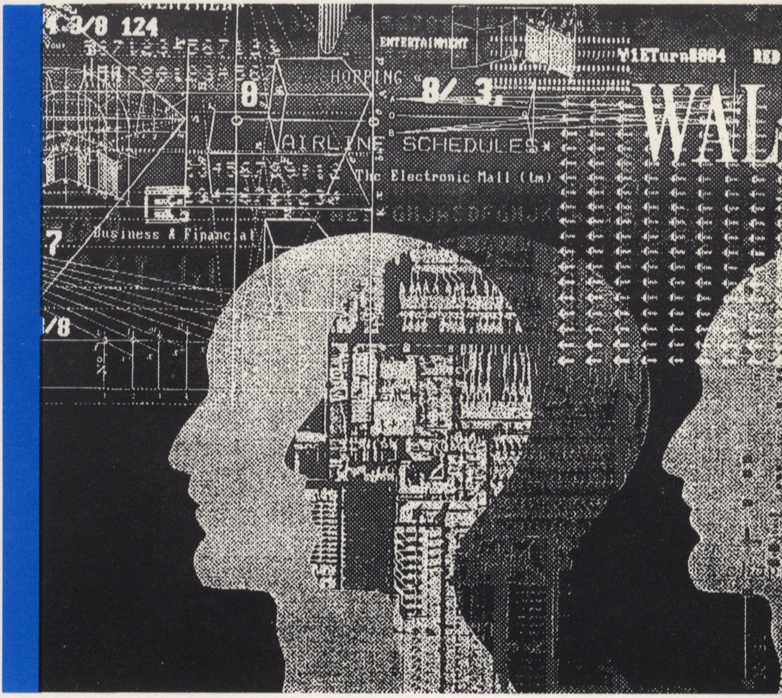
CompuServe®

Personal File Area

Users Guide



Personal File Area

Users Guide

CS-473(05/86)

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Contents

Chapter 1: Introduction

Chapter 2: Creating and Editing Files with Edit

Chapter 3: Creating and Editing Files with ICS Editor

Chapter 4: Working with Permanent Files

Chapter 5: Transferring Files

Chapter 6: ICS Standard-Function Commands

Index

Chapter 1
Introduction

Welcome to CompuServe's Personal File Area!

The Personal File Area provides you with your own private file maintenance and processing system. You can create files at your terminal and use CompuServe's facilities for file storage and manipulation. Any file you store remains available for you to read and edit.

The Personal File Area also provides you with a wide variety of methods for exchanging files with other subscribers. You can use EasyPlex, CompuServe's electronic mail service, to send and receive files as messages. You can read or download a wealth of files from CompuServe's Public File Access System, or place your own files there for others to use. You also can transfer files between your CompuServe storage area and your terminal's disk drive(s).

In addition, you can issue commands to obtain information about your current status and perform other standard CompuServe functions.

Modes of Operation

The Personal File Area offers two distinct modes of operation:

The menu mode is designed to help you perform file creation and handling functions with the least possible opportunity for error. You can select any of the available functions by entering the corresponding menu item number, and perform them by responding to simple English-language prompts.

The command mode is the most efficient means for performing all Personal File Area functions. You can perform any function by issuing the appropriate command. If you intend to use the Personal File Area often, you should learn commands.

Personal File Area Structure

The Personal File Area gives you both temporary workspace and permanent disk storage:

Temporary workspace exists only for the duration of the current session. It can hold one file, which can be a file you are creating at the time, or a copy of a previously created file that you call up for editing or review.

Disk storage is like a filing cabinet maintained for you by CompuServe. It holds all the files that you create and store. CompuServe initially allocates 128,000 bytes, or characters, of disk storage to every CompuServe subscriber. You can request more disk space (at an additional charge) through FEEDBK.

The file in your temporary workspace is called the current temporary file. When you save it, or transmit it to disk storage, it becomes a permanent file. CompuServe keeps any permanent file until you explicitly delete it, or until you do not access it for 30 days. To access a file means to call it into your workspace, or to take any other action that causes the file to be opened.

Note: if your subscription includes the Executive Option, your initial disk storage allocation is 192,000 bytes. Also, any permanent file will remain in your area until you do not access it for six months.

The current temporary file can be as large as you like. If you want to save it, it cannot exceed the size of your remaining disk space. To save a current temporary file, you must transmit it to disk before accessing another file or leaving the Personal File Area.

You can manipulate a permanent file in a number of ways without removing it from disk storage. You can rename it, copy it to another file, combine it with other files, delete it, and so on. You also can call a copy into your temporary workspace and display it, or change its contents and then substitute the updated copy for the original file.

File Creation Capabilities

The Personal File Area enables you to create any type of file you want: you can enter textual information or numeric data. You can use any of several text editor programs to create a file in your workspace:

EDIT creates a file without line numbers. This guide includes a detailed description, with extensive examples, of the most useful EDIT commands (See Chapter 2).

ICS Editor creates a file with line numbers. This guide explains and illustrates the major ICS Editor commands (See Chapter 3).

TECO is a text editor program designed expressly for Digital Equipment Corporation (DEC) computers. CompuServe supports TECO for the convenience of those already familiar with it. This guide does not include documentation of TECO procedures.

File Processing Capabilities

To help you work with files in disk storage, the Personal File Area includes commands that enable you to list your files, display the contents of any file, manipulate files in various ways, and conserve disk space. You also can order a printed copy of any file at any time. This guide describes the applicable procedures in detail (See Chapter 4).

This guide also explains the procedures for the various types of file transfer: to and from other subscribers, and to and from CompuServe (See Chapter 5).

General-Purpose Commands

In addition to all the functions directly related to file creation, storage, processing and transfer, the Personal File Area also includes a number of general-purpose commands, which enable you to perform most of the standard functions available in CompuServe's information services (See Chapter 6).

Billing

CompuServe charges standard connect-time rates (plus any communications surcharges imposed by supplemental networks such as Telenet, TYMNET, etc.) for the use of most Personal File Area capabilities. Where additional charges do exist (as for remote printing), you will receive advance notification. All charges are billed through your CompuServe account.

For the most up-to-date billing information, check the online billing area (GO BILLING).

Conventions

Throughout this guide, the following conventions are used:

UPPER CASE denotes an item that must be entered (typed) exactly as shown.

lower case denotes an item that can be one of many possible entries; the text explains the type of information required.

For example, EDIT file means that you must enter the word EDIT, a space, and the name of a file.

[ ] denotes an optional entry. For example, TYP[E] means that you must enter TYP, but the E is not required. If multiple items are stacked within brackets, you may enter any one of them or none.

{ } denotes a required entry that can be any one of the items stacked within the braces.

CR denotes the carriage return key.

Blue in examples indicates input from you as opposed to output from the computer.

Accessing the Personal File Area

The procedures for signing on to CompuServe are detailed in the CompuServe Information Service User's Guide (CS-597). You can reach the Personal File Area from any ! prompt by entering:

```
PER
```

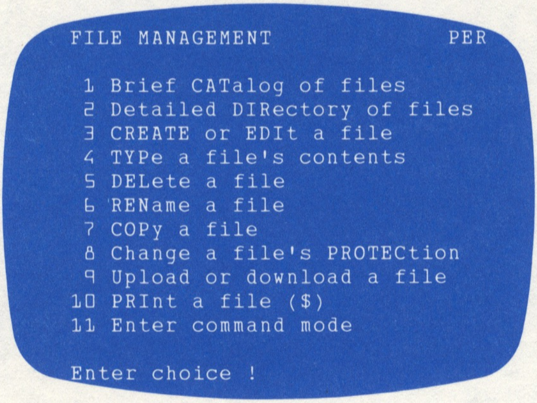
or

```
PRO
```

The PER command puts you in the menu mode, while the PRO command puts you in command mode.

You can also reach the Personal File Area via menus by selecting Choice 11 (Computers/Technology) from the top CompuServe menu, and then selecting Choice 7 (Personal File Area) from the COMPUTERS AND TECHNOLOGY menu.

When you access the Personal File Area in the menu mode, the following menu appears:

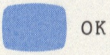


```
FILE MANAGEMENT                PER

 1 Brief CATalog of files
 2 Detailed DIRectory of files
 3 CREATE or EDIt a file
 4 TYPe a file's contents
 5 DELete a file
 6 REName a file
 7 COPy a file
 8 Change a file's PROTECtion
 9 Upload or download a file
10 PRInt a file ($)
11 Enter command mode

Enter choice !
```

When you access the Personal File Area in command mode, you see the following prompt:



```
OK
```

Navigating the Personal File Area

Most of the file-related functions of the Personal File Area are listed as menu items in the File Management menu above. To perform any of these functions, you begin by entering a number from 1 through 10. The system responds by prompting you for any necessary information. When you enter this information – usually the file name – the system performs the indicated function.

You should note that, when you select Choice 3 and identify a file, you are actually intitiating a program. You will receive a message indicating that the specified file is ready. At this point, you can begin entering or editing the file's contents, using the EDIT commands described in this guide (See Chapter 2). You should always exit the EDIT program with an /EX command on a line by itself.

Once the function you indicate has been performed, the File Management menu will reappear on your screen, allowing you to select another function.

The functions itemized in the menu are not the only functions you can specify; you can select any available Personal File Area function by entering the appropriate command. You do not have to enter command mode to issue commands.

However, the command mode does have several advantages: the most important is the time saved by not redisplaying the File Management menu when each command is executed. You can issue any number of commands without returning to the menu. Avoiding the repeated menu display also helps you keep better track of your activities.

Thus, it is a good idea to enter command mode whenever you intend to perform more than one or two functions. Otherwise, it is just as easy to specify any function from the menu.

To switch to command mode, you must select Item 11 from the menu. Your terminal will respond by displaying the command prompt:

```
OK
```

Whenever you see the OK prompt, you can issue any available Personal File Area command.

Once you have finished issuing commands, you can return to the File Management menu by entering:

```
M
```

at any OK prompt.

Online Information

You can display information about Personal File Area commands and programs by entering:

```
HELP
```

any time you see the ! or OK prompt. The HELP command lists all the topics for which online information is available, and then prompts you to select one of them, like this:

```
Topic?
```

As soon as you specify a topic, the system displays a HELP message. Some of the topics have additional subtopics. When this is the case, the HELP message for the major topic will list the available subtopics and prompt you for further specifications.

If you know the name for the topic, you can bypass the topic list by including the name when you issue the HELP command. For instance, the command:

```
HELP FILTRN
```

will immediately display information about the FILTRN program. Similarly, you can also include the name of a subtopic in the initial command, like this:

```
HELP FILTRN INSTRUCTIONS
```

This command takes you directly to the HELP message about FILTRN program instructions.

To quit displaying HELP messages, just type a carriage return when you are prompted for a new topic or subtopic. Depending on the level of the last message, you may have to type several carriage returns to get back to the ! or OK prompt.

Exiting the Personal File Area

You can exit the Personal File Area whenever you see the ! prompt or the OK prompt.

You have already seen how you can use the M command to return to the File Management menu from the command mode. Repeating the M command will take you out of the Personal File Area to a service menu.

To go directly to the top CompuServe menu, enter:

```
T
```

To exit the Personal File Area and proceed directly to another information service area, enter:

```
GO
```

followed by the page identifier for the desired service. For example:

```
GO CB
```

takes you to the Citizens Band Simulator menu.

For a list of available services and the corresponding page designators, see the index (GO IND).

To exit the Personal File Area, sign off CompuServe, and initiate a new sign-on sequence, enter:

```
HELLO
```

or

```
LOGIN
```

To exit the Personal File Area and sign off CompuServe, enter:

```
OFF
```

or

```
BYE
```

Identifying Your Files

You must assign a unique file identification to every file you create. The file identification format is:

filename[.[extension]]

filename is required for each file, and consists of up to six characters. It is a good idea to select a name that will convey some idea of the file's purpose or contents; this will help you to reference the file later. For example, you might assign a name like TAXDED to a file where you list itemized income tax deductions.

extension is optional, and can consist of up to three characters. It can help describe the type of file. For instance, you might use the extension TXT for textual files or the extension DAT for numeric data files.

