

NFC

Procedures



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Interactive System Productivity Facility (ISPF)

TITLE VI
Systems Access Manual

CHAPTER 2
Remote Site Usage

SECTION 2
Interactive System Productivity Facility (ISPF)

**User Documentation
For Systems
And Processes**



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About This Procedure

This procedure provides instructions for accessing and operating the Interactive System Productivity Facility (ISPF). The following information will help you to use the procedure more effectively and to locate further assistance if needed.

How The Procedure Is Organized

The major sections of this procedure are described below:

System Overview describes the system and provides background information.

System Access provides security information and instructions for accessing the system.

Operating Features describes the system's design and how to use the operating features.

Main Menu gives instructions for selecting the main options.

Glossary contains a definition of terms used in the procedure.

To keep you informed about new or changed information related to this system, NFC issues short publications called bulletins or amendments. This procedure and all related bulletins and amendments are listed in the NFC External Publications Index, issued semiannually.

Pages are numbered consecutively at the bottom of each page. If the procedure is amended, point pages (e.g., 3.2, 3.3, etc.) are used as needed to accommodate additional pages. All amended pages are marked at the bottom with the amendment number and date.

If you begin receiving this procedure after it has been amended, you will receive the publications with all amendments and bulletins. Remove and insert amended pages according to the accompanying page control chart so that your procedure is current.

What Conventions Are Used

This procedure uses the following visual aids to identify certain kinds of information:

- Messages displayed by the system are printed in *italics*.

Example:

The message *{the option selected is invalid}* is displayed.

- Field specifications are also printed in *italics*.

Example:

SSN. (*required, numeric field; 9 positions*). Key in the employee's social security number.

- Emphasized text within a paragraph is printed in **bold**.

- Figure and appendix references link figures and appendixes with the text. These references are printed in the bold sans serif font shown below.

Example:

(see **Figure 23**)

- References to sections within the procedure are printed in the same font as figure references.

Example:

see **Introduction**

- References to menu options are printed in ***bold italics***.

- References to keys on the keyboard are printed in brackets.

Example:

To return to the main menu, press **[PF1]**.

- At the end of instructions for each processing function, optional actions that the user may take are identified by leaderdots.

Example:

To perform another function, select the applicable menu option or tool button.

- Important extra information is identified by a note icon in the left margin.

Example:



Note

Window and **Help** appear on all menu bars and display the same pull-down menus. Instructions for using **Window** are provided under **Arranging And Viewing Multiple Windows**. Instructions for using **Help** are provided under **Using Help**.

Who To Contact For Help

For questions about the system (including help with unusual conditions), contact Information Center personnel at **504-255-5230**.

For access to ISPF, contact your agency's ADP security officer.

For questions about this procedure, contact the Directives and Analysis Branch at **504-255-5322**.

Introduction

The Interactive System Productivity Facility (ISPF) is a programming tool which provides access to partitioned and sequential data sets. The current version of ISPF provides an action bar-driven interface. The panels look different from the previous version and most have action bars at the top.

System Overview

ISPF is an application on the OS/390 mainframe operating system used by the U.S. Department of Agriculture (USDA). ISPF helps programmers develop interactive applications, called dialogs, which are used to communicate with terminal users. Through a series of panels, users gain access to ISPF functions (menus); request information (data entry panels); and provide information (scrollable data displays).

System Capabilities And Interface

ISPF can be used in the following ways:

- Users can employ ISPF Edit, SCRIPT/VS, and the Hardcopy utility or another print utility provided by their installation to prepare memos and other written documents.
- Data processing administrators and system programmers can use ISPF to monitor and control program libraries and communicate with MVS through TSO commands, CLISTs, or REXX EXECs. Programmers can use ISPF to develop a batch, interactive, or any other type of program and documentation.
- Terminal users can access dialogs that use the Dialog Manager (DM) component and Program Development Facility (PDF) component dialog services to do the work of the application.
- The View, Browse, and Edit functions, a wide range of utilities, foreground and batch compilers, program library control, and other facilities are available to assist in developing ISPF dialogs.

Responsibilities

Listed below are the responsibilities of the primary organizations involved in data processing and system maintenance for ISPF.

The National Finance Center (NFC):

- Installs, operates, and maintains the ISPF system.
- Allows developers to program in an interactive environment.
- Provides limited technical support to client agencies.

- Trains agency personnel in the limited use of ISPF.
- Develops and issues ISPF procedures.

The agency:

Uses ISPF to view, edit, move, copy, print, and delete data.

System Access

This section provides access security information and gives specific sign-on/sign-off instructions.

Security And Remote Terminal Usage

Access security is designed to prevent unauthorized use of systems and data bases. For information about access security, including user identification numbers (user ID's), passwords, and obtaining access to a specific system, see the Remote Terminal Usage procedure, Title VI, Chapter 2, Section 1.

To access ISPF, you must (1) have authorized security clearance and (2) use a terminal or personal computer that is connected through your telecommunications network to the mainframe computer located at OCFO/NFC. For information about connecting and disconnecting from your telecommunications network, see the instructions that are provided with your specific network.

Sign-On

To sign on, connect to your telecommunications network to display the NFC banner screen (**Figure 1**) on your terminal.

```

=====
== 03/24/95          SNAMOD2          T3138E0D          PF1=HELP ==
=====
==              NN      NN      FFFFFFFF      CCCCCCCC ==
==             NNN      NN      FFFFFFFF      CCCCCCCC ==
==            NNNN      NN      FF              CC ==
==           NN NN NN      FFFFFFFF      CC ==
==          NN  NNNN      FFFFFFFF      CC ==
==         NN   NNN      FF              CCCCCCCC ==
==        NN    NN      FF              CCCCCCCC ==
==
== ===== National Finance Center ===== ==
== ===== Office of the Chief Financial Officer ===== ==
== ===== United States Department of Agriculture ===== ==
== ===== For Authorized Use Only ===== ==
==
== ENTER USER ID = 1          PASSWORD = 2          NEW PASSWORD = 3 ==
==
== ENTER APPLICATION NAME = 4          OR PRESS ENTER FOR NFC MENU ==
=====

```

Figure 1. NFC banner screen

Then respond to the prompts as follows:

- | | |
|---|--|
| 1 Enter User ID
<i>Required, alphanumeric
9 positions max.</i> | Key in your assigned user ID (e.g., NF999). Press [Tab] . |
| 2 Password
<i>Required, alphanumeric
6 to 8 positions</i> | Key in your password. Your password is not displayed on the screen. The password will expire approximately every 35 days. At that time, you are prompted to enter a new password. Press [Tab] . |
| 3 New Password
<i>Required, alphanumeric
6 to 8 positions</i> | If your current password expires, key in a new password. Press [Tab] . You may change your password any time but not more than once a day. |
| 4 Enter Application Name
<i>Required, alphanumeric
9 positions max.</i> | Key in ISPF and press [Enter] . |

The ISPF Primary Option Menu is displayed, except when NFC needs to communicate special system function messages. In this case, the Electronic Access Bulletin Board is displayed. Read the message(s) shown and press **[Enter]**. The NFC Menu (**Figure 2**) is displayed. Press **[Enter]** again to display the main menu.

```

=====
== 03/24/95      SNAMOD2      NFC MENU      T3138E0D      10:49:06  CT  ==
=====
==
== SELECT ONE:
==
== 1. PAYROLL/PERSONNEL SYSTEMS
== 2. FINANCIAL INFORMATION SYSTEMS
== 3. PROPERTY MANAGEMENT INFORMATION SYSTEMS
== 4. ADMINISTRATIVE INFORMATION SYSTEMS
== 5. DEVELOPMENT SYSTEMS <NFC ONLY>
== 6. DATA BASE TEST SYSTEMS <NFC ONLY>
== 7. MISSION ASSIGNMENT TRACKING SYSTEM <GAO ONLY>
== 8. DIRECTIVES BULLETIN BOARD
== ENTER APPLICATION NAME OR SELECTION NUMBER ==>          PF11 = EXIT ==
=====
==                                MESSAGE BOARD
=====
=====

```

Figure 2. NFC Menu



Note

When signing on, before you display the system's main menu, you may select Option 8, Directives Bulletin Board, on the NFC Menu to view additional messages related to other systems. (See Title VI, Systems Access Manual, Bulletin 94-1, Directives Bulletin Board, dated January 24, 1994.)

Instructions for using the ISPF Primary Option Menu begin on page 7.

Sign-Off

To exit ISPF, press **[PF3]** at any screen until the Ready prompt is displayed. Key in **bye** and press **[Enter]** (**Figure 3**).



Figure 3. Enter Next Task Code prompt

The NFC Menu is displayed. You are now disconnected from the system. However, you are still connected to the mainframe and may select another application from the NFC Menu.

To disconnect from the mainframe, press **[PF11]** or a compatible function key. The NFC banner screen is displayed. If you do not intentionally disconnect from the mainframe, you are automatically disconnected after your terminal is inactive for a short time.

Operating Features

This section describes the system's design and operating features.

To select an option from the ISPF Primary Option Menu use one of the following methods:

- Select an option from one of the pull-down menus on the action bar.
- OR**
- Select one of the Point-and-shoot fields. Point-and-shoot fields are cursor sensitive. If selected, the action described in that field is performed.
- OR**
- Type an option on the Command line and press **[Enter]**.

Unless otherwise specified, the last selection method above is used in the instructions throughout this documentation. If you wish, you may substitute one of the other methods, described above, to select menu options.

System Design

ISPF is designed to allow users the ability to prepare, view, store and print reports and memorandums, and edit data files. Most ISPF functions are controlled by menus that offer a list of processing functions.

Help Screens

Help screens are available for all ISPF panels.

System Edits

All entries in the system are subject to front-end system edits. If an error occurs or if required data is omitted, an edit error message is displayed at the bottom of the screen. All errors must be corrected before the data base is updated.

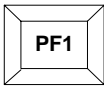
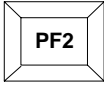
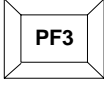
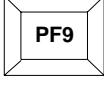


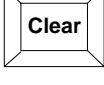
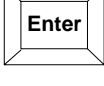

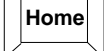
Function Keys

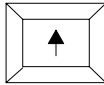
Your keyboard includes :

- Program function keys (**[PA]**, **[PF]**, **[F]**, etc.), used to execute functions and display specific screens in the system
- Other function keys (**[Enter]**, **[Clear]**, etc.)

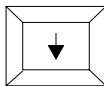
For instructions on your equipment usage for these keys, see the manufacturer's operating guide.

The special functions of these keys in ISPF are displayed at the bottom of each screen. Descriptions are provided below:

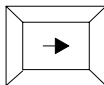
Key	Functions
	Used to provide help by taking you to the ISPF Program Development Facility Utility Tutorial.
	Used to divide the screen into two logical panels separated by a horizontal line or, PF2 changes the location of the horizontal line.
	Used to exit from a window and return you to the ISPF Primary Option Menu. From the ISPF Primary Option Menu this key will take you completely out of ISPF.
	Used to move the cursor to where it was previously positioned on the other logical screen of a split-screen pair.
	Used to move the cursor to the action bar. If you press PF10 a second time, the cursor moves to the command line.
	Used to Cancel or exit the system.
	Used to exit the system.
	Used to send data to the system after you have keyed it in at a screen.
	Used to move the cursor from field to field.
	Used to move the cursor to the action bar choice or the first data entry position on the panel.



