PLAN 4000™

The MESSENGER™
Electronic Mail Program User's Manual

NESTAR

NESTAR SYSTEMS, INCORPORATED

PLAN 4000 (TM)

THE MESSENGER (TM)
ELECTRONIC MAIL PROGRAM

USER'S MANUAL

DISCLAIMER OF WARRANTIES

How to Use This Manual

The Messenger (TM) electronic mail program allows users of the PLAN 4000 (TM) System to send messages to one or more of the users on the same or any connected network. This software features comprehensive English prompts and "Help" displays which make it easy to use.

The PLAN 4000 System supports The Messenger electronic mail program under a number of microcomputer operating systems (environments). Since this is the case, our documentation assumes that you have already read these manuals written by the manufacturer of your microcomputer explaining the use of your computer under the operating system you intend to be using. In the body of this manual we describe how the mail system works. When it is necessary to provide specific instructions for particular environments, we do so in the appendix for that environment (found at the end of this manual).

Since the network takes over communication with the File Server for you, you don't need to have knowledge of network file management to use this application. However, there are introductory manuals and guides which we would like all users to be familiar with in order to be comfortable while operating their workstation. If you have not already read these manuals, be aware that you can refer to them when you come across concepts or situations concerning the network that you are unfamiliar with.

The recommended PLAN 4000 manuals are:

File Server User's Manual

File Server User's Guide for your environment

General Information Manual

About This Manual:

Chapter 1 is an introductory overview. It defines the different components of a message and describes the stages the message goes through between its creation by the sender and its final disposition by the recipient. The procedures the user follows in order to send a message are also introduced here.

Chapter 2 explains how the mail program is started up and provides a breakdown of its different levels: the command level, the incomming level, and the outgoing level.

Chapter 3 explains in detail how to send and receive mail. Each of the commands and options relevant to sending and receiving mail is explained in detail here.

Chapter 4 explains how to file mail. Each of the options and commands relevant to filing mail is explained in detail here. Mail can also be printed on a shared printer (if your installation has the Print Server subsystem), or on a local printer through use of the "Write" command. This capability is also discussed in Chapter 4.

Chapter 5 explains how to make use of filed mail. The "Forwarding" capability of the mail system is explained here. Filed mail can be printed on a shared or local printer. This

capability is introduced here and detailed in the appendices for the various environments.

NOTE: Chapters 2-5 contain tables of commands and options. The table in Chapter 2 shows all commands and options and explains which level they are issued from and what they do. The tables in Chapters 4 and 5 include only those commands and options relevant to the topics for those chapters.

Chapter 6 covers other commands which you can use when running this software. For instance, there are a number of "HELP" displays which privide on-line documentation for the user.

Chapter 7 contains instructions for setting defaults which will cause the Mail program to run automatically when the system is started up and which will cause the mail program to automatically execute the function of the user´s choice.

Chapter 8 contains instructions intended for programmers who are using this software in combination with other programs. This chapter describes the Nestar CVAL convention, which makes chaining of programs possible.

Mail subsystem installers and system managers should read this User´s Manual as well as the Messenger Installation and Operations Manual.

The material in this document applies to Version 2.2 of the Messenger software.

We welcome criticisms and suggestions. Forms for reporting program and documentation errors or inadequacies are provided at the back of this manual.

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Chapter 1

Introduction

1.0 What is a Message?

In the Messenger System, a message is simply a
sequence of text lines. For example:

    TO: Jones
    FROM: Smith
    DATE: Thu 19-Feb-1981 11:33:10
    SUBJECT: Tomorrow's meeting

    Please be sure to have the final audit
    report with you so that you can answer any
    specific questions that come up.

Note that the message contains two parts: the
"header" and the "body". The header contains
special lines that identify the sender,
receiver, date, and subject of the message. The
body, which is separated from the header by a
blank line, consists of any number of lines of
text.

When a message is composed and sent, some of the
header lines are supplied automatically by the
Messenger, while others are supplied by the
sender. All the header lines are displayed when
the message is received. Some common header
lines are:

TO: Who is to be a primary recipient
               of the mail (always present)
CC: Who else is to receive a copy
               (optional)
FROM: Who sent the message
               (always present-automatically
                generated)

DATE: When the message was sent (always
             present-automatically generated)
SUBJECT: A short description of the contents
             (optional)
IN-REPLY-TO: A reference to a previous message
             (automatically generated for replies)

The header lines TO, FROM, and DATE are present
in all messages.