If the extension is present, you must place a period between it and the file name. Otherwise, the period is not required.

The first character in the file name must be alphabetic. The other characters in the file name and extension can be any combination of:

- Alphabetic letters (A-Z)
- Numeric digits (0-9)
- Dash (-)

Certain extensions – BAK, CRF, LST and TMP – are reserved for temporary files. The system automatically deletes a file with any of these extensions as soon as you exit the Personal File Area.

The file identifications EMAIL.DAT and EMAIL.ADR are also reserved, for special files that hold EasyPlex messages and your EasyPlex address book. (See File Transfer via EasyPlex). Similarly, MENU.CTL is reserved for a file that can be used for your Personal Menu. CompuServe creates, updates and/or deletes these files automatically.

Wild Card (* and ?) Features

Once you have placed a set of files in disk storage, you can use the special wild card characters * and ? to reference multiple files.

You can use the * wild card to copy, delete, etc., all files with the same name or extension. For example, TEST.* would indicate all files with the file name TEST, while *.DAT would indicate all files with the extension DAT.

```
CAT *.DAT
JANEXP.DAT      FEBEXP.DAT      MAREXP.DAT
```

The ? wild card indicates that any character may appear in the corresponding position. For example, INT???.TXT would reference any file whose name begins with INT and whose extension is TXT.

```
CAT ???EXP.DAT
JANEXP.DAT      FEBEXP.DAT      MAREXP.DAT
```

Fine-Tuning Your Terminal

The Personal File Area also provides four commands to help you fine-tune your terminal. You can issue these commands from the File Management menu or any OK prompt.

FULLD informs the CompuServe system that your terminal uses full-duplex communications. That is, it is able to transmit and receive messages simultaneously. Unless otherwise specified, CompuServe assumes that your terminal operates in full-duplex mode.

HALFD informs the CompuServe system that your terminal uses half-duplex communications. That is, it can not transmit and receive messages simultaneously.

TER[MINAL] PAR[AMETER] displays a complete list of the parameters for your terminal, along with the current setting for each parameter. You can issue a HELP TERMINAL command to display explanations for the parameters and settings.

TER[MINAL] parameter setting changes the specified terminal parameter to the specified setting. You can use a HELP TERMINAL command to locate explanations for all terminal parameters and the available settings.

You can use these commands to change the way your terminal operates during the current Personal File Area session. But you should be aware that any modifications made in this way will not remain in effect if you switch hosts or sign off and then sign back on.

To make permanent changes in your terminal parameters, enter the command:

```
GO TERMINAL
```

This takes you to the TERMINAL/OPTIONS menu of your User Profile. From there, you can select the menu choice for viewing or changing your current terminal parameters. Any change you make in this fashion will remain in effect unitl you change it again.

Chapter 2
Creating and Editing Files with EDIT

The EDIT program is an excellent means for creating and editing textual data files in your Personal File Area. With EDIT you can enter and change the contents of a file without using line numbers.

Note: EDIT is the new name for CompuServe's FILGE (File Generator and Editor) program. CompuServe is in the process of modifying existing documentation to reflect the name change. Meanwhile, you should interpret any reference to FILGE as a reference to EDIT.

This section provides an introduction to the use of the EDIT program, together with sufficient explanatory material to enable you to create and modify EDIT files. For additional information about EDIT, see the EDIT Users Guide (CS-612).

When you use EDIT, you are actually running a program. This means that standard commands such as COPY, TYPE, etc., do not work. The EDIT program has its own set of instructions; this section describes the most important ones.

EDIT commands begin with a forward slash (/). They are valid only when you issue them on a separate line. They must appear at the beginning of the line; any line not beginning with a slash is treated as text or data. When an EDIT command is executed, you will not see the OK prompt (until you exit the EDIT program with the /EX command).

EDIT Terminology

Before you begin to study the EDIT commands, you should be familiar with the following frequently used terms:

text is the information that you enter or edit in a file. A line of text is any line that does not begin with a slash; it can contain up to 140 characters.

string is one or more consecutive characters within a line. It can include spaces or tabs. Some examples of strings are:

```
To initiate the EDIT program,
To initiate
To init
```

current line is the line of text on which you are working at any given time.

line pointer is an invisible marker which points (directs the EDIT program) to the current line. You can move the line pointer forward or backward (up or down) any number of lines. You also can move it forward to a line containing a specific string.

Initiating the EDIT Program

To create a new file or edit an existing file, you must call the EDIT program. If you are in menu mode, select Choice 3 (CREATE or EDIt a file) from the File Management menu. This displays the following prompt:

```
Filename:
```

At this point you must enter the complete indentification for the file you want to create or edit (See Identifying Your Files in Chapter 1).

The EDIT program responds by notifying you that the file is ready. When you first create a file, EDIT displays a message that looks like this:

```
New file EXPENS.DAT created - ready
```

When you identify an existing file, the ready notice looks like this:

```
File EXPENS.DAT - ready
```

At this point you are in EDIT (running the EDIT program). If you are creating a new file, just start typing the desired contents, line by line. You can edit the text as you go or afterwards.

In command mode, you can create a new file by issuing a CREATE command at the OK prompt. The format for the CREATE command is:

CREATE file

Note that, unlike most other commands, the CREATE command cannot be abbreviated. You must enter the complete word.

file is the complete identification for the file to be created. See Identifying Your Files in Chapter 1 for the rules for CompuServe file identification.

To edit an existing file in command mode, use an EDIT command. Its format is:

```
EDI[T] file
```

The file you specify in an EDI[T] command must already exist in your Personal File Area. If there is no such file, you will receive an error message and the EDIT command will be ignored.

Exiting the EDIT Program

After you have finished creating and/or editing the file, you can exit the EDIT program by entering:

```
/EX
```

on a line by itself. This automatically places the current contents of the file in disk storage. If you were editing a previously stored file, the new contents would also overwrite the previous contents.

If you were in menu mode when you initiated the EDIT program, you will return to the File Management menu as soon as the /EX command is executed. If you were in command mode, you will see the OK prompt.

You should note that, until you enter the /EX command or one of the other file transmission commands (the /N0 command or the /T command), all the work you do on your file is recorded only in your temporary workspace. For this reason, you should never exit the EDIT program with a Control C. If you do, the file copy you have been working on will be lost.

Sample EDIT File Creation

The following example illustrates file creation with the EDIT program from the command mode. We will use the same file to illustrate the various editing commands on the next few pages.

```
OK
CRE TEST.DAT
New file TEST.DAT created - ready


This is an EDIT file.
It does not have line numbers.
It contains only the text you enter.
    You can begin a text line with any
character but a /.  A / at the head of
a line identifies an editing command.
/EX

OK
```

EDIT Program Commands

Every EDIT program command begins with a forward slash (/) in the first position of a new line. The command must be the only entry on a line.

You can terminate an EDIT program command with a carriage return (usually marked Enter or Return) or an Escape key (sometimes marked ESC). This manual denotes the carriage return key with the symbol CR. CR simply executes the command. Escape executes the command and displays the new contents of the current line after execution.

Using the Escape key can help you to keep track of the current line and to verify that any changes are the ones you intended to make. You should note that entering the Escape key displays a dollar sign ($). The $ appears only at your terminal; it is not entered in your file.

EDIT Display and Position Commands

/**P[#lines]** displays (prints) the specified number of lines, starting with the current line. If you enter /P without a number, only the current line is displayed. After the command is executed, the line pointer is positioned at the last line displayed. For example:

```
/P2
```

displays the current line and the next following line. It also repositions the line pointer at the second line displayed (now the current line). From the top of our sample file, for instance:

```
/P2
This is an EDIT file.
It does not have line numbers.
```

Any command you now issue would begin execution at the second displayed line.

If the number you specify is larger than the remaining number of lines in your file, the following message will appear below the last displayed line:

```
% FLGEOF - End of file
```

and the line pointer will be positioned at the last line in your file.

/**N[#lines]** moves the line pointer up or down the specified number of lines. The /N command by itself moves the line pointer to the next following line (same as /N1). If you include a positive number, the line pointer moves down the specified number of lines. If you include a negative number, the line pointer moves up the specified number of lines.

For example, suppose you are positioned at the third line of our file. Entering:

```
/N2
```

would move the line pointer to the fifth line, whereas entering:

```
/N-2
```

would move the line pointer to the first line.

Terminating the /N command with an Escape key displays the new current line (the line where you are positioned) after the command is executed. For example:

```
It contains only the text you enter.
/N-2 Escape
This is an EDIT file.
```

You can use the special instruction /N0 (next zero) to transmit the current contents of your file to disk storage. It is a good idea to enter a /N0 command periodically, to help minimize the time and effort that could be lost in case of a communications failure or computer system problem.

/T (top) positions the pointer at an imaginary line just before the first line of your file. By entering the /T command before entering any string search command, you can guarantee that the search operation will include the entire file. You can also use the /T command to insert new text at the top of the file. For example:

```
/T
Sample EDIT File
CR
/T
/P3
Sample EDIT File

This is an EDIT file.
```

The /T command, like the /N0 command, also places the current contents of your file into disk storage.

A variation of the /T command, /TCNT (top and count) places the line pointer at the top of your file and displays the number of lines in the file. Using our sample file (including the two lines just added):

```
/TCNT
[ Line 8 ]
```

/B (bottom) positions the pointer at the last line in the file. For example:

```
/B Escape
a line identifies an editing command.
```

You can use the /B command when you want to add new text at the end of the current file.

/F/string positions the line pointer at the first following line that begins with the specified character string. From the top of our file, for example:

```
/F/It Escape
It does not have line numbers.
```

If you happened to issue the same command from a line below the last line beginning with *It,* you would receive the following error message:

```
? FLGLNF - Line not found
```

/L/string (locate string) moves the line pointer down the file to the first line containing the specified character string in any position. From the line we just found with the /F command, for example:

```
/L/text Escape
It contains only the text you enter.
```

You should always enter enough of the line to locate the specific occurrence of the string you want. If you wanted to advance to the second line containing "text" (the first line of the second paragraph), for example, you might enter:

```
/L/a text Escape
        You can begin a text line with any
```

You can repeat the last specified change by simply entering /C. For example:

```
/T
/L"/ [Escape]
character but a /.  A / at the head of
/C"/"slash [Escape]
character but a slash.  A / at the head of
/C [Escape]
character but a slash.  A slash at the head of
```

Even if you move to another line before entering the second /C command, it will make the same change as the original command.

/**O[#lines]** overwrites the specified number of lines, beginning with the current line. If you issue the /O command without a number, it overwrites only the current line.

You should use the /O command instead of the /C command when you wish to make extensive or multiple changes to text.

In effect, the /O command deletes the specified number of lines without moving the line pointer. After issuing the /O command, you can enter any number of new text lines, no matter how many lines you delete.

When you issue the /O command, you must begin entering the substitute text on the next following line. For example:

```
/T
/L/It c [Escape]
It contains only the text you enter.
/O
You just enter the text, line by line,
depressing the ENTER key (or carriage
return) whenever you wish to begin
another line.
/N [Escape]
NOTE: You can begin a line of text with any
```

The action of the /O command ends only when you issue another EDIT program command. If you issue the /O command, then issue another EDIT program command without entering any substitute text, it simply deletes the specified number of lines.

/**GC/oldstring[/newstring]** searches down the file for the first occurrence (not counting the current line) of the specified old string, and then replaces it with the specified new string, if any. If you do not specify a new string, the /GC command deletes the old string.

Suppose, after displaying our file, we decide to change *another* to *a new.*

```
/T
/GC/another/a new [Escape]
a new line.
```

After the /GC command is executed, the line pointer remains at the changed line.

/A/string appends the specified character string to the end of the current line. For example:

```
/A/  You can exit EDIT [Escape]
a new line.  You can exit EDIT
```

If you enter the /A command without specifying a character string, it adds the same string specified in the last previous text editing command.

The /A command does not move the line pointer.

/D[#lines] deletes the specified number of lines, beginning with the current line. The /D command without a number deletes only the current line.