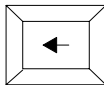
Used to move the cursor up from line to line.



Used to move the cursor down from line to line.



Used to move the cursor to the right from position to position within a field.



Used to move the cursor to the left from position to position within a field.

ISPF Primary Option Menu

After you access ISPF, the ISPF Primary Option Menu panel is displayed (**Figure 4**). This panel contains two menus: (1) the Action Bar Pull-Down Menu, located at the top of the panel, with six options, and (2) the ISPF Primary Option menu with ten options. Options on both of these menus are described below.

Menu	Utilities	Compilers	Options	Status	Help
ISPF Primary Option Menu					
Option ==>					
0	Settings	Terminal and user parameters		User ID . . :	NFXXX
1	View	Display source data or listings		Time. . . :	16:44
2	Edit	Create or change source data		Terminal. :	3278
3	Utilities	Perform utility functions		Screen. . :	1
6	Command	Enter TSO or Workstation commands		Language. :	ENGLISH
C	Changes	Display summary of changes		Appl ID . :	ISR
I	INFO/MGMT	Info/Management Problem Data Base		TSO logon :	US05PROC
J	JES*Master	Setup/Invoke JES*Master		TSO prefix:	NF316
T	TUTORIAL	Display information about ISPF/PDF		System ID :	SYSB
V	VMCF	VPS Monitor and Control Facility		MVS acct. :	21050051
				Release . :	ISPF 4.3
Enter X to Terminate using log/list defaults					
F1=Help		F3=Exit		F10=Actions F12=Cancel	

Figure 4. ISPF Primary Option Menu

Description of The Action Bar Menu Options

The Action Bar Pull-Down Menu appears at the top of the ISPF Primary Option Menu panel and consists of six options (**Figure 5**). Below is a brief description of each option.

Menu	Utilities	Compilers	Options	Status	Help

Figure 5. Action Bar Menu Options

Menu. Used to provide an alternate method for accessing some of the same options contained on the Primary Option Menu and contains options accessible only from this menu. This menu consists of ten options.

Utilities. (For NFC Use Only) Used to perform library and data set maintenance tasks, such as moving or copying library or data set members, displaying or printing data set names and volume table of contents (VTOC) information, comparing data sets, and searching for strings of data. This menu consists of 15 options; however, its general use is not supported by NFC.

Compilers. (For NFC Use Only) Used to translate the high level programming language into machine language. This menu consists of four options; however, its general use is not supported by NFC.

Options. (For NFC Use Only) Used to display the ISPF Settings panel, the CUA Attribute Change utility, the Keylist Utility panel, Global Color Change Utility panel, and the Dialog Test Application ID pop-up. This menu has six options; however, its general use is not supported by NFC.

Status. (For NFC Use Only) Used to specify what you want to display in the status area. The Status menu consists of six options; however, its general use is not supported by NFC.

Help. Used to provide assistance in using ISPF.

Using The Menu Option on the Action Bar Menu

Menu is the first option on the Action Bar Pull-Down menu. To access this option, place the cursor under the M (in Menu), and press **[Enter]**. The ten Menu Action Bar options are displayed (**Figure 6**).

Menu Utilities Compilers Options Status Help	
<div style="border: 1px solid black; padding: 5px;"> 1. Settings 2. View 3. Edit 4. ISPF Command Shell 5. Dialog Test... 6. Other IBM Products... 7. SCLM 8. ISPF Workplace 9. Status Area... 10. Exit </div>	
Primary Option Menu	
er parameters	User ID . : NFXXX
data or listings	Time. . . : 16:44
e source data	Terminal. : 3278
functions	Screen. . : 1
rkstation commands	Language. : ENGLISH
of changes	Appl ID . : ISR
Problem Data Base	TSO logon : US05PROC
S*Master	TSO prefix: NF316
	System ID : SYSB
	MVS acct. : 21050051
	Release . : ISPF 4.3
T TUTORIAL	Display information about ISPF/PDF
V VMCF	VPS Monitor and Control Facility
Enter X to Terminate using log/list defaults	
F1=Help F3=Exit F10=Actions F12=Cancel	

Figure 6. Menu Action Bar Options

The Action Bar options that are available vary from panel to panel, as do the options available from their pull-downs. However, Menu and Utilities are basic action bar options and the options on their pull-down menus are always the same. Following is a description of each option.

Settings. Used to display the ISPF Settings panel and is discussed in detail in the section entitled Establishing Terminal and User Parameters.

View. Used to display source data or listings and is discussed in detail in the section entitled Establishing Terminal and User Parameters.

Edit. Used to create, display and change source data, such as program code and documentation using the ISPF full screen editor. Edit is discussed in detail in the section entitled Establishing Terminal and User Parameters.

ISPF Command Shell. (For NFC Use Only) Used to display the ISPF Command Shell panel; however, it's general use is not supported by NFC.

Dialog Test. (For NFC Use Only) Used to display the Dialog Test Primary Option panel however, it's general use is not supported by NFC.

Other IBM Products. (For NFC Use Only) Used to display the Additional IBM Program Development Products panel however, it's general use is not supported by NFC.

SCLM. (For NFC Use Only) Used to display the SCLM Main Menu; however, it's general use is not supported by NFC.

ISPF Workplace. (For NFC Use Only) Used to display the Workplace entry panel; however, it's general use is not supported by NFC.

Status Area. (For NFC Use Only) Used to display the ISPF Status panel; however, it's general use is not supported by NFC.

Exit. Used to exit ISPF.

Description of The ISPF Primary Option Menu

The ISPF Primary Option menu consists of 10 options (**Figure 4**). Option O, which was previously referred to as **ISPF Parm's**, is now referred to as **Settings**, and options on the ISPF Primary Option Menu remain the same. Their functionality also remains the same. Below is a brief description of each option.

0 Settings. Used to display and change selected ISPF parameters, such as terminal characteristics and function keys at any time during the ISPF session. This option can also be accessed from the Action Bar.

1 View. Used to allow you to view or browse source data and lists stored in ISPF libraries or other partitioned or single-volume or multivolume sequential data sets. Use View or Browse to look at large data sets, such as compiler lists. You can scroll the data up, down, left, or right. If you are using Browse, a FIND command, entered on the command line, allows you to search the data and find a character string. If you are using View, you can use all the commands and macros available to you in the Edit function.

2 Edit. Used to create, display and change source data, such as program code and documentation using the ISPF full screen editor. You can scroll the data up, down, left, or right. You can change the data by using Edit line commands, which are entered on the command line.

3 Utilities. Used to perform library and data set maintenance tasks, such as moving or copying library or data set members, displaying or printing data set names and volume table of contents (VTOC) information, comparing data sets, and searching for strings of data.

6 Command. (For NFC Use Only). Used to enter TSO commands, CLIST, or REXX EXECs on the Command line of any panel and in the Line Command field on data set list displayed; however, it's general use is not supported by NFC.

C Changes. (For NFC Use Only). Used to provide a summary of changes; however, it's general use is not supported by NFC.

I INFO/MGMT. (For NFC Use Only). Used to provide an organized framework to manage data processing problems and changes and to maintain inventories and configurations; however, it's general use is not supported by NFC.

J JES-Master. Used to view and print output data from remote terminals.

T TUTORIAL. Used to provide help and other information about ISPF.

V VMCF. Used for VPS and Control Facility

Instructions follow for using the system options that are supported by NFC.

Establishing Terminal and User Parameters

Terminal and User parameters are established by using the Settings option, on the Primary Option Menu or the Action Bar Pull-down menu. You are able to display and change a variety of ISPF parameters at any time during an ISPF session. This facility can be started from any command line with the Settings command.

Using The Settings Options

To access the Settings option, type **Settings** at the command line and press **[Enter]**. The ISPF Settings panel (**Figure 7**) is displayed showing 10 options.

Log/List Function keys Colors Environ Workstation Identifier Help									
ISPF Settings									
Command ==>									
					More: +				
Options					Print Graphics				
Enter y/y to select option					Family printer type 2				
Command line at bottom					Device name				
/ Panel display CUA mode					Aspect ratio . . . 0				
Long message in pop«up									
Tab to action bar choices									
Tab to point«and«shoot fields					General				
/ Restore TEST/TRACE options					Input field pad . . N				
Session Manager mode					Command delimiter . ;				
/ Jump from leader dots									
Edit PRINTDS Command									
/ Always show split line									
Terminal Characteristics									
Screen format	1	1. Data	2. Std	3. Max	4. Part				
Terminal Type	3	1. 3277	2. 3277A	3. 3278	4. 3278A				
		5. 3290A	6. 3278T	7. 3278CF	8. 3277KN				
F1=Help	F3=Exit	F10=Actions	F12=Cancel						

Figure 7. ISPF Settings Panel

Below is a description of each option:

- **Command Line At Bottom.** Used to specify that the command line is to appear at the bottom of each screen. Line commands are valid only when you call them within the PDF component. Exceptions are the primary and line commands for EDIT, which are defined in ISPF EDIT and Edit Macros and those defined for Option 8. The ISPF primary option that you are using determines which commands are valid.

PDF component primary commands can affect a complete data set or PDS member, but the line commands can affect only one or more specified lines within a data set.

- **Panel Display CUA Mode.** Used to specify that panels are displayed in Common User Access (CUA) mode. This selection affects how the long message line, command line, and function keys are displayed.

A panel is a predefined display image that you see on a display screen. ISPF formats all panels to fit on a 24-line by 80-character screen. On a 3278 Model 3

or 4, data that you can scroll occupies the full length of the screen. On a 3278 Model 5, ISPF displays information in default mode. Browse and edit data that is wider than 80 characters is displayed with the smaller native mode characters. Use the Settings option to override the automatic modes.

The Panel display CUA mode field determines where the Command or Option line and long messages are displayed on the bottom of the panel. The default setting also selects Long message in pop-up, which causes long messages to be displayed in a pop-up window directly above Command or Option line. To display the command or option line and long messages at the top of the panel, select option 0, deselect the Panel display CUA mode field, and deselect the Command line at bottom field.

- **Long Message In Pop-up.** Used to specify that long messages will be displayed in a pop-up window, regardless of the .WINDOW setting in the message source.
- **Tab To Action Bar Choice.** Used to specify that you want to use the Tab key to move the cursor among the action bar choices.
- **Tab To Point-and-shoot Fields.** Used to specify that you want to use the Tab key to move the cursor through point-and-shoot fields on a panel. The point-and-shoot fields are cursor-sensitive. If you select a field, the action is performed.



Note

If you have a command on the command line, this command is processed before any point-and-shoot command.

The cursor-sensitive portion of a field often extends past the field name. You can use the Tab key to position the cursor to point-and-shoot fields by selecting the Tab down-and-shoot fields option of the ISPF Settings panel.

- **Restore TEST/TRACE Options.** Used to specify the restoration of the TEST and TRACE values to the ISPF call values when you exit dialog test.



Note

When you select Dialog Test facility, certain TEST and TRACE options are established that can be different than those specified during ISPF start up.