1.1 The Progress of a Message

Messages can go through several stages between
their creation by a sender and their final
disposition by   a   recipient.   The   three
fundamental stages are:

1. The message is composed. For short messages,
   the sender may simply type in the text at the
   keyboard.   Previously prepared text can be
   included at any point.

2. The   message   is sent   to one   or more
   recipients. These can be primary recipients
   (those on the TO list), or people receiving
   copies (those on the CC list). The sender
   may,   if   desired,   retain a   copy of the
   message. The recipients, of course, need not
   be using the Messenger at the time the
   message is sent; mail will be held awaiting
   delivery for as long as necessary.

3. The   message is received. Delivery of a
   message is completed when a recipient asks to
   read his incoming mail. After a message is
   read, it can be discarded or saved for future
   reference at the reader's discretion.   If a
   reply is appropriate, a message can be sent
   back to the originator.

These are the basic stages in the life of a
simple message. More complex operations are
possible, such as forwarding mail to others, or
requesting return receipts when mail is read,
but these are just elaborations of the simple
scheme.

1.2   The Storage of a Message

Messages reside in one of three places:

1. At the user station, as an "active" message
   that is currently being composed or read.

2. On disk, stored and awaiting delivery. Every
   user of the mail system has a queue of
   incoming messages that have not yet been
   read; this is the "new mail" queue, which may
   be thought of as an electronic In-basket.

3. On disk, filed away for future reference by
   the sender or the recipient, or both. Every
   user of the mail system has an area on the
   disk for saving copies of mail sent to others
   and mail received; this is the "mail file",
   which may be thought of as an electronic
   filing cabinet.

In addition, messages can be printed locally (on
a printer attached directly to the user's
workstation) or on a shared printer, and can be
transferred to and from textfiles. The appendix
for your particular environment discusses this.

The "mail file" can be thought of as a
repository of messages that have been sent or
received. New pieces of mail may be entered into
this repository at any time and may be
cross-indexed in categories (called classes)
that the user invents. These classes can then

be used to manage groups of messages.

1.3 Using The Messenger: An Example

Using the Messenger is extremely simple and does
not require extensive training or a knowledge of
programming. The following example demonstrates
two basic operations:

1. Reading an incoming message.

2. Composing and sending an answer to that
   message.

In the example that follows, the user's input is
underlined; everything else is typed
automatically by the Messenger. <RETURN>
indicates that the return key has been pressed.

NOTE: The following is an example. You don't
need to be running the mail software at this
point. However, in later chapters, you will.
This manual assumes that a system manager has
already taken the necessary steps to configure
the mail system software to be ready to support
the user. If this has not been done the user's
station will not be prepared to send or receive
mail. The PLAN 4000 (TM) Messenger (TM)
Installation And Operation Manual contains all
the instructions for configuring the software to
support new user's.

When the Messenger becomes active, it displays a
greeting:

        WELCOME TO THE MESSENGER, VERSION X.X
           Today is Thu 19-Feb-1983 13:33:13
        For help type ? RETURN to any request
        Command? READ <RETURN>

[With the READ command the user asks to read any
mail currently in the new mail queue - his
In-basket.]

>   You have 1 message:
>   02/19 12:54 SMITH
>   Read 02/19 12:54 SMITH (Y/N)? Y <RETURN>

[Only one new message has arrived since this
user last read his mail. The timestamp and name
in the label are used by the system to identify
the message. By replying "Y" to the Messenger´S
prompt the user has asked to read the message.]

>   To: JONES
>   From: SMITH
>   Date: Thu 19-Feb-1981 12:54:14
>   Subject: Tomorrow´s meeting
>   Display it (Y/N)? Y <RETURN>

[The header of the message has been displayed,
and the user, Jones, can decide whether or not
to look at the message itself. Since Jones has
replied ´Y´, the Messenger displays the body of
the message.]

>   Please be sure to have the final audit
>   report with you so that you can answer any
>   specific questions that come up.

IN:A(nswer) D(isplay) F(ile) FO(rward)
K(eep) N(ext) P(rint) Q(uit) W(rite)? A <RETURN>

[The body of the message has been listed,
followed by a menu of actions appropriate for
incoming messages (the "Incoming" menu,
appearing here as it does on a 40 column
screen). Afer reading the message, Jones has
decided to send back an answer, and so has typed
"A".]