The /D command always moves the line pointer to the first undeleted line. If you terminate the /D command with an [Escape], it displays this line. For example:

```
a new line.  You can exit EDIT
/D [Escape]
NOTE:  You can begin a line of text with any
```

Repeating a Command

You can instruct the EDIT program to execute a command more than once by placing a number after the initial slash. The general format is:

/#command

This feature is most useful with the /C command, when you wish to change several occurences of the same text in the current line. You can also use it with the /A command to append the same string multiple times. For example, 10A/* would place ten asterisks at the end of the current line.

You can specify indefinite repetition of a command by placing a left parenthesis (() between the forward slash and the command. For instance:

```
/(GC/EDIT/TEXTEDIT
```

would change every occurence of EDIT in the sample file to TEXTEDIT. Another good reason for using indefinite repetition is to review all the lines where a given string occurs. A sample sequence might look like this:

```
/T
/(L/EDIT Escape
Sample EDIT File
This is an EDIT File.
a line identifies an editing command.
%FLGSNF - String not found.
```

When you see this notice, you know that you have succeeded in locating all occurrences of EDIT. In this instance, the program has found the specified string three times, and then failed to locate another occurrence.

EDIT Usage Tips

Empty file – In menu mode if you erroneously identify a file you want to access (See Initiating the EDIT Program, above), you may accidentally create an empty file. Suppose, for example, that you transpose two letters when you intend to access the existing file JANEXP.DAT:

```
FILE MANAGEMENT                  PER

 1 Brief CATalog of files
 2 Detailed DIRectory of files
 3 CREATE or EDIt a file
 4 TYPe a file's contents
 5 DELete a file
 6 REName a file
 7 COPy a file
 8 Change a file's PROTECtion
 9 Upload or download a file
10 PRInt a file ($)
11 Enter command mode

Enter choice ! 3


Filename:  JANXEP.DAT

New file JANXEP.DAT created - ready
```

You can tell by the designation *New file* that you have not called in an existing file. Inspecting the file name reveals the problem. You can resolve it by exiting the EDIT program and deleting the new file.

You should always delete empty files, because the system allocates 1920 bytes of disk storage for any new file, regardless of the number of characters the file actually contains.

File backup – Whenever you use EDIT to access a file, the system automatically creates a backup copy of the file. This helps protect any valuable information you might accidentally destroy while editing.

The backup file copy has the same file name as the original, with the file extension BAK.

When you leave the Personal File Area, all backup files are automatically deleted. Therefore, if you wish to keep a backup file, you must rename it, using the procedures described elsewhere in this guide (See Chapter 4).

If your disk space contains a backup file from a previous EDIT session, you can access this file instead of the updated original by entering an EDIT command with the following format:

```
EDIT filename/R
```

identifying the file by file name only. You cannot include the extension BAK (or any other extension).

You should note that when you exit this recovered file, the system substitutes its contents for the updated original file, not the original backup file from the previous EDIT session. The original backup file remains unchanged.

Chapter 3
Creating and Editing Files with ICS Editor

The ICS Editor program creates a file with line numbers. It is designed to help you produce, store and manipulate files containing ordered sequences of lines, especially programs.

You must begin each line of an ICS Editor file with a number from 1 through 99999. It is recommended that you specify line numbers in multiples of 5 or 10. This makes it easy to insert additional lines later.

The computer system stores the lines in numeric order. You can change the contents of any line by referencing the line number and entering the new text. As soon as you depress the carriage return key [CR], the new line replaces the previous one. This makes it easy to update your file.

To use the ICS Editor, you should be in command mode; you can enter a new ICS Editor command whenever you see the OK prompt.

Creating a New ICS Editor File

NEW file creates a new ICS Editor file in your temporary workspace. As soon as you see the OK prompt, you can begin typing the text, line by line. You must begin each line with a number, and terminate it by typing [CR].

NOTE: Do not use the [Escape] *key to terminate a line, because it will erase the contents of the line.*

The following example illustrates file creation with the ICS Editor. We will use the same example in describing the ICS Editor commands in the next few pages.

```
NEW ICS.TXT

OK
10 This is an ICS Editor file.
20 Every line must have a line number.
30 When you create an ICS Editor file,
40 you are not running a separate
50 program.  The commands you use are
60 a specialized subset of the commands
70 available in the Personal File Area.
```

Note that it is a good idea to place one or more spaces between the line number and the text. This helps make the contents of your file more readable.

You do not have to enter the line numbers yourself. The INSERT command automatically generates line numbers in increments of ten. It also sets the first character of text at the first tab stop (eight positions to the right). Using our example:

```
NEW ICS.TXT

OK
INSERT
   10     This is an ICS Editor file.
   20     Every line must have a line number.
   30     When you create an ICS Editor file,
   40     you are not running a separate
   50     program.  The commands you use are
   60     a specialized subset of the commands
   70     available in the Personal File Area.
   80     Escape
```

You can discontinue automatic line number generation at any time by depressing the Escape key at the beginning of a new line. Do not use the Escape key at the end of a line, however; it erases the entire line.

If you want to restart automatic number generation after discontinuing it, you should specify the new starting line number in the INSERT command. For example, suppose you want to place one or more omitted lines in the text, then continue entering new text:

```
80 Escape
OK
21 You can use the INSERT command
22 to generate the line numbers automatically.
INSERT 80
   80
```

By including an increment number in the INSERT command, you can avoid the necessity of entering line numbers for inserted lines. For example, we could have added the same lines as follows:

```
   80 Escape
OK
INSERT 21,1
   21 You can use the INSERT command
   22 to generate the line numbers automatically.
   23 Escape
OK
INSERT 80
   80
```

If you issue the INSERT command without a starting line number, you will return to Line 10. Any text you enter will overwrite the original text. You can avoid overwriting the line by depressing the Escape key immediately; this does not affect the line's contents.

Saving a New ICS Editor File

SAV[E] [file] saves (stores) the current temporary file as a permanent file in your disk space. If you want the permanent file to have the same file identification as the current temporary file, you do not have to include the file identification. If you do specify a file identification, it becomes the file identification for the permanent file.

The SAVE command cannot include a file identification which is already assigned to a file in disk storage. This means that you cannot use the SAVE command to update the contents of an existing permanent file. To do this, you must use the REPLACE command (See below).

You must issue the SAVE command as soon as you have finished creating the file. Otherwise, the temporary file will be deleted as soon as you exit the Personal File Area or create a new temporary file.

You can issue the SAVE command whenever you are in command mode. If you have been creating the file or adding new lines, you are in command mode even though you do not see the OK prompt. If you have issued an INSERT command, however, you are in automatic line insertion mode, and you must depress the Escape key before you can issue the SAVE command.

A variation of the SAVE command, the SAVENN command, stores the current temporary file as a permanent file in your disk space, but without the line numbers.

Editing an Existing ICS File

OLD [file] creates a copy of a permanent ICS Editor file, and places the copy into your temporary workspace. The file identification is the name and extension assigned to the file you wish to access. If you do not specify a file identification when you issue the OLD command, you will have to do so in response to a separate prompt.

When the file copy has been placed in your workspace, you will see the OK prompt. From this point, you can enter any of the ICS Editor commands described in the following sections.

Replacing a Permanent ICS Editor File

REP[LACE] [file] replaces the specified permanent file with the current temporary file. If the permanent file and the current temporary file have the same name and extension, you do not have to specify a file identification when you issue the REPLACE command.

Note that you must use the REPLACE command if you want to overwrite the contents of an existing permanent file. The SAVE command will not accomplish this purpose. However, you can keep both versions by issuing a SAVE command with a new file identifier.

You must issue the REPLACE command as soon as you are through editing the file copy. Like any other current temporary file, it will be deleted immediately if you exit the Personal File Area or create a new current temporary file.

You can issue the REPLACE command whenever you are in command mode. If you have been adding new lines to the file, you are in command mode even if you do not see the OK prompt. If you have issued an INSERT command, however, you are in automatic line insertion mode, and you must depress the [Escape] key before you can issue the REPLACE command.

A variation of the REPLACE command, the REPNN command, replaces the specified permanent file with the current temporary file, but strips the line numbers.

Displaying an ICS Editor File

You can use various ICS Editor commands to display the complete contents of a file, a consecutive portion of the file, all the lines which contain a specific character string, the first line of the file, or the last line of the file.

The ICS Editor display commands apply only to the current temporary file. That is, the file must be in your workspace before you issue any command.

TYP[E][line#][,[line#]] displays the specified lines of the current temporary file:

- The TYPE command with one line number displays only the specified line. For example:

```
TYPE 30
   30     When you create an ICS Editor file,

OK
```

- The TYPE command with one line number followed by a comma displays all lines from the specified line through the last line of the file. For example:

```
TYPE 60,
   60     a specialized subset of the commands
   70     available in the Personal File Area.

OK
```

- The TYPE command with a comma followed by one line number displays all lines from the first line of the file through the specified line. For example:

```
TYPE ,20
   10   This is an ICS Editor file.
   20   Every line must have a line number.

OK
```

- The TYPE command with two line numbers separated by a comma displays all lines from the first specified line through the second specified line. For example:

```
TYPE 20,40
   20     Every line must have a line number.
   21     You can use the INSERT command
   22     to generate the line numbers automatically.
   30     When you create an ICS Editor file,
   40     you are not running a separate

OK
```

- The TYPE command without any line numbers displays the entire file. For example:

```
TYPE
   10     This is an ICS Editor file.
   20     Every line must have a line number.
   21     You can use the INSERT command
   22     to generate the line numbers automatically.
   30     When you create an ICS Editor file,
   40     You are not running a separate
   50     program.  The commands you use are
   60     a specialized subset of the commands
   70     available in the Personal File Area.

OK
```

You should note that the TYPE command always prints the file as though you had created and/or edited it with the INSERT command, no matter how you originally constructed the lines.

LOC[ATE][line#][,[line#][,maximum#]]/string displays all the lines within a specified range which contain a specified character string. If the same line contains more than one occurrence of the specified string, the line is displayed one time for each occurrence.

- The LOCATE/string command without any numbers displays all lines which contain the specified character string. For example:

```
LOCATE/ICS
   10   This is an ICS Editor file.
   30   When you create an ICS Editor file,

OK
```

- The LOCATE/string command with one number displays the corresponding line if it contains the specified character string. For example:

```
LOCATE30/ICS
   30   When you create an ICS Editor file,

OK
```

- The LOCATE/string command with one number followed by a comma displays all the lines that contain the specified string, from the specified line through the last line in the file. For example:

```
LOCATE30,/file
   30   When you create an ICS Editor file,
   70   available in the Personal File Area.

OK
```

- The LOCATE/string command with a comma followed by a line number displays all the lines that contain the specified string, from the first line in the file through the specified line. For example:

```
LOCATE,30/line
   20   Every line must have a line number.
   20   Every line must have a line number.
   22   to generate the line numbers automatically.

OK
```

- The LOCATE/string command with two line numbers separated by a comma displays all the lines that contain the specified string, from the first specified line through the second specified line. For example:

```
LOCATE40,70/commands
   50   program.  The commands you use are
   60   a specialized subset of the commands

OK
```

If the system is unable to locate a line with the specified character string within the specified range, it will display the following error message:

```
? ICSNMF - No match found
```

Optionally, you can specify a maximum number of string occurrences in any version of the LOCATE command. To have the desired effect, the maximum number specification must be preceded by two line numbers or the equivalent commas. Otherwise, the system interprets the number you enter as a line number. For example, suppose you wish to locate the first three occurrences of the string *file:*

```
LOCATE,,3/file
   10   This is an ICS Editor file.
   30   When you create an ICS Editor file,
   70   available in the Personal File Area.

OK
```

To search from line 30 through the last line for the first occurrence of *command,* you would enter:

```
LOCATE30,,1/command
```

and so on. Note that in this instance you must include an extra comma to enable ICS Editor to interpret the second number as the maximum instead a line identifier. In the previous example, it was sufficient to enter the two commas that represented the missing line numbers.

The character string must be separated from the rest of the LOCATE command by a slash. This is called the string delimiter. If the string to be located contains a slash, you can substitute any other special character (any non-alphabetic or non-numeric character) except a comma, tab or blank space.

HEA[D] displays the first line of the current temporary file.