- **Session Manager Mode.** Used to enter a slash to indicate that the Session Manager should handle any line mode output from the processing program.

To invoke the session manager mode, select it from the Settings panel. If you select this option, any display output is displayed in the Session Manager TSOOUT stream.

The function key definitions are not transferred to the Session Manager from ISPF. When the command ends, the Session Manager prompts you to enter an empty line to return to ISPF control and displays the TSO Command Processor panel again when you do so.

If you do not select Session Manager mode, terminal I/O occurs as though the Session Manager were not installed. The terminal operates in normal TSO fashion. Any communication with the commands is in line-I/O mode. When the command ends, three asterisks(***) are displayed. Press **[Enter]** to display the TSO Command Processor panel again in full screen mode.

To interrupt a TSO command, CLIST, or REXX EXEC, press **[PA1]**. The TSO command ends and the TSO Command Processor panel is displayed again. If terminal input is inhibited, press the Reset key before pressing **[PA1]**. If you are in Session Manager mode, enter a null line to return to ISPF full screen mode.

When the TSO Command Processor panel is displayed again, the command that was just processed is displayed to the right of the arrow. Enter another command or the END command to return to the ISPF Primary Option Menu.

- **Jump From Leader Dots.** Used to enable the ISPF jump function from field prompts that have leader dots (. . or ...). Field prompts that have the ==> will always have the jump function enabled. Enter a slash to enable the function.
- **Edit PRINTDS Command.** Used to intercept the local print request to allow you to modify the statement before the PRINTDS command begins. Enter a slash to invoke the function.

If you have selected the **Edit PRINTDS** command on the ISPF Settings panel and you specify a local printer ID on either the Log and List Data Set Termination Options panel or the Hardcover Utility panel, ISPF displays the Local Print Command Edit panel to allow you to edit the PRINTDS command before it processes.

- **Always Show Split Line.** Used to specify that the split line in split screen mode, as seen on a 3270 display, should always be shown. The default for the option is selected. By deselecting this option, the split line does not display when the screen is split at the top or the bottom of the screen.

Using Terminal Characteristics

The Terminal Characteristics portion of the ISPF Settings panel allows you to specify values for the following terminal characteristics:

Screen Format 1

Specification of screen format applies to 3278 Model 5 (or 3180 set to a mode that emulates the 3278 Model 5) and 3290 terminals only. ISPF ignores screen format for other types of terminals.

Following are explanations for the terminal types:

- **Data.** Format is based on data width (for 3278 Model 5 only).
- **Std.** Format is always 24 x 80 characters.
- **Max.** Format is always 27 x 132 characters.
- **Part.** Format uses hardware partitions (3279 only).



If you are in an Edit session or you are using the EDIT service, ISPF will not allow you to change the screen format.

Terminal Type 3

You must specify a valid terminal type. If you are using a terminal emulator, select the type that is being emulated (more than likely, a 3278 or 3278x).

Specification of a terminal type allows ISPF to recognize valid characters. The terminal type value that you specify to ISPF might not be the actual terminal type. For example, if your terminal is a 3279, you specify 3278 because a 3279 terminal has the same character set as a 3278. The keyboard character sets for the specified terminal and the actual terminal are always compatible. For specific information about the type value to specify to ISPF for each supported terminal, refer to Help form the ISPF Settings panel.

Print Graphics Params

The Print Graphics Params portion of the ISPF Settings panel allows you to specify the family printer type, device name, and aspect ratio. They are described below.

- **Family Printer Type.** This parameter has a default value of 2, which cannot be changed.
- **Device Name.** VTAM node name of the physical printer to which graphic display output is to be routed.
- **Aspect Ratio.** The manner in which the graphics aspect ratio (relationship to displayed screen image) is to appear on the printed output. Aspect ratio can be either of the following:
 - **0** Preserves the aspect ratio of the graphic area.
 - **1** Preserves the positional relationship between the graphic and the alphanumeric characters outside the graphics area.

General

The General portion of the ISPF Settings panel allows you to specify values for the input field pad and the command delimiter. They are described below.

- **Input Field Pad.** Specifies a pad character that controls the initial padding of blank (unfilled) panel fields, including the selection panels, but not the data portion, of an Edit display. Within Edit, you control null or blank padding with Edit commands. The pad character specified can be a **B** (for Blank), **N** (for Nulls), or any special (non-alphanumeric) character.
- **Command Delimiter.** You can stack commands on the command line by separating them with a delimiter. The default delimiter, the semicolon, can be changed using this option. Alphanumeric characters, the period (.), and the equal sign (=) are not valid command delimiters.

Specifying Settings On the Panel Action Bar

The ISPF Settings Panel Action Bar portion of the ISPF Settings panel is located at the top of the ISPF Settings panel (**Figure 8**). Following is a discussion of the options.

Log/List	Function keys	Colors	Environ	Workstation	Identifier	Help
----------	---------------	--------	---------	-------------	------------	------

Figure 8. ISPF Settings Panel Action Bar

Log/List. This option allows you to specify the log and list data set defaults that are used when you terminate ISPF by issuing the Return or End command or by entering an **X** on the ISPF Primary Option Menu command line.

Function Keys. (For NFC Use Only) This option allows you to define function keys and to create, edit, delete, and view keylists; however, it's general use is not supported by NFC.

Colors. (For NFC Use Only) This option allows you to access the Global Color Change Utility and the ISPF CUA Attribute Utility along with the Point-and-shoot Color Change panel; however, it's general use is not supported by NFC.

Environ. (For NFC Use Only) This option allows you to invoke the ISPF ENVIRON Command Settings panel allowing users to enable traces, dumps, and obtain information about their terminal or terminal emulators; however, it's general use is not supported by NFC.

Workstation. (For NFC Use Only) This option allows you specify that the user wants to start a Graphical User Interface session; however, it's general use is not supported by NFC.

Identifier. (For NFC Use Only) This option allows you to run display screen names, messages, and panel identifiers off and on; however, it's general use is not supported by NFC.

Help. This option allows you to obtain assistance in using ISPF.

Using The Log/List Option

Log/List option is the first option on the ISPF Settings Panel Action bar. To access this option, position the cursor under the **L** (in log). Press **[Enter]**. The Log/List pull-down menu is displayed with four options (**Figure 9**). Following is a description of each option.

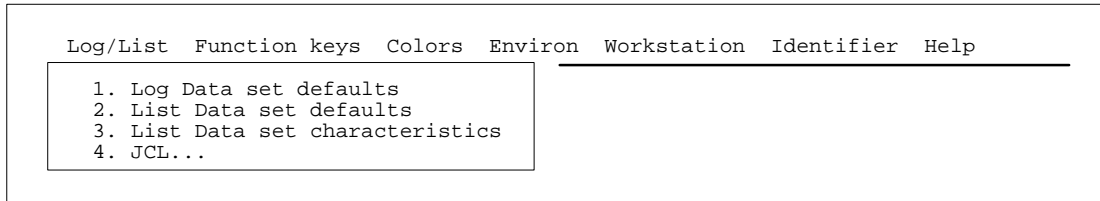


Figure 9. Log List Pull-Down Menu

1. **Log Data Set Defaults.** Used to display the Log Data Set Defaults panel.
2. **List Data Set Defaults.** Used to display the List Data Set Defaults panel.
3. **List Data Set Characteristics.** Used to display the List Data Set Characteristics panel.
4. **JCL.** Used to display the Log and List JCL pop-up.

The Log/List pull-down allows you to specify the log and list data set defaults that are used when you terminate ISPF by issuing the Return or End commands or by entering an **X** on the ISPF Primary Option Menu command line.

The defaults can also be used when you issue the Log or List command. You may specify the characteristics of the records to be contained in the list data set when it is defined.

Establishing Settings on the Log Data Set Defaults Panel

Log Data Set Defaults is the first option on the Log List Pull-Down menu (**Figure 9**). To select this option, position the cursor in the field for Option 1 and press **[Enter]**. The Log Data Set Defaults Panel is displayed (**Figure 10**).

Log/List	Function keys	Colors	Environ	Workstation	Identifier	Help
ISPF Settings						
Log Data Set Defaults						
C	Process option . . . 2	1. Print data set and delete				:
O		2. Delete data set (without printing)				+
		3. Keep data set (append subsequent information to same data set)				
		4. Keep data set and allocate new data set				
	SYSOUT class A					
	Local printer ID or					
	writer<name					
	Lines per page 60					
	Primary pages 10					
	Secondary pages 10					
	Log Message ID (/ = Yes)					
T	F1=Help	F3=Exit	F12=Cancel			
Terminal Type 3 1. 3277 2. 3277A 3. 3278 4. 3278A						
5. 3290A 6. 3278T 7. 3278CF 8. 3277KN						
F1=Help F3=Exit F10=Actions F12=Cancel						

Figure 10. Log Data Set Defaults Panel

The initial defaults are displayed. Following is a description of each setting:

- **Process Option.** Used to provide four process options.
 - Print the data set and delete it. With this option you must also specify a SYSOUT class and job statement information.
 - Delete the data set without printing it.
 - Keep the data set. ISPF appends new information to the same data set.
 - Keep the data set and allocate a new data set for subsequent information.
- **SYSOUT Class.** Used to enter the SYSOUT class assigned to your system output data set. For example, entering A causes ISPF to use the DD Statement “DD SYSOUT=A” when printing the log data set.
- **Local Printer ID.** Used to enter the name that your installation has assigned to an IBM 328x type of printer. The default is blank. If you enter a name in this field, you must leave the SYSOUT class field empty.
- **Lines Per Page.** Used to enter the number of lines per page. Normal values are:
 - 60 When printing 6 lines per inch
 - 80 When printing 8 lines per inch

The number of lines per page can range from 1-999. ISPF uses this value to determine when to cause a page eject if the eject control is not provided by the dialog.

- **Primary/Secondary Pages.** Used to allocate primary/secondary parameters which are specified in terms of the anticipated number of pages of printout. These values are automatically converted by ISPF to the appropriate number of blocks prior to allocating space for the log data set.

If you modify the primary/secondary allocation parameters after the data set has been allocated, the new values take effect the next time you start ISPF. The log data set is allocated the first time you perform some action that results in a log message, such as saving edited data or submitting a batch job.



Allocate a value of 0 to prevent allocation and generation of the log.

- **Log Message ID.** If you select the Log Message ID option, the message ID is automatically added to the long message text written in the LOG data set.

If you request default processing options for the log data set, the following rules apply:

- If you specify Print data set and delete: you must also specify SYSOUT class and job statement information. If you specify Print data set and delete for both log and list, you can specify different SYSOUT classes, but only one job is submitted for printing both data sets.
- If you specify routing to a local printer, you must specify a printer ID and SYSOUT must be blank.



If you do not follow the aforementioned rules or do not specify default options, primary option X or the Return command causes the final termination panel to be displayed.

Settings for the List Data Set Defaults Panel

List Data Set Defaults is the second option on the Log List Pull-Down menu (**Figure 9**). To select this option, position the cursor in the field for Option 2 and press **[Enter]**. The List Data Set Defaults Panel is displayed (**Figure 11**).

