blanks for character fields and zeros for numeric fields, or the values specified when the file was created.

  Therefore, you should consider transferring the data to a different AS/400 file and running an AS/400 application to incorporate the transferred data into the original file. This gives you more control over the updates made to your AS/400 master file.

  To prevent a user from transferring data to a particular AS/400 system, ensure that the authority level on that file is correctly defined.

Transferring Data to a New Member in an Existing File

You can transfer the data from your personal computer file to a new AS/400 member. The transfer function automatically creates the member in the file and library you specified. The new member is created according to the file description in the existing file.

Note that a previous AS/400 system-to-personal computer transfer request might have transferred only a subset of the fields in the AS/400 file. If that data is then transferred back to the AS/400 system, the new member contains only a subset of the data originally contained in the file. Any other fields that are not transferred, but are defined for this member, are filled with blanks for character fields and zeros for

numeric fields, or the values specified when the file was created. The date, time, and timestamp field have the AS/400 default date, time, and timestamp value.

Transferring Data to a New Member in a New File

A personal computer-to-AS/400 system transfer request can transfer data to a new member in a new AS/400 file. This is a good way to transfer data because you ensure that data already stored on the AS/400 system is not replaced by data from the personal computer.

You can transfer data to new AS/400 files and members in two ways. Both ways depend on what the data looks like:

- If the data is subdivided into fields, you will probably want to transfer the data field by field so that the data is changed correctly. In this case, specify that a personal computer file description file be used during the transfer. In addition, specify *data* for the AS/400 file type.

  When creating the AS/400 file and member, the transfer function must have access to a description of how each field to be transferred will look on the AS/400 system. This description is taken from an AS/400 file called the field reference file. You must supply the name of the AS/400 field reference file along with other file and member parameters when you create the AS/400 file and member. Note that only the fields that are transferred are defined in the new file.

- If the data is simply records of text or source statements, there is no need to divide the records into fields. In this case, you do not need a personal computer file description file to transfer the data; an AS/400 physical source file is created.

Transferring Data to AS/400 Data and Source Files

You can transfer data to two types of AS/400 physical files:

- **Physical data file**. A member in a physical data file can contain both numeric and character data of any AS/400 data type. When you transfer data to this type of file, you need a personal computer file description file to define the data as it exists in the personal computer data file. You also need a file description of the AS/400 file so that the data can be changed correctly.

  If you are transferring data to an existing AS/400 file, the file description is part of the AS/400 file. If you are transferring data to a new AS/400 file, the file description is contained in an AS/400 field reference file.

- **Physical source file**. A physical source file generally stores text or source statements instead of data as follows:

  - The first portion or field of a source file is always a sequence number.
  - The second portion or field of a source file always holds a date.
  - The third portion of a source file is the text portion of the file. The text portion can hold data fields of type CHARACTER and ZONED only. Source files are perfect for transferring text or source statements to and from the personal computer.

  When transferring data to and from AS/400 physical source files, keep the following in mind:

  1. When transferring text from the AS/400 system to the personal computer, specify the name of your source file and member in the *FROM* prompt.

Specify an asterisk (*) in the *SELECT* prompt. This signals to the AS/400 system that you are transferring text from a source file, and that you want to transfer only the text portion of the source file, not the sequence number and date fields.

2. Store the AS/400 text in a personal computer ASCII text file. Personal computer editors usually work with ASCII text files.
3. Specify that you do not want to save a personal computer file description file for the personal computer file. Because the text is simply thought of as records of character data, no fields need to be defined.
4. Specify the type of personal computer file that the text is in (most often ASCII text) when transferring the text back to the AS/400 system from the personal computer file. You do not need to specify a personal computer file description file.
5. If you are creating a new AS/400 file and member, specify the correct record length. The record length should be the length of the largest record in your personal computer file plus 12. The transfer function automatically creates the sequence number and date fields for you when this file is transferred to the AS/400 member. (The sequence number and date fields together use 12 bytes.)

Creating a Personal Computer-to-AS/400 System Transfer Request

When you have decided which data you want to transfer to the AS/400 system, you need to create a transfer request. After you create a transfer request, you can use the action list to modify, save, or run it.

The transfer request you create remains the current transfer request until you specify Create, Recall, or Exit.

Note: If you want to save the current transfer request, you must save it before you create or recall another transfer request or before you end the transfer function. Otherwise, the current transfer request is deleted.

To start creating the personal computer-to-AS/400 system transfer request, select the option `Transfer data` from the PC Support/400 menu. You are led step-by-step through displays and prompts to create the transfer request.

Press F10 to go to the action list, select Create, and press the Enter key. The following display appears:

```
Create  Recall  Exit  Help
┌──────────────────────────┐
▶1. Create a transfer request │ /400 System Transfer
└──────────────────────────┘
 Esc=Cancel

            There is no current transfer request at this
            time. You can use the create or recall actions
            to establish the current transfer request. To
            select an action from the top of the display,
            press F10.
```

RSLH062-4

Press the Enter key again for prompts. As you proceed, this display appears:

```
                Create a PC-to-AS/400 System Transfer Request

Select options and then press Enter

 System name. . . . . .[SYSTEM1 ]

 TO . . . . . .[                                        ]

 From . . . . . .[C:\PCS\                                >

 Use PC file
 description. . . . . .▶1. Yes
                        2. No

 Description
 file name. . . . . .[                                   >

 Create AS/400
 objects. . . . . .  1. Yes, create member
                     2. Yes, create file and member
                    ▶3. No, replace existing member

  Enter  Esc=Cancel  F1=Help  F3=Exit  F4=Prompt
```

RSLH053-7

System name

This prompt contains the default system name, if the router is active. If the router is not active, this input field is blank. Press F4 to display a list of possible system names.

TO

This prompt is required. It identifies the name of the host system physical file that receives the data you send from your personal computer. You may specify a file that already exists or create a new one.

To specify the AS/400 file that will receive the transferred data, you must use the following format:

```
[library-name/]file-name[(member-name[,record format-name])]
```

where:

library-name
Is the name of the AS/400 system library that contains the file where you want to send the data. If you do not specify a library, then *LIBL is used. If you want to create a file to receive the transferred data, you must specify a library name.

If you press F4 while the input field is empty, a list of all libraries defined in the user portion (*USRLIBL) of the AS/400 job library list is displayed. You can personalize this list by changing your job description using the Change Job Description (CHGJOBD) command on the AS/400 system.

file-name
Is the name of a AS/400 physical database file. If you want to transfer data to an existing file, the newly transferred data replaces data already in the file. If you want to create a file to receive the transferred data, specify a new file name from 1 to 10 characters long.

member-name
Is the name of a member in the AS/400 system file. If you do not specify a member name, the data is transferred to the first member in the file *FIRST. If the member already exists, the old data is replaced with the current data.

If you want to transfer data to an existing file, specify the member name. The data in the member file is replaced by the transferred data.

If you want to create a new member for your transferred data in an existing file or a new file, specify a new member-name that is from 1 to 10 characters long.

record format-name
Is the name of the record format in the specified AS/400 file. You must specify a member name or *FIRST as the member name before you can specify a record format name.

If you want to transfer data to an existing file and you do not specify a record format-name, it is assumed that only one format is in the file *ONLY and it is used.

If you are creating a new file and you do not specify a record format name, QDFTFMT is used as the record format name.

Notes:

1. The library name, file name, member name, and record format name each can have a maximum of 10 characters. The first character in each name must be A through Z, $, #, or @. All remaining characters can also be 0 through 9, underscore, or period.
2. The library name, file name, and file member name must be all uppercase characters. Lowercase characters may be included in the name if the name is enclosed in quotation marks. For example, "itemlib." Each name must be enclosed individually. Format names cannot contain lowercase characters.

FROM

This prompt is required. It identifies the name of the personal computer file containing the data you want to transfer to the AS/400 system. The format of the *FROM* prompt is as follows:

```
[d:][path] filename [.ext]
```

You can press F4 to list the file names you can use. You can also specify a part of a file name using a global file name character (* or ?) in the *FROM* prompt input area to limit the number of names listed. For example:

- Pressing F4 with the value A: supplies a list of all the file names in the current directory on the diskette in drive A.
- Pressing F4 with the value A:\SUPPLY\ supplies a list of all file names on the diskette in drive A in path SUPPLY.
- Pressing F4 with the value B:*.DIF supplies a list of all the file names in the current directory on the diskette in drive B with extension .DIF.

You can use the Up Arrow and Down Arrow keys or the PgUp and PgDn keys to find the file name you want; then press the Enter key to select it.

Use PC file description

This prompt is required. It specifies if a PC file description is to be used to transfer the data to the AS/400 system. A PC file description file is necessary if you want to transfer a PC file that contains data to be transferred (and changed) on a field basis. Such files are those that contain more than one field or those that contain numeric data fields. You do not need a PC file description file if you are transferring a PC file that contains records with text (character data) only.

Specify one of the following:

- No, if you are transferring data from a personal computer file that has one field (such as an ASCII character) and the AS/400 file you are transferring data to is a physical source file with the following record format:

```
    FIELD          TYPE       LENGTH      DECIMAL POSITIONS

Sequence number    Zoned        6              2
Date               Zoned        6              0
Data               Character    1 to 4096
```

  Note: The data portion can be made up of separate fields if the fields are character or zoned data only. The personal computer file does not contain a sequence number or date field, although the AS/400 file you are transferring to does. This allows you an easy way of transferring text only between the AS/400 system and the personal computer.

- Yes, for any other situation. For example,
  - If you are transferring data from a personal computer file that has more than one field.
  - If the AS/400 file you are transferring data to is not a physical source file with the record format shown above.

Description file name

This prompt appears only if you specified Yes for the *Use PC file description* prompt.

This prompt is required. The *Description file name* prompt specifies the name of the personal computer file description file containing the description of the data to be transferred.

The personal computer file description file can be created for you when you transfer data from the AS/400 system to the personal computer.

If you have not previously transferred the data from the AS/400 system to the personal computer, or if a file description file does not exist, you will need to create a file description file. For more about creating a file description file, refer to the *PC Support/400 Technical Reference for DOS and OS/2*.

The file description file defines the following:

- The file type of the personal computer file to be transferred. For information about file types, refer to the *PC Support/400 Technical Reference for DOS and OS/2*.
- The field names and the order in which they appear in each data record.
- The personal computer data type of each field.
- The size and number of decimal positions of each field.

The system supplies a file description name automatically. This file description name is created using the values you specified in the *FROM* prompt. The extension is .FDF.

It is recommended that you use the supplied extension. However, you can specify your own extension. If you do not want to use any extension, specify only a period (.) after the file name.

If you do not want to use the supplied file description name, you can enter your own file description name.

If you do not know the name of the personal computer file description file that you want to use, press F4. This displays a list of all of the file description files on the default disk drive in the current directory.

To limit the number of names listed, enter part of the name using a global file name character (* or ?) in the File description name input area. In this case, pressing the F4 key lists all of the file description files with names that are the same as the characters you typed.

PC file type

This prompt appears only if you specified No for the *Transfer data using PC file description* prompt.

This prompt is required. You must specify the type of personal computer file you named in the *FROM* prompt. The supplied value is ASCII text. For file type No conversion, the data file should contain data that needs no conversion.

Create AS/400 objects

This prompt is required. Use this prompt to specify whether data is transferred to a new or existing AS/400 member and, if data is transferred to a new member, whether the file that contains the member exists.

Specify one of the following:

- Yes, create member, only if you want to create and transfer data to a new member in an existing AS/400 file.

- Yes, create file and member, if you want to create and transfer data to a new member in a new AS/400 file.
- No, replace existing member, if you want to transfer data to an existing AS/400 member specified from the *TO* prompt. The data you are transferring completely replaces the data in the AS/400 member.

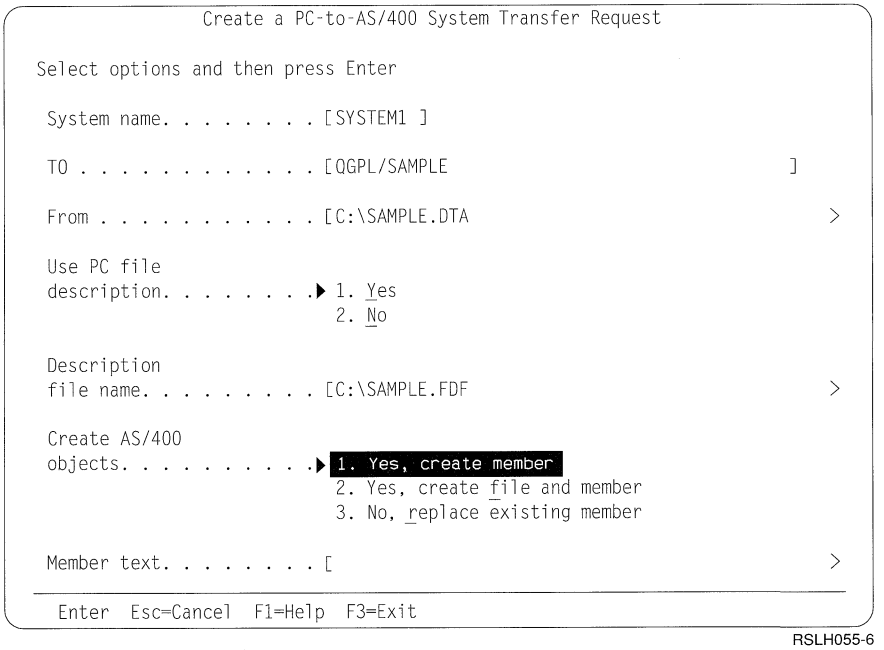
If you select No and press the Enter key, the request is created. Press F5 to run the transfer request.

If you select either Yes, create member or Yes, create file and member for the *Create AS/400 objects* prompt and press the spacebar, additional prompts for creating AS/400 files and members appear. Refer to the next section, "Creating AS/400 Objects," for a description of these prompts.

Creating AS/400 Objects

This section describes the prompts used to transfer data to files and members and to create new AS/400 files and members. The prompts you see depend on your responses to the prompts described in this chapter.

Creating an AS/400 Member Only: If you specify Yes, create member only, for the *Create AS/400 objects* prompt and press the spacebar, the AS/400 *Member text* prompt appears as follows:



RSLH055-6

Member text

This prompt is optional. Use this prompt to specify a description of the new AS/400 member. The description can help you remember the contents of the member at a later time. For example, this description is displayed when you request a list (using F4) of all the members in a file. If you leave this prompt blank, no description is associated with the new AS/400 member.

If your description includes apostrophes ('), you must type them using two apostrophes (' ').

When you complete the *Member text* prompt, the transfer request is created.

Notes:

1. In order to create the member, you must have the following authority:
   - *OBJOPR, *OBJMGT and *ADD for the file that will contain the new member
   - *READ and *ADD for the library that contains the file

   For more information about object authority, see the manual *Security Reference*.
2. When the member is created and added to the file, the transfer function uses the supplied values of the AS/400 Add Physical File Member (ADDPFM) command.

Creating an AS/400 File and a Member: If you specified Yes, create file and member for the *Create AS/400 objects* prompt, and specified Yes for the *Transfer data using the description file name* prompt, the *AS/400 file type* prompt appears as follows:

```
                Create a PC-to-AS/400 System Transfer Request
                                                                More:  ↑
Select options and then press Enter

 AS/400
 File type. . . . . .  1. Source
                     ▶ 2. Data

 Field reference
 filename . . . . . . [                    ]

 Authority. . . . . .▶ 1. Read/Write
                       2. Read
                       3. All
                       4. None

 File text. . . . . . [                                          >

 Member text. . . . . [                                          >


  Enter  Esc=Cancel  F1=Help  F3=Exit  F5=Run  Spacebar
```

RSLH056-4

AS/400 file type

This prompt is required. Use this prompt to specify the type of AS/400 file and member (they are both of the same type) you want to create.

Specify one of the following:

- Source, if you want to create an AS/400 physical source file and member. This member is created with two beginning fields, sequence number and date, in addition to the data fields from your personal computer file. The new AS/400 source file and member will have the following record format:

```
    FIELD          TYPE    LENGTH   DECIMALS

Sequence number    Zoned      6         2
Date               Zoned      6         0
Data               Char    1-32755
```

Note that although an AS/400 physical source file can have a record length of 32755 bytes, the largest source file that can be created using the personal computer-to-AS/400 system transfer function is 4107 bytes, including the sequence and data fields. The maximum amount of data that can be transferred per record is 4096 bytes.

The data portion of the member takes on the characteristics of your personal computer file. That is, if your personal computer file is an ASCII text file and is made up of many records containing text, the resulting data field will look similar.