TAI[L] displays the last line of the current temporary file. If you wish to add more lines to the file, this command can help you determine the appropriate line numbers.

Remember that you can use the INSERT command to start automatic line numbering after the last current line. For example:

```
TAIL
   70   available in the Personal File Area.

OK
INSERT 80
   80
```

Editing Text in an ICS Editor File

You can edit any current temporary file, whether you are currently in the process of creating it for the first time – that is, a file created by the NEW command – or whether you have called a file copy from permanent disk storage – that is, a file created by the OLD command. The only time you cannot edit a file is when you are in the automatic line number insertion mode.

You can edit any line in an ICS Editor file by entering the line number of the line you want to modify, and then entering the new contents of the line. However, there are several commands that are more convenient in certain circumstances:

CHA[NGE][line#][,[line#][,maximum#]]/oldstring/newstring searches the specified lines for occurrences of the old string, replaces the old string with the new string, and then displays the modified line(s).

If a line contains more than one occurrence of the specified oldstring, the CHANGE command changes all occurrences and displays the line after each change. Thus, if a line is displayed more than once, only the last display reflects all the changes.

ENT[ER][line#][,[line#][,maximum#]]/string enters (inserts) the specified character string at the beginning of each indicated line, and then displays the modified line(s).

APPEND][line#][,[line#][,maximum#]]/string appends the specified string of characters to the end of each indicated line, and then displays the modified line(s).

You can modify or limit the action of each of these commands by including various combinations of the three optional numbers:

- The command without numbers operates on the entire file. For example:

```
CHANGE/command/instruction
   21   You can use the INSERT instruction
   50   program.  The instructions you use are
   60   a specialized subset of the instructions

OK
```

- The command with one number operates only on the specified line. For example:

```
ENTER21/NOTE:  /
   21   NOTE:  You can use the INSERT instruction

OK
```

- The command with one number followed by a comma operates on every line from the specified line through the last line in the file. For example:

```
APPEND60,/   ???
   60   a specialized subset of the instructions  ???
   70   available in the Personal File Area.  ???

OK
```

- The command with a comma followed by one number operates on every line from the first line in the file through the specified line. For example:

```
ENTER,20/-- /
   10   -- This is an ICS Editor file.
   20   -- Every line must have a line number.

OK
```

- The command with two numbers separated by a comma operates on every line from the first specified line through the second specified line. For example:

```
CHANGE30,70/instruction/command
   50   program.  The commands you use are
   60   a specialized subset of the commands

OK
```

- The command with three numbers separated by commas begins its operation on the first specified line, and performs the operation the specified maximum number of times. For example:

```
CHANGE20,40,2/line/text line
   20   Every text line must have a line number.
   20   Every text line must have a text line number.

OK
```

The command ceases to operate when it performs the specified number of operations or at the end of the specified range, whichever comes first.

You do not have to specify line numbers when you specify a maximum number. However, you must include commas to represent the missing line numbers. Otherwise, the system will interpret the number you enter as a line number instead of a maximum. For example:

```
ENTER,,5/* /
```

inserts an asterisk and a space at the beginning of each of the first five lines in the file.

If you include a starting line number but no ending line number, you must also include the comma that would normally separate the ending line number from the maximum number. For example:

```
ENTER20,,5/* /
```

inserts an asterisk and a space at the beginning of five consecutive lines, starting with line 20.

Deleting Lines from an ICS Editor File

DEL[ETE][first][,[last]] deletes the specified line(s) from your current temporary file, and then displays the OK prompt. It does not display the deleted line(s).

The DELETE command must include at least one line number. If it includes only one number, it deletes only the specified line. If the number is preceded by a comma, it deletes all lines from the first line in the file through the specified line. If the number is followed by a comma, it deletes all lines from the specified line through the last line in the file.

If the DELETE command includes two line numbers separated by a comma, it deletes all lines from the first specified line through the second specified line.

Resequencing Line Numbers

RES[EQUENCE] [line#][,[line#][,increment#]] renumbers the lines in your current temporary file.

The first line number is the new line number to be assigned to the line where resequencing is to begin. If you omit this number (or substitute a comma), 10 is assumed.

The second line number is the line number of the line where resequencing is to begin. If you omit this number (or substitute a comma), the first line in the file is assumed.

The increment number is the increment to be used for renumbering succeeding lines. If you omit this number, 10 is assumed.

You can include or exclude any or all of the optional numbers. For example, using our file:

```
RESEQUENCE
```

would renumber all lines, starting with 10 and incrementing by 10. This would not affect lines 10 and 20, but lines 21 and 22 would become lines 30 and 40 respectively, line 30 would become line 50, and so on through line 80, which would become line 100.

As a further example:

```
RESEQUENCE 30,21,10
```

would have exactly the same effect, as would:

```
RESEQUENCE 30,21
```

The program will not let you replace a line number with a smaller number which is already assigned to an existing line. For example, you could not specify 10 as the new line number to be assigned to line 21 of our file, because this would create two lines identified as line 10.

Chapter 4
Working with Files in Disk Storage

Once your files exist in permanent disk storage, you can list them, display them, and manipulate them in various ways. You also can pack multiple files together to conserve your disk space. The following subsections explain the commands for each of these functions.

Looking at Your Disk Space

CAT[ALOG] displays a catalog of your disk space, listing all current files by name and (if present) file extension.

```
CAT
TAXDED.DAT      BROMSG          PROFIL.TXT      MEMJOG.TXT
```

You can produce the same listing by selecting Choice 1 from the File Management menu. In command mode, however, you can include one or more switches. The /SORT switch may be very helpful if you have a large number of files: it enables you to list them in alphabetical order of the file name or the file extension. In our example:

```
CAT/SORT:NAME
BROMSG          MEMJOG.TXT      PROFIL.TXT      TAXDED.DAT
```

DIR[ECTORY] displays a list of all your permanent files. The listing for each file includes the number of characters, the date the file was created, and the protection level.

```
DIR
TAXDED.DAT        3200   09-Jun-85  (4)
BROMSG            3880   17-May-85  (4)
PROFIL.TXT        9600   06-May-85  (4)
MEMJOG.TXT        6400   20-Apr-85  (4)

Total chars      23080 in    4 files
```

The same listing appears if you select Choice 2 from the File Management menu. In command mode, however, a number of switches are also available. For example, you can sort the listing, not only by file name or extension, but by the date of creation, the date of the last access, by protection level, or by size. Optionally, you can include the /LONG switch to create an extended directory, which also lists the time and date of creation, the date of last access, and the mode. Following our example:

```
DIR/L
 Name
Ext
Prot
     Chars      Creation        Access
   Mode

TAXDED
DAT
(4)
      3200   15:34 09-Jun-85   16-Jun-85    0

BROMSG

(4)
      3880   19:20 17-May-85   12-Jun-85    0

PROFIL
TXT
(4)
      9600   20:56 06-May-85   09-Jun-85    0

MEMJOG
TXT
(4)
      6400   08:17 28-Apr-85   18-Jun-85   22

Total chars                  23080 in    4 files
```

You should note that the term *mode,* in this instance, refers to the way the file is written. The mode number code at the right conveys abstruse information useful only to CompuServe technical personnel.

Displaying Files

TYP[E] file displays the specified file at your terminal. You must enter the complete file identification: file name and (if present) file extension.

```
TYP MEMJOG.TXT
Anniversary:

Dinner with Norm & Terri, Barth & Ellen, Nick & Eve
Cornish hen
Rice
Rolls
Salad
Champagne!!!!!
Asparagus Casserole
Appetizers????

!!!!Remember to order CAKE before 10 July!!!!!

Shalimar:  perfume, bath powder
Earrings
Robe
Ceramic horse (got it!)
Redbook
Ladies' Home Journal

!!!LOOK FOR CARD ASAP!!!
```

You can perform the same function by selecting Choice 4 from the File Management menu.

LIS[T] file produces the same listing, except that a header with the file identification, your User ID, the time and date, and the page number precedes every page of the listing. The header for our sample file would look like this:

```
MEMJOG.TXT[76003,1001]

18:40 EST 18-Jul-85
page 1
```

The File Management menu does not include the LIST function. Typically, you would use LIST instead of TYPE only when you want to include header information in a hardcopy listing.

Both the TYPE and LIST commands can include a number of switches. One useful combination is the /LINES switch and the /SCROLL switch: this enables you to review a specified number of lines at a time. The next series of lines will not appear until you depress the carriage return key. For example, suppose your terminal can display only 16 lines at once:

```
TYP/LINES:16/SCROLL MEMJOG.TXT
Anniversary:

Dinner with Norm & Terri, Barth & Ellen, Nick & Eve
Cornish hen
Rice
Rolls
Salad
Champagne!!!!!
Asparagus Casserole
Appetizers????

!!!!Remember to order CAKE before 10 July!!!!!

Shalimar:  perfume, bath powder
Earrings
Robe
```

The next 16 lines will not appear until you type CR. If you are using the LIST command, you must allow six extra lines for the header on each page.

In command mode, either TYPE or LIST can display multiple files. For example:

```
TYP MEMJOG.TXT, BROMSG
```

would type the contents of MEMJOG.TXT, followed by the contents of BROMSG.

LISTNH file lists the specified file without a header (same as the TYPE command).

Printing Files

If you have a printer attached to your terminal, you can produce a printed copy of any file in your Personal File Area by setting up the printer and issuing a TYPE command.

If you do not have a printer, you can have CompuServe mail you a printed copy of any file by selecting Choice 10 (PRInt a file) from the File Management menu, or by entering the command:

```
REQUEST PRINT
```

In either case, the system notifies you that there are charges for printing a file. In menu mode, the system will then prompt you for a file name. In command mode, however, you must enter a PRINT command. The command format is:

```
PRINT file[,File]. . .
```

Using the PRINT command, you can specify as many files as you like, provided the whole command fits on one line. In menu mode, you can only specify one file at a time. Since there are per-use charges as well as per-page charges for printing, you should use the REQUEST PRINT command if you want to print more than one file.

In either mode, you must enter the complete file identification(s) (See Identifying Your Files in Chapter 1) for any file(s) you want to print. In menu mode, you will be returned to the File Management menu as soon as you have identified a file. In command mode, you must enter another REQUEST PRINT command to disable the CompuServe line printer.

All CompuServe printing is done on standard 14.875″ by 11″ computer printer paper, and sent to you via first class U.S. Mail. You should allow up to a week for delivery.

The charges for printing are subject to change. For the most up-to-date information, enter the command:

```
GO RATES
```

at the OK prompt or the File Management menu. This takes you to the RATES menu, where you must select Choice 3 (Miscellaneous Charges). Then the system displays another menu, where you can specify that you want to see the charges for printing.

Manipulating Files

COM[BINE] file ,file ,. . . TO newfile combines two or more files into the specified new file. The files you combine are arranged in the order you name them. For example:

```
COM MEMJOG.TXT,PROFIL.TXT TO FAMNOT.TXT
```

would create the new file FAMNOT.TXT, consisting of the contents of MEMJOG.TXT followed by the contents of PROFIL.TXT. The COMBINE command would not affect either MEMJOG.TXT or PROFIL.TXT: both files would remain intact in your disk storage.

The COMBINE command can include a number of switches. One useful switch is the /NOREPLACE switch, which helps guarantee that you will not accidentally overwrite an existing file. If you specify an existing file as the new file, you will be prompted to verify that you want to replace it before the COMBINE command is executed.

Another switch that can be helpful is the /SEQ switch. If you include this switch, the program will automatically number the lines in the new file. The format is:

```
COM/SEQ:increment file, . . . TO newfile
```

The line numbering increment can be any whole number.

COP[Y] file TO newfile creates a new file whose contents are exactly the same as those of a previously existing file. The COPY command has no effect on the original file.

The COPY command has all the same optional switches as the COMBINE command. In addition, you have the option of copying multiple original files into multiple new files. The format for the command to do this is:

```
COPY file, file, . . . TO newfile, newfile, . . .
```

The number of new files must be the same as the number of original files.

DELETE file, . . . deletes one or more files from disk storage.