Log/List	Function keys	Colors	Environ	Workstation	Identifier	Help
ISPF Settings						
List Data Set Defaults						
C	Process option . . .	1. Print data set and delete				:
O		2. Delete data set (without printing)				+
		3. Keep data set (append subsequent information to same data set)				
		4. Keep data set and allocate new data set				
	SYSOUT class	A				
	Local printer ID or writer<name					
	Lines per page	60				
	Primary pages	100				
	Secondary pages	200				
	F1=Help	F3=Exit	F12=Cancel			
T	Screen format	1. Data	2. Std	3. Max	4. Part	
	Terminal Type	3	1. 3277	2. 3277A	3. 3278	4. 3278A
			5. 3290A	6. 3278T	7. 3278CF	8. 3277KN
	F1=Help	F3=Exit	F10=Actions	F12=Cancel		

Figure 11. List Data Set Defaults Panel

- **Process Option.** Used to provide four process options.
 - **Print the data set and delete.** With this option you must also specify a SYSOUT class and job statement information.

- **Delete the data set (without printing).**
 - **Keep the data set (append subsequent information to same data set).** ISPF appends new information to the same data set.
 - **Keep the data set and allocate a new data set.** ISPF will keep the data set and allocate space for subsequent information.
- **SYSOUT Class.** Used to enter the SYSOUT class assigned to your system output data set. For example, entering *A* causes ISPF to use the DD Statement “DD SYSOUT=A” when printing the log data set.
 - **Local Printer ID.** Used to enter the name that your installation has assigned to an IBM 328x type of printer. The default is blank. If you enter a name in this field, you must leave the SYSOUT class field empty.
 - **Lines Per Page.** Used to enter the number of lines per page. Normal values are:
 - **60** When printing 6 lines per inch
 - **80** When printing 8 lines per inch
- The number of lines per page can range from **1-999**. ISPF uses this value to determine when to cause a page eject if the eject control is not provided by the dialog.
- **Primary/Secondary Pages.** Used to allocate primary/secondary parameters which are specified in terms of the anticipated number of pages of printout. These values are automatically converted by ISPF to the appropriate number of blocks prior to allocating space for the log data set.

If you modify the primary/secondary allocation parameters after the data set has been allocated, the new values take effect the next time you start ISPF. The log data set is allocated the first time you perform some action that results in a log message, such as saving edited data or submitting a batch job.



Note

Allocate a value of **0** to prevent allocation and generation of the log.

- **Log Message ID.** If you select the Log Message ID option, the message ID is automatically added to the long message text written in the LOG data set.

If you request default processing options for the log data set, the following rules apply:

- If you specify Print data set and delete: you must also specify SYSOUT class and job statement information. If you specify Print data set and delete for both log and list, you can specify different SYSOUT classes, but only one job is submitted for printing both data sets.
- If you specify routing to a local printer, you must specify a printer ID and SYSOUT must be blank.



Note

If you do not follow the aforementioned rules or do not specify default options, primary option X or the Return command causes the final termination panel to be displayed.

After reviewing or changing the parameters on this panel, enter the End command to return to the previous menu.

Settings for the List Data Set Characteristics Panel

List Data Set Characteristics is the third option on the Log List Pull-Down menu (**Figure 9**). To select this option, position the cursor in the field for Option 3 and press **[Enter]**. The List Data Set Characteristics Panel is displayed (**Figure 12**).

```

Log/List  Function keys  Colors  Environ  Workstation  Identifier  Help
-
  ISPF Settings
  List Data Set Characteristics
C
Record Format . . . . . 1  1. FBA
O
                2. VBA
Logical record length . . 121
Line length . . . . . 120

F1=Help      F3=Exit      F12=Cancel
  
```

Figure 12. List Data Set Characteristics Panel

This option is used to specify the record format, the logical record length, and the line length to be printed. When the characteristics are reset, their new values take effect at once unless the list data set has already been allocated. In that case, the new values are used for the next list data set allocation. These values are saved in your user profile, which ISPF automatically builds and maintains across sessions.

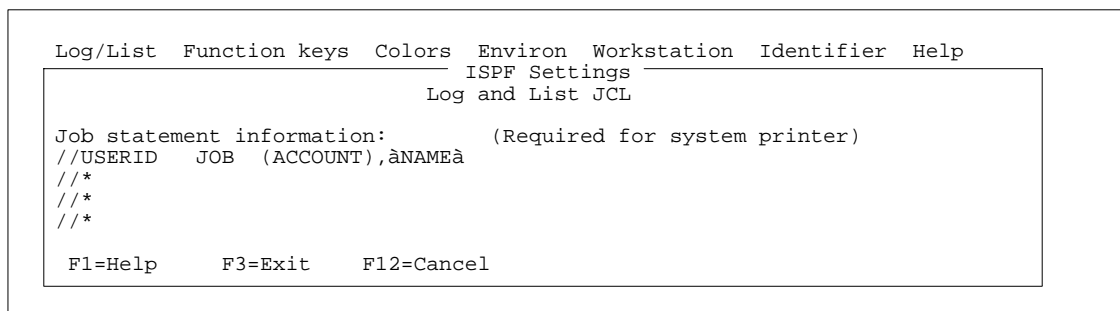
Specifications for logical record length and the line length values can affect the truncation of lines written to the list data set by a LIST service request.

The fields on the List Data set Characteristics panel are discussed below:

- **Record Format.** The record format specifies the format and characteristics of the records in the list data set. The record formats designated for use are:
 - **FBA.** Fixed length records that contain ANSI-defined printer control characters. FBA is the default setting.
 - **VBA.** Variable length records that contain ANSI-defined printer control characters
- **Logical Record Length.** The logical record length specifies the length, in bytes, of the fixed length records or the maximum length allowed for the variable length records. The default value is **121**.
- **Line Length.** The line length specifies the length of the logical line to be printed. If the specified line length is greater than the logical record length of the list data set, data is truncated. The range of the lengths is from **80** bytes to **160** bytes. The default value is **120**.

Settings for the JCL Panel

JCL is the fourth option on the Log List Pull-Down menu (**Figure 9**). To select this option, position the cursor in the field for Option 4 and press **[Enter]**. The Log and List JCL Panel is displayed (**Figure 13**).



The screenshot displays the 'Log and List JCL' panel within the ISPF Settings menu. The panel has a title bar with 'Log/List', 'Function keys', 'Colors', 'Environ', 'Workstation', 'Identifier', and 'Help'. Below the title bar, the text 'Log and List JCL' is centered. The main area contains 'Job statement information:' followed by a prompt '(Required for system printer)'. Below this, there are four lines of job statement information: '//USERID JOB (ACCOUNT),àNAMEà', '//*', '//*', and '//*'. At the bottom, there are three function key assignments: 'F1=Help', 'F3=Exit', and 'F12=Cancel'.

```
Log/List  Function keys  Colors  Environ  Workstation  Identifier  Help
                                     ISPF Settings
                               Log and List JCL

Job statement information:           (Required for system printer)
//USERID  JOB  (ACCOUNT),àNAMEà
//*
//*
//*
```

F1=Help F3=Exit F12=Cancel

Figure 13. Log and List JCL Panel

The Log and List JCL Panel is used to provide a means to specify up to four default job statements to be used for printing a log or list data set.

Viewing/Browsing Data

Viewing and browsing listings and source data stored in ISPF libraries or other partitioned or single-volume or multi-volume sequential data sets are accomplished through the use of the View option. View allows you to use all Edit line commands, primary commands and macros to manipulate the data. Browse allows you to use the Browse primary commands to manipulate the data.

Using the View Entry Panel

To select the View option, type **View** at the command line and press **[Enter]**. The ISPF View Entry Panel is displayed (**Figure 14**).

Menu	RefList	RefMode	Utilities	Workstation	Help
View Entry Panel					
Command ==>					
ISPF Library:					
Project
Group
Type
Member
(Blank or pattern for member selection list)					
Other Partitioned or Sequential Data Set:					
Data Set Name
Volume Serial
(If not cataloged)					
Workstation File:					
File Name
Initial Macro
Profile Name
Format Name
Data Set Password
Options					
/ Confirm Cancel/Move/Replace					
Browse Mode					
View on Workstation					
Mixed Mode					
F1=Help	F3=Exit	F10=Actions	F12=Cancel		

Figure 14. View Entry Panel

An ISPF library is a cataloged partitioned data set or a partitioned data set extended (PDSE). The library has a three-level name consisting of a project, group, and type. An optional library member name can also be included. A member consists of programming code, data, or text. Following is a discussion of the View panel.

Settings for the ISPF Library

To name an ISPF library, you must specify at least a project, group, and type. Following is a discussion of the fields:

- **Project.** The common identifier for all ISPF libraries belonging to the same programming project is **Project**. This name must be your user ID unless you are using a specific project name that has been predefined in the MVS master catalog.
- **Group.** The identifier for a particular set of ISPF libraries, the level of the libraries within the library hierarchy, is **Group**.

- **Type.** The identifier for the type of information in the ISPF library, such as PL/1, SCRIPT, or PANELS is **Type**.
- **Member.** A member selection list, also called a member list, is initially an alphabetic list of the members of an ISPF library or TSO partitioned data set.

Each component of the library name can be up to 8 alphanumeric or national characters. The first one must be alphabetic.

Other Partitioned or Sequential Data Set Names

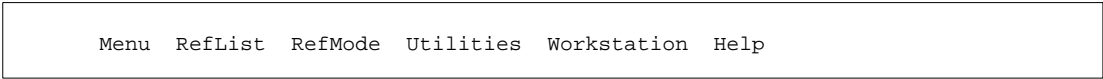
You can use the following field to specify any partitioned or sequential data set:

- **Data Set Name.** You can include either a TSO user prefix or user ID as the first level qualifier of the data set name. If you omit the single quotes and if you have created a TSO user prefix, that prefix is automatically added to the beginning of the data set name. If you omit the single quotes and if you do not have a TSO user prefix, a prefix cannot be added, and the name is used exactly as it appears.

If you include your user prefix or ID, enclose the data set name with apostrophes. If you include the apostrophe at the beginning of the data set name but omit the one at the end, ISPF inserts it for you.
- **Volume Serial.** Along with a data set name, you can optionally specify a volume serial. If you do, the system catalog is not used.
- **Initial Macro.** You can specify an Edit macro to be processed before you begin viewing your sequential data set or any member of a partitioned data set. The initial macro enables you to set up a particular environment for the View session you are beginning. If you leave the Initial Macro field blank and your Edit profile includes an initial macro specification, the initial macro from your Edit profile is processed. To suppress the processing of an initial macro in your Edit profile, enter **None** in the Initial Macro field.
- **Profile Name.** You can specify a profile name to override the default Edit profile.
- **Format Name.** Contains the name of a format definition, which is used to view or browse a formatted data set.
- **Browse Mode.** Specifies that you want to browse the data set using the Browse function. This function is useful for large data sets and data sets that are formatted RECFM=U.
- **Confirm Cancel/Move/Replace.** Specifies that you want ISPF to display a confirmation panel whenever you issue a Cancel, Move, or Replace command.
- **Mixed Mode.** Specifies that you want to view or browse unformatted data that contains both EBCDIC and DBCS characters.

Using the View Panel Action Bar

The View Entry Panel Action Bar is located at the top of the View Entry Panel (**Figure 15**). Following is a discussion of the options.