- Data, if you want to create an AS/400 physical data file and member. This file and member contain only the data fields that are in the personal computer file description file.

If you are using a PC file description file to transfer data, the value for the *AS/400 file type* prompt is assumed to be Data. If you are not transferring data using a PC file description file, the value for this prompt is assumed to be Source.

When you complete the *AS/400 file type* prompt, press the Tab key.

Field reference filename

This prompt appears only if you specified Yes for the *Use PC file description* prompt and you are creating a new file.

If you specified No for the *Use PC file description* prompt, an AS/400 physical source file is created. The *AS/400 file type* and *Field reference filename* prompts do not appear; instead, the *Record length* prompt appears.

This prompt is required. The new AS/400 file is created using the field names in the personal computer file description file and the definitions of the fields in the AS/400 field reference file.

The format of the field reference file name is as follows:

```
[library-name/]file-name
```

where:

library-name

Is the name of the AS/400 library where the field reference file is located. If you do not specify a library name, then *LIBL is used. If you do not know the library name, you can press F4 to list all the libraries in the user portion (*USRLIBL) of the AS/400 job library list. You can personalize the user portion of the library list by changing your job description using the CHGJOBD command on the AS/400 system.

file-name

Is the name of the AS/400 physical database file that contains the field definitions. A filename is required. If a library name is also specified, it must be separated from the file name by a slash (/). If you do not know the name of the file you want to use, you can press F4 after a library name and a slash to see a list of files in that library. For a list of all the files in the libraries that are defined in the user portion of the AS/400 job library list, type *USRLIBL/ and press F4.

If you type a partial file name followed by an asterisk (*) before pressing the F4 key, a list of file names that you can use, beginning with the partial name, is displayed.

For example, if you type ARLIB/AR* for the *Field reference filename* prompt and press the F4 key, you see a list of all the physical file names beginning with the characters AR contained in the library named ARLIB.

Use the Arrow keys or the PgUp and PgDn keys to find the desired file name; then press the Enter key to select a file. This automatically copies the library name and the file name to the input area for the *Field reference filename* prompt.

Note: You must have *OBJOPR authority for the specified field reference file. Also, in order for a file to appear in a list, you must have *OBJOPR authority to that file.

Record length

This prompt is required. Use this prompt to specify the record length of the AS/400 physical source file. Because you are transferring data to an AS/400 physical source file, the length you specify must include the length of the sequence number and the date field that will be added to the PC file when it is transferred (these two fields have a total length of 12).

Authority

This prompt is required. Use this prompt to specify the level of authority you want for the new AS/400 file.

Specify one of the following:

- Read/Write means that other users can read and write to the AS/400 file and see the file in a list, but they cannot delete the file (*OBJOPR, *READ, *ADD, *OBJMGT, *UPD, and *DLT authority). If other users will be transferring personal computer files to this file, you must specify Read/Write or All.
- Read means that other users can read from the AS/400 file and see the file in a list, but they cannot write to the file or delete it (*USE authority).
- All means that other users can read and write to the AS/400 file, delete the file, and see the file in a list (*ALL authority).
- None means that no other users (except the security officer) can write to the AS/400 file, delete the file, or see the file in a list (* EXCLUDE authority).

File Text

This prompt is optional. You can use this prompt to specify a description of the new AS/400 file. The description can help you remember the contents of the file at a later time. For example, this description is displayed when you request a list (using F4) of all files in a library. If you leave this prompt blank, no description is associated with the new AS/400 file.

If your description includes apostrophes ('), you must type them using two apostrophes (' ').

Member Text

This prompt is optional. Use this prompt to specify a description of the new AS/400 member. The description can help you remember the contents of the member at a later time. For example, this description is displayed when you request a list (using F4) of all the members in a file. If you leave this prompt blank, no description is associated with the new AS/400 member.

If your description includes apostrophes ('), you must type them using two apostrophes (' ').

When you complete this prompt, the transfer request is created.

Notes:

1. To create the file and member, you must have *READ and *ADD authority for the library that will contain the file. You also must have authority to use the AS/400 Create Physical File (CRTPF) command.
2. When the file and member are created, the transfer function uses the supplied values of the AS/400 Create Physical File (CRTPF) command, except for the following values:

   (MAXMBRS[*NOMAX]), where the file can have a maximum of 32,767 members.

   (SIZE[*NOMAX]), where each member in the file can have an unlimited number of records.

Running a Personal Computer-to-AS/400 System Transfer Request

Before you run a transfer request, you must have previously created, recalled, or changed the transfer request.

Note: When data is transferred from the personal computer to an existing member in an AS/400 file, any data in the member is replaced by the data being transferred.

Specify Run on the action list and press the Enter key. If the action list is not on the display, you can run a transfer request by pressing F5. The following display appears while the transfer request is running:

```
                Run a PC-to-AS/400 System Transfer Request


System name. . . . . [SYSTEM1 ]

TO . . . . . [QGPL/NUMBER                                ]

FROM . . . . . [C:\PHN\TTELE.DAT                           >

Use PC file
description. . . . . ▶ 1. Yes
                       2. No

Description
file name. . . . . [C:\PHN\TTELE.FDF                       >

Create AS/400
objects. . . . . .  1. Yes, create member
                    2. Yes, create file and member
                  ▶ 3. No, replace existing member

                  ┌──────────────────────────┐
                  │ Your transfer request is running. │
                  └──────────────────────────┘
```

RSLH057-3

While the transfer request is running, the PC file description file (if specified) is read from the disk or diskette and processed. The AS/400 system and the personal computer exchange information while getting ready to transfer the data.

The personal computer sends the records, one at a time, from the file specified in the *FROM* prompt. The records are changed and stored on the AS/400 system in the member specified in the *TO* prompt.

During this conversion process, it is possible that conversion errors may occur. For example, a number in the personal computer file may need to be rounded off in order to fit into the AS/400 field, or the length of a record in the personal computer file is not the same as what the AS/400 system is expecting.

For these conversion errors, you receive an error message, the number of the record in the personal computer file in which the error occurred, and, in some cases, information about the specific field in the record containing the error.

A serious conversion error can stop the data from being transferred. In this case, you must stop the transfer request, correct the error, and run the transfer request again.

For less serious errors, you have the option to continue transferring data. If you choose to continue transferring data, and the error occurs in the same place in another record, you do not receive another message. In this case, the transfer function automatically continues running the transfer request. When the transfer request ends, the transfer function displays the number of records that had errors.

You can end the transfer at any time by pressing the Esc key. Any records already sent to the AS/400 system remain in the member.

If any conversion errors occurred while the transfer request was running, you will see additional messages in the Status display. These messages tell you the number of records that had a particular conversion error. The following status messages can occur (*n* is the number of records affected):

- `n record(s) had data that was padded`: Error message 8154 occurred, and you chose to continue running the transfer request. This status message shows the number of records that had this error.
- `n record(s) had data that was truncated`: Error message 8155 occurred, and you chose to continue running the transfer request. This status message counts the number of records that had this error.
- `n record(s) had data that was rounded`: Error message 8152 occurred, and you chose to continue running the transfer request. This status message counts the number of records that had this error.
- `n record(s) had data that was lost`: Error message 8158 occurred, and you chose to continue running the transfer request. This status message counts the number of records that had this error.
- `n record(s) had data that was missing`: Error message 8157 occurred, and you chose to continue running the transfer request. This status message counts the number of records that had this error.
- `n record(s) had numeric data with too many digits`: Error message 8156 occurred, and you chose to continue running the transfer request. This status message counts the number of records that had this error.
- `n record(s) had extra data not transferred`: Error message 8171 occurred, and you chose to continue running the transfer request. This status message counts the number of records that had this error.

- n record(s) had data that could not be translated or n bytes could not be translated: These messages occur when character data could not be translated from ASCII to EBCDIC. The number of records that had data that could not be translated or the number of bytes is shown. Each character that could not be translated was set to hex 00 and transferred to the AS/400 system.

  To create or change a translation table, use the translation table utility. Refer to the *PC Support/400 Technical Reference for DOS and OS/2* for information on using the translation table utility. After creating or changing a translation table, you may need to add or change some entries in your PC Support configuration file. Use the PC Support configuration program (CFGPCS) to change your file.

- n bytes was the longest record in the PC file: This status message occurs when you transfer data from a personal computer ASCII text file without a personal computer file description and one or more of the records had extra data that was not truncated.

For more details on error messages, see Chapter 5, "Getting Help When You Need It" on page 33.

After you are done with the status information, press the Esc key to return to the action list.

Using the Interactive Transfer Function Programs

There are two interactive programs: RTOPC and RFROMPC.

Transferring Data with the RTOPC Command

When you type the RTOPC program on the PC prompt display, you use the same displays and prompts as you did by selecting the transfer option (Transfer data from host system to PC) on the PC Support/400 menu.

To start the interactive transfer of data from the host system to the personal computer type:

```
[d:][path]RTOPC transfer-request-filename
```

where:

transfer-request-filename is the name of the transfer request previously created and saved.

Transferring Data with the RFROMPC Command

When you type the RFROMPC program name on the PC prompt display, you use the same displays and prompts as you did by selecting the transfer option (Transfer data from PC to host system) on the PC Support/400 menu.

To start the interactive transfer of data from the personal computer to the host system type:

```
[d:] [path] RFROMPC transfer-request-filename
```

where:

transfer-request-filename is the name of the transfer request previously created and saved.

Using the Automatic Transfer Function Programs

The automatic transfer function programs run a previously created and saved transfer request without prompting you for information. To create and save a transfer request, you must use the interactive transfer function.

The automatic transfer function programs are run by typing RTOPCB or RFROMPCB on the PC prompt display.

Transferring Data with the RTOPCB Command

The RTOPCB program runs the automatic AS/400 system-to-personal computer transfer function program. This program automatically starts the PC Support programs required to transfer data from the AS/400 system to the personal computer. (The router program must be started before you can run this program.)

To start the program, enter the following command at the PC prompt:

```
[d:][path]RTOPCB transfer-request-filename
```

where `transfer-request-filename` specifies the name of a transfer request that was previously created and saved. The `transfer-request-filename` is required. The format of the `transfer-request-filename` is:

```
[d:][path] filename [.ext]
```

where: `d:` and `path` are the drive and directory containing the file, `filename` specifies the name of the file that contains the transfer request, and `.ext` specifies the transfer-request-filename extension.

The file name can be from 1 to 8 characters long and is required in the command. The extension consists of a period (.) and 3 characters immediately following the file name. The extension is optional. If you do not specify an extension, the TTO extension is used. If you specify only a period (.) with no characters following it, no extension is used.

Running a Transfer Request Using the RTOPCB Command: Example

To automatically run a transfer request using the automatic AS/400 system-to-personal computer transfer function, type the RTOPCB program name with a `transfer-request-filename` specified and press the Enter key.

For example, to start the automatic AS/400 system-to-personal computer transfer function with the transfer request in file CUSTREQ.TTO on drive A specified, you type:

```
RTOPCB A:CUSTREQ
```

Then press the Enter key.

While the transfer request is being recalled, the following message appears:

```
Your transfer request is being recalled
```

While the transfer request is running, the following message appears:

```
Your transfer request is running
```

After the transfer request runs, the transferred records are sent to the output device specified in the transfer request.

If you specified *Display* for the *Output device* prompt, the transferred records are sent to the display. Each record is shown using one or more lines of the display, depending on the length of the record. Column headings are the *SELECT* field names.

Each field of an transferred record is changed from an AS/400 data type to personal computer ASCII. If a field cannot be changed, the field is displayed with rectangles occupying the character positions that could not be changed.

You can press the Esc key to stop displaying the records. The display then shows the total number of records that were displayed and the total number of records that had data that could not be translated, as follows:

```
9 record(s) displayed
0 record(s) had data that could not be translated
```

If you specified *Printer* for the *Output device* prompt, the transferred records are sent to the printer. The output is printed by the values specified in the transfer request. The output is in column format. Column headings are the *SELECT* field names.

Each field of an transferred record is translated from an AS/400 data type to personal computer ASCII. If a field cannot be translated, the field is printed with rectangles occupying the character positions that could not be translated.

If you want to stop printing the transferred records before all of the records are printed, you can press the Esc key. The display then shows the total number of records printed and the number of records that had data that could not be translated, as follows:

```
9 record(s) printed
0 record(s) had data that could not be translated
```

Note: If you are printing on a printer that is not a virtual printer, after printing the transferred records, the transfer function resets the printer to print 80 characters per line, 66 lines per page, 6 lines per inch, with no double strike. If you are printing on a virtual printer, these characteristics might not be reset.

If you specified *Disk* for the *Output device* prompt, one of the following occurs:

- If you specified that the format of the transferred data is to be printed, the following message appears while the printing is being done:

  ```
  The format of transferred data is being printed
  ```

  You can press the Esc key to stop printing the format of transferred data.
- If you specified that the personal computer file description should be saved, the following message appears while the file description is being written to the specified disk or diskette file:

  ```
  The file description is being written to disk
  ```

The transferred records are sent directly to the personal computer disk or diskette file, and the following message appears:

```
Retrieved data records are being written to disk
```

If you want to stop writing records to the disk or diskette before the transfer request ends, you can press the Esc key.

After the records are transferred, the following messages appear, showing the total number of records written to the personal computer disk or diskette file, and the number of records containing data that could not be translated:

```
9 record(s) written to disk file
0 record(s) had data that could not be translated
```

Transferring Data with the RFROMPCB Command

The RFROMPCB program runs the automatic personal computer-to-AS/400 system transfer function program. This program automatically starts the PC Support programs required to transfer data from the personal computer to the AS/400 system. (The router program must be started before you can enter this command.)

To start the RFROMPCB program, enter the following command at the PC command prompt:

```
[d:][path]RFROMPCB transfer-request-filename
```

where `transfer-request-filename` specifies the name of a transfer request that was previously created and saved. The transfer-request-filename is required. The format of the transfer-request-filename is:

```
[d:][path] filename [.ext]
```

where `d:` and `path` are the drive and directory containing the file, `filename` specifies the name of the file that contains the transfer request, and `.ext` specifies the transfer-request-filename extension.

The file name can be from 1 to 8 characters long and is required in the command. The extension consists of a period (.) and 3 characters immediately following the file name. The extension is optional. If you do not specify an extension, the TTO extension is used. If you specify only a period (.) with no characters following it, no extension is used.

Running a Transfer Request with the RFROMPCB Command: Example

To automatically run a transfer request using the automatic personal computer-to-AS/400 system transfer function, type the RFROMPCB command with a `transfer-request-filename` specified and press the Enter key.

For example, to start the automatic personal computer-to-AS/400 system transfer function with the transfer request in file CUSTREQ.TFR on drive A, you would type:

```
RFROMPCB A:CUSTREQ
```

Then, press the Enter key.

While the transfer request is being recalled, the following message appears:

```
Your transfer request is being recalled
```

While the transfer request is running, the following message appears:

```
Your transfer request is running
```

While the transferred records are being sent to the AS/400 system, the following message appears:

```
Data records are being sent to the AS/400 system
```

The data records are read, one at a time, from the personal computer file. The records are changed; then stored on the AS/400 system in the member specified in the *TO* prompt when the transfer request was created or changed.

You can end the transfer request at any time by pressing the Esc key. Any records already sent to the AS/400 system remain in the member.

When the transfer request stops running (either all the data was sent or you pressed the Esc key), the following status message appears:

```
n record(s) successfully sent to the AS/400 system
```

where `n` is the number of records successfully transferred.

In addition, one or more status messages might appear, showing the number of records that contained data that was padded, truncated, rounded off, lost, missing, or too long, and the number of records that contained untranslatable characters.

For more information on the messages that might appear when a transfer request is run, refer to "Running a Personal Computer-to-AS/400 System Transfer Request" on page 154.

If no file description file was specified when the transfer request was created or changed, and extra data was found in one or more records while being transferred from a personal computer ASCII text file, the length of the longest record in the personal computer file is displayed.

Specifying Values in a Transfer Request

When you create a transfer request, you can use the following to limit the information transferred:

- Constants
- Expressions
- Tests

Using Constants in a Transfer Request

You can specify a character string, a number, or the keyword NULL as a constant.

Note: NULL is a constant that can only be used with the IS and ISNOT operators.

Using Character strings: A character string must be enclosed in apostrophes. For example:

```
'JOHN'
```

To represent an apostrophe within a character string, use two apostrophes. For example:

```
'JOHN''S'
```

Note: Only the right apostrophe (') is supported by the transfer function.

If the character string is shorter than the specified field, blanks are added to the right end of the string. If the character string is longer than the specified field, the character string is truncated.