You can include the /VERIFY switch to ensure that the file will not be deleted by mistake. Before the file is deleted, you will be prompted to confirm your intention. If you issue a DELETE command naming more than one file, you will be prompted to verify deletion for each file in turn.

If you select deletion (Choice 5) from the File Management menu, you can name only one file. The program will always prompt you for verification before deleting the file you identify.

Note: If you accidentally delete a file you want to save, you may be able to recover it by contacting CompuServe Customer Service. Files are saved every Wednesday and held for eight weeks. There is an extra charge for restoring files. Additional information about file restoration is available through FEEDBK.

RENAME file TO newfile changes the file identification (name and/or extension) for a file in your disk space. The RENAME command does not affect the contents of the file.

Optionally, you can rename multiple files at once. The format for the command to do this is:

```
RENAME file, file, . . . TO newfile, newfile, . . .
```

The number of new files must match the number of original files.

Conserving Disk Storage

You can use the PACK command to help you conserve disk storage. The PACK command places copies of several files into one file. This reduces the amount of disk space required for the individual files.

Whenever you create a file, the CompuServe system automatically allocates three blocks of disk storage, or enough space to hold 1920 characters. If the number of characters you enter exceeds this initial allocation, the system automatically allocates another three blocks, and so on. Thus an individual file is stored in units of 1920 characters, regardless of the actual number of characters the file actually contains.

When you pack multiple files into a single file, you reduce the space allocated to the individual files. The file boundaries within a packed file are set at the next block instead of the next three-block unit. Thus you may save as much as two blocks (1280 characters) of disk space for each file in a packed file.

You may not save much space if you pack just two or three files into one, because the packed file also contains a directory. But the savings increase considerably if you pack many files into a single file.

There are many variations of the PACK command: you can use them to create packed files, add new files to packed files, retrieve a file from a packed file, etc.

You can display a packed file (See PACK TYPE, below), but you cannot modify it. To modify any packed file, you must first replace it into disk storage (See PACK RETRIEVE, below) in its original form, and then call it into your workspace.

Once you have finished editing the file, be sure to replace the old version in the packed masterfile (See PACK ADD, below).

You should note that it is not always necessary to identify the masterfile – by default, every PACK command except the PACK MAKE command applies to the last previously specified masterfile.

PAC[K] MAKE masterfile FROM file, . . . creates a new packed masterfile containing copies of the specified files.

You cannot specify an existing packed file as the masterfile. You can assign any other file name you like to the new masterfile, provided that you follow the rules given elsewhere in this guide (See Identifying Your Files). However, the file extension should always be PAK: any other extension may prevent the computer system from properly processing subsequent file handling instructions.

You can include wildcards (* and ?) in identifying the files to be packed. For example:

```
PACK MAKE TEXTFL.PAK FROM *.TXT
```

would pack any file with the extension .TXT into the new masterfile TEXTFL.PAK.

If you use wildcards, a list of the packed files will appear at your terminal as soon as the PACK MAKE instruction has been executed. You can pack any files you like into a new masterfile: permanent files, temporary files, and existing packed files.

Normally, the PACK MAKE instruction does not affect the originals of the packed files. However, you can use the /DELETE switch to delete a file from disk storage after packing it. You must append /DELETE to the identification for each file to be deleted. For example:

```
PACK MAKE JANEXP.PAK FROM JHOUSE.DAT, JAUTO.DAT/DEL
```

would create the masterfile JANEXP.PAK and then delete JAUTO.DAT from disk storage. However, JHOUSE.DAT would remain.

You can use the /UPPER switch to set a maximum limit on the number of blocks in the new masterfile. You must append this switch to the keyword MAKE: its full format is /UPPER:#blocks. For example:

```
PACK MAKE/UPPER:70 JANEXP.PAK FROM JHOUSE.DAT, JAUTO.DA
```

limits the total size of the masterfile JANEXP.PAK to 70 blocks.

There are two other switches that can be helpful when you use wildcards in your list of files to be packed. One is /SAVE, which includes temporary files with the extensions BAK, LST and TMP. The other is /PACK, which includes existing masterfiles.

PAC[K] ADD file, . . . TO masterfile adds the specified file(s) to an existing packed masterfile.

The masterfile you specify must already exist in your disk storage.

You can add any file to an existing masterfile, provided that the file to be added does not have the same file name as the masterfile. You also can use wildcards (* and ?) in identifying the files to be added. If you do, the specified files will be listed at your terminal as soon as the PACK ADD command is executed.

The PACK ADD command can include all the same switches as the PACK MAKE command. Another useful switch is the /NOSUPE switch, which prevents an added file from overwriting (superseding) a file with the same name that is already packed in the masterfile.

PAC[K] UPD[ATE] masterfile searches your disk storage for files whose identifications match those of files in the specified masterfile. When a matching file is found, the contents of the disk file replace the existing packed file. As soon as the PACK UPDATE command has been executed, a list of the updated files will appear at your terminal.

If the creation date of the disk file precedes that of the existing packed file, you will be prompted to confirm your intention to update. If you know that you intend to replace a packed file with an earlier version, you can avoid this by using the /RGDLES switch. You must append this switch to the keyword UPDATE.

The PACK UPDATE command does not affect the files in your disk storage, unless you include the /DELETE switch. If you append /DELETE to the keyword UPDATE, every disk file used in the update will be deleted as soon as the PACK UPDATE command is executed.

You can also use the /UPPER switch in a PACK UPDATE command, to ensure that the file modifications do not result in the masterfile's exceeding a specified number of blocks.

PAC[K] RET[RIEVE] file, . . . FROM masterfile copies the specified file(s) from the masterfile into your disk storage.

You can use wildcards (* and ?) in identifying the files to be retrieved. If you do, the PACK RETRIEVE command lists the file identifications for individual files as soon as they are copied to disk storage.

If a file in your disk storage has the same identification as a file to be retrieved, you will be prompted to indicate whether you want the disk file to be overwritten by the packed file. You can eliminate this prompt by appending the /RGDLES switch or the /NOSUPE switch to the keyword RETRIEVE. The /RGDLES switch instructs the program to overwrite any file with a matching identification, whereas the /NOSUPE switch instructs the program not to overwrite any existing disk file.

PAC[K] CAT[ALOG] masterfile lists the file identifications for all the files currently contained in the specified masterfile. For example:

```
PACK CAT JANEXP.PAK
JHOUSE.DAT     JAUTO.DAT
```

PAC[K] DIR[ECTORY] masterfile displays a file directory for the specified masterfile. The listing for each of the files includes the number of characters in the original file, the date the original file was created, and the original file's protection level. It also lists the total number of characters and the total number of files. For example:

```
PACK DIR JANEXP.PAK
JHOUSE.DAT     6400   (4)
JAUTO.DAT      3200   (4)

Total Chars    9600

Total Files       2
```

If a maximum number of blocks has been specified for the masterfile, the PACK DIRECTORY command will also list this upper limit.

The PACK DIRECTORY command has several optional switches. The /LONG switch produces the same type of listing as in the DIRECTORY command (See Looking at Your Disk Storage in this guide). The /BLOCKS switch lists the number of blocks in each file instead of the number of characters. And the /ACTUAL switch lists the number of actual units (characters or blocks) in the packed file instead of the number of units allocated to it. The number of units allocated is always larger than the number of units actually occupied.

You should note that the total size of any masterfile is somewhat larger than the sum of the total files in it. The additional space is allocated for the directory at the head of the masterfile.

PAC[K] COM[PARE] masterfile searches for file identifications in your disk storage that match those in the specified masterfile, then compares the contents of any files with the same identifications. It lists any files compared (files with matching identifications), then indicates whether the contents of the files are the same or different. For example:

```
PACK COM JANEXP.PAK
Files Compared:
JHOUSE.DAT

Same
```

If you append the switch /ALL to the keyword COMPARE, the PACK COMPARE command also lists packed files that have no counterparts in disk storage.

PAC[K] TYP[E] file, . . . FROM masterfile types the original contents of the specified packed file(s) at your terminal.

You should note that the PACK TYPE command does not place copies of the packed files in your workspace. It simply transmits their contents as a message.

PAC[K] CLE[AN] masterfile deletes from your disk storage any files that have the same file identifications as files in the specified masterfile. It also displays the identification for each file at your terminal as soon as the file is deleted.

You should note that the PACK CLEAN command does not affect the contents of the masterfile in any way.

PAC[K] PUR[GE] file, . . . FROM masterfile deletes the specified file(s) from the masterfile.

You can include wildcards (* and ?) in identifying the files to be purged. If you do, the PACK PURGE command lists the deleted files at your terminal.

PAC[K] HEL[P] displays information about the PACK command. This information includes brief descriptions of all the available subcommands and switches.

Protecting Your Files

When you create a file and place it in your disk storage, the CompuServe system automatically marks the file in such a way that you and only you (that is, your User ID) can read (display) or write (update) it.

The way the file is marked is called the protection level or protection level code. The default protection level assigned to each new file in disk storage is (4).

You may want to change this initial protection level for various reasons: to make the file a read-only file (no updates permitted), to allow other subscribers to read the file, or to allow other subscribers to read and write the file. The format for the protection level change command is:

```
PRO[TECT] file (level#) [,file (level#)] . . .
```

Note that you must always place the new protection level code number in parentheses. The following list explains the protection level for each of the available code numbers:

- (0) or (1) – enables any CompuServe subscriber to read and/or write the file.
- (2) – enables you to read and/or write the file; enables any other subscriber to read the file.
- (3) – enables you to read and/or write the file; enables anyone with the same project number (the first part of your User ID) to read the file.
- (4), (9) or (10) – enables you and no one else to read and/or write the file. This is the default protection level.
- (5) – enables any subscriber to read the file; no one can write it.
- (6) – enables you and anyone with the same project number to read the file; no one can write the file.
- (7) or (11) – enables only you to read the file; no one can write it.
- (8) – enables you and anyone with the same project number to read and/or write the file.

Chapter 5
Transferring Files

The following sections describe the various methods you can use to transfer files to or from another CompuServe subscriber's disk space, to or from CompuServe's Public File Access Area, or between your Personal File Area disk space and a disk drive at your terminal.

File Transfer between Subscribers

There are several ways to transfer a file to another subscriber's disk space:

- You can transfer files as messages by using EasyPlex, CompuServe's electronic mail service. Two shortcut programs – EMADMP for reading incoming message files, and SNDMAL for sending message files – are also available.
- You can transfer files of any length into CompuServe's Public File Access System. Once in the Public File Access System, the file becomes available to any other subscriber, who can download it to his or her file storage area.

The following subsections describe the general procedures for each of these methods.

File Transfer via EasyPlex

EasyPlex is CompuServe's electronic mail service. Through EasyPlex, you can read and file messages sent to you by other subscribers, or transmit files from your disk storage to other subscribers as messages.

You can proceed to EasyPlex by entering:

```
GO EASYPLEX
```

at the File Management menu or any OK prompt.

What you see at the start of EasyPlex depends on the current display mode setting. There are three display modes:

- MENU
- PROMPT
- COMMAND

If your EasyPlex display mode is set to MENU, you will see the EasyPlex main menu, which looks like this:

```
EasyPlex  Main Menu

 1 READ mail, 2 messages pending

 2 COMPOSE a new message
 3 UPLOAD a message
 4 USE a file from PER area

 5 ADDRESS book
 6 SET options


Enter choice !
```

If there are no messages pending (messages you have not already filed or deleted), Choice 1 will not appear. Instead, the program will display the following notice:

```
   ***No mail waiting***
```

If the current display mode setting is PROMPT, the EasyPlex program will display the following extended prompt:

```
SCAn, REAd, COMpose, ADDress or HELp!
```

If the display mode is set to COMMAND, the program will display the brief prompt:

```
EasyPlex!
```

In MENU mode, you can either enter an item number or a command. In the other two modes, you must enter a command.