Menu RefList RefMode Utilities Workstation Help

Figure 15. View Entry Panel Action Bar

Menu. The options on this menu are discussed in the section entitled **Using the Menu Options**.

Reflist. (For NFC Use Only) Reference lists are active lists of data sets and libraries that you have referenced in your ISPF session; however, its general use is not generally supported by NFC.

Refmode. (For NFC Use Only) Refmode indicates the settings you used when making reference lists; however, its general use is not generally supported by NFC.

Utilities. (For NFC Use Only) Used to perform library and data set maintenance tasks, such as moving or copying library or data set members, displaying or printing data set names and volume table of contents (VTOC) information, comparing data sets, and searching for strings of data. However, the general use of this option is not supported by NFC.

Help. The Help menu offers twenty two options which provide assistance in operating in ISPF.

Browsing A Data Set

If you select the Browse mode on the View Entry Panel, ISPF displays either a member selection list or a Browse data display. If you specify a volume serial on the View Entry Panel, you can browse a single volume of a non-SMS multi-volume data set.

Each character in the data that cannot be displayed is changed on the display to either a period or a character that you have specified. Using the Display command, you can specify whether printer carriage-control characters are to be treated as part of the data, and displayed.

During Browse, four-way scrolling is available through the scroll commands. You can also use Find and Locate commands to scroll to a particular character string, line number, or symbolic label.

Whenever you enter a command, ISPF highlights the character string.

To end Browse data display, use the End command. This will return you to the previous panel which is either a member list display or the View Entry panel. If a

member list is displayed, the name of the member you just browsed is at the top of the list. You can select another member from the list or enter the End command again to return to the View Entry panel.

Editing A Data Set

The Edit option allows you to create, display, and change data stored in ISPF libraries or other partitioned or single-volume or multi volume sequential data sets with the following characteristics:

- Record Format (RECFM):
 - Fixed or variable (non-spanned)
 - Blocked or unblocked
 - With or without printer control characters
- Logical Record Length (LRECL):
 - From 10 to 32760, inclusive, for fixed length records
 - From 14 to 32756, inclusive, for variable length records

Using the Edit Entry Panel

To access this option, type **Edit** at the command line and press **[Enter]**. The ISPF Edit Entry panel is displayed (**Figure 16**).

You also have the option of editing the host data sets on your workstation, or editing workstation files on the host.

Menu	RefList	RefMode	Utilities	LMF	Workstation	Help
Edit Entry Panel						
Command ==>						
ISPF Library:						
Project . . .						
Group						
Type						
Member (Blank or pattern for member selection list)						
Other Partitioned or Sequential Data Set:						
Data Set Name . . .						
Volume Serial . . . (If not cataloged)						
Workstation File:						
File Name						
Initial Macro						
Profile Name						
Format Name						
Data Set Password . .						
F1=Help F3=Exit F10=Actions F12=Cancel						
Options						
Confirm Cancel/Move/Replace						
Mixed Mode						
Edit on Workstation						

Figure 16. Edit Entry Panel

Settings for the ISPF Library

For information on Settings for the ISPF Library, see [Using the View Entry Panel](#).

Other Partitioned or Sequential Data Set Names

For information on settings for the Other Partitioned or Sequential Data Set Names see [Using the View Entry Panel](#) .

Editing A Host Data Set on the Workstation

The editor searches the ISPF libraries in the designated order to find the member and copy it to the workstation. The data set name is converted to the workstation file name, and that name is appended to the workstation's current working directory. The host data set is transferred to the workstation, and the working file is then passed to the user's chosen edit program.

Editing A Workstation File on the Host

The editor searches the workstation files to find the appropriate file and copy it into working storage. The workstation file name is converted to a host data set name, and if greater than 44 characters, it is truncated to be 44 characters. The workstation file is then transferred to the host where it can be edited.

Editing A Workstation File on the Workstation

This type of edit proceeds as it normally does on the workstation.

Workstation File

The name of a file on your workstation that you want to edit.

Initial Macro

You can specify a macro to be processed before you begin editing your sequential data set or any member of a partitioned data set. This initial macro allows you to set up a particular editing environment for the Edit session you are beginning.

If you leave the Initial Macro field blank and your edit profile includes an initial macro specification, the initial macro from your edit profile is processed.

If you want to suppress the processing of an initial macro in your edit profile, type **NONE** in the Initial Macro field.

Profile Name

You can specify a profile name to override the default Edit profile.

Format Name

The format name contains the name of a format definition which is used to edit a formatted data set.

Using Options

- **Confirm Cancel/Move/Replace.** Specifies that you want ISPF to display a confirmation panel whenever you issue a Cancel, Move, or Replace command.
- **Mixed Mode.** Specifies that you want to edit unformatted data that contains both EBCDIC and DBCS characters.

Using the Edit Panel Action Bar

Options on the Edit Panel Action Bar are found at the top of the Edit Entry panel and are the same as on the View Edit Panel Action Bar (**Figure 15**). The Menu, Reflist, Refmode, and Utilities options were previously discussed in the View option. Following is a discussion of the remaining options.

- **LMF.** Used to edit-lock the member if a controlled library that is part of a concatenation sequence, but only if the member does not exist in your private library. Specify one of the following values for **LMF**:
 - **Lock-Never.** Tells ISPF not to edit-lock the member and to retain this value for the future Edit sessions.
 - **Lock-No.** Tells ISPF not to edit-lock the member, but to change this value to Yes for the next Edit session.
 - **Lock-Yes.** Tells ISPF to edit-lock the member. The member is locked under your user ID.

Edit-locking is important for two reasons:

- Keeping other users from accessing that member while you are editing it.
- Promoting the member back to the controlled library when you have finished editing it. If you do not edit-lock the member, you cannot promote it.

If you save any changes you made while editing the member, it remains locked in your private library. The version of the member stored in the controlled library remains unchanged until you promote the one in your private library. If you leave Edit without saving the changes, they are lost.

- **Workstation.** This option is discussed in the section entitled Using the Edit Entry Panel.

Using Utilities

The Utilities option provides a variety of functions for library, data set and catalog maintenance.

Using Options on the Utility Selection Panel Action Bar

To select the Utility Panel Action Bar, type **Utility** at the command line and press **[Enter]**. The Utility Selection Panel action bar is displayed (**Figure 17**). Following is a description of each option.

Menu Help	
Utility Selection Panel	
Option ==>	More:
1 Library	Compress or print data set. Print index listing. Print, rename, delete, browse, edit or view members
2 Data Set	Allocate, rename, delete, catalog, uncatalog, or display information of an entire data set
3 Move/Copy	Move, copy, or promote members or data sets
4 Dslist	Print or display (to process) list of data set names. Print or display VTOC information
5 Reset	Reset statistics for members of ISPF library
6 Hardcopy	Initiate hardcopy output
7 ISPF C/S	Install ISPF C/S workstation code from MVS to your workstation.
8 Outlist	Display, delete, or print held job output
9 Commands	Create/change an application command table
* Reserved	This option reserved for future expansion.
11 Format	Format definition for formatted data Edit/Browse
12 SuperC	Compare data sets (Standard Dialog)
13 SuperCE	Compare data sets Extended (Extended Dialog)
14 Search«For	Search data sets for strings of data (Standard Dialog)
15 Search«ForE	Search data sets for strings of data Extended (Extended Dialog)
F1=Help	F3=Exit F10=Actions F12=Cancel

Figure 17. Utility Selection Panel

- **Library.** Used to compress or print a data set. Used to print an index listing. Used to print, rename, delete, browse, edit or view members.
- **Data Set.** Used to allocate, rename, delete, catalog, uncatalog, or display information in an entire data set.
- **Move/Copy.** Used to move, copy, or promote members or data sets.
- **Dslist.** Used to print or display (to process) list of data set names. Used to print or display VTOC information.
- **Reset.** Used to reset statistics for members of ISPF library
- **Hardcopy.** Used to initiate hardcopy output.
- **ISPF C/S.** Used to install ISPF C/S workstation codes from MVS to your workstation.
- **Outlist.** Used to display, delete, or print held job output.

- **Commands.** Used to create/change an application command table.
- **Reserved.**
- **Format.** Used to format definition for formatted data Edit/Browse
- **SuperC.** Used to compare data sets. (Standard Dialog)
- **SuperCE.** Used to compare data sets and Search-for strings. (Extended Dialog)
- **Search-For.** Used to search data sets for strings of data. (Standard Dialog)

Using Library Utility Options

Library is the first option on the Utility Selection panel. To access this option, type **1** at the command line and press **[Enter]**. The Library Utility panel is displayed (**Figure 18**).

```

Menu  RefList  Utilities  Help
-----
                                Library Utility
Option ==>
blank Display member list          E Edit member          More:      +
  C Compress data set              V View member
  X Print index listing            B Browse member
  L Print entire data set          D Delete member
  I Data set information           R Rename member
  S Short data set information     P Print member

ISPF Library:
Project . . .
Group . . . . .
Type . . . . .
Member . . . . . (If B, D, E, P, R, V, or blank selected)
New name . . . . (If R selected)
Other Partitioned or Sequential Data Set:
Data Set Name . . .
Volume Serial . . . . (If not cataloged)
F1=Help      F3=Exit    F10=Actions  F12=Cancel

```

Figure 18. Library Utility Panel

The Library Utility Panel is displayed to allow you to specify a data set and an action to be performed. This library is intended primarily for maintenance of partitioned data sets. The print index listing (X), print entire data set (L), data set information (I), and short data set information (S) functions also apply to sequential data sets. Following is a discussion of the fields on this panel.

- **Display Member List.** Used to display a member list by leaving the Member field blank; omitting the member name from the name of another partitioned data set; or entering a pattern as the member name.

You can use a combination of asterisks and percent signs in the same pattern. The pattern including the asterisks and percent signs, cannot contain more the 8 characters.

- **C Compress Data Set.** Used to specify any partitioned data set. The compress function is not valid for a PDSE. The compress is done by calling either the IEBCOPY utility or an optional compress request exit routine.

- **X Print Index Listing.** Used to specify either a DASD-resident sequential or partitioned data set. The index listing is recorded in the ISPF list data set. For a partitioned data set, the index listing includes general information about the data set followed by a member list. For a sequential data set, the index listing includes general information.
- **L Print Entire Data Set.** Used to specify either a DASD-resident sequential or partitioned data set. The allowable data set characteristics are the same as for Browse, except that data sets with a logical record length greater than 300 characters are not printed. The data should not contain any printer control characters. Use the Hardcopy utility (Option 3.6) to print data sets that contain printer control characters. A source listing of the complete data set (including all members of a partitioned data set), preceded by an index listing, is recorded in the ISPF list data set.
- **I Data Set Information.** Used to display the location, characteristics, and current space utilization of the specified data set. For sequential data sets, options I and S display current allocation and utilization values that represent totals from all volumes used. Do not enter a volume serial when you are requesting information on a multivolume data set.
- **S Short Data Set Information.** Used to display information about the selected data set. The information displayed is the same information displayed by Option S of the Data Set utility, but differs from Option I. Information for partitioned data sets, when displayed by Option S, lacks the number of maximum and used directory blocks, and the number of members. You may not enter a volume serial when you requisition information on multivolume data sets.