A search is made for the exact characters you specify. That is, if you specify only uppercase characters, a search is made only for uppercase letters. If you specify only lowercase characters, a search is made only for lowercase letters.

A character string can also be specified in hexadecimal notation by typing the character X, followed by the EBCDIC hexadecimal representation of the character string enclosed in apostrophes. For example:

X'D1D6C8D5'

You can use hexadecimal representation when the character string contains nondisplayable characters.

Using Numbers: A number may include an optional sign (+ or -) and an optional decimal point. Either a period (.) or a comma (,) can be used for the decimal point. The following are examples:

```
.5
-.05
1000.00
+5.00
```

Numeric fields are compared by aligning the fields on the decimal point. Zeros are added where numbers are missing.

Using Expressions in Transfer Requests

An expression can contain numeric field names, numeric constants, parentheses, and the following arithmetic operators:

+ Plus (add)

- Minus (subtract)

***** Multiply

/ Divide

For example, the following searches for a record where the quantity of available items (ONHAND) is larger than the quantity on order (ONORDER) by at least 500:

```
ONHAND > ONORDER + 500
```

The following searches for a record where the price is equal to 1000:

```
PRICE = (10.00 * 100)
```

Using Tests in a Transfer Request

The following tests are supported and can be before or followed by one or more blanks:

=	Equal
<> or ><	Not equal (see Note)
>	Greater than

>=	Greater than or equal
<	Less than
<=	Less than or equal
LIKE	Field is like the value specified
BETWEEN	Field is equal to or between two constants
IN	Field is equal to a value in a list of constants
IS	Field contains null values
ISNOT	Field does not contain null values

Note: The personal computer keyboard does not support the NOT sign (¬) for not equal (¬=). Instead, you must type the less than and greater than symbols together (<> or ><).

Using the LIKE Test: The LIKE test searches the field you specified in fieldname for the character pattern you specified in value. The specified field must be a character field.

The value tested must be a character string constant. The string may contain any character. The percent (%) character represents any character string of zero or more characters. The underscore (_) character represents any single character.

The following examples show the use of the LIKE test:

```
NAME LIKE '%ANNE%'
```

searches for any name that contains the character string ANNE, such as ANNE, ANNETTE, or SUZANNE.

```
NAME LIKE 'ANNE%'
```

searches for any name that starts with the character string ANNE, such as ANNE or ANNETTE.

```
NAME LIKE '%ANNE'
```

searches for any name that ends with the character string ANNE, such as ANNE or SUZANNE.

```
NAME LIKE '_A%'
```

searches for any name that has a second letter equal to A.

```
LSTNAM LIKE 'J%'
```

searches for any last name beginning with the letter J. This is equivalent to

```
SUBSTR (LSTNAM,1,1) = 'J'
```

If the pattern does not include the percent character (%), the length of the character string must equal the field length.

Note: A search is made for the exact characters you specify. That is, if you specify only uppercase characters, a search is made only for uppercase letters. If you specify only lowercase characters, a search is made only for lowercase letters.

Using the BETWEEN Test: The BETWEEN test searches the field you specified in fieldname for a character string or a number that is equal to or between the constants you specified in value. The value tested must be either two character string constants or two numeric constants; the constants must be the same type as the fieldname you specify. The constants must be separated by AND.

In the following example, records are searched for any price that is greater than or equal to 50.35 and less than or equal to 75.3:

```
PRICE BETWEEN 50.35 AND 75.3
```

In the following example, records are searched for names that start with the letter C:

```
NAME BETWEEN 'C' AND 'CZZZZZZZZZ'
```

In the following example, records are searched for any balance due between 0 and 5000.

```
BALDUE BETWEEN 0 AND 5000
```

This is equivalent to

```
BALDUE >= 0 AND BALDUE <= 5000
```

Note: The values tested must be presented in the form BETWEEN (lowest value) AND (greatest value). For example, a valid presentation is BETWEEN 1 AND 10. A presentation of BETWEEN 10 AND 1 does not return any records.

Using the IN Test: The IN test searches the field you specified in fieldname for a character string or for a number in a list you specified in value. The value tested must be a list of character string constants or numeric constants; the constants must be the same type as the fieldname you specify. The constants must be separated by blanks and enclosed in parentheses; up to 100 constants can be specified. The following example shows the use of the IN test:

```
NAME IN ('SMITH' 'JONES' 'ANDERSON')
```

Records are searched for names that equal SMITH, JONES, or ANDERSON.

In the following example, all values in the field STATE will be searched for *except* NY, MN, and TX.

```
NOT STATE IN ('NY' 'MN' 'TX')
```

Note: A search is made for the exact characters you specify. That is, if you specify only uppercase characters, a search is made only for uppercase letters. If you specify only lowercase characters, a search is made only for lowercase letters.

Using the IS Test: The IS test searches the field you specified in the field name for a null value.

In the following example, records are searched for any commission that contains a null value:

```
COMMISSIONS IS NULL
```

Using the ISNOT Test: The ISNOT test searches the field you specified in the field name for all nonnull values.

In the following example, records are searched for any commission that does not contain a null value:

```
COMMISSIONS ISNOT NULL
```

Tests can be combined with a logical AND or OR. When both AND and OR are specified, AND comparisons are made first. A maximum of 50 conditions can be specified. For example:

```
MONTH=2 AND LOC='MIAMI' OR LOC='CHICAGO'
```

means that each record selected must satisfy the condition:

```
MONTH=2 AND LOC='MIAMI'
```

or

```
LOC='CHICAGO'
```

You can use parentheses to change the order of the operation. For example:

```
MONTH=2 AND (LOC='MIAMI' OR LOC='CHICAGO')
```

means that each record selected must satisfy the condition:

```
MONTH=2
```

and

```
LOC='MIAMI' OR LOC='CHICAGO'
```

You can also use the word NOT. In the following example, data is transferred from records where field DEPT is not equal to 470; data is also transferred from records where DEPT is equal to 470 *and* STATE is equal to NY:

```
NOT (DEPT = 470) OR (DEPT = 470 AND
  STATE = 'NY')
```

If the entire condition does not fit on one *WHERE* input area line, the transfer function automatically creates another input area line, or you can create another line by pressing the F9 key.

A comparison can start on one line and end on the next line. However, the fieldname cannot start on one line and end on the next line. The fieldname must be all on one line.

If the value tested is a character string enclosed in quotes, it can start on one line and end on another.

Identifying Batch Error Level Codes

The batch return codes are as follows.

0 The function completed successfully.

10 The function completed successfully with informational messages.

20 The function completed with an error. An error message is displayed.

Using File Names and Field Names in a Transfer Request

The following keywords cannot appear in a file name or be used as field names in a personal computer-to-AS/400 system transfer request:

CRTFILE
CRTMBR
FILETEXT
FILETYPE
INTO
MBRTEXT
PUBAUT
RCDLEN
REFFILE

The following keywords cannot appear in a file name or be used as field names in an AS/400 system-to-personal computer system transfer request:

ABS
AND
ASC
AVG
BETWEEN
BY
COLUMNS
COUNT
DESC
EXTRACT
FROM
GROUP
HAVING
IN
INNER
IS
ISNOT
LIKE
MAX
MIN
NOT
OR
OPTIONS
ORDER
PARTOUT
REPLACE
SELECT
SUBSTR
SUM
TABLES
WHERE

If you use one of these keywords as a field name or in a file name, the keyword must be capitals and enclosed in quotation marks. For example:

```
TO MYLIB/"INTO"
```

Part 5. Using Your PC as a Work Station

Chapter 17. Understanding the Concept of Work Station Emulation

Work station emulation is done by the OS/2 5250 Work Station Feature programs. These programs are part of the Communications Manager. The basic concepts and principles behind work station emulation are similar to those of the PC Support/400 work station function. You can use the online introduction to PC Support to gain a general understanding of these concepts and principles.

If you merely need an AS/400 display or printer station, use the OS/2 5250 Work Station Feature. You do not need PC Support to accomplish this.

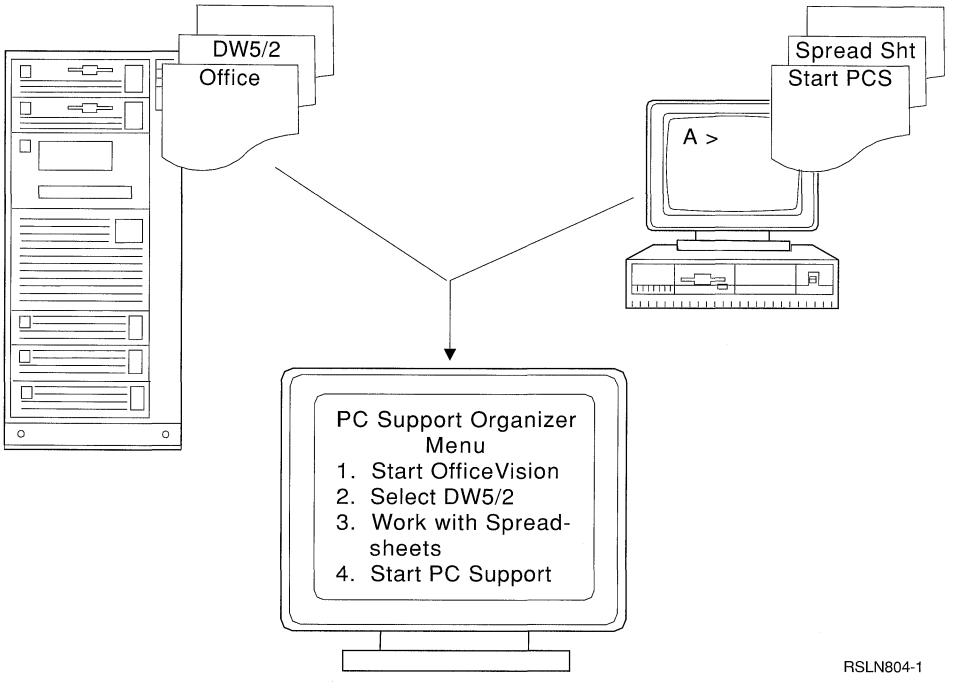
For more information about the OS/2 Work Station Feature, refer to your OS/2 documentation.

Chapter 18. Using the PC Support Organizer Menu

This chapter shows you how to use the PC Support Organizer. This includes the following procedures:

- Starting the PC Support Organizer
- Using the options on the PC Support Organizer menu
- Selecting a text editor using the PC Support Organizer menu
- Performing host system tasks from the PC Support Organizer menu

The keyboard operations as described in Chapter 4, "Learning to Use the PC Support Keyboard," do not apply when you are using the 5250 Work Station Feature. Instead, your keyboard performs AS/400 functions rather than PC functions. While you are using the 5250 Work Station Feature, you can also use the PC Support organizer. The organizer runs in the 5250 Work Station Feature session. As the diagram below shows, you can use the PC Support/400 Organizer menu to run AS/400 applications as well as PC Support and other PC applications.



Starting the Organizer

If you selected the organizer during installation, the PC Support/400 Organizer menu is automatically displayed when you start PC Support. If not, you can start the organizer by selecting the option, `Go to Organizer Menu`, on the PC Support/400 menu. However, the OS/2 work station feature must be running before you can select this option. If this menu option doesn't work, go to the OS/2 Communication Manager and start a 5250 emulation session.

Use the hot-key sequence to change back to the PC prompt. At the PC prompt, type the command:

```
[i:] [path] PCSMENU
```

which returns you to the PC Support/400 menu to try the option again.

The cursor must be on the command line before the PC Support/400 Organizer can start.

If you do not remember how to start PC Support on your personal computer, you can review the instructions in Chapter 6, "Starting PC Support" on page 45.

You can change the options on the PC Support/400 Organizer menu to run any PC or AS/400 applications that you frequently use. If you have someone responsible for installing PC hardware and applications, this may have already been done for you.

If the options on the PC Support/400 Organizer menu have not been changed, the following display is shown when you select option 8 from the PC Support/400 menu:

```
PCOMNU              PC SUPPORT/400 ORGANIZER

 Select one of the following:

   Office Functions
     1. OfficeVision/400
     2. Work with documents in folders
     3. Select editor of choice

   PC Support
     4. PC Support PC tasks
     5. PC Support host system tasks
     6. PC command prompt
     7. Start a PC command

    90. Sign off


Selection or command
===>_____________________________________________________________________
_____________________________________________________________________
F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
F13=User Support      F16=System main menu
```

This menu allows you to access PC and AS/400 applications without having to know whether an application runs on the AS/400 system or the personal computer.

Using the PC Support/400 Organizer Menu Options

The following are descriptions of the options on the PC Support/400 Organizer menu. If the menu has been changed, these options might not apply to you. If you do not have OfficeVision/400 installed on your AS/400 system, option 1 (OfficeVision/400) does not function, and option 2 (Work with documents in folders) and option 3 (Select editor of choice) are limited in their functions.

Option 1 (OfficeVision/400)
: Allows you to work with OfficeVision/400 functions from the AS/400 Office main menu.

Option 2 (Work with documents in folders)
: Allows you to work with documents in AS/400 folders. This option allows you to create, change, copy, delete, view, print, rename, describe, check spelling, file remote, paginate, assign authority to, and send a document.

Option 3 (Select editor of choice)
Shows the Select Editor of Choice display.

Option 4 (PC Support PC tasks)
Shows the PC Support/400 menu, from which you can run most of the PC Support functions.

Option 5 (PC Support host system tasks)
Displays the Host System Tasks for PC Support/400 menu, from which you can work with files and documents on the AS/400 system.

Option 6 (PC command prompt)
Allows you to use PC commands while the organizer is running. When you select this option, the PC command prompt is shown. You can then run any PC command you want to use. When you are ready to return to the organizer, you must type EXIT.

Option 7 (Start a PC command)
Shows the STRPCCMD command display, from which you can run a single PC command or a PC application. When the command finishes running, the PC Support/400 Organizer menu automatically returns.

Option 90 (Sign off)
Signs you off the AS/400 system.

Running PC Commands from the PC Support Organizer Menu

If you are using the organizer, you can also run PC commands or other PC commands using the Start PC Command (STRPCCMD) command. This command allows you to run PC commands from the PC Support/400 Organizer menu, or from the command line of any AS/400 menu while the organizer is running. To do so, type STRPCCMD on the command line in the following format:

```
STRPCCMD PCCMD('pc command') PAUSE(*yes/*no)
```

where 'pc command' is the PC command you want to run. You should enclose the command name in apostrophes if it contains hyphens (-), slashes (/ or -), embedded blanks, colons (:), or other delimiters. The PAUSE parameter allows you to specify whether you want the personal computer to pause after running the command (*yes) or (*no).

Example

To change the current PC directory using the PC change directory command (CD), you can type either of the following:

```
STRPCCMD PCCMD('CD \MYFLR') PAUSE(*YES)
```

```
STRPCCMD 'CD \MYFLR' PAUSE (*NO)
```

where MYFLR is the name of the directory to which you want to change. The PAUSE parameter is optional.

When the command has completed, the PC Support/400 Organizer menu returns.

You can also use the STRPCCMD command to return to your PC operating system for a longer period of time to do other work. To do so, you can enter the command as follows:

```
STRPCCMD CMD.EXE
```

When you are ready to return to the menu from which you ran the above command, type Exit at the PC command prompt.

Using a Text Editor from the PC Support/400 Organizer Menu

You may use DisplayWrite 5/2 or the OfficeVision/400 word processor functions when working with documents in folders. Select option 3 (Select editor of choice) on the PC Support/400 Organizer menu to select the text editor you want to use. The following display is shown when you choose to select an editor of choice:

```
                    Select Editor of Choice

Type choice, press Enter.

  Text editor . . . . . . . . . . . . :    1=OfficeVision/400 (DOS, OS/2)
                                           2=DW4 (DOS)
                                           3=DW4 Version 2 (DOS)
                                           4=DW5 (DOS)
                                           5=DW5/2 (OS/2)

F3=Exit    F12=Cancel
```

On the Select Editor of Choice menu, enter:

- 1 to select OfficeVision/400
- 5 to select DisplayWrite 5/2

The remaining options are not available in OS/2.

Selecting OfficeVision/400 Word Processing Functions

To select OfficeVision/400 word processing functions, select option 1 (OfficeVision/400) on the Select Editor of Choice display. Since you do not need to provide any more information, the PC Support/400 Organizer menu returns.

PC Support provides a function called **text assist**, which helps you when working with OfficeVision/400 word processing functions from your personal computer. The text-assist function runs automatically when you use the OfficeVision/400 word processing functions from the PC Support/400 Organizer menu. The text-assist function allows you to do the following:

- Center text on a line even though tabs, controls, or other text are set on that line.
- Highlight text being moved, copied, or deleted.
- Roll text both horizontally and vertically.
- Decide whether to display embedded codes. When codes are not displayed, other instructions, such as underline and bold, will no longer take up space on the display.