You can reset your display mode at any time by entering a SET DISPLAY command. Its format is:

```
                  ⎧ MEN[U]     ⎫
SET DIS[PLAY]     ⎨ PRO[MPT]   ⎬
                  ⎩ COM[MAND]  ⎭
```

Reading and Filing EasyPlex Messages (MENU Mode Only)

In MENU mode, selecting Choice 1 (READ mail) from the EasyPlex main menu enables you to read any messages sent to you by other subscribers. EasyPlex responds by displaying a menu that offers you the options of reading all your incoming messages or any one of them. The menu includes a numbered list of the message senders and subjects. For example:

```
EasyPlex  Read Menu

1 Ted Driver/Conference Request
2 Marianne Mason/Megawars Tips

0 Read all 2 messages

Last page.  Enter choice
or M for EasyPlex main menu!
```

If you enter any number except 0, the program displays the corresponding message. If the message is too long to be displayed at once on your screen, the program divides it into pages. When you have read one page, you can display the next by depressing the carriage return key. After the last page, EasyPlex displays a menu of message disposition options, like this:

```
EasyPlex  Action Menu

** Ted Driver/Conference Request **

1 DELETE this message
2 FILE in PER area
3 FORWARD
4 REREAD message
5 REPLY
6 SAVE in mailbox

Enter choice or ⟨CR⟩
to continue !
```

If you want to file the message, select Choice 2. EasyPlex will prompt you for a file name:

```
Name of file:
```

At this point, you must enter a valid file identification (See Identifying Your Files in Chapter 1).

Suppose you select the file identification TEDMSG.TXT. There are three different ways to place the file in disk storage:

- If there is not already a disk file with the identification TEDMSG.TXT, then entering:

  ```
  TEDMSG.TXT
  ```

  creates a new file and places the message into that file.

- If there is already a disk file with the identification TEDMSG.TXT, then entering:

  ```
  TEDMSG.TXT/A
  ```

  appends the new message to the existing file. You might use this option to file a series of messages from one person or about one topic.

- If there is already a disk file with the identification TEDMSG.TXT, then entering:

  ```
  TEDMSG.TXT/R
  ```

  replaces the previous contents of that file with the new message.

In any case, after you enter the file identification, the program will notify you that the message has been stored. Extending the above example, the storage notice would be:

```
Message filed in TEDMSG.TXT
```

The program also automatically deletes the message from your mailbox. When you depress the carriage return key, you will see a new menu of messages. For example:

```
EasyPlex  Read Menu

1 Marianne Mason/Megawars Tips

Last page.  Enter choice
or M for EasyPlex main menu!
```

You should note that the program automatically renumbers the remaining messages whenever it deletes a message.

If you select Choice 0 (Read all messages) from the incoming message menu, the program will display all the messages in order, following each message with the menu of message disposition options. Whenever you file or delete a message, the program displays the appropriate notice, then goes on to display the next message.

Reading and Filing EasyPlex Messages (Any Mode)

In any of the three display modes, you can use EasyPlex commands to read and/or file new messages. The command for reading messages is:

```
REA[D] [message-number(s)]
       [ALL              ]
```

If you issue the READ command by itself, the program will prompt you to specify which message(s) you want to read:

```
Which message(s) # (or ALL)?
```

You can enter any combination of message number lists (message numbers separated by commas) and/or message number ranges (message numbers separated by hyphens), or the word *ALL* to read all your messages. For example, suppose you had 20 waiting messages. Entering:

```
1,3,5,7,9,15-18
```

would prepare messages 1,3,5,6,7,9,15,16,17 and 18 for you to read.

If you issue the READ command with one or more message numbers (you can include any combination of lists and/or ranges, as above), the program will prepare the corresponding messages for you to read.

The READ ALL command prepares all the incoming messages for reading.

No matter which variation of the READ command you choose, the program displays the specified message(s), and prompts you to specify the disposition for each message after you read it. If you are in MENU mode, the program displays the disposition menu shown above. If you are in PROMPT mode, the program displays the extended prompt:

```
DELete, FILe, REPly or NEXt!
```

And if you are in COMMAND mode, the program displays the brief prompt:

```
Action!
```

To file a message in your disk storage area, you can issue a FILE command. Its format is:

```
FIL[E]
```

The EasyPlex program responds by prompting you to identify the file where the message is to be stored:

```
Name of file:
```

At this point, you must enter a file identification, following the rules provided (See Identifying Your Files) elsewhere in this guide. Optionally, you can use the /A or /R switch to instruct EasyPlex to add the new message to an existing file, or to substitute the new message for an existing file (See the previous subsection).

The EasyPlex program notifies you that the message has been filed. It also deletes the message from your electronic mailbox, and renumbers the remaining messages.

The program then displays the next message identified in your READ command. After displaying all the messages to be read, the program returns to the EasyPlex function level and displays the EasyPlex main menu or the appropriate prompt.

Transmitting a File with EasyPlex

When you use the EasyPlex program to send a message to another subscriber (or to yourself), the message you send can be one that you compose while you are running the EasyPlex program, or it can be a file that you identify for transmittal.

The procedures for using the EasyPlex program to compose and send messages are detailed in the EasyPlex Users' Guide (CS-592). This section deals only with sending files from your disk storage area.

Before attempting to transmit a permanent file, you should note that the maximum length for an EasyPlex message is about 10,000 characters, and that the meximum number of EasyPlex messages that can be held in any one electronic mailbox is 20.

If you attempt to send a file with too many characters, the EasyPlex program will immediately notify you of the problem by displaying an error message.

If you attempt to transmit a message to a mailbox which already holds 20 messages, you will not receive any immediate notification. After the system attempts to deliver the message (usually in less than two hours), it will return it to your mailbox, placing a returned-to-sender notification in the message header.

In MENU mode, you can copy a permanent disk file into your EasyPlex message-sending area by selecting Choice 3 (USE a file from PER area) from the EasyPlex main menu, or by issuing a USE command. In PROMPT or COMMAND mode, you must issue a USE command. Its format is:

```
USE
```

EasyPlex then prompts you to identify the file to be used:

```
Name of file to use:
```

At this point, you can enter the identification for any file in your disk storage area.

Now EasyPlex offers you the opportunity to display or edit the file before you send it. You can also file a copy (FILE DRAFT) of the original file or any edited version.

Editing Modes

There are two editing modes available:

- LINE
- NOLINE

You can specify which editing mode you want by issuing a SET EDIT command from EasyPlex function level — that is, when you see the EasyPlex main menu or the appropriate prompt. The SET EDIT command format is:

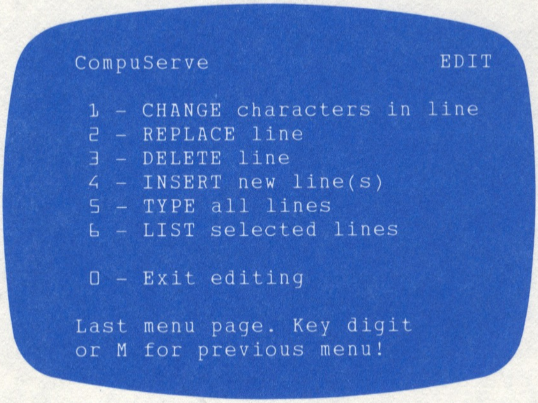
$$\text{SET EDI[T]} \quad \left\{\begin{array}{l}\text{LIN[E]}\\ \text{NOL[INE]}\end{array}\right\}$$

The following subsections explain the two editing modes.

The LINE Editing Mode

In the LINE mode, the EasyPlex program assigns line numbers to every line in the file. The first line becomes Line 1, the next becomes Line 2, and so on.

EasyPlex then prompts you to specify the type of change you wish to make. In MENU mode, it displays the EDIT menu, which looks like this:



```
CompuServe                        EDIT

 1 - CHANGE characters in line
 2 - REPLACE line
 3 - DELETE line
 4 - INSERT new line(s)
 5 - TYPE all lines
 6 - LIST selected lines

 0 - Exit editing

Last menu page. Key digit
or M for previous menu!
```

In PROMPT mode, it displays the extended prompt:

```
CHAnge, REPlace, INSert or TYPe!
```

In COMMAND mode, it displays the brief prompt:

```
Edit!
```

In menu mode, you can specify the type of change by entering the corresponding item number or a command. In PROMPT or COMMAND mode, you must enter a command.

The available commands are:

APP[END] adds one or more characters at the end of a line.

CHA[NGE] changes the contents of a line. You should choose this command when you want to make relatively minor changes.

REP[LACE] substitutes a new line for an existing line. You should choose this command when you wish to make multiple or extensive changes to a line.

DEL[ETE] deletes one or more lines.

INS[ERT] inserts a new line.

TYP[E] prints (displays) the entire contents of the file at your terminal.

LIS[T] prints (displays) a range of lines at your terminal.

LOC[ATE] prints (displays) lines that contain a specified character string.

END indicates that you have finished editing.

Once you enter a command or a menu item number, EasyPlex prompts you to identify the pertinent line(s) and to enter any other information necessary to perform the specified operation.

As soon as you have entered all the necessary information, EasyPlex performs the specified editing operation. If the operation entails modification of the contents of the file, EasyPlex also notifies you that it is complete. Then EasyPlex returns you to the EDIT menu or the appropriate prompt. At this point, you can specify a new operation, or indicate that you are through editing.

In MENU mode, you can indicate that you have finished editing by selecting Item 0 (Exit editing) or by entering an END command. In either of the other two modes, you can either enter an END command or depress the carriage return key without entering any command.

The LINE mode is excellent for anyone who is not familiar with EDIT (See Chapter 2 of this guide), CompuServe's text editing program for files without line numbers, because it prompts you for all the information needed to make any changes. If you are familiar with EDIT (or FILGE), however, you should set the editing mode to NOLINE, especially if you need to make numerous changes. The disadvantage of the LINE mode is that it returns you to the EasyPlex Edit function level after each editing operation.

The NOLINE Editing Mode

In the NOLINE editing mode, the EasyPlex program opens the file as soon as it has copied it to your message area. It notifies you that the file is ready for editing by displaying the following message:

```
[File Ready]
```

At this point, you can issue any command available in CompuServe's EDIT text editing program (See Creating Files with EDIT in this guide, or the EDIT Users Guide, CS-104).

Sending the Message

You can edit, type or file (FILE DRAFT) your message as may times as you like. Whenever you indicate that the message is ready to send, EasyPlex prompts you to transmit the file:

```
Send to (Name or User ID):
```

If the intended recipient is listed in your EasyPlex address book, you can identify him or her by name. Otherwise, you must enter the appropriate User ID.

EasyPlex now prompts you to specify a subject for your message:

```
Subject:
```

You can enter any combination of up to 32 characters.

Before transmitting the message, EasyPlex prompts you to verify the recipient's User ID, your name, and the message subject. You can make any changes you like. When you indicate that the information is correct, EasyPlex transmits the message and notifies you that it has been sent.

Transmitting Files to Multiple Recipients

When you return to the EasyPlex function level after sending a message, you can send the same message (or even a modified version) to another subscriber.

When EasyPlex transmits a message, it actually sends a copy. The original remains in your mailbox until you create a new message or exit the EasyPlex program. So you can send it again and again.

If you are in MENU mode, EasyPlex adds two new items to the main menu:

```
7 SEND last message
8 EDIT last message
```

You can transmit the same message to another subscriber by selecting Item 7 (SEND last message). EasyPlex will prompt you to identify the recipient and the subject, and then to verify their accuracy, just as it did after you finished editing the original message.

You can transmit a modified version of the message to another subscriber by selecting Item 8 (EDIT last message). This enables you to modify the message and then send it, following the same procedures as with the original file.

If you are in PROMPT mode or COMMAND mode, you can send the message to another subscriber by entering a SEND command. Its format is:

```
SEN[D]
```

or you can edit the message and then send it with an EDIT command. Its format is:

```
EDI[T]
```

You can repeat any combination of these procedures indefinitely.

Exiting EasyPlex

When you are finished with EasyPlex, you can return to the Personal File Area by entering either of two commands at the EasyPlex function level:

```
PER
```

or:

```
PRO
```

You can also exit the program by entering any of the standard CompuServe navigational commands (See Navigating the Personal File Area and Exiting the Personal File Area, in this guide). You should note that the M command takes you to the COMMUNICATIONS/BULLETIN BOARDS menu instead of to the Personal File Area.