The space for data sets allocated in blocks is calculated as if all of the tracks including the last one, contain only full blocks of data. Partial or short blocks are ignored.

Using the ISPF Library Fields

All except one of the fields under ISPF Library on the Library Utility Panel (**Figure 18**) have been explained in the section entitled Settings for the ISPF Library (View Entry Panel). The exception is the New Name field, which is discussed below.

- **New Name.** Used to enter a new member name, which is used in conjunction with R Rename Member. However, if you are editing a member, you cannot rename the member.

Using Utilities on the Panel Action Bar

The options on the Panel Action Bar are displayed at the top of the Library Utility Panel (**Figure 18**). Following is a description of each option.

- **Menu.** Described in the section entitled Using The Menu Options on the Menu Action Bar.

- **RefList.** Described in the section entitled Using The View Panel Action Bar.
- **Utilities.** Described in the section entitled Action Bar Pull-Down Menu.

Using the Data Set Utility Options

Data Set is the second option on the Utility Selection panel. To access this option, type **2** at the command line and press **[Enter]**. The Data Set Utility panel is displayed (**Figure 19**).

Menu RefList Utilities Help	
Data Set Utility	
Option ==>	
A Allocate new data set	C Catalog data set
R Rename entire data set	U Uncatalog data set
D Delete entire data set	S Short data set information
blank Data set information	V VSAM Utilities
ISPF Library:	
Project . . .	
Group . . .	
Type . . .	
Other Partitioned, Sequential or VSAM Data Set:	
Data Set Name . .	
Volume Serial . .	(If not cataloged, required for option ŸCŸ)
Data Set Password . .	(If password protected)
F1=Help	F3=Exit F10=Actions F12=Cancel

Figure 19. Data Set Utility Panel

Following is a description of the fields.

The fields are read left to right.



Note

- **A Allocate New Data Set.** Used to allocate a new data set. You must do the following:
 - Enter an ISPF library name in the Project, Group and Type fields. The volume in the Volume Serial field is ignored. If you entered another data set name, you can specify the volume on which to allocate the data set in the Volume Serial field. If you want to use the authorized default volume or enter a generic unit address in the Generic Unit field on the allocate New Data Set panel, do not enter a volume serial.
 - Enter a partitioned or sequential data set name in the Data Set Name field.
 - If your ISPF libraries and data sets are password-protected, enter the password in the Data Set Password field.
 - Press Enter.

The new data set is allocated and cataloged. To return to the previous panel without allocating the data set, type **END**.

- **C Catalog Data Set.** Used to specify that a particular data set is cataloged. You must specify the volume serial on which the data set resides, regardless of whether the the data set is specified as project, library, and type, or as another data set name. The data set must reside on the specified volume.

- **R Rename Entire Data Set.** Used to provide a new name to the entire data set. If you specify a volume serial for a data set to be renamed, ISPF checks to see whether the data set is cataloged on that volume. If it is, the rename panel prompts you to specify whether to recatalog the data set. The displayed default for the field is **Yes**. If you specify a volume serial and the data set is not cataloged, it remains uncataloged after you rename it. If a volume serial is not specified, the data set is recataloged to the new data set name and the old data set name is uncataloged.
- **U Uncatalog Data Set.** Used to uncatalog a specific data set. There is no need for the specified data set to be allocated or for the volume on which it resides to be mounted. If the catalog entry being removed contains an expiration date, a confirmation panel is displayed.
- **D Delete Entire Data Set.** Used to delete a data set. A confirmation panel is displayed when you select **D** (for delete). ISPF checks to see whether the data set is cataloged on that volume. If it is, the confirm panel prompts you to specify whether to uncatalog the data set. It defaults to Yes. If a volume serial is not specified, and the data set does not have an expiration data, the data set is deleted and uncataloged.
- **S Data Set Information (Short).** Used to display information that resides on Storage Management Subsystem volumes when DFP is installed and available and the Storage Management Subsystem is active.
- **Blank Data Set Information.** Used to display information about the selected data set. The information is the same as found on the topic of data sets in the section entitled Using Library Utility Options. For multivolume data sets, options I and S display current allocation and utilization values that represent totals from all volumes used. When requesting information on a multivolume data set, you cannot enter a volume serial.
- **M Enhanced Data Set Allocation.** Used to allocate a new data set by using the Storage Management Subsystem classes (management class, storage class, and data class). A data set that is allocated on a volume that is managed by the Storage Management Subsystem is referred to as a managed data set. Conversely, a data set that is allocated on a volume that is not managed by the Storage Management Subsystem is called a non-managed data set.
- **V VSAM Utilities.** Used to create the IDCAMS commands to define, delete, and list catalog information for VSAM data sets.

Using Move/Copy Utility

Move/Copy is the third option on the Utility Selection panel. To access this option, type **3** at the command line and press **[Enter]**. The Move/Copy Utility panel is displayed (**Figure 20**). Following is a description of the fields.


```

Menu  RefList  Utilities  Help
-----
                                Move/Copy Utility
Option ==>

C  Copy data set or member(s)          CP Copy and print
M  Move data set or member(s)          MP Move and print
L  Copy and LMF lock member(s)         LP Copy, LMF lock, and print
P  LMF Promote data set or member(s)   PP LMF Promote and print
Specify ŸFromŸ Data Set below, then press Enter key
From ISPF Library:
  Project . . . . . ( ««« Options C, CP, L, and LP only ««« )
  Group . . . . .
  Type . . . . .
  Member . . . . . (Blank or pattern for member list,
                   Ÿ*Ÿ for all members)
From Other Partitioned or Sequential Data Set:
  Data Set Name . . .
  Volume Serial . . . (If not cataloged)
F1=Help      F3=Exit      F10=Actions  F12=Cancel

```

Figure 20. Move/Copy Utility Panel

- **C and CP Copying Data Sets.** Used to specify up to four input libraries as the “From” data set. The libraries are searched from left to right as they are entered into the panel.

Use Option C to copy a data set. You can specify either a DASD-resident sequential or partitioned data set for both the “From” or “To” data sets. The “From” data set is not deleted.

Use Option CP as you would Option C, except source listing are recorded in the ISPF list data set as follows:

- If the “To” data set is partitioned, a listing of each new or replaced member is recorded.
 - If the “To” data set is sequential, a listing of its complete contents is recorded.
- **M and MP Data Sets.** Used to specify up to four input libraries as the “From” data set. Only the first library in the sequence is searched. Therefore, the member to be moved, which is either specified in the Member field or selected from a member list, is moved only if it is found in the first library. The other three library names remain on the panel and can be used with the C, CP, L, and LP options.

Use Option M to move a data set. You can specify either a DASD-resident sequential or partitioned data set for both the “From” or “To” data sets.

- If the “From” data set is partitioned, the selected members are deleted from it.
- If the “From” data set is sequential, the complete “From” data set is deleted.

The MP Move and Print are the same as Option M, except source listings are recorded in the ISPF list data set as follows:

- If the “To” data set is partitioned, a listing of each new or replaced member is recorded.

- If the “To” data set is sequential, a listing of its complete contents is recorded.
- **L and LP Copying and Locking Data Sets.** Used to specify up to four input libraries as the “From” data set. The libraries are searched from left to right as they are entered on the panel. The member to be locked, which is either specified in the Member field or selected from a member list, is locked from the first library in which it is found.

L Copy and LMF Lock Member. Use option L to copy data from a controlled library and lock the member in the controlled library.

LP Copy, LMF, Lock, and Print: Same as option L, except source listings are recorded in the ISPF list data set, as follows
 - If the “To” data set is partitioned, a listing of each new or replaced member is recorded.
 - If the “To” data set is sequential, a listing of its complete contents is recorded.
- **P and PP Promoting Data Sets.** Used to specify up to four input libraries as the “From” data set. However, only the first library in the sequence is searched. The member to be promoted, which is either specified in the Member field or selected from a member list, is promoted only if it is found in the first library. The other three library names remain on the panel and can be used with the C, CP, L, and LP options.

Using the Data Set List Utility

Data Set List Utility is the fourth option on the Utility Selection panel. To access this option, type **4** at the command line and press **[Enter]**. The Data Set List Utility panel is displayed (**Figure 21**). Following is a description of the fields on this panel.

Menu	RefList	RefMode	Utilities	Help
Data Set List Utility				
Option ==>				
blank Display data set list			P Print data set list	
V Display VTOC information			PV Print VTOC information	
Enter one or both of the parameters below:				
Dsname Level . . .				
Volume serial . .				
Data set list options				
Initial View . . . 1		1. Volume	Enter y/y to select option	
		2. Space	/ Confirm Data Set Delete	
		3. Attrib	/ Confirm Member Delete	
		4. Total		
The following actions will be available when the list is displayed:				
Enter a y/y on the data set list command field for command prompt pop<up.				
Enter TSO commands, CLIST, REXX execs, or y=y to execute previous command.				
F1=Help	F3=Exit	F10=Actions	F12=Cancel	

Figure 21. Data Set List Utility Panel

- **Dsname Level.** Used to specify the level or levels of any data set that you want to list or print. When you specify the Dsname level, you are defining the level qualifiers for the data set names to be included in the list.

- **Volume Serial.** Used to specify the volume serial whose VTOC is to be used to display or print a list of data set names or VTOC information. ISPF retains the information you put in this field and displays it the next time you use the panel.
- **Volume.** The volume view shows a data set list that contains data set names and the volumes on which they reside.
- **Space.** The space view shows a a data set list that contains data set names, tracks, percentages used, extents, and devices.
- **Attrib.** The attributes shows a data set list that contains data set names, data set organizations, record formats, logical record lengths, and block sizes.
- **Total.** The Total view shows a data set list that contains all the information displayed by the Volume, Space, and Attributes views, in addition to created, expired, and referred dates.
- **Confirm Data Set Delete.** Used to control whether the Confirm Delete panel appears when you are using the D (delete data set) line command from the displayed data list or the TSO Delete command.
- **Confirm Member Delete.** Used to control whether the Confirm Delete panel appears when you are using the D (delete) command for a member in the displayed data set list.

Reset ISPF Statistics Utility

Reset is the fifth option on the Utility Selection panel. To access this option, type **5** at the command line and press **[Enter]**. The Reset ISPF statistics panel is displayed (**Figure 22**). Following is a description of the fields.

```

Menu  RefList  Utilities  Help
-----
                                Reset ISPF Statistics

Option ==>                                More:      +

R Reset (create/update) ISPF statistics
D Delete ISPF statistics
New Userid      . . . . .      (If userid is to be changed)
New Version Number . .      (If version number is to be changed)
                                Enter y/Y to select option
                                /  Reset Mod Level
                                /  Reset Sequence Numbers

ISPF Library:
  Project . . .
  Group . . .
  Type . . .
  Member . . .      (Blank or pattern for member selection
                    list, y*y for all members)

Other Partitioned Data Set:
  Data Set Name . . .
  Volume Serial . . .      (If not cataloged)
F1=Help      F3=Exit      F10=Actions  F12=Cancel

```

Figure 22. Reset ISPF Statistics Panel

- **New User ID.** Used to set the ID field in the statistics. Use this field if you want to change the user ID the statistics are recorded under.
- **New Version Number.** Used to change the version number.