Selecting a DisplayWrite Editor

Select option 5 (DisplayWrite 5/2) on the Select Editor of Choice menu to use the DisplayWrite 5/2 editor. The remaining options are not available in OS/2. A display similar to the following is shown. It will vary slightly depending upon the option you select.

```
                    Select Editor of Choice

Type choices, press Enter.

  Text editor . . . . . :   DW5/2
  Program . . . . . .   C:/DW5-2/DW52A112.EXE_____________________
_____
  Profile . . . . . .   C:/DW5-2/DW5.CMD_____________________
_____
  Primary program path. .   C:/DW5-2_____________________
_____
  Temporary program path    _____________________
_____
  Secondary program path    C:/DW5-2_____________________
_____
  Document type for save  3   1=Revisable form
                              2=Final form
                              3=Select type at end of edit


F3=Exit   F12=Cancel
    07-06      SA       MW     KS          IM     II  S1  RCH38342  KB
```

This display allows you to specify the PC path information needed to find and start a DisplayWrite editor. Help information is available from this display to help you complete the prompts. To install a DisplayWrite editor on your personal computer, follow the instructions provided in your manual for your DisplayWrite program. This can be done before or after you start the PC Support/400 organizer. Because this display does not allow more than 100 characters total for the program name, profile name, and three path names, you should keep your PC file and path names as short as possible.

When you use a DisplayWrite editor with the organizer, the organizer does the following:

- Allows you to take advantage of AS/400 printer functions without assigning them as virtual printers.
- Allows you to print PC or AS/400 documents without converting them to final-form text.
- Allows you to get (merge) information directly from an AS/400 file.
- Makes backup copies of your documents automatically.
- Loads and starts the DisplayWrite editor for you.
- Allows you to take advantage of AS/400 security.

Recovering a Document Lost While Using a DisplayWrite Editor

If you are using the PC Support organizer function with a DisplayWrite editor, as your editor of choice, and your edit session ends abnormally before you save your changes, you should follow this procedure to recover the document.

1. Start the organizer function and attempt to edit the document again. You will receive a message telling you the file is in use. You cannot edit the document at this time.
2. Sign off the organizer function and use the hot-key sequence to go to the personal computer session.
3. Start the DisplayWrite editor as a stand-alone personal computer editor.
4. Use the recovery utility to recover the document.
5. Start the organizer function again. You should be able to edit the document. Your success at recovering the document depends on the number of changes you made before your session ended.

Note: If your final document is to be saved in revisable-form text format, you should use a profile that does not define a system path for revisable-form text. If necessary, you should create a new profile to be used specifically for your DisplayWrite editor of choice. This profile should be the one used on the organizer editor of choice profile name.

Improving Performance When Using DisplayWrite 5/2

The PC Support Organizer provides a function which keeps DisplayWrite 5/2 loaded in memory upon completion of the first DisplayWrite 5/2 request. Because the PC Support Organizer does not have to load DisplayWrite 5/2 in memory each time a new request is received, performance is improved for each subsequent request.

To use this feature, you must start the PC Support Organizer by typing the following command:

```
[d:] [path] PCO /d
```

If your PC Support Organizer is started from an OS/2 command file, you must edit the command file using your OS/2 editor and insert the /d parameter. No option exists to add the /d parameter from the PC Support configuration program.

Note: While this feature provides better performance when DisplayWrite 5/2 is initializing, this feature can cause confusion since the DisplayWrite 5/2 task remains active even after the edit is complete. You can look at the DisplayWrite session but cannot type anything. The organizer attempts to hide the DisplayWrite 5/2 session behind the work station feature session; however, the DisplayWrite session is still accessible through the OS/2 task list. If you do access the locked DisplayWrite session, simply use the OS/2 task list to return to the work station feature session and continue as usual.

Initializing the Organizer

When the organizer is started for an OS/2 work station feature session, a series of initialization commands is sent to the first host command line it recognizes. For the first work station feature display session, the default sends the Start PC Organizer (STRPCO) command (which starts the host organizer processing), followed by the GO PCOMNU command (which displays the PC Support/400 Organizer menu).

For each subsequent display session that is started, the organizer defaults to sending only the STRPCO command. If the default commands do not match the customer setup, the initialization commands can be changed by specifying PCOP entries in the PC Support configuration file (default name is CONFIG.PCS).

A PCOP entry looks like this:

```
PCOP n, command
```

where *n* is the work station feature session and *command* is the command to be sent to that session. The organizer always sends an Enter Key after sending the keystrokes representing the command. Multiple commands can be sent by creating multiple PCOP entries for a session.

In instances when the organizer does not see a command line or a user has limited capability (LMTCPB(*YES)), the organizer initialization commands are not run, or are rejected by the host system. In these cases, special application procedures must be set up to allow the organizer to initialize properly, such as defining the user's initial menu so that one of the options runs the STRPCO command. This could be an option the user never sees on the menu. Set up a single PCOP entry for the session so that PCO sends the number to run the STRPCO option at initialization time. By doing this, the organizer's requirement to send initialization keystrokes is satisfied, and the command to start the organizer on the host is run; however, to do this, the initial menu is required to have a command line.

Note: The organizer does not send its initialization keystrokes if it first receives an organizer type request from the host system (run a PC command, or load an editor). If it receives such a command before it has sent its initialization keystrokes, the organizer assumes initialization has already occurred.

Performing PC Support/400 Host System Tasks

Use the Configure AS/400 for PC Support menu to perform user tasks, such as copying PC documents to database files, and to perform administrator tasks, such as enrolling new PC Support users. You can use this menu from any AS/400 display station, or from your personal computer while you are running the work station function.

To display the Configure AS/400 for PC Support menu on your personal computer, select option 5 (PC Support host system tasks) on the PC Support/400 Organizer menu. The following display is shown:

```
PCSTSK                    PC Support Tasks
                                                        System:  SYSTEM1
Select one of the following:

  User Tasks
     1. Copy PC document to database
     2. Copy database to PC document
     3. Work with documents in folders
     4. Work with folders
     5. PC Support Organizer


  Administrator Tasks
    20. Work with PC Support administrators
    21. Enroll PC Support users
    22. Configure PC connections

    30. Change keyboard and conversion tables

Selection or command
===>
F3=Exit    F4=Prompt    F9=Retrieve    F12=Cancel    F13=User support
F16=System main menu
```

The following are descriptions of the options on the PC Support Tasks menu:

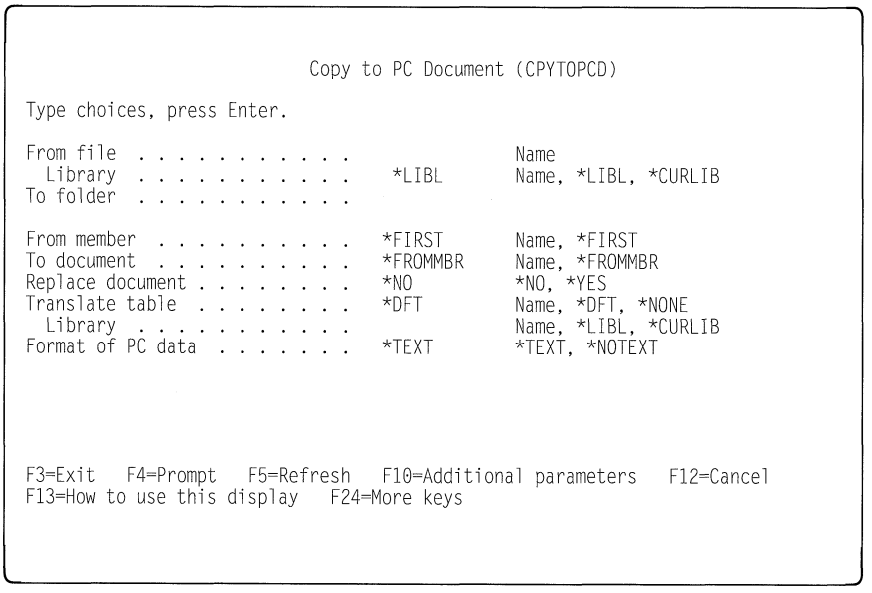
Option 1 (Copy PC document to database)

Use to copy data from a PC document stored on the AS/400 system to an AS/400 database file. When you select option 1, you are asked for the information needed to run the AS/400 Copy from PC Document (CPYFRMPCD) command. When you select this option, the following display is shown:

```
                          Copy from PC Document (CPYFRMPCD)

Type choices, press Enter.

From folder  . . . . . .

To file  . . . . . .                        Name
  Library  . . . . . .      *LIBL           Name, *LIBL, *CURLIB
From document  . . . . . .                  Name
To member  . . . . . .    *FIRST            Name, *FIRST, *FROMDOC
Replace or add records . . . . .  *REPLACE   *REPLACE, *ADD
Translate table  . . . . . .  *DFT           Name, *DFT, *NONE
  Library  . . . . . .                      Name, *LIBL, *CURLIB
Format of PC data  . . . . . .  *TEXT        *TEXT, *NOTEXT




F3=Exit    F4=Prompt    F5=Refresh    F12=Cancel    F13=How to use this display
F24=More keys
```

Option 2 (Copy database to PC document)

Use to copy data from an AS/400 database file to a PC document stored on the AS/400 system. When you select option 2, you are asked for the information needed to run the AS/400 Copy to PC Document command (CPYTOPCD). When you select this option, the following display is shown:



Option 3 (Work with documents in folders)
: Use to work with documents on the AS/400 system using OfficeVision/400 functions. When you select this option, the Work with Documents in Folders menu is shown.

Option 4 (Work with folders)
: Use to work with folders on the AS/400 system using OfficeVision/400 functions. When you select this option, the Work with Folders menu is shown.

Option 5 (PC Support Organizer)
: Use to return to the PC Support/400 Organizer menu.

Option 20 (Work with PC Support administrators)
: Use to work with a list of PC Support users who are currently PC Support administrators. When you select this option, the Work with PC Support administrators menu is shown.

Option 21 (Enroll PC Support users)
: Use to enroll new PC Support users. When you select this option, the Enroll PC Support Users menu is shown.

Option 22 (Configure PC connections)
: Use to configure your personal computer connections to communicate between the AS/400 system and your personal computer. When you select this option, the Configure PC Connections menu is shown.

Option 30 (Change keyboard and conversion tables)
: Use to change keyboard and conversion tables if the default values selected are not appropriate for your environment. When you select this option, the Initialize PC Support/400 (INZPCS) command menu is shown.

Part 6. Working With Remote Systems

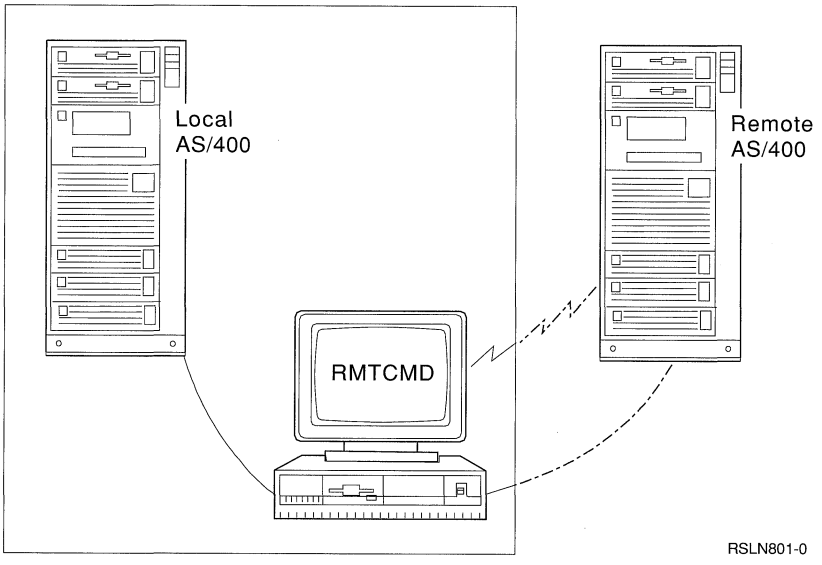
Chapter 19. Getting Ready to Send Remote Commands

This chapter provides basic information about sending commands to a remote system using the submit remote command function of PC Support.

When you have familiarized yourself with the information in this chapter, go to Chapter 20, "Submitting Single Remote Commands" on page 185 to learn how to send a single remote command or Chapter 21, "Submitting Multiple Remote Commands" on page 187 to learn how to submit multiple commands at one time.

Understanding the Submit Remote Command Function

While using PC Support, you can submit AS/400 CL (control language) commands from your personal computer to an attached AS/400 system using the submit remote command function (RMTCMD command). You can do this from the PC Support menu or from the PC command line. The following diagram shows how a command can be sent to a local AS/400 system or another AS/400 system on the network.



The primary purpose of the RMTCMD command is to help you perform file management operations and file authorization activities on AS/400 files. For example, using this command you can create, delete, or change the name of files located on the AS/400 system. You can also use this command to perform other operations, such as creating a message queue.

Some AS/400 CL commands are interactive commands; that is, they require some input from you. You cannot submit interactive CL commands from a remote work station.

Some AS/400 CL commands result in printed or displayed output. If you submit these commands to a remote system, the output created by the command is not available to you. For example, you could submit the command to display remote file descriptions, but the output created by the command would remain on the AS/400 system. For a list of acceptable CL commands that are useful, see the *DDM Guide*. The same commands that can be used with the AS/400 Submit

Remote Command (SBMRMTCMD) command can be used with the RMTCMD command on the personal computer.

Chapter 20. Submitting Single Remote Commands

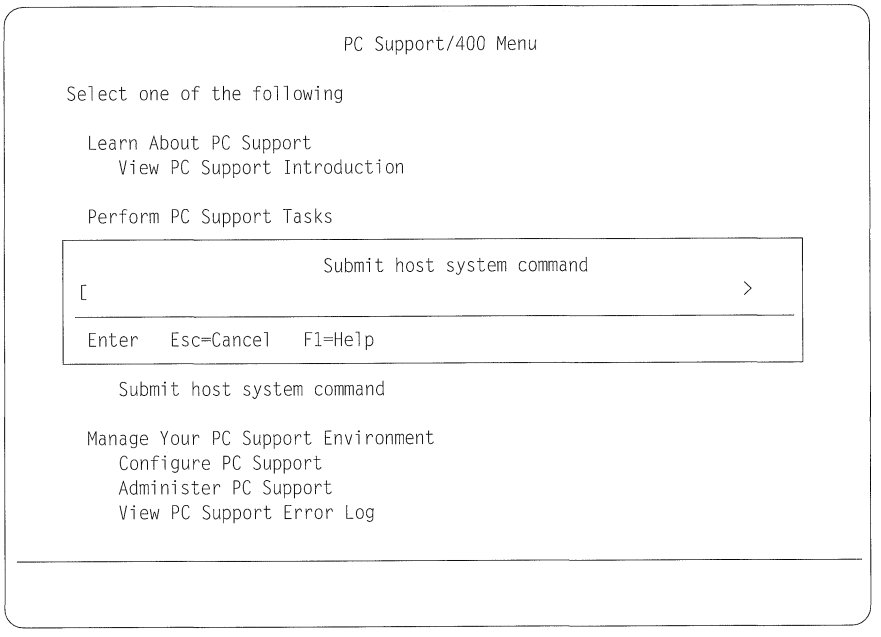
This chapter shows you how to submit a single remote command from the PC Support/400 menu.

While using PC Support, you can submit AS/400 CL (control language) commands from your personal computer to an attached AS/400 system using the submit remote command function (RMTCMD command). You can do this from the PC Support menu or from the PC command line.

Before you can submit a remote command from the PC Support menu, you must start PC Support. If you do not remember how to start PC Support, you can review the instructions in Chapter 6, "Starting PC Support" on page 45. When you start PC Support, the following display is shown:

```
                          PC Support/400 Menu

 Select one of the following

  Learn About PC Support
    View PC Support Introduction

  Perform PC Support Tasks
     Go to PC command prompt
     Use printers on host system
     Use folders on host system
     Transfer data
     Send and receive messages
     Go to Organizer menu
     Submit host system command

 Manage Your PC Support Environment
     Configure PC Support
     Administer PC Support
     View PC Support Error Log

 ____________________________________________________________________________

 Enter   Esc=Cancel   F1=Help   F3=Exit
```

Select the option `Submit host system command`. The following display is shown:



RV2N239-0

The window contains a command line from which you can submit a remote command. The command should be typed as follows:

```
actual remote command [//RemoteSystemName]
```

where `actual remote command` is the AS/400 CL command.