Reading Mail with EMADMP

The EMADMP program offers a simple method for reading all the messages sent to you via EasyPlex. You can request the EMADMP program from the File Management menu or any OK prompt by entering:

```
REQUEST EMADMP
```

This program displays, in the order of delivery, the contents of all the messages currently present in your mailbox. Reading all messages is the sole function of the EMADMP program: you cannot select a particular message to read, file a message, or delete a message.

As soon as the EMADMP program displays the messages in your mailbox, it automatically returns you to the Personal File Area.

Sending Message Files with SNDMAL

The SNDMAL program provides a shortcut method for sending a permanent file as an EasyPlex message. Sending messages with SNDMAL can be very convenient, presuming that the contents of the file are exactly what you wish to send: SNDMAL does not allow for any editing.

To request the SNDMAL program, enter:

```
REQUEST SNDMAL
```

at the File Management menu, or at any OK prompt. As soon as you access the program, you will receive a series of prompts for the information required to send the message. For example:

```
Name the input file
:MSG.DAT
Message created from
MSG.DAT

Send to User ID
:74004,444
Subject (32 characters max)
:Hammett's Influence
Name (32 characters max)
:Lucy Harrison
```

You can abort the program at any time by typing CR instead of entering a response. The program will return you automatically to the Personal File Area as soon as you abort. If you abort after identifying a file, the file will remain in your workspace.

You also can use the SNDMAL program to compose a message at your terminal. You must enter:

```
TTY:
```

when you are prompted to name the input file. SNDMAL switches immediately to composition mode, and displays the following prompt:

```
Enter a ^Z when finished.
```

Message composition in SNDMAL is continuous; the program automatically supplies a carriage return and line feed when you fill the last position in a line (that is, whenever you enter the number of characters defined as the line width for your terminal). Do not depress the carriage return key when you finish a line; this will return you to the beginning of the current line and erase its contents. To keep your message legible, you must enter an appropriate number of spaces at the end of each line.

You should note that the SNDMAL program does not respond to a Control Z unless it is followed by a Break. That is, you must depress the Control key and the Z key simultaneously, then depress the Break key. This concludes message entry and returns you to the message identification sequence. From this point, you can proceed as if you were sending a file.

Once you have finished responding to all the prompts, you will see the following notice:

```
Message awaiting delivery.
```

At this point, the system automatically returns you to the Personal File Area.

Transferring Files with ACCESS

The Public File Access System is a large and growing library of files maintained by CompuServe for information service subscribers. Many subscribers have contributed useful and informative files to the Public File Access System for other subscribers to read or copy.

You can use the Public File Access System to transfer a file of any length. The file's owner submits the file to the Public File Access System, and the intended recipient copies it from there. To keep the file private, you can make it invisible and notify the recipient of its availability through EasyPlex or CB/talk.

CompuServe reviews any submitted file before placing it in the Public File Access System. The file cannot contain commercial advertising or a catalogue, and its submitter is subject to copyright laws.

You can reach the Public File Access System from the File Management menu or any OK prompt by entering:

```
GO ACCESS
```

The ACCESS program responds by displaying the following menu:

```
Public File Access

 1 (BRO) Browse thru files
 2 (SCA) Scan
 3 (KEY) Keyword list

 4 (DOW) Download a file
 5 (REA) Read a file
 6 (COP) Copy a file to PER area

 7 (UPL) Upload a new file
 8 (SUB) Submit a file

Enter choice !
```

At this point, you can either select a menu choice or issue a command.

If you specify uploading or downloading, you must provide three types of information:

- the complete identification for the file in the Public File Access System. The file identification must follow the rules for CompuServe files (See Identifying Your Files in Chapter 1).
- the complete identification for the file on disk or tape at your terminal.
- the file transfer protocol: CompuServe B Protocol, XMODEM (sometimes called MODEM7 or the Christensen protocol), DC2/DC4 capture buffer, or no protocol, which is the same as DC2/DC4 except that you must signal the end of the transfer with an /END instead of a Control Z.

If you specify transfer to or from your Personal File Area, you must supply the CompuServe file identification. The same identification will be used for the file in both the Public File Access System and your Personal File Area. You should note, however, that it may be necessary to include the User ID when copying a file from the Public File Access System, because there may be more than one file with the same name and extension.

At this point, you can either select a menu choice or issue a command. There are four options for transferring files:

- Choice 4 (DOW) copies a file from the Public File Access System to peripheral storage media (disk on tape) at your terminal.
- Choice 6 (COP) copies a file from the Public File Access System to your Personal File Area.
- Choice 7 (UPL) copies a file from disk on tape at your terminal to the Public File Access System.
- Choice 8 (SUB) copies a file from your Personal File Area to the Public Access File System.

When you transfer a file to the Public File Access System, whether from disk or tape at your terminal or from your Personal File Area, you will be prompted to indicate whether the file is to be visible or invisible. An invisible file is one that is not included in the Public File Access System's catalogue, so no one will be able to access it unless he or she already knows it is there.

If you specify that the file is to be visible, the ACCESS program will prompt you to enter keywords and a description. This extra information is optional: keywords can serve as topic reference, and a description can provide a brief summary of the purpose on contents of the file.

After performing the operation you specify, the ACCESS program returns to the menu shown above. You can only return to the Personal File Area from this menu by entering one of the two commands:

```
PER
```

or:

```
PRO
```

Transferring Files to and from CompuServe

You can transfer a file between your terminal's storage and your CompuServe disk space in either of two ways:

- By using your computer's RAM buffer
- By using FILTRN, CompuServe's exclusive error-free file transfer program

The following subsections describe the procedures for both methods of file transfer.

RAM Buffer Transfer

If your computer's terminal program provides RAM buffer control, you can transfer a file to your CompuServe disk storage from any terminal storage media (that is, upload the file) through the following procedure:

1. Load the file into the RAM buffer (See your terminal program user's guide for the load buffer command).
2. Log onto CompuServe and access the Personal File Area.
3. Create a temporary file, using the EDIT program, to hold the data you want to upload (See Creating and Editing Files with EDIT).
4. Transmit your RAM buffer into the EDIT file.
5. Close the EDIT file by entering /EX at the beginning of a line.

Note that only standard ASCII files where line lengths do not exceed 132 characters can be transferred with this method. Also, you must be sure to terminate each line of your file with a carriage return when you compose it.

Hint: If you are using VIDTEX™ or any program with the transmit with prompt capability, you can avoid dropping characters from the beginning of lines by using Control J *(line feed) as the wait for prompt character before sending each line.*

To download a file from your CompuServe disk storage area:

1. Open your buffer.
2. When you see the OK prompt, issue a TYPE command to display the CompuServe file. The format for the TYPE command is:

```
TYP[E] file
```

3. Close your buffer when the file listing is complete.

Hint: You may need to edit the file to eliminate any extraneous lines of characters included during transfer.

FILTRN Transfer

You can use CompuServe's FILTRN program to transfer files quickly and easily between your microcomputer and your Personal File Area. This can save you time and expense in a variety of ways. For example, you can create and edit EasyPlex messages offline, and then upload them for sending, or you can download files to your computer's disk drive.

FILTRN supports a number of widely used communications protocols, and enables you to transfer binary data files and machine-specific files as well as standard text files.

The FILTRN program was originally designed to prompt you for all the necessary information step by step after being initialized. But it has been upgraded so that it can now process information input along with the program request. This means that you can choose between letting the program guide you through the procedure of supplying information or entering it all at once.

Available Protocols

In telecommunications terminology, a protocol is a set of rules and procedures governing the way computers exchange information with one another. The protocol in effect at any given time is determined by the communications package (sometimes called the terminal emulation program) your microcomputer is currently using.

You can determine which protocol your terminal emulation program uses by referring to the accompanying user's manual. The FILTRN program supports the following protocols:

CompuServe B protocol provides fast, efficient communications and uses extensive error detection and correction facilities. It is used in all recent CompuServe VIDTEX™ communications packages, and also in CompuServe's Professional Connection™.

CompuServe A protocol was developed by CompuServe to provide error-free file transfers over noisy telephone lines. It has been largely supplanted by CompuServe B protocol, and is now used very infrequently.

XMODEM protocol (also known as MODEM7 or the Christensen protocol) was originally developed by Ward Christensen to enable microcomputers to communicate with one another. XMODEM was later modified to help micros communicate with mainframe host systems such as CompuServe. It includes error detection and correction facilities, and is utilized in many popular telecommunications packages.

Macintosh XMODEM protocol is a variation of XMODEM, designed to provide communications for the Apple Macintosh^R microcomputer. It is used in Macterminal™ and other Macintosh communications packages.

DC2/DC4 protocol (sometimes called Buffer Capture protocol) is used to transfer data to or from a capture buffer set up in microcomputer RAM (random access memory). This protocol does not include any means for detecting or correcting errors produced during computer communications.

Using FILTRN

You can start the FILTRN program whenever you see the File Management menu or the OK prompt, by entering the command:

```
REQUEST FILTRN
```

FILTRN begins by prompting you to specify which protocol your micro uses:

```
File Transfer

TRANSFER PROTOCOL

1 XMODEM (MODEM7) protocol
2 CompuServe 'B' protocol
3 CompuServe 'A' protocol
4 DC2/DC4 (CAPture) protocol
5 MACintosh XMODEM protocol


Enter choice !
```

Once you select a protocol, FILTRN prompts you to indicate the direction of the upcoming file transfer:

```
TRANSFER DIRECTION

1 DOWnload from CompuServe
2 UPLoad to CompuServe
3 Exit

Enter choice !
```

When you choose a direction, FILTRN prompts you to specify what type of file will be transferred:

```
TRANSFER TYPE

1 ASCII
2 BINary
3 IMAge

Enter choice !
```

The program will transfer any of three types of file:

- ASCII files, such as standard text files or untokenized BASIC programs.
- binary data files, such as tokenized BASIC programs or machine language programs.
- image files, such as eight-bit machine-dependent programs.

Once you have specified a file type, FILTRN prompts you for a CompuServe file identification:

```
Enter the CompuServe file name:
```

The file name you enter must conform to CompuServe file identification rules (See Identifying Your Files in Chapter 1). If you are downloading, it must also identify a file that already exists in your Personal File Area.

If you are uploading and you identify an existing file, FILTRN will notify you that the file already exists, and ask you whether you wish to overwrite it. If your response is affirmative, the contents of the existing file will be erased and then replaced by the contents of the uploaded file. If your response is negative, the program will repeat the file identification prompt.

If you have specified CompuServe B protocol or CompuServe A protocol, FILTRN will now ask you to specify a file identification for your microcomputer:

```
Enter a file name for your computer:
```

With any of the other three protocols, the way this information is obtained depends on the communications package you are using. For details, check the accompanying user documentation.

This must be a complete file identification that conforms to the rules for your system. Your micro's user documentation should explain these rules in detail. If you are uploading, the file name must also match a file in your computer's disk storage.

Most micros that include a hard disk drive also offer the capability for dividing the hard disk into logical portions, usually called subdirectories. If a file you want to upload is located in the same subdirectory as the terminal emulation program you are using, or if you want to download a CompuServe file to that subdirectory, you do not have to include subdirectory or "pathname" specifications. You can enter just the file name and the file extension.

Similarly, if you want to transfer a file to or from the current subdirectory, but you do not want to change its name or extension, you do not have to enter any information at all. Just press the carriage return key.

As soon as you have identified the source and destination files, FILTRN performs the specified file transfer. If you have specified a download, the program will display a message telling approximately how many characters (or, with XMODEM, how many blocks) the file contains.

As it begins the transfer, FILTRN displays a notice that reports the transfer direction and identifies the two files. For example, suppose you are using an IBM PC™ with a hard disk drive, and you are copying a file called MARKET.RPT to the \STOCK subdirectory for offline review and editing. The notice might look like this:

```
Downloading MARKET.RPT to C:\STOCK\MARKET.RPT
```

FILTRN also displays information that helps you track the progress of the transfer. The information, and its display format, varies according to the communications package you are using.