- **Reset Mod Level.** Used to reset the modification level. This field is selected by typing in a slash.
- **Reset Sequence Numbers.** Used to reset the sequence numbers. This field is selected by typing in a slash.
- **SCLM Settings.** Used to determine the last type of edit the file had performed on it.

Following is an explanation of the settings:

- **SCLM.** Used to specify that the last edit of this file was under SCLM control if the bit is **On**.
- **Non-SCLM.** Used to specify that the last edit of this file was under control of other than the SCLM, if the bit is on.
- **As-is.** Used to specify that this copy operation transfers the current setting of this as it already is, if the bit is on.
- **Reset Date/Time.** Used to determine whether or not to reset the Last Modified Date or Time and the Creation Date of the file.
- **Reset Number of Lines.** Used to determine whether or not to reset the the Current Number of Lines, the Initial Number of Lines, and the Number of Modified Line settings.

Initiating Hardcopy Output

Hardcopy is the sixth option on the Utility Selection panel. To access this option, type **6** at the command line and press **[Enter]**. The Hardcopy Utility panel is displayed (**Figure 23**). Following is a description of the fields that have not been previously described:

Menu RefList Utilities Help	
Hardcopy Utility	
Command ==>	
Process option	1. Print and keep data set or member 2. Print and delete sequential data sets
Data Set Name . .	
Volume Serial	(If not cataloged)
Data Set Password . .	(If password protected data set)
Print Mode	BATCH (BATCH or LOCAL)
Sysout class	(BATCH only)
Local printer ID or writer<name>	(LOCAL only)
Job statement information: (If not to local printer/external writer, verify before proceeding)	
====>	
====>	
====>	
F1=Help	F3=Exit F10=Actions F12=Cancel

Figure 23. Hardcopy Utility Panel

- **Print Mode.** Used to specify the print mode, either Batch, which submits your print request as a background job; or Local which routes the data to a local printer that may be connected to your terminal group.

- **Sysout Class.** Used to specify the destination of the printed data set. This is to be used when the data set to be printed and SYSOUT class is specified.
- **Local Printer ID.** Used to specify the destination of the printed data set. This is to be used when the data set is to be printed and the local printer ID is specified.

Creating and Submitting JCL

To generate and submit JCL for print jobs, follow these steps:

1. Choose one of the options listed in the Process Option section of the panel. choice 1 (PK) for print and keep, or choice 2 (PD) for print and delete.
2. Type in a fully qualified data set name and member name.
3. If the data set is not cataloged, specify the volume serial.
4. If your data set is password protected, type the password in the Data Set Password field.
5. Type in either Batch or Local in the Print Mode field.



Note

If you choose Batch, type a SYSOUT class and any job statement information you need. If you choose Local, type the name of a local printer in the Local Printer ID field.

6. Press **[Enter]**.

If you chose Batch, ISPF generates the JCL and displays the message *JCL Generated*. You can either cancel the job by typing Cancel in the Option field and pressing **[Enter]**, or submit the job by typing End and pressing **[Enter]**.

If you chose Local, ISPF calls the PRINTDS TSO command processor to print the data set on the specified local printer.

Setup/Invoke JES-Master

Setup/Invoke JES-Master (Job Entry Subsystem) is Option J on the ISPF Primary Options Menu (**Figure 4**). JES-Master allows the user to examine the status of all jobs that are present in the system. Specific system output data sets or groups of data sets can be selected for browsing. Standard ISPF browse is used for scanning system output data and, therefore, all standard browse commands and facilities are available.

The Setup/Invoke JES-Master option is used to view and print output at the users terminal. The first panel (**Figure 24**) is the JES-Master Selection panel.

```

----- JES«Master+ Selection Panel -----(V3R2)-----
SELECTION ==> 1
  Enter selected service Code or Name above,
    or JES xxxx to select an alternate JES,
    or JES to select the primary JES.

    «« SERVICE ««
    Code ««Name««
    S  Setup    Set default selection criteria
    T  Tutorial JES«Master+ Tutorial
    0  PArms    Set JES«Master+ Default values
    1  JOblist  Job List Display and Process

                                MODE ==> LIST
                                USERID ==> NFXXX
                                JOBNAME ==>
                                JOB CLASSES ==>
                                OUTPUT CLASSES ==>
                                CONFIRM DELETE ==> YES

F1=HELP      F2=SPLIT    F3=END      F4=RETURN   F5=RFIND    F6=RCHANGE
F7=UP        F8=DOWN     F9=SWAP    F10=LEFT   F11=RIGHT   F12=RETRIEVE

```

Figure 24. JES-Master Selection Panel

From this panel, you may specify various job selection criteria. The criteria are used for searching and selecting jobs from the JES-Master system. This panel will be used to enter a specific job name or class. The Job List panel (**Figure 27**) displays a listing of all job names specified for your user ID. From the Job List, you are allowed several line commands which are entered under **SEL** located in the left-hand column.

To select the Setup/Invoke JES-Master option, key in **J** at the Option prompt on the ISPF Primary Options Menu (**Figure 4**) and press **[Enter]**. The JES-Master Selection Panel is displayed.

Instructions follow for using the functions in this option.

Setting Default Selection Criteria

To set the default selection criteria in JES-Master, at the JES-Master Selection Panel, perform the following actions:

- At the Selection prompt on the JES-Master Selection Panel (**Figure 24**), key in **S** over the default code **1** and press **[Enter]** to activate the SETUP service. The

JES-Master Default Selection Criteria Panel (**Figure 25**) will be displayed. This field automatically defaults to 1.

```

----- JES«Master+ Default Selection Criteria -----(V3R0)-----
SELECTION ==>
  To set the default selection criteria for a listed function,
  enter the number corresponding to the function.
  To see the results of these default criteria, enter the function
  name (or the first 2 characters of the name).

      1   JOblist   Job List Display and Process

F1=HELP      F2=SPLIT    F3=END      F4=RETURN    F5=RFIND     F6=RCHANGE
F7=UP        F8=DOWN     F9=SWAP    F10=LEFT     F11=RIGHT    F12=RETRIEVE

```

Figure 25. JES-Master Default Selection Criteria Panel



Note

If the user wants to move to another Primary Menu Option from this point, key in **=** and the option number and press **[Enter]**. For example, to move to the View option panel from this point key in **=1** and press **[Enter]**.

- At the Selection prompt on the JES-Master Selection Criteria Panel (**Figure 26**), key in **1** and press **[Enter]** to move to the JES-Master JOB LIST Setup Panel (**Figure 26**).
- On the JES-Master JOB LIST Setup Panel, tab to the Jobname field and key in your user ID with an ***** at the end and press **[Enter]** to set up the job name. The system will default to this job name until another name is entered.

```

----- JES«Master+ JOB LIST Setup Panel -----(V3R0)-----
COMMAND ==>
  Enter the default JOB«LIST selection criteria below:
  USER ID ==>NFXXX          > Primary          NOTE: Use JOBNAME=*
  or                                         > Selection      to select ALL
  JOBNAME ==>                > Criteria         jobs.
  Types ==> JTS   J=Job,T=TSU,S=STC,I=Initiator
      Queue ==>          >
      Classes ==>        >
      Origin ==>          > Secondary Criteria
      Dest ==>            > (applies WITHIN
      Acct.# ==>          > the Primary
      Room ==>            > Criteria)
      Pgm# ==>            >
      Sec«Id ==>          >
  Press ENTER to save these criteria and display the SETUP menu.
  Press END to save these criteria and return to the MAIN menu.
F1=HELP      F2=SPLIT    F3=END      F4=RETURN    F5=RFIND     F6=RCHANGE
F7=UP        F8=DOWN     F9=SWAP    F10=LEFT     F11=RIGHT    F12=RETRIEVE

```

Figure 26. JES-Master JOB LIST Setup Panel

Display Job List

To display Job List in the JES-Master job entry system, at the ISPF Primary Options Menu (**Figure 4**), perform the following actions:

- At the Option prompt on the ISPF Primary Option Menu, key in **J** and press **[Enter]**. The JES-Master Selection Panel (**Figure 24**) is displayed.
- At the Selection prompt on the JES-Master Selection Panel, option **1** is system generated. Press **[Enter]**. The Job List panel (**Figure 27**) is displayed. The Job List panel shows information about the user and any jobs still in the system.

```
-- (1)==> - Job List NF316 Q=ALL C=ALL O=ALL D=ALL      ----- NO SYSOUT FILES
COMMAND ==>                                           SCROLL ==> PAGE
SEL JOBNAME  JOBID  MC  <<<<QUEUE<<< <RECORDS MAXRC  ADDITIONAL INFO  DEST  STEP
S  NFXXX      T16838 Z  EXEC SYSB          405      MULTTEST 0:01.18  US05PROC
***** BOTTOM OF DATA *****
```

F1=HELP	F2=SPLIT	F3=END	F4=RETURN	F5=RFIND	F6=RCHANGE
F7=UP	F8=DOWN	F9=SWAP	F10=LEFT	F11=RIGHT	F12=RETRIEVE

Figure 27. JES-Master JOB LIST Panel

JES-Master Commands

The two types of commands used to control JES-Master are Primary and Line commands.

Primary Commands

Primary commands operate in the COMMAND field located in the upper left corner of the JES-Master Job List panel. The primary commands available are **Find**, **Locate (Loc)** and **Select**.

The **Find** command is used to locate an occurrence of a specific word or number on a JES-Master job display screen. For example, to find the word **product** enter **find PRODUCT** and **press** the **[Enter]**. The display moves directly to the next appearance of the word **Product** after the cursor.

The **Locate (LOC)** command is used to locate specific job name on the JES-Master Job List. If the job exists on the list, the cursor will move to the first occurrence of the job name. Users may access a specific character or line number from the JES-Master Job Display screen. For example, **key** in **LOC B** in the Command field and press **[Enter]**. The display moves directly to the first occurrence of the letter **B**.

The Selection command can be used to directly access a job name, if known, from the JES-Master Job List without browsing the entire list. For example, enter selection **T9999** in the Command field and press **[Enter]**. The JES-Master Job Display for job name “T9999” will be shown.

Line Commands

Line commands are performed on and affect individual lines only. The following line commands may be used on the Job List Panel (**Figure 27**) only:

Code	Description
S or SEL	Selects a job.
M	Modifies a job. This is a GLOBAL modification and applies to all data sets of the job.
B	Browse a job.
R	Requeues (releases) a job from its current queue and allows it to be printed.
C	Cancels a job if it is in execution. If the job is in the input or output queue, it will be flagged for deletion.
D	Deletes any held output for a job; however, the job will not be removed from the JES-Master System until all non-held output has been printed.
J	Displays a job's ready output.
L	Displays job information.

The following line commands may be used on the Job Display screen and will affect the entire data set:

Code	Description
B	Browses the data set.
L	Displays the JES-Master DISPLAY SYSOUT panel which allows the user to change the destination of the output.
M	Modifies the data set.
R	Requeues the data set.

The SCROLL commands described in the section under PF key assignments allow you to view data that exceeds the screen size.

VPS Monitor and Control Facility

VPS Monitor and Control Facility is Option V on the ISPF Primary Options Menu (**Figure 4**). VPS is a part of the Time Sharing Option (TSO) software package and is used for printer control. VPS has an interface VPS Monitor and Control Facility (VMCF). With VMCF you can monitor and control VPS specifically defined 3270 type printers.