The remote system name (`RemoteSystemName`), which specifies the system to send the command to, is optional. If you do not provide one, the command is sent to your default system.

For example, if you wanted to create a library named SALES on the SYSTEM1 system, you would use the CL create library command, CRTLIB, with the RMTCMD command as follows:

```
crtlib sales //SYSTEM1
```

After you type the command, press the Enter key. The PC Support menu and window are cleared from the display. When the command finishes running, a reply message is sent from the remote system to your personal computer. In the example used above, you would receive a message similar to the following:

```
CPC2102 - Library SALES created.

Press any key to return
```

When you press a key, you return to the PC Support menu. The submit remote command window is gone and the cursor is on the option `Submit host system command`.

Chapter 21. Submitting Multiple Remote Commands

You can submit multiple commands to a remote system. To do this, you must build a file containing the CL commands you want to submit. Each command is placed on a separate line in the file. You can insert blank lines between groups of commands, if desired. Each command in the file can be up to 2000 characters in length.

When you submit the file, the commands are processed sequentially. As each command is processed, it is shown on the display. All messages related to the command are shown on the display after the command. If there are no errors, each command is processed without interruption. If an error occurs, you may receive the following message:

```
Press Enter to continue or press Esc to cancel
```

If you press the Enter key, the next command in the file is submitted. If you press the Esc key, the Submit Remote Command (RMTCMD) command ends without submitting any more commands.

To submit a file containing multiple commands, choose the option `Submit host system commands` from the PC Support/400 Menu. When the window is shown, enter the following on the command line in the window:

```
/I file name [/Q] [//RemoteSystemName]
```

where `filename` is the name of the file that contains multiple commands. The /I and /Q program options can be entered in uppercase or lowercase. The /I program option tells the system to submit the commands listed in the following file. If you enter the /Q program option, you are not prompted for information when an error is encountered. The remote system name (`RemoteSystemName`), which specifies the system to send the command to, is optional. If you do not provide one, the command is sent to your default system.

In the following example, a file named ACTSET was created containing the following commands:

```
crtlib tmpacct
cpyf fromfile(qsales/expend) tofile(tmpacct/expend) mbropt(*replace) crtfile(*yes)
cpyf fromfile(qsales/revenue) tofile(tmpacct/revenue) mbropt(*replace) crtfile(*yes)
```

To submit the file containing the commands, type:

```
/I ActSet /Q //SYSTEM1
```

When the Enter key is pressed, the following messages are returned:

```
crtlib tmpacct
CPC2102 - Library TMPACCT created.

cpyf fromfile(qsales/expend) tofile(tmpacct/expend) mbropt(*replace) crtfile(*yes)

CPF2880 - Physical file EXPEND created in library TMPACCT.
CPF2889 - Member EXPEND added to file EXPEND in TMPACCT.
CPF2957 - 10,000 records copied from file EXPEND in QSALES.

cpyf fromfile(qsales/revenue) tofile(tmpacct/revenue) mbropt(*replace) crtfile(*yes)

CPF2880 - Physical file REVENUE created in library TMPACCT.
CPF2889 - Member REVENUE added to file REVENUE in TMPACCT.
CPF2957 - 3,345 records copied from file REVENUE in QSALES.

Press any key to return.
```

When you press any key, you are returned to the PC Support menu. The submit remote command window is gone and the cursor is on the option `Submit host system command`.

Part 7. Communicating With Other Users

Chapter 22. Sending Messages

You can use PC Support to communicate with other users by sending and receiving messages. You can communicate with users at AS/400 work stations or with users at personal computers attached to the AS/400 system. If you are using the 5250 Work Station Feature, you can use either the PC Support message function or the AS/400 message functions to send and receive messages.

This chapter shows you how to:

- Start the message function
- Send a message

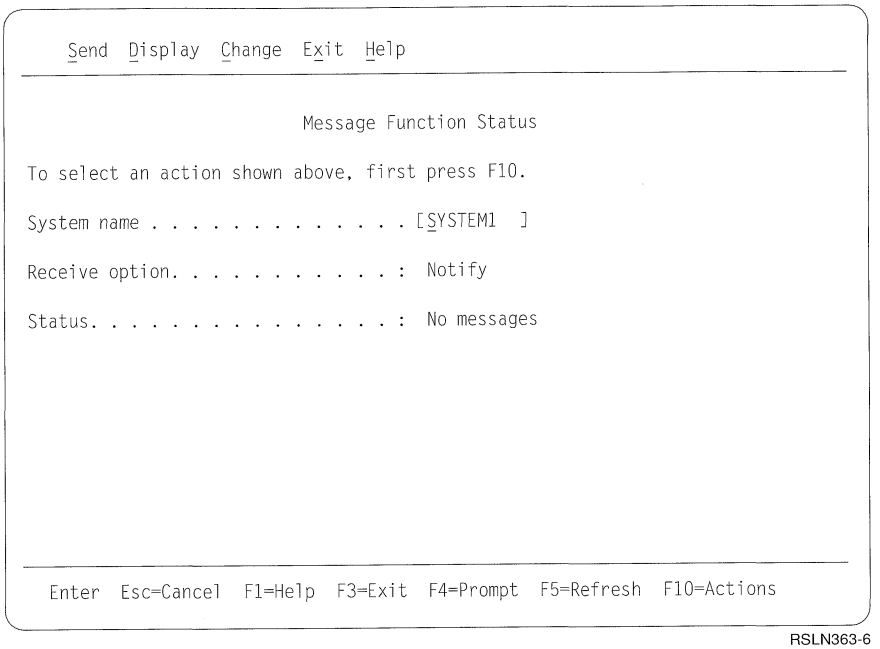
The easiest way to learn about the message function is to try sending and receiving messages. You can practice by starting PC Support on your personal computer and performing the steps in this chapter. This chapter shows pictures of the displays so you can follow the steps to send and receive messages or change the way you receive messages.

Starting the Message Function

Before you can work with messages, you must start PC Support. When you start PC Support, the following display is shown:

```
                        PC Support/400 Menu

Select one of the following

 Learn About PC Support
   View PC Support Introduction

 Perform PC Support Tasks
    Go to PC command prompt
    Use printers on host system
    Use folders on host system
    Transfer data
    Send and receive messages
    Go to Organizer menu
    Submit host system command

Manage Your PC Support Environment
    Configure PC Support
    Administer PC Support
    View PC Support Error Log

_____________________________________________________________________

Enter   Esc=Cancel   F1=Help   F3=Exit
```

To start the message function, select the option `Send and receive messages` on the PC Support/400 Menu. The following display is shown:

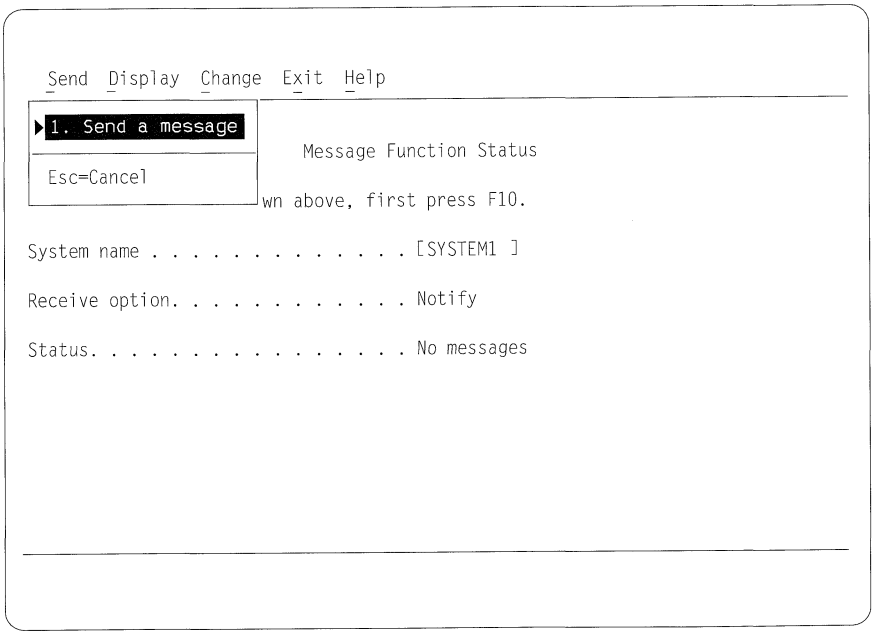


RSLN363-6

From this display, you can send or display messages, change the way you receive messages, exit the message function and return to the PC Support/400 Menu, or view help information about the message function.

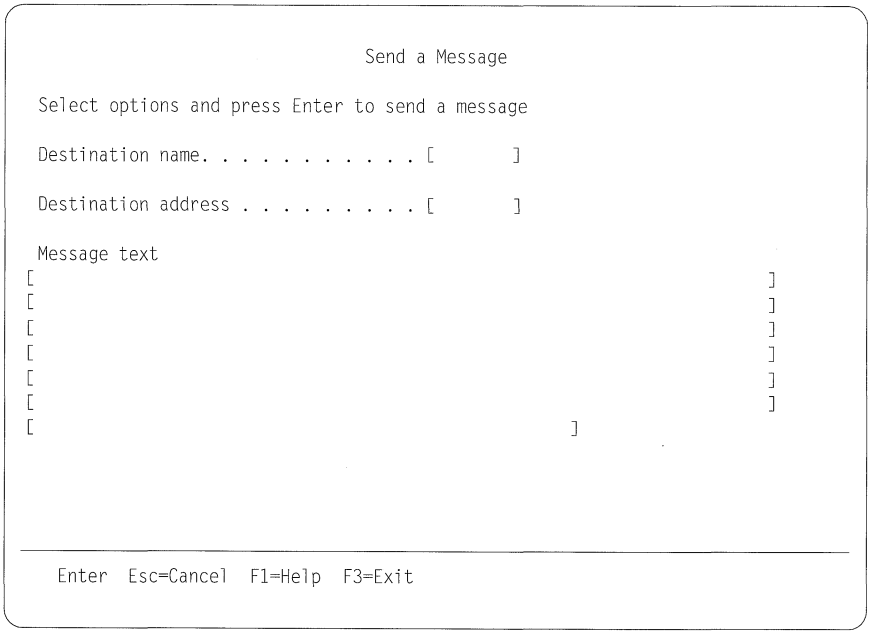
Sending a Message

To send a message, press F10 and select Send from the list of actions at the top of the Message Function Status display. The following display is shown:



RSLN364-5

Press the Enter key to continue. The following display is shown:



RSLN365-3

From this display, you can send a message to another user. You need to provide the destination name, the destination address (if you are on a network and want to send a message to a user on a different system), and the text of the message you want to send.

Destination Name

The destination name tells the system who should receive the message. You can use any of the following:

User profile name Identifies the user profile for the person to receive the message.

Message queue Holds messages until the person receiving them is ready to display them.

User identification Identifies a person to the AS/400 system. The user identification, along with the destination address, make up a two-part user identification (ID). The user is known by this ID within the distribution network. The user ID you enter can be from 1 to 8 characters long. If you type a user ID, you must also provide the destination address in the next prompt.

Distribution list Lists the users enrolled in a system distribution directory for SNA Distribution Services. If you type a distribution list, you must also provide a destination address in the next prompt.

***ALLWS** Sends the message to the message queue of each work station or personal computer attached to the system.

***ALLACT** Sends the message to the message queue of each active user on the system. An active user is one of the following:

- A user who is currently signed on to the system at a work station or at a personal computer running a work station feature session.

- A PC Support user who has started the message function by running the Start Message (STARTMSG) command either from the PC command line or from the STARTPCS.BAT file.

***SYSOPR or blank** Sends the message to the system operator's message queue.

Type the destination name you want to use between the brackets. For practice, put your own user ID here. Press the Tab key to continue.

Destination Address

The destination address is optional unless the destination name you provided in the last prompt was a user ID on a different system or a distribution list. If it was, you must provide the destination address to which the message should go. This address can be used in combination with the destination name to identify an entry in the AS/400 directory. Using directory entries, you can send messages to user groups, users at other systems, and local users.

In order to use a destination name in combination with a destination address, both you and the person receiving the message must be enrolled in the system directory. If you do not know whether you are enrolled, or if you need to be enrolled, see your AS/400 system administrator.

The destination address can be from 1 to 8 characters long. For practice, you can leave this prompt blank. Press the Tab key to continue.

Message Text

This is the text of the message you want to send. You can enter up to 512 characters of message text, unless you specify both a destination name and address. In this case, you can enter up to 254 characters of message text. If you exceed the length, you will send multiple messages. For practice, type the following:

```
Have you completed your report for today?
```

Press the Enter key to send the message. Press the Esc key to return to the Message Function Status display. Since you sent the message to yourself, you should receive the message in a few moments. Notice that *Message Waiting* now appears in the status field.

Ending the Message Function

When you have finished working with messages, you can:

- Stop automatic notification of new messages by entering the following command at the PC prompt:

  ```
  STOPMSG
  ```

- Exit the message function by following these steps.

  1. Press the Esc key. You are returned to the Message Function Status display.
  2. On the Message Function Status display, press F10 and select Exit from the list of actions at the top of the display. The Exit window is shown.
  3. From this display, select the option to exit the message function. This returns you to the PC Support/400 menu.

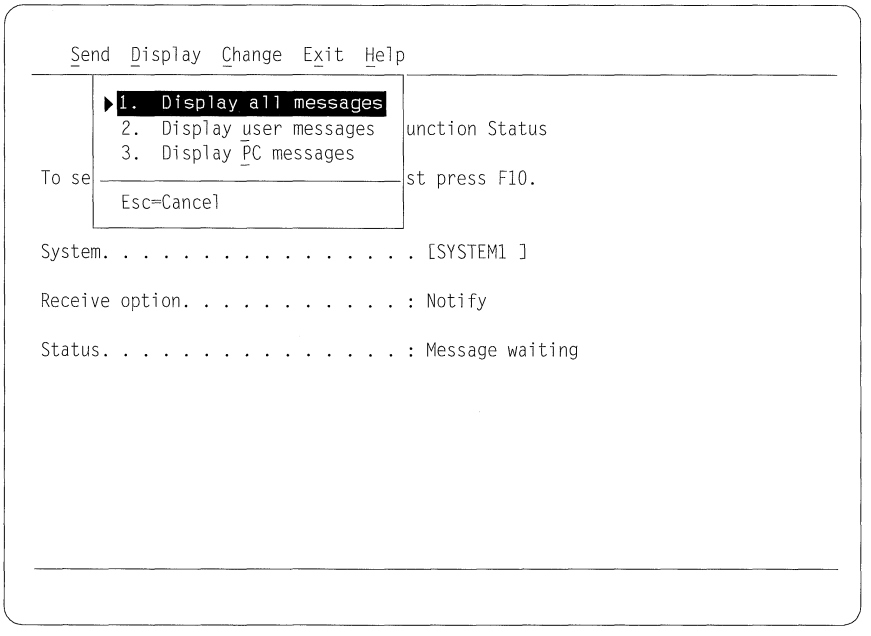
Chapter 23. Receiving and Displaying Messages

Once you have started the message function and have started receiving messages, you can display you messages. This chapter shows you how to:

- Display your messages
- Change the way you receive messages

Displaying Your Messages

To display your messages, press F10 (Action) and select Display from the list of actions at the top of the Message Function Status display. The following display is shown:



RSLN366-5

You can display all messages, user messages, or PC location messages.

Display all messages

Displays all of your messages, both from your own user queue and from the PC location queue. Messages in your user queue are displayed first and then, after you press the Enter key, messages for your PC location.

Display user messages

Displays the messages in your user queue. If you select option 2 (Display user messages), the Display Messages for User display is shown.

Display PC messages

Displays the messages for your PC location. If you select option 3 (Display PC messages), the Display Messages for PC display is shown.

For practice, select option 1 (Display all messages). The following display is shown:

```
                          Display Messages for User

Press Enter to display messages for the PC

From . . :  NAN                01/19/90    12:21:09
When is the year-end report due?

From . . :  KRL                01/19/90    13:58:20
What time do you leave work?  Do you have time to review the accounting
data before you leave today?

From . . :  GMM                01/19/90    16:54:13
Can you attend a meeting in my office tomorrow morning at 8 o'clock?

From . . :  SMG                01/19/90    16:57:02
Have you completed your report for today?

Enter  Esc=Cancel  F1=Help  F3=Exit  Alt+F6=Delete message
Alt+F8=Delete all
```

RSLN387-4

This display shows you the following for each message:

- User ID of the person who sent the message
- Network ID, if you are on a network
- Date the message was received
- Time the message was received
- Message text

When you have finished reading the messages, you can delete them. To delete one message at a time, position the cursor on any line of text of the message, press and hold the Alt key, and then press F6. To delete all of the messages at once, press and hold the Alt key and then press F8. For practice, position the cursor on the message you sent to yourself, press and hold the Alt key, and then press F6. The message should be deleted.