When it finishes the transfer, FILTRN displays the notice:

```
*** File Transfer Completed! ***
```

and returns you to the TRANSFER DIRECTION menu so that you can perform another transfer if you like. You do not have to respecify the protocol, but you will have to repeat all the other steps. Whenever you are through with FILTRN, just select Choice 3 (Exit) from the TRANSFER DIRECTION menu. This takes you back to the File Management menu or the OK prompt, depending on your mode.

FILTRN Shortcuts

Once you become familiar with the procedure for using the FILTRN program, you can perform a file transfer with a single command. The general format for the command is:

$$\textbf{REQUEST FILTRN(} \left\{\begin{matrix}\textbf{UPL}\\ \textbf{DOW}\end{matrix}\right\} \textbf{file1} \left\{\begin{matrix}\textbf{TO}\\ \textbf{FROM}\end{matrix}\right\} \textbf{file2)}$$

(instructs the FILTRN program to process the following information as if it were your responses to the program prompts. The (must be placed immediately after the word FILTRN.

$\left\{\begin{matrix}\textbf{UPL}\\ \textbf{DOW}\end{matrix}\right\}$

specifies the direction of the transfer.

file1 can be the file identification for the source file or for the destination file, depending on whether you enter TO or FROM afterwards.

$\left\{\begin{matrix}\textbf{TO}\\ \textbf{FROM}\end{matrix}\right\}$

specifies which file is the source and which is the destination. TO means that file1 will identify the source and file2 will identify the destination, whereas FROM means exactly the reverse.

file2 can be the file identification for the source file or for the destination file, depending on whether it is preceded by TO or FROM.

) marks the end of your instructions to the program. This is optional, since you cannot include any more information on the same command line.

For example, suppose you want to perform the transfer specified earlier, downloading MARKET.RPT from CompuServe to the \STOCK subdirectory on your hard disk. To do this, you could enter either:

```
R FILTRN(DOW MARKET.RPT TO C:\STOCK\MARKET.RPT)
```

or

```
R FILTRN(DOW C:\STOCK\MARKET.RPT FROM MARKET.RPT)
```

Conversely, after you finish working with the file offline, you could transfer it back to the Personal File Area by issuing the command:

```
R FILTRN(UPL C:\STOCK\MARKET.RPT TO MARKET.RPT)
```

or the command:

```
R FILTRN(UPL MARKET.RPT FROM C:\STOCK\MARKET.RPT)
```

Just as when you are responding to the FILTRN prompts, you do not have to identify the file for your microcomputer if you want to transfer a file to or from the current subdirectory without changing its name. Thus, to download MARKET.RPT from your Personal File Area to the current subdirectory, you could enter:

```
R FILTRN(DOW MARKET.RPT)
```

Once you had finished editing the file offline, you could upload it back into your Personal File Area with the command:

```
R FILTRN(UPL MARKET.RPT)
```

Whenever you upload a file that you have previously downloaded, as with the sample MARKET.RPT file, that file is one that already exists in your area (unless, of course, you deleted it after downloading). So you would normally encounter the prompt asking you whether it should be overwritten. When you know in advance that you intend to overwrite an existing file, you can bypass this prompt by including one of two switches in the command:

- **/REP** — short for replace.
- **/SUP** — short for supersede.

Both these switches perform exactly the same function, so it does not matter which you use.

The /REP or /SUP switch can be placed after the UPL specification, after the source file identification, or after the destination file identification (e.g., UPL/REP or C:\STOCK\MARKET.RPT/REP or MARKET.RPT/REP). Wherever you place it, be sure not to separate it from the preceding information with a space or any other character.

To discontinue automatic overwriting, you can use either of two different switches in exactly the same fashion:

- **/NOR** — short for "no replace".
- **/NOS** — short for "no supersede".

With either of these switches, the program will prompt you for a new file name if you identify an existing file.

By default, FILTRN does not automatically overwrite a CompuServe file. So the only time you need to use a /NOR or /NOS switch is when you have previously specified automatic overwriting during the same FILTRN session. As will be shown later, this is only possible when you specify multiple file transfers in the same command.

Note: These switches are valid only for uploading.

The FILTRN program also uses two other defaults:

- It assumes that yóu are using CompuServe B Protocol.
- It assumes that any file you transfer is ASCII (in other words, a text file), unless the file extension is .BIN or .IMG. The .BIN extension identifies any file as a binary data file; the .IMG extension identifies it as an image file.

You can use two other switches to modify these defaults:

The /PROTO switch specifies a protocol. It can take any of the following forms:

- /PROTO:A means to use CompuServe A protocol.
- /PROTO:B means to use CompuServe B protocol.
- /PROTO:X means to use XMODEM protocol.
- /PROTO:M means to use Macintosh XMODEM protocol.
- /PROTO:D means to use DC2/DC4 protocol.

Note: If you specify CompuServe A protocol, all other information in the command will be ignored. This means that you will be taken through the standard menus (except the protocol menu) to provide the necessary specifications.

The /TYPE switch changes the type of file to be transferred. It can be any of the following:

- /TYPE:ASC means to process the file as standard text (ASCII format).
- /TYPE:BIN means to process the file as binary data.
- /TYPE:IMA means to process the file as a machine-dependent (image) file.

The switch names PROTO and TYPE can be abbreviated to P and T respectively. For example, either /PROTO:X or /P:X means to use XMODEM protocol, and either /TYPE:BIN or /T:BIN means to treat the contents of the file as binary data.

As with the switches for automatic overwriting, the /PROTO or /TYPE switches can appear after the direction specification (UPL or DOW), after the source file identification, or after the destination file identification.

Remember, you can also force FILTRN to transfer a file as binary data or image by using the special extensions .BIN or .IMG in the CompuServe file identification. If you use the extension, you do not have to include the file type switch.

If you use the extension, you do not have to include the file type switch.

As soon as you enter the complete instruction, FILTRN performs the specified transfer, displaying the same types of information as if you had followed the complete sequence of menus.

Once the specified transfer is finished, the program terminates automatically. This means that you will return to the File Management menu or the OK prompt as soon as you see the notice:

```
*** File Transfer Completed! ***
```

However, you can specify multiple file transfers in the same command. The procedures are explained in the next subsection.

Optionally, you can also skip any portion of the prompt sequence by including the appropriate information. For example, you could start by entering:

```
R FILTRN(DOW
```

This bypasses the TRANSFER PROTOCOL menu, the TRANSFER DIRECTION menu, and the TRANSFER TYPE menu, taking you to the prompt for CompuServe file identification. It automatically applies the defaults: CompuServe B protocol and the file type (as determined by the file extension). To override either or both defaults, you must place the appropriate switch(es) immediately after the direction specification (DOW or UPL).

In a similar fashion, you could enter all the remaining specifications at once from the TRANSFER DIRECTION menu. Instead of just selecting a download operation, for instance, you could enter:

```
DOW MARKET.RPT TO C:\STOCK\MARKET.RPT
```

The FILTRN program would automatically treat the file as ASCII (standard text) unless you specified otherwise by including a /TYPE:BIN or /TYPE:IMA switch immediately after DOW or either file identification.

CAUTION

In using any of these shortcuts, you should be aware that you will never be prompted to identify the file for your computer system. That is, unless your command explicitly specifies a computer file identification, FILTRN will automatically assume that you are transferring a file with the same identification to or from the current subdirectory.

When entering the file identification for your computer in a command, you should note that there are some characters which CompuServe interprets in special ways:

- (space)
- , (comma)
- / (forward slash)
- ((left parenthesis)
-) (right parenthesis)

If the file identification contains any of these characters, you must enclose the complete file identification in single or double quotes (' or "). This requirement does not apply to menu mode entries.

Transferring Multiple Files with One Command

There are two ways to transfer multiple files with a single REQUEST command. One is to include all the necessary information in the command. For example, the command:

```
R FILTRN(DOW MARKET.BIN, MARKET.RPT, UPL REVIEW.DAT)
```

would download two files and upload one. The transfer operations always take place in the same order in which you specify them.

You can include any combination of the available options in the command. But you should be aware that any option you specify becomes the default for any subsequent file transfer performed by the same command. For example, if your binary data file were named MARKET.REF instead of MARKET.BIN, you should avoid issuing the following command:

```
R FILTRN(DOW MARKET.REF/T:BIN, MARKET.RPT)
```

This would result in MARKET.RPT also being transferred as a binary data file.

One way to circumvent this potential problem is to assign the file the appropriate extension, as shown above. Another is to rearrange the operations so that any option you wish to specify for one transfer or group of transfers is not applied until after all other transfers are performed. For example, you could avoid the trouble of renaming the binary data file in the above example by issuing the command:

```
R FILTRN(DOW MARKET.RPT, MARKET.REF/T:BIN)
```

Note that any direction specification (UPL or DOW) also applies to all subsequent transfers, until you enter a new direction specification.

Of course, you could also identify one file as binary data, and the next as ASCII, and so on. But that is much less efficient.

The other method for specifying multiple file transfers at once is to create a file with all the necessary information in advance, and then issue a REQUEST command instructing FILTRN to process this file. This is called an "indirect" file transfer.

The file that specifies the transfer operations must have the file extension .CMD. This instructs FILTRN to process it as a series of instructions.

For instance, suppose you wanted to create a file for performing the three different transfers in the first example command in this section. If you intended to perform these transfers once a week, you might call the file WEEKLY.CMD, and it might look like this:

```
UPL REVIEW.DAT
DOW MARKET.RPT
MARKET.REF/T:BIN
```

Each transfer specification must be on a separate line. Blank lines and leading spaces will be ignored by the program. As with the direct file transfer command, once you have specified a transfer direction or a transfer type, it remains in effect until you change it.

Once you had created the file WEEKLY.CMD (and placed it in the same subdirectory as your communications package), you could perform all the file transfers at once by issuing the command:

```
R FILTRN(@WEEKLY.CMD)
```

The at sign (@) tells FILTRN to refer to the specified file for the information it needs.

Chapter 6
ICS Standard-Function Commands

The Personal File Area supports most of the standard-function commands provided by the Integrated Command System (ICS). You can issue any of the following commands from the File Management menu or any OK prompt:

DAY[TIME] displays the current time, day and date.

DOC[UMENT] ALL lists the programs for which on-line documentation is available.

DOC[UMENT] program [TO file] displays the on-line documentation for the specified program. Optionally, you can use this command to copy the documentation to a specified destination file in disk storage.

G[O] page takes you to the specified page. You can find the page identifications for the available services in your service index (GO IND).

HELP [topic [subtopic] . . .] displays information and/or instructions for the specified topic or subtopic. The HELP command by itself lists all the topics for which HELP messages are available. The HELP command with a topic displays information about the topic and lists the available subtopics. The HELP command with a topic and one or more subtopics displays information about the specified subtopic. If you specify more than one subtopic, the second subtopic must be a subtopic of the first subtopic, and so on.

JOB displays the job number assigned by CompuServe to your current CompuServe Information Service session.

MON[TH] provides billing information. It displays a menu that allows you to obtain summary or detail information for any week up to the current week, a transactional analysis of a session, or your current account balance. You also can obtain a hardcopy listing of billing information, at an extra charge.

NEWS displays the latest What's New bulletin from CompuServe, which is a topical list of recent additions and modifications to your service, as well as other items of interest to subscribers. To see a detailed explanation of any topic, enter:

```
GO NEW
```

PER takes you from any OK prompt to the File Management menu. You can also use this command to access the Personal File Area from any other point in the CompuServe Information Service.

R[EQUEST] program initiates the specified program. From the Personal File Area, you can request any of the following programs: EMADMP, SNDMAL and FILTRN.

STA[TUS] displays detailed information about your current session. The information includes your job number, the name of the CompuServe host computer system, your User ID, the node ID of your terminal, the name of the last program performed during the current session, the level of software being used (always 1), the number of System Resource Units (SRUs) expended during the present session, and the connect time. It also displays the name of the current temporary file, if there is one in your workspace. If core memory has been allocated to your job, the STATUS command also displays the current position of the program counter (the address of the next instruction to be executed), and the core sizes of the low and/or high segments of the last program, together with the adjusted maximum core size currently available to you.

TIM[E] displays the connect time elapsed during your present session.

Index

In this index, the most relevant page numbers appear first.

CompuServe

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