To access the VPS Monitor and Control Facility from the Primary ISPF Menu, select Option V and press **[Enter]**. The VMCF Primary Option Menu (**Figure 28**) is displayed.

```
----- VMCF PRIMARY OPTION MENU ----- VPS62      NOT ACTIVE
COMMAND ===>

          PRINTER ===>
T3039E10

          1 - Enter VPS printer command
          2 - Display VPS printer list
          S - Display VPS printer summary
          T - VMCF Tutorial
          X - Terminate VMCF
Enter END command to terminate VMCF.

          USERID  « NFXXX
          TERMINAL «
          NAME    « VPS62
          PROFILE « NFXXX

F1=RETRIEVE  F2=VERSION  F3=END      F4=RETURN  F5=*/START,  F6=*/STOP,&
F7=UP        F8=DOWN    F9=*/CANCEL F10=*/REPEAT F11=*/RESTAR F12=CSR
```

Figure 28. VMCF Primary Option Menu

VMCF Primary Option Menu

The VMCF Primary Option Menu (**Figure 28**) contains 5 options. Below is a brief description of each option.

Enter VPS printer command (Option 1). Used to control the operation of a specific VPS printer or a group of VPS printers. This panel lists 7 commands that can be used to control VPS printers. (See **Figure 29**.)

Display VPS printer list (Option 2). Used to specify which printer is to be included in the VPS printer selection list. (See **Figure 30**.)

Display VPS printer summary (Option S). Used to display printer parameters and statistics for a printer.

VMCF Tutorial (Option T). Used to provide online information about the features and operations of VPS and VMCF.

Terminate VMCF (Option X). Used to terminate the VMCF session.

VPS Printer Command Menu

The VPS Printer Command Menu (**Figure 29**) allows the authorized user to control the operation of a specific VPS printer or a group of VPS printers. A command is selected by entering the number, representing the command, in the Option field and pressing **[Enter]**. The message area will be used to indicate whether or not the command was actually issued.

```

----- VPS PRINTER COMMAND MENU -----
COMMAND ==>

PRINTER ==> U1

3 - START      (Remove drain status)
4 - STOP      (Set drain status)
   TYPE ==>    (Blank«Normal, I«Immediate, F«Force)
5 - CANCEL     (Cancel dataset|job currently printing)
   TYPE ==>    (D«Dataset, J«Job, Default is dataset)
6 - REPEAT     (Repeat dataset currently printing)
7 - RESTART    (Restart dataset currently printing)
8 - REPOSITION (Reposition dataset currently printing)
9 - SELECT     (Alter printer selection criteria)

F1=RETRIEVE  F2=VERSION  F3=END      F4=RETURN  F5=*/START,  F6=*/STOP,&
F7=UP        F8=DOWN    F9=*/CANCEL F10=*/REPEAT F11=*/RESTAR F12=CSR

```

Figure 29. VPS Printer Command Menu

To access the VPS Printer Command Menu from the VMCF Primary Option Menu (**Figure 28**), select Option **1** and press **[Enter]**. The VPS Printer Command Menu is displayed with 7 options. Below is a brief description of each option.

Start (Option 3). Used to remove the DRAINED or EDRAINED status from one or more printers. It can also be used to notify VPS of a form mount.

Stop (Option 4). Used to put a printer into DRAINED status and stop further sysout selection for the printer. Specifying **I** after the printer id will cause the printer to stop printing immediately. Specifying **F** after the printer id will cause the printer to stop printing immediately, even if waiting for an event to occur, such as a printer ready condition after an intervention required. If neither **I** or **F** is specified, the printer will drain after completing the current job.

Cancel (Options 5). Used to remove one or more printers from the VPS system.

Repeat (Option 6). Used to print additional copies of the sysout dataset that VPS is currently printing on the specified printer.

Restart (Option 7). Used to restart printing of the sysout dataset currently being printed on the specified printer.

Reposition (Option 8). Used to reposition the sysout dataset that VPS is currently printing on the specified printer. Any request that would cause positioning to be prior to the start of the dataset will have the same effect as repositioning to line 1. Any request that would cause positioning to be past the end of the dataset will have the same effect as cancelling the dataset.



This command must be used for a specific VPS Printer.

Select (Option 9). Used to change the selection criteria for a printer. The specified selection criteria are merged with the current selection criteria to determine the new selection criteria. A selection criteria may be nullified by specifying a null value (i.e., D=, would nullify the destination).

VPS Printer Selection Menu

The VPS Printer Selection Menu allows the authorized user to specify which printers are to be included in the VPS Printer Selection List. The selection possibilities include printer name, group name, VPS started task name, and printer status. Within these selections, VMCF will restrict the VPS Printer Selection List to only those printers that the user is authorized to control. If nothing is entered in any of these selection fields, and the user presses **[Enter]** VMCF will include every printer that the user is authorized to control in the VPS Printer Selection List.

To access the VPS Printer Selection Menu from the VMCF Primary Option Menu (**Figure 28**), select Option **2** and press **[Enter]**. The VPS Printer Selection Menu (**Figure 30**) is displayed.

```

----- VPS PRINTER SELECTION MENU -----
COMMAND ===>
ENTER PRINTER LIST SELECTION CRITERIA:
PRINTER ===>          (Specify full or partial printer name)
GROUP   ===>          (Specify full or partial group  name)
VPS NAME ===>          (Limit search to specific VPS STC name)
PRINTER STATUS:       (Specify printer status; null defaults to any status)
- ABENDED             (Scheduler subtask abended)
- BUSY                (Utility function)
- DRAINED             (Stopped)
- DRAINING            (Printing but will stop when complete)
- EDRAINED            (Stopped due to error condition)
- FORMWAIT            (Waiting for form mount)
- IDLE                (Waiting for work)
- INTVREQD            (Intervention required)
- MISSRESP            (Missing response detected)
- POWEROFF            (Printer is powered off)
- PRINTING            (Currently printing)
F1=RETRIEVE F2=VERSION F3=END F4=RETURN F5=*/START, F6=*/STOP,&
F7=UP F8=DOWN F9=*/CANCEL F10=*/REPEAT F11=*/RESTAR F12=CSR

```

Figure 30. VPS Printer Selection Menu

The specific selection fields that can be entered on the VPS Printer Selection Menu are described below.

Printer. This field is used identify the printer(s) to be included in the VPS Printer Selection List. A generic printer name can be specified by entering an asterisk after a partial printer name.

Group. This field is used to identify the group(s) of printers to be included in the VPS Printer Selection List. A generic group name can be specified by entering an asterisk following a partial group name. To view only JES and PSF printers, enter a group name of JES.

VPS Name. This field is used to limit the list of printers to a specific VPS started task. If this field is left blank, VMCF will search the installation defined list of VPS started tasks.

Printer Status. This field is used to limit the list of printers to those in a specific state. A status is selected by entering any non-blank character (other than an underscore) next to the states to be selected.

Glossary

Action Bar. The area at the top of an ISPF panel that contains choices that give you access to actions available on the panel. When you select an action bar choice, ISPF displays a pull-down menu.

Browse. To look at a data set member without changing it. In JES-Master, this queue represents jobs that have completed executing.

Data Set. The major unit of data storage and retrieval, consisting of a collection of data in one of several prescribed arrangements and described by control information to which the system has access.

Data Set Name. The term or phrase used to identify a data set.

Default Printer. A printer which has been specified during the creation of your data. Printing will automatically activate to this printer when printing has been requested.

Destination. Any point or location, (e.g. node, station, terminal) to which data is to be sent. The routed location for the member, data set, or job.

Ellipsis. Three dots that follow a pull-down choice. When you select a choice that contains an ellipsis, ISPF displays a pop-up window.

Exec. Jobs on the execution queue. This queue has jobs that are awaiting execution as well as those that are currently executing.

File. A set of related records treated as a unit.

Group. A set of related records that have the same value for a particular field in all of the records, or a series of records logically joined together.

Hold. Jobs to be held in the print queue and later directed to a printer.

ISPF. Interactive System Productivity Facility is a programming tool which provides access to partitioned and sequential data sets.

JC. Job's execution class.

JCL. Job Control Language is a command language for mini and mainframe operating systems that launches applications. It specifies priority, program size and running sequence, as well as the files and data base used.

JES. Job Entry Subsystem is software that provides batch communications for IBM's MVS operating system. It accepts data from remote batch terminals, executes them on a priority basis and transmits the results back to the terminals.

Library. A collection of related files.

Macro. A series of selections, keystrokes and commands that have been recorded and assigned a name or key combination. When the macro is called or the key combination is pressed, the steps in the macro are executed from beginning to end.

Members. A collection of data units that are stored in a library.

Operating System. The master control program that runs the computer. It is the first program loaded when the computer is turned on, and its main part, called the kernel, resides in memory at all times. The operating system provides the user interface and controls multitasking. It handles the input and output to the disk and all peripheral devices. It also handles job scheduling.

Output. Data being delivered or to be delivered from a device or from a computer program.

Parameter. Any value passed to a program by the user or by another program in order to customize the program for a particular purpose. A parameter may be anything; for example, a file name, a coordinate, a range of values, a money amount or a code of some kind.

Partition. A reserved part of disk or memory that is set aside for some purpose.

Partitioned Data Set (PDS). A data set in direct access storage that is divided into partitions, called members, each of which can contain a program, part of a program, or data.

Point-and-shoot Text. Words on a screen that are cursor sensitive.

Pop-up Window. A bordered temporary window that displays over another panel.

Pull-down menu. A list of numbered choices extending from the selection you made on the action bar. The action bar selection is highlighted. You can select an action either by typing in its number and pressing Enter or by selecting the action with your cursor. ISPF displays the requested panel. If your choice contains an ellipsis (...), ISPF displays a pop-up window. When you exit this panel or pop-up, ISP closes the pull-down and returns you to the panel from which you made the initial action bar selection.

Push Button. A rectangle with text inside. Push buttons are used in windows for actions that occur immediately when the push button is selected (available only when running in GUI mode).

Queue. A line or list formed by items in a system waiting for service. A list of jobs waiting to be executed.

Remote Printer. A printer that is connected to a computer by a telecommunication line.

Requeue. A command that releases the data set from a HOLD status.

Sequential Data Set. A data set whose records are organized on the basis of their successive physical positions, such as on magnetic tape.

Software. Programs, procedures, rules, and any associated documentation pertaining to the operation of a computer system.

Source Data. The data contained in a source program or source module. Data that includes program codes, test data, documentation, or data used in reports.

Sysout Class. The two types of SYSOUT (system output) classes are **A** and **X**. Class **A** directs the output to a designated printer and a hard copy computer printout will be generated. Class **X** directs the output to be held in the SYSOUT queue to be viewed on the CRT screen.

TSO. Time Share Option is software that provides interactive communications for IBM's MVS operating system. It allows a user or programmer to launch an application from a terminal and interactively work with it.

Utility Program. A program that supports using the computer. Utility programs, or “utilities” provide file management capabilities, such as sorting, copying, comparing, listing and searching, as well as diagnostic and measurement routines that check the health and performance of the system.

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