When you are finished with this display, you can press the Enter key to display messages sent to your PC location. The following display is shown:

```
                          Display Messages for PC

Press Esc after viewing or deleting messages

From . . :  QSYSOPR           01/19/90   13:07:01
System 01 will be down on 01/20/90 from 04:00:00 until 06:00:00.

From . . :  QSYSOPR           01/19/90    15:12:22
Please conserve energy... remember to turn off your equipment at the end
of the day

Esc=Cancel  F1=Help  F3=Exit  Alt+F6=Delete message  Alt+F8=Delete all
```

RSLN386-3

After you have read all of your messages, you can delete them the same way you did on the Display Messages for User display. Deleting the messages after you have read them saves storage on the AS/400 system.

Press Esc to return to the Message Function Status display.

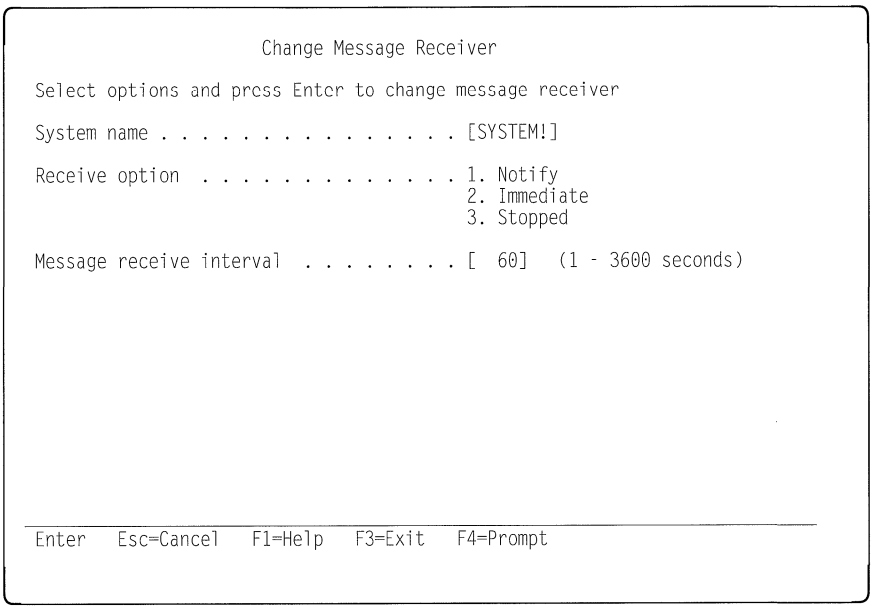
Changing the Way You Receive Your Messages

You may not like the way your messages are received. If this is true, you can change the options that determine how and when your messages are received.

You can change the way you receive messages. If the message function was selected when PC Support was installed, Change is shown in the list of actions at the top of the Message Function display. If Change does not appear on your display, exit the PC Support/400 Menu and type the following command:

```
[d:][path]STARTMSG
```

To change the way you receive messages, return to the PC Support/400 Menu and select the option, Send and receive messages. The Message Function Status display is shown. Press F10 and select Change from the list of actions at the top of the Message Function Status display. The Change Message Receiver display is shown, as follows:



From this display, you can change:

- The system where you receive messages from
- The method of receiving messages (notify, immediate, or stopped)
- The frequency that you want the personal computer to check for messages (message receive interval)

System Name

This is the name of the system you want to receive messages from. A system name is supplied for you. If this is not the correct system name, type over the supplied name with the appropriate system name.

You can press F4 to list the system names you can use. To select a name from the list, position the cursor next to the name you want and press the Enter key.

Receive Option

This prompt allows you to tell the personal computer how you want to receive your messages. You can choose any one of these ways:

- Notify, which sounds an alarm when a message is received. The message function regularly checks the AS/400 system for messages. If messages were received since the last check, the alarm sounds. You can specify how often the message function is to check for messages. For information on how to do this, see "Message Receive Interval" on page 199.
- Immediate, which sounds an alarm and automatically displays a message when it is received. You can specify how often the message function is to check for messages. For information on how to do this, see "Message Receive Interval" on page 199.
- Stopped, which does not notify you in any way when a message is received.

If you choose Notify or Stopped, you must manually display your messages. They are not automatically displayed. For information on how to display your messages, see Chapter 23, "Receiving and Displaying Messages."

Message Receive Interval

This is the number of seconds the message function should wait before checking the AS/400 system for new messages. You can type any value from 1 to 3600 seconds. A value of 60 seconds is supplied for you. If you want to change the interval from 60 seconds to another length of time, type the value you want to use over the supplied value.

When you have completed all of the prompts on this display, press the Enter key. The changes you made are in effect until you start the message function or your personal computer again. When you start again, PC Support uses the values in your configuration file.

Part 8. Printing with PC Support

Chapter 24. Printing on an AS/400 Printer with PC Support

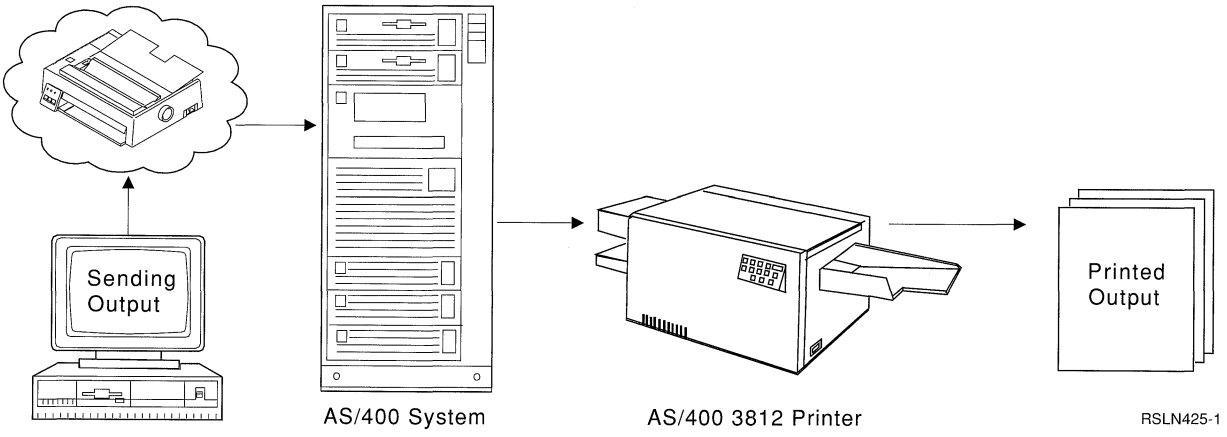
The information in this chapter helps you:

- Understand the concepts of using a virtual printer
- Start the virtual printer function

When you have familiarized yourself with the information in this chapter and started the virtual printer function, go to Chapter 25, "Assigning Virtual Printers" on page 207 to learn how to assign a virtual printer.

Understanding Virtual Printers

PC Support allows you to take advantage of the printers attached to your AS/400 system. The term **virtual printer** means that although the printer is attached to the AS/400 system, you use it as though it were a PC printer. You control a virtual printer from your personal computer by using many of the same commands you use for a PC printer.



When you use PC Support, you can do one of the following:

- Assign and use up to three virtual printers.
- Use up to five work station function printers.
- Use up to five PC printers.
- Use a combination of PC, virtual, and work station function printers.
- Use a combination of PC and virtual printers.

Unlike PC printers, AS/400 printers are typically used by more than one program or person. This requires the AS/400 system to manage the printing on these printers more efficiently.

Starting the Virtual Printer Function

Before you can work with virtual printers, you must start PC Support. When you start PC Support, the following display is shown:

```
                          PC Support/400 Menu

 Select one of the following

  Learn About PC Support
    View PC Support Introduction

  Perform PC Support Tasks
     Go to PC command prompt
     Use printers on host system
     Use folders on host system
     Transfer data
     Send and receive messages
     Go to Organizer menu
     Submit host system command

 Manage Your PC Support Environment
     Configure PC Support
     Administer PC Support
     View PC Support Error Log

Enter   Esc=Cancel   F1=Help   F3=Exit
```

If the virtual printer function was not selected during installation, you must enter the Virtual Printer (VPRT) command after the PC prompt to start the virtual printer function. To do this enter:

`[d:][path]VPRT`

where **d:** is the drive containing the virtual printer program. Then select the option `Use printers on host system` on the PC Support/400 Menu. The following display is shown:

```
  Assign  Exit  Help
 ------------------------------------------------------------------------
                          Current Virtual Printers
                                                            More:   ↓
 To select an action shown above, first press F10.

                                              LPT1      LPT2      LPT3

System name . . . . . . . . . . . . . . . . . :
Printer device. . . . . . . . . . . . . . . . :
  Printer type. . . . . . . . . . . . . . . . :
Printer file library. . . . . . . . . . . . . :
Printer file. . . . . . . . . . . . . . . . . :
Printer data type . . . . . . . . . . . . . . :
Printout format
  Characters per inch . . . . . . . . . . . . :
  Characters per line . . . . . . . . . . . . :
  Lines per inch. . . . . . . . . . . . . . . :
  Page length in lines. . . . . . . . . . . . :
  Lines per page. . . . . . . . . . . . . . . :
Printer setup
  Number of copies. . . . . . . . . . . . . . :
  Time-out in seconds . . . . . . . . . . . . :

 ------------------------------------------------------------------------
  Enter  Esc=Cancel  F1=Help  F3=Exit  F10=Actions
```

RSLN359-5

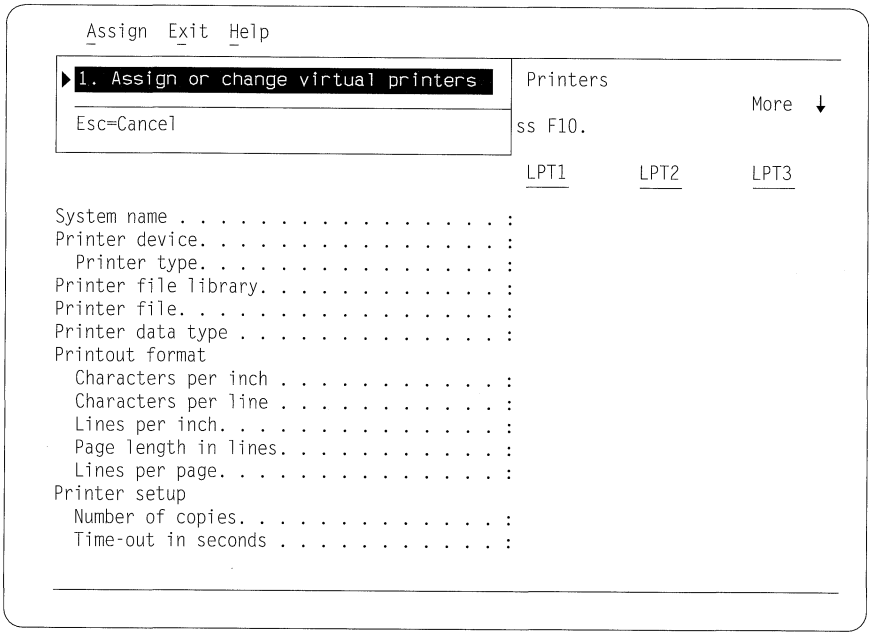
If you have already used virtual printers, the Current Virtual Printers display shows the printers and printer values already assigned, and Release is shown as an option in the action list.

From this display, you can assign a virtual printer, or exit the virtual printer function and return to the PC Support/400 menu, or view help information about the display.

Chapter 25. Assigning Virtual Printers

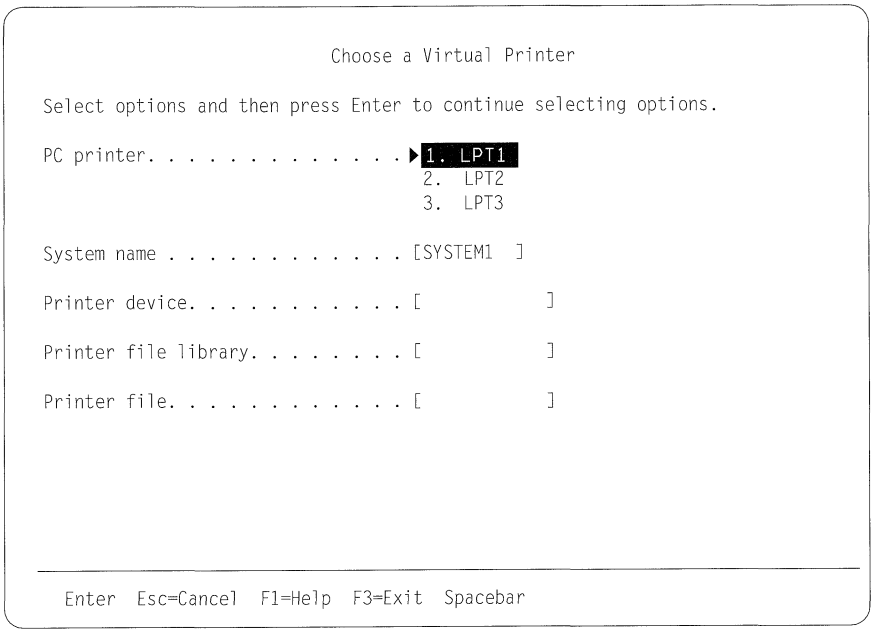
Before you can use a printer as a virtual printer, you need to **assign** it. When you assign a virtual printer, you make decisions about how the printing should be done on that printer. You may already have one or more PC printers attached to your personal computer. However, you do not need to have a PC printer in order to assign and use a virtual printer.

To assign a virtual printer, press F10 and select Assign from the list of actions at the top of the Current Virtual Printers display. The following window is shown:



RSLN360-3

Press the Enter key. The Choose a Virtual Printer display is shown:



RSLN361-6

Filling In the Virtual Printer Prompts

PC Printer

The personal computer's name for the virtual printer you want to assign. The personal computer refers to the PC printers and virtual printers by the names LPT1, LPT2, and LPT3. If a virtual printer is already assigned to a name, the assigned values are displayed.

System Name

This is the name of the AS/400 system to which the printer you want to use is attached. If you have only one system, the name of that system is automatically supplied. If you have more than one system, your default system is supplied. If you do not know what system you want to use, you can press F4 to list the system names you can use. You can then select a system name from the list provided.

When you filled in a system name, press the TAB key to continue.

Printer Device

This is the name of the AS/400 printer you want to use as a virtual printer. If you want to use a printer file, you can leave this prompt blank.

If you do not know the name, or what devices are available, you can press F4 for a list of printers. You can then select a printer from the list.

Printer File Library

If you entered a printer device, you do not need to enter a printer file library. However, if you plan to use a printer file, the system needs to know where to find it. You can tell the system the name of the library that contains the printer file, if you have this information. If you do not know the library name, you can leave this prompt blank. When you enter the name of the printer file in the next prompt, the system searches the libraries defined in the AS/400 library list (*LIBL) for that file.

You can press F4 to display a list of all the libraries defined in the user portion (*USRLIBL) of the AS/400 job library list. To limit the number of libraries listed, you can type the first few characters of a library name followed by an asterisk (*) before pressing F4. This lists all of the libraries that begin with the characters you entered.

For example, if you know the library name has something to do with reports, type REP* for the *Printer file library* prompt and press F4. This lists all of the library names beginning with REP. You can then select the name you want from the list.

Printer File

If you did not specify a printer device, you must enter a printer file name. If you enter a printer file name but did not enter a printer file library, the system searches through your library list to find the printer file.

You can press F4 to display a list of the printer files you can use. To limit the number of files listed, type the first few characters of the printer file name followed by an asterisk (*). For example, if you know the printer file name begins with PRT, type PRT* for the *Printer file* prompt and press F4. This lists all of the file names beginning with PRT.

If you entered a printer file library, the list shows the names of the printer files in that library. If you did not enter a printer file library, F4 lists all of the printer files in all of the libraries defined in the user portion of the AS/400 job library list.

When you press the Enter key, the Assign or Change a Virtual Printer display is shown. It shows the values you have selected for the `PC printer`, `System name`, and `Printer device` or `Printer file library` and `Printer file` prompts. Continue entering values for the following prompts.

Printer Data Type

AS/400 printers are not designed to print data from the personal computer. This means that the PC Support/400 virtual printer programs sometimes need to convert the data from your personal computer before it can be printed on the AS/400 printer. The *Printer data type* prompt tells the virtual printer how to handle the data from your personal computer. If you do not change the value for this prompt, the virtual printer automatically converts the ASCII data to SNA character string (SCS).

The values you can select for this prompt are:

1. SCS data

   Select this data type if your personal computer program is supplying data that is already SCS. You may select this option if you are using programs that supply final form text (FFT) such as DisplayWrite* 5/2.

   If you select this option and the virtual printer you are using cannot print the data in the manner you requested it (for example, underlined), the virtual printer does not change the data to a printable form. You receive an error message when you try to print the data.

   If you select this option and your printed document does not look the way you expect it to, you may want to return to this prompt and select option 3 (Final form text).

2. Convert ASCII to SCS

Select this data type if your PC program is supplying data that is already SCS and does not have to be translated from ASCII to SCS.

3. Final form text

   Select this data type if you are using any program supplying final form text (FFT), such as DisplayWrite 5/2.

   If you select this option and the virtual printer you are using cannot print the data in the manner you request it (for example, underlined), the virtual printer changes the data to a printable form.

   When you select this option, your text data can be printed on any AS/400 printer. However, because printers vary in their capabilities, your printed document may not look the way you expect it to look. If this happens, you may want to return to this prompt and select option 1 (SCS data).

4. ASCII data

   Select this data type if your personal computer program is supplying ASCII data and you want the data to print on an ASCII printer that is connected to the host system.

5. AFPDS

   Select this data type if you are using personal computer programs that supply advanced function printing data stream (AFPDS) data and you want to print the data on a printer connected to your AS/400 system using AFP (advanced function printing) support.

Characters Per Inch

Select the number of characters that you want to print per horizontal inch.

Characters Per Line

This prompt allows you to specify the maximum number of characters per line you want printed. You can specify any number from 1 through 378, depending on the printer device you selected.

To calculate the maximum number of characters per line you can use, multiply the width of your paper by the number of characters per inch you selected in the previous prompt. For example, if the paper you are printing on is 8.5 inches wide and you selected 10 characters per inch, the maximum number of characters per line you can print is 85.

A value is automatically displayed for you. If you want a different value, type the value you want in that column.

Lines Per Inch

This prompt allows you to tell the virtual printer how many lines to print per vertical inch. The value you use depends on the printer you are using.

Page Length

Type the length of your printed page in lines. The number you enter here depends on the length of the paper you are using. You can enter any number from 1 through 255.

To calculate the page length in lines, multiply the actual page length, in inches, by the number of lines per inch. For example, if your page is 11 inches long, and you chose 6 lines per inch, your page length is 66 lines.

Lines Per Page

Enter the number of lines to be printed on each page. The number of lines you enter depends on the length of the paper you are using. You can enter any number from 1 through the number you entered in the *Page length* prompt. If you enter a number that is less than the page length, blank lines appear at the bottom of each printed page. If you do not change the number of lines per page, the number automatically displayed for this prompt is used.

Number of Copies

This prompt allows you to decide how many copies of each printed job you want. If you selected option 1 (SCS data), 2 (ASCII to SCS), 4(ASCII data), or 5 (AFPDS) as your printer data type, you can enter any number from 1 through 255. If you selected option 3 (Final-form text) as your printer data type, you can enter any number from 1 through 99.

Command Override

This value affects the way the virtual printer handles some personal computer printer commands if you selected option 2 (ASCII to SCS) as your printer data type.

1. Yes.

   The virtual printer uses personal computer printer commands found in the data that change characters per inch (cpi), characters per line (cpl), lines per inch (lpi), lines per page (lpp), and page length (pl), rather than the values you choose when you assign the virtual printer. Superscript and subscript commands are also used. These commands are in effect for the current output file only.

2. No.

   This is the default value. The virtual printer uses the values you choose for cpi, cpl, lpi, lpp, and pl when you assign the virtual printer. If you select No, the program ignores the personal computer printer commands that change those values in the data. Superscript and subscript commands found in the data are ignored.

PC Printer Character Set

The printer character set determines how your virtual printer handles ASCII codes. Depending on the character set that you select, the printer expects a command or a printable character.

1. Character set 1.

   The virtual printer handles ASCII codes hexadecimal 80 through 9F as printer commands.

2. Character set 2.

   The virtual printer handles ASCII codes hexadecimal 80 through 9F as printable characters. This is the default.

For example, in character set 1, the printer handles a hexadecimal 9B as the beginning of a printer command, and the printer expects the next character to be part of

a command. But in character set 2, the printer translates a hexadecimal 9B into a printable character.

Defer Printing until Output File Closed

This value lets you choose if you want your data to begin printing on the host system printer immediately, or if you want to wait until all of the data has arrived at the host system.

Option 1 (Yes) is the default for this parameter.

1. Yes.

   The host system printer waits until the output file is closed before it starts printing the data.

2. No.

   The host system printer starts printing your data as soon as it receives the first character; it does not wait for the output file to close.

   Choosing option 2 (No) can save you time if you are printing a large amount of data. However, other users are not able to print their data until your output file is closed and completely printed.

Untranslatable Character

The EBCDIC hexadecimal code for the character the virtual printer prints if it finds a character it cannot translate from ASCII to EBCDIC. A default value of hexadecimal 40 (blank) is supplied.

Because many personal computers supply ASCII data and many host system printers accept only EBCDIC data, the virtual printer must translate each character of data sent by the personal computer from ASCII to EBCDIC. When an untranslatable character is found, the virtual printer substitutes a printable EBCDIC character.

Completing the Virtual Printer Assignment

When you have completed all of the virtual printer prompts, press the Enter key. Your virtual printer is now assigned and ready to be used. Press the Esc key to return to the Current Virtual Printers display. This display now shows the values you selected for your virtual printer.

Press F10 (Action) and then select Exit from the top of the Current Virtual Printers display. Your virtual printer remains assigned until you select the option to release it.

Printing on Your Virtual Printer

You can print a document on the virtual printer much the same way you would print a document on a PC printer.

If you want to try printing on your virtual printer, type the following after the PC command prompt:

```
DIR > LPT2
```

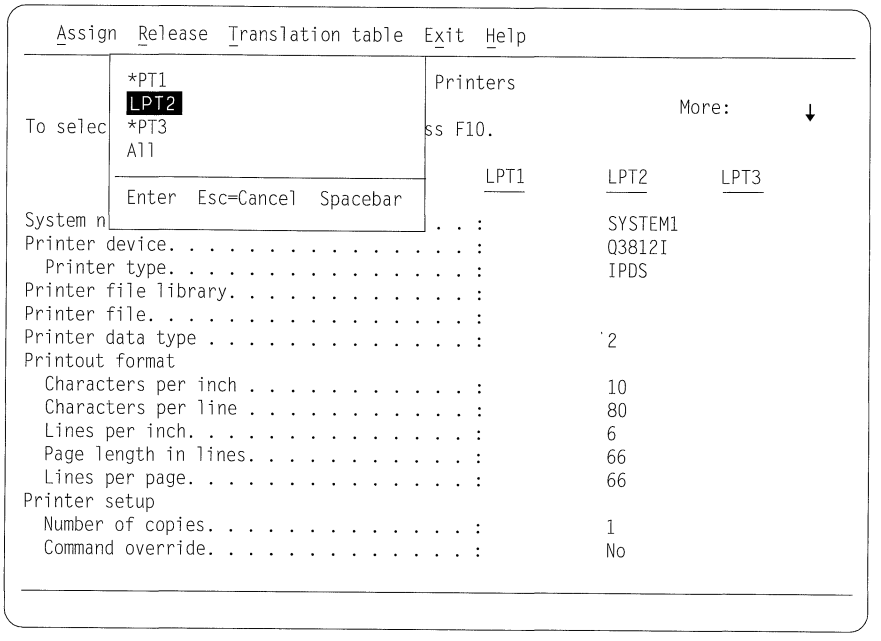
When you press the Enter key, the directory of your default drive is sent to your virtual printer for printing.

Chapter 26. Releasing a Virtual Printer

When you are finished using a virtual printer, you need to release it. To do this, select the option `Use printers on host system` on the PC Support/400 Menu.

The virtual printer or printers you assigned are displayed. The values you chose for each printer are shown in the column below each printer name.

To release one or all of your virtual printers, press F10 and select `Release` from the menu bar. The following display is shown:



RSLN403-2

From this list, you can select the virtual printers you want to release, or you can select `All` to release all of your virtual printers. Although all of the possible virtual printers are listed, there may be some you cannot select. Those you cannot select are identified by an asterisk (*). The asterisk tells you that you cannot release the virtual printer because it was never assigned.

For practice, select the name of the printer you assigned in the previous example. Use the Up and Down Arrow keys to highlight it, and then press the spacebar.

When you have selected the printers you want to release, press the Enter key. The list disappears. The values that were displayed for your printer are now gone. The virtual printer is now released, and you can continue with other work.

If you are finished working with virtual printers at this time, press the Esc key and then select Exit from the list of actions to return to the AS/400 PC Support menu.

Part 9. Using Data Queues with PC Support

Chapter 27. Understanding Data Queue Concepts

This chapter includes basic information about data queues by:

- Defining data queues
- Providing examples of ways to use data queues

When you are ready to start working with data queues, turn to Chapter 28, "Using Data Queues with PC Support" on page 221 for instructions. You may also want to read the information in "Using Parameters with Data Queue Commands" on page 227 for tips on working with data queues. If you are interested in including calls to data queues in your PC applications, see the *PC Support/400 API Reference*.

Defining Data Queues

Everything on the AS/400 System, from programs to databases to documents, are called objects. The objects are grouped into libraries. You or a program can directly refer to any object in any library.

Data queues are a type of object on the AS/400 System. They function like resting places for different groups of data that are referred to as *messages*. Multiple applications can send messages to the data queues, and the messages will wait there until other applications retrieve them.

There are three types of data queues. The first type contains messages that are grouped in a serial manner so that the last message sent to the data queue is the first message retrieved. This is known as *last in-first out*, or LIFO.

The second type contains messages that are grouped in a serial manner so that the first message sent to the data queue is the first message retrieved. This is known as *first in-first out*, or FIFO.

The third type contains messages that are grouped in a keyed manner. These data queues are referred to as *keyed data queues*. Each message sent to the data queue is given a unique address called a *key*. This allows you or your applications to be selective about the messages retrieved. When you request messages from the data queue, you request them by their keys. If multiple messages with the same key reside on a data queue, then the messages are returned in a FIFO manner.

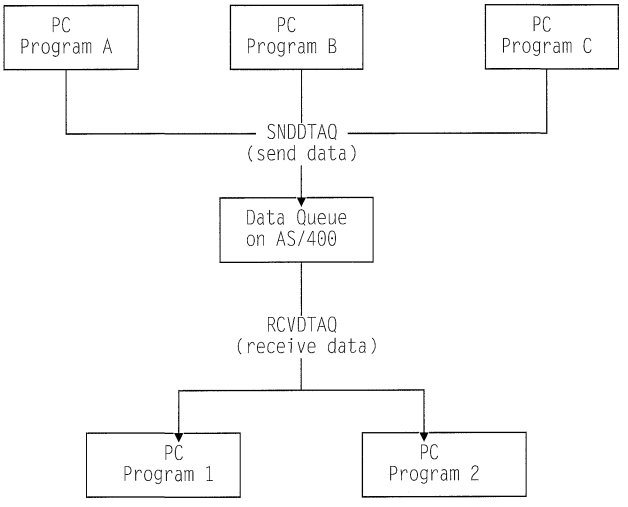
You can work with data queues from your AS/400 system or from your personal computer using PC Support. When you work with data queues from your AS/400 system, you use control language (CL) commands. (Refer to the *CL Reference* for more information about CL commands.) When you work with data queues from your personal computer, you use several batch programs provided by PC Support. You can either enter the commands for these batch programs from a command line, or include data queue calls in your PC command files.

Understanding the Uses for Data Queues

Data residing on a data queue has no prescribed format or content. The format it follows is completely up to you. You can use a format like simple narrative text information, or you can use a format that is more complex. Because of this open nature, the format and content of a data queue can enable an unlimited range of applications.

The format you use depends on what you want the send and receive applications to do with the data. If a receiving application looks at various parts of the data and makes decisions based on the values these parts contain, then the sending application must make sure these parts have legal values when it is sending data to the data queue. In other words, your sending applications and receiving applications must be "talking" about the same thing (in this case, parts of the data).

There are many ways to use data queues. The following diagram shows one way to use data queues. It shows three application programs (Programs A, B, and C) sending data to a data queue and two different application programs (Programs 1 and 2) receiving data from the same queue.



Data queues can be used for many things. For example, you could have several personal computer systems set up to process compile requests. An AS/400 application could distribute the requests through a data queue to the first available personal computer. The personal computer would process the compile requests and then send the results back to the application through a different data queue.

Or, a personal computer could send a command for processing to an application on a remote AS/400 system (through the submit remote command function of PC Support). The application could process the command and send the results to a data queue. Another PC application could, in turn, use selected portions of the data in the queue to complete its own set of tasks.

If you are interested in using data queue API calls in your applications, refer to the *PC Support/400 API Reference*. If you are interested in using the data queue batch commands provided by PC Support, refer to Chapter 28, "Using Data Queues with PC Support" on page 221.

Chapter 28. Using Data Queues with PC Support

This chapter explains how to:

- Create a data queue using the CRTDTAQ command
- Delete a data queue using the DLTDTAQ command
- Query a data queue's attributes using the QRYDTAQ command
- Send messages to a data queue using the SNDDTAQ command
- Receive messages from a data queue using the RCVDTAQ command
- Clear all messages from a data queue using the CLRDTAQ command
- Stop any data queue conversations taking place with a remote system using the STPDTAQ command

You can enter any of these commands from a PC command line or place them in an OS/2 command file. You can also use the application program interface (API) to call them. If you are interested in using the API, refer to the *PC Support/400 API Reference*.

When working with data queue commands, you can receive two types of error messages: AS/400 error messages or PC error messages. AS/400 error messages are usually identified by a series of numbers and letters. PC error messages are usually defined by a four-digit number preceding the message. You can look these up in the PC Support error log using the PCSLOG or PCSHELP command. See Chapter 5, "Getting Help When You Need It" on page 33 for more information.

Creating an AS/400 Data Queue

If you want to create an AS/400 data queue, enter the following command at the PC command line:

```
CRTDTAQ name [/L=library-name] /M=maximum-length [/O=Order] [/D]
[/F] [/A=authority] [/C=characters-in-key] [//system-name]
```

where:

CRTDTAQ
Is the name of the command used to create the data queue.

name Is the name of the AS/400 data queue you want to create.

/L=library-name
Specifies the name of the AS/400 library where the data queue is created. This parameter is optional. If you do not specify a library name, the current library associated with your user profile is used.

/M=maximum-length
Specifies the maximum length of a message for this data queue. The valid range is 1 – 31744 (31K). This is a required parameter.

/O=order Specifies the order or sequence of the data stored in the data queue. Valid values are FIFO, LIFO, and KEYED. The default value is FIFO.

/D Specifies a description may be entered. If you specify this parameter, you are prompted to enter a description of 50 characters or less. The default is no description.

/F Specifies if you want enqueued messages forced to auxiliary storage. The default is not to have messages forced to auxiliary storage.

/A=authority
Specifies the authority you are giving to users who do not have specific authority to the data queue. Valid values are:

ALL
EXCLUDE
CHANGE
USE
LIBCRTAUT

The default is LIBCRTAUT, which is the same authority that other users have to the library the queue is created in.

/C=characters-in-key
Specifies the length of the key. This parameter is required if the sequence specified is KEYED. If the sequence specified is not KEYED, this parameter causes an error. Valid values are 1 – 256.

//system-name
Specifies the name of the AS/400 system to contain the data queue. This parameter is optional. If you do not specify a system name, your default system is used.

After you enter the CRTDTAQ command, you may be asked to enter a description for the data queue. If you specified the /D parameter, you are prompted.

Type the description for the data queue and then press the Enter key. The description you enter must be 50 characters or less.

Deleting an AS/400 Data Queue

If you want to delete an AS/400 data queue and all of its messages, enter the following command at the PC command line:

```
DLTDTAQ name [/L=library-name] [//system-name]
```

where:

DLTDTAQ
Is the name of the command used to delete a data queue.

name Is the name of the AS/400 data queue you want to delete.

/L=library-name
Specifies the name of the AS/400 library containing the data queue. This parameter is optional. If you do not specify a library name, the default library list associated with your user profile is used.

//system-name
Specifies the name of the system containing the AS/400 data queue. This parameter is optional. If you do not specify a system name, your default system is used.

After you enter the DLTDTAQ command, the messages are cleared from the data queue and the data queue is deleted from the AS/400 system.

Querying an AS/400 Data Queue

If you want to query an AS/400 data queue, enter the following command at the PC command line:

```
QRYDTAQ name [/L=library-name] [//system-name]
```

where:

QRYDTAQ
Is the name of the command used to query a data queue.

name Is the name of the AS/400 data queue you want to query.

/L=library-name
Specifies the name of the AS/400 library containing the data queue. This parameter is optional. If you do not specify a library name, the default library list associated with your user profile is used.

//system-name
Specifies the name of the system containing the AS/400 data queue. This parameter is optional. If you do not specify a system name, your default system is used.

After you enter the QRYDTAQ command, the attributes specified when the data queue was created are returned. The attributes are displayed in the following order: maximum length, order, force to auxiliary storage, sender ID information, description, and optionally a key length if the data queue is keyed.

Sending Messages to an AS/400 Data Queue

If you want to send messages to an AS/400 data queue, follow these instructions:

1. Enter the following command at the PC command line:

   ```
   SNDDTAQ name [/L=library-name] [/N] [/K=key-value] [//system-name]
   ```

   where:

   SNDDTAQ
   Is the name of the command used to send data to a data queue.

   name Is the name of the AS/400 data queue you want to send messages to.

   /L=library-name
   Specifies the name of the AS/400 library containing the data queue. This parameter is optional. If you do not specify a library name, the default library list associated with your user profile is used.

   /N Specifies that you do not want the messages or the key, if specified, translated. The /N parameter is optional.

   If you are using the SNDDTAQ program and the message you are sending will be used by an application on an AS/400 system, do not specify the /N parameter. If you do specify the parameter, the message is not translated from ASCII characters to EBCDIC characters before being sent to the AS/400 system. Because applications that run on the AS/400 system only understand EBCDIC characters, your message will not be understood by these programs.

However, if you know that only another PC application will be retrieving this message, using the /N parameter may be beneficial.

/K=key-value
Specifies the key you want associated with the data. This parameter is optional. Only use this parameter if you are sending data to a keyed queue. If you did not specify the /N parameter, the key is also translated from ASCII characters to EBCDIC characters.

//system-name
Specifies the name of the system containing the AS/400 data queue. This parameter is optional. If you do not specify a system name, your default system is used.

After you enter the SNDDTAQ command, you are asked to enter the message you want sent.

2. Type the complete message, and then press the Enter key.

   Each time you press the Enter key, you are indicating that the information just typed is a complete message. The message is then sent to the specified data queue on the AS/400 system.

3. Continue entering messages until you have sent all the information you want to the AS/400 data queue.

4. Press and hold the Control key, and then press the Z key. Release both keys, and then press the Enter key.

   This indicates that you are finished sending messages to the AS/400 data queue.

So, if you want to send a message to a data queue named MYQUEUE in a library named MYLIB on a system named SYSTEM1, you would:

1. Enter the following:

   ```
   SNDDTAQ MYQUEUE /L=MYLIB //SYSTEM1
   ```

2. Enter the message or messages you want sent.
3. Press and hold the Control key, and then press the Z key. Release both keys, and then press the Enter key.

Receiving Messages from an AS/400 Data Queue

If you want to receive messages from an AS/400 data queue, enter the following command at the PC command line:

```
RCVDTAQ name [/L=library-name] [/W=wait-time][/N][/K=key-value]
[/S=search-order] [//system-name]
```

where:

RCVDTAQ
Is the name of the command used to receive messages from a data queue.

name Is the name of the AS/400 data queue you want to receive messages from.

/L=library-name

Specifies the name of the AS/400 library containing the data queue. This parameter is optional. If you do not specify a library name, the default library list associated with your user profile is used.

/W=wait-time

Is the amount of time you want the system to wait for a message. This parameter is optional. If you do not specify this parameter, all messages in the data queue are returned. If you do specify a value, a single message is returned.

You can specify a negative value, a positive value, or a value of zero.

- If you specify a negative value, no time limit is imposed. If the data queue does not contain any messages, the command waits until a message is placed on the queue before returning.
- If you specify a positive value, a limit equal to that value is imposed. If the data queue does not contain any messages, the command waits until a message is placed on the queue or the time specified has passed before returning.
- If you specify a value of zero, the system does not wait. An immediately available message is returned. If the data queue does not contain any messages, the command does not wait for any to be placed on the queue.
- If you do not specify this parameter, all messages that are immediately available are returned.

/N Specifies that you do not want the messages translated. The /N parameter is optional.

If you are using the RCVDTAQ program, and the message you are receiving is in EBCDIC format, do not specify /N. If you do specify the parameter, the message is not translated from EBCDIC characters to ASCII characters before being sent to your personal computer.

/K=key-value

Specifies the key associated with the data. This parameter is optional unless you specified the /S parameter. Then you must include this parameter. If you did not specify the /N parameter, the key is also translated.

/S=search-order

Specifies the search criteria you want imposed on the data. This parameter is optional unless you specified the /K parameter. Then you must include this parameter.

Use one of the following relational operators:

- EQ, for equal to
- GT, for greater than
- LT, for less than
- GE, for greater than or equal to
- LE, for less than or equal to
- NE, for not equal to

//system-name

Specifies the name of the system containing the AS/400 data queue. This parameter is optional. If you do not specify a system name, your default system is used.

After you enter the RCVDTAQ command, the messages are returned. The method in which they are returned depends on your use of the /W=wait-time parameter. If you used the parameter and a message is available, the message is returned immediately. If you used the parameter and a message is not available, the command waits to return the call until a message is placed on the queue or until the time specified has passed.

You can also specify the optional /Z parameter, as described in "Using Correct Command Syntax" on page 4, to suppress the IBM logo from being displayed when you enter the command. By suppressing the logo, you have the opportunity to direct the output from the RCVDTAQ command to a file. Only the messages retrieved from the data queue can be placed in the file. Then, other applications can use the data directly from the file.

So, if you have a data queue named MYQUEUE in a library named MYLIB, and you want to receive all the messages in the data queue into a file called PCCMD.CMD, you would enter the following:

```
RCVDTAQ MYQUEUE /L=MYLIB /Z >PCCMD.CMD
```

The messages you receive into the PCCMD.CMD file could be a set of PC commands. Then, other applications could use the file and process the PC commands.

Clearing Messages from an AS/400 Data Queue

If you want to clear all the messages in a data queue, enter the following command at the PC command line:

```
CLRDTAQ name [/L=library-name] [//system-name]
```

where:

CLRDTAQ
: Is the name of the command used to clear all messages from the data queue.

name
: Is the name of the AS/400 data queue you want to clear the messages from.

/L=library-name
: Specifies the name of the AS/400 library containing the data queue. This parameter is optional. If you do not specify a library name, the default library list associated with your user profile is used.

//system-name
: Specifies the name of the system containing the AS/400 data queue. This parameter is optional. If you do not specify a system name, your default system is used.

After you enter the CLRDTAQ command, the messages are cleared from the data queue. This does not delete the data queue from the AS/400 system.

Stopping Conversations with an AS/400 Data Queue

Data queue conversations are started by using any of the data queue commands. If you want to stop the data queue conversations to the AS/400 system, you can use the STPDTAQ command. This command also frees PC resources used by the data queue function.

To stop active conversations resulting from using any of the data queue commands, enter the following command at the PC command line:

```
STPDTAQ //System-name
```

where:

STPDTAQ
Is the name of the command used to stop conversations for the PC Support/400 data queue function with the AS/400 system.

//System-name
Specifies the name of the system with which you want to stop any conversations. If you do not specify this parameter, the conversations with the default system are stopped.

After you enter the STPDTAQ command, the conversations with the specified system are ended.

Using Parameters with Data Queue Commands

This section contains tips on using the various parameters with the data queue commands.

Using the /N Parameter with Data Queue Commands

When the /N option is used on the SNDDTAQ batch command, the length of each message is the maximum message size that was specified when the data queue was created. This length should be less than or equal to 31K. If you set the maximum message size of a data queue to a length greater than 31K, the length of the message sent will still be only 31K.

For instance, if you wanted to send a very large file (100K), named BIGFILE.DAT, to a data queue called BIGQ, which is 31K in size and is contained in the library MYLIB, you would use the following command:

```
SNDDTAQ BIGQ /L=MYLIB /N < BIGFILE.DAT
```

The file would be stored as 3 messages in the data queue.

Note: The data queue should have its messages in first-in, first-out (FIFO) order to get the file back in its correct order.

When using the /N option on the RCVDTAQ batch commands, the output is expected to go into a file. Therefore, the end-of-file character is written at the end of the RCVDTAQ command. If the output is not sent to a file, the end-of-file character is still written but goes to the display. This appears as a block on the display.

To receive BIGFILE.DAT, described in the previous example, enter the following command:

```
RCVDTAG BIGQ /L=MYLIB /N /Z > NEWBIG.DAT
```

This creates a file called NEWBIG.DAT on your personal computer that is identical to BIGFILE.DAT.

Using the /W Parameter with Data Queues

The RCVDTAQ batch command either receives one message from the data queue or empties the data queue of messages. If no wait time is specified with the /W=wait_time option, the entire queue is emptied of messages. If a wait time is used, either one message is received immediately if one is available, or the command waits the specified period of time and then returns.

Using the /K Parameter and the /S Parameter

When issuing the RCVDTAQ and SNDDTAQ commands, both keyed and nonkeyed calls can be issued. Using the /K=key option changes the API that is called. When the /K=key option is used with the RCVDTAQ command, the /S=search_order option must also be used. If both command options are not used, an error message is displayed.

Using the // Parameter with Data Queues

The STPDTAQ batch command ends all data queue conversations with the host system specified by the //system_name option. This means that if other applications are currently using data queues to the specified host system, their conversations are dropped. The other application immediately restarts its conversation when the next API call is issued, but it affects performance for that call. The user should be aware of this impact when the STPDTAQ command is issued.

Using the /L Parameter with Data Queues

It is best to use the /L parameter on the batch commands. For any command sent to the AS/400 system, a specified library name is preferable to using the *LIBL default. A specified library name results in less work for, and faster response by, the AS/400 system.

Matching Data Queue Parameters with Data Queue Commands

The following table shows which data queue parameters you can use with each data queue command.

Table 2. Quick Reference for Data Queue Parameters

Program	/L	/W	/N	/K	/S	//	/Z	/M	/O	/D	/F	/A	/C
SNDDTAQ	x		x	x		x	x						
RCVDTAQ	x	x	x	x	x	x	x						
CLRDTAQ	x					x	x						
STPDTAQ						x	x						
DLTDTAQ	x					x	x						
QRYDTAQ	x					x	x						
CRTDTAQ	x					x	x	x	x	x	x	x	x

Using Data Queue Commands in Sample Command Files

The following example shows how an administrator could use data queues to issue remote PC commands to a personal computer. You can issue remote PC commands to several personal computers by using the keyed feature of the data queues support.

ADMIN.CMD

```
REM  Load data queue function.
LOADDQ

REM Create the data queue SAVEQ.
CRTDTAQ SAVEQ /L=SAVELIB /M=31744 /O=FIFO /A=ALL

REM Clear the data queue in the event it already existed.
CLRDTAQ SAVEQ /L=SAVELIB

REM Send the data in FILE.DAT to the data queue.
SNDDTAQ SAVEQ /L=SAVELIB /N <FILE.DAT

REM Stop the data queues conversations with the host system.
STPDTAQ
```

FILE.DAT

```
REM Copying the files from drive C: to the shared folder
REM drive K:
XCOPY c:\*.* K: /S
```

PC1.CMD

```
REM Erase the GO.CMD file to create a new one.
ERASE GO.CMD

REM Load data queue function.
LOADDQ

REM Receive data from the SAVEQ date queue.  Wait 60
REM minutes for REM data to be placed on the queue.
RCVDTAQ SAVEQ /L=SAVELIB /W=3600 /N /Z
>GO.CMD

REM Delete the data queue
DLTDTAQ SAVEQ /L=SAVELIB

REM Stop the data queue conversations with the host system.
STPDTAQ


REM Run the commands that were received into GO.CMD.
GO
```

ADMIN.CMD is a command file that an administrator can run to initiate PC commands. In this example, ADMIN.CMD sends an XCOPY command to a data queue called SAVEQ in library SAVELIB.

PC1.CMD is a command file that a PC Support user can run to receive the XCOPY command from the data queue. The RCVDTAQ command in PC1.CMD redirects

the XCOPY data to the GO.CMD file. The last step PC1.CMD does is call GO to run the XCOPY command.

STPDTAQ cleans up the conversations that were allocated and frees allocated PC resources.

When you run these commands, many lines of information are displayed. To reduce the number of lines displayed, specify the /z parameter on all data queue commands.

If you wish to expand these examples to include other functions, it is recommended that you write an application that uses the data queue application program interface (API). By writing an API, you can include all the data queue commands within a single program which significantly improves the performance of the task you wish to complete. For more information on using data queue APIs, see the *PC Support/400: Application Program Interface Reference*, SC41-8254 manual.

Appendix A. Using Commands with PC Support

Using PC Support Commands

This section contains a summary of the PC Support commands used to operate each PC Support function. To display the command and parameter descriptions for each of these commands, you can use the PCSHELP command on your personal computer.

Table 3 (Page 1 of 2). PC Support Commands

PC Support Function	Command	Description
All Functions	STARTPCS	Starts the processing of a batch file containing all of the PC Support functions you selected when PC Support was installed.
Administration Function	PCSADM	Allows a PC administrator to control groups of PC Support users by making configuration changes from a central location.
Installation Function	INSTALL	Starts the PC Support installation program.
PC Support/400 Menu	PCSMENU	Displays the PC Support Menu.
Error logging	PCSLOG	Displays the entries in the PC Support error log.
Help Information	PCSHELP	Displays help information for PC Support commands and messages.
	PCSINTRO	Displays hypertext help information in the form of an introductory tutorial.
Configuring PC Support	CFGPCS	Starts the configuration program used to configure PC Support.
Shared Folders Function	CFGFLR	Allows you to assign and release shared folders drives based on information in a configuration file.
	FSPC	Allows you to interactively assign, release, and display the status of folders.
	CHKFIL	Allows you to check files out and in, and to check the status of files on the AS/400 system.
	STARTFLR	Starts the PC Support shared folders function.
	STOPFLR	Stops the PC Support shared folders function.
Data Queue Function	SNDDTAQ	Sends data to a data queue.
	RCVDTAQ	Receives data from a data queue.
	CLRDTAQ	Clears data from a data queue.
	STPDTAQ	Stops data queue conversation with AS/400 system.
	CRTDTAQ	Creates a data queue.
	DLTDTAQ	Deletes a data queue.
	QRYDTAQ	Queries a data queue.
Transfer Function	RTOPC	Starts the interactive transfer request from the AS/400 system to the personal computer.
	RFROMPC	Starts the interactive transfer request from the personal computer to the AS/400 system.
	RTOPCB	Starts the batch transfer request from the AS/400 system to the personal computer.
	RFROMPCB	Starts the batch transfer request from the personal computer to the AS/400 system.
	STF	Installs the Transfer Function Application Program Interface (API).
Organizer Function	PCO	Starts the PC organizer function if work station feature is running.
Virtual Printer Function	SETVPRT	Starts the interactive virtual printer function.

Table 3 (Page 2 of 2). PC Support Commands

PC Support Function	Command	Description
	CFGVPRT	Starts the batch virtual printer function.
Message Function	STARTMSG	Starts the message function receiver.
	MSG	Allows you to interactively send, display, delete, change, or receive messages.
	RCVMSG	Receives messages from the host system and stores them in a designated file.
	STOPMSG	Stops the message function receiver.
Submit Remote Command Function	RMTCMD	Allows you to submit control language (CL) commands from the personal computer to a remote AS/400 system.
Router Function	STARTRTR	Allows you to communicate with the host system and starts the router so you can use PC Support.
	STOPRTR	Allows you to stop communicating with the host system and stops the PC Support router.
Update Function	PCSUPDT	Updates the PC Support files and programs.
	UPDATEP2	Completes the update process when updates are applied in two steps.

Using Related AS/400 Commands

There are some AS/400 commands that can be used with PC Support. For more information on using these commands, see the online help information by pressing the F1=Help key when you are on an AS/400 command display.

Table 4. AS/400 Command List

Command	Description
CPYFRMPCD	Copies the data in a PC document to a system physical database file.
CPYTOPCD	Copies a member from a system database file to a PC document in a folder.

Index

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

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