To: SMITH? <u>\<RETURN\></u>
CC: ? <u>\<RETURN\></u>
Subject: Re: Tomorrow´s meeting ? <u>\<RETURN\></u>
Enter message or %filename,
terminate with <u>\<ESC\></u> <u>\<RETURN\></u>

[The mail system automatically suggests values for the header fields, and by pressing the return key, JONES indicates that the suggestions are acceptable. He now enters his reply to Smith.]

I´m expecting the audit report to be delivered this afternoon at 4; if it gets here on time I´ll be able to bring it to the meeting. If not, we may have to stall them another day or so. \<ESC\> \<RETURN\>

[In order to signal the end of the message, JONES types an ESC followed by a RETURN. While he is typing the message, JONES can correct errors by using the appropriate delete keys (these vary according to personal computer type). However, he can only correct errors within the same line. Once he has typed a RETURN at the end of a line, he can not return to the text in that line and correct it.]

OUT:D(isplay) F(ile) P(rint) Q(uit)
R(eceipt) S(end) W(rite)? <u>S</u> <u>\<RETURN\></u>

[Another option list, appropriate for outgoing messages, is displayed after the reply has been composed (the "Outgoing" menu). Jones chooses "S" in order to send his reply.]

Smith: Writing... Sent.

OUT:D(isplay) F(ile) P(rint) Q(uit)
R(eceipt) S(end) W(rite)? <u>Q</u> <u>\<RETURN\></u>

[The reply has been sent and is now in Smith's
new mail queue, and he will get it when he next
reads his mail. Since Jones doesn't want to do
anything more with the reply he has just sent
(such as saving a copy for himself), he answers
"Q" for quit and returns to reading the mail.]

    IN:A(nswer) D(isplay) F(ile) FO(rward)
    K(eep) N(ext) P(rint) Q(uit) W(rite)? Q <RETURN>

[The Messenger has returned to the menu that
asks Jones what he wants to do with the incoming
message. Since he doesn't want to do anything
more with it (like forwarding it to someone
else), he again reponds with "Q".]

    Command?

[The mail system is now waiting for more
commands. Jones has received a message, read
it, and composed and sent a response.]

There are many other commands and features of
the Messenger. They will be described in the
following sections, but they all follow the
simple menu style of this example.

Chapter 2

Using the Messenger

2.0 Getting Started

There are two ways to invoke the mail program.
You can run the program, as explained in the
appendix for your environment, or the file on
your boot volume can be edited to start the mail
program automatically when you power up your
system. Your system manager will help you with
this procedure, which is explained in Chapter 7
of this manual.

2.1 Automatic Startup and Read

In addition to configuring your startup file so
that your mail system will run when your
workstation is powered up, the Defaults.Text
file on your boot volume can also be configured
to perform some automatic functions for you.

Here is an example of what it does
automatically:

        WELCOME TO THE MESSENGER, Version X.X
           Today is Thu 19-JAN-1983 13:33:13
        For help type ? RETURN to any request

        Command? READ <RETURN>

A greeting appears and the Messenger looks for
new mail for the station's user as soon as the
system is turned on. Chapter 7 of this manual
explains how to tailor these automatic defaults
to your specific needs.

2.2 What Happens When The Messenger Software is Started Manually

If you do not choose to have your mail program invoked automatically each time you power up, such instructions can be left out of your boot volume's startcmd.text file. When you have manually invoked the mail software as explained in the appendix for your environment (and if your Defaults.Text file contains no relevant defaults), you will see the mail program's banner and the following prompt:

> Who are You?

The user will respond with the identification assigned to him by the system manager (last name or initials, for example), and the Messenger will ask

> Command?

The mail program is now operational.

2.3 The Messenger's Three Levels

The Messenger's commands and menu items can be divided into four categories and can be entered at three different levels (See Table 1, page 2-6):

    1. the "Command" Level (C Level)
    2. the "Incoming Mail" Level (I Level)
    3. the "Outgoing Mail" Level (O Level)

Levels I and O each present the user with a menu of further actions after a message has been read or composed. For instance, if a user types READ at the outermost (Command) level of the Messenger, and reads a new message, the Incoming

Mail menu of further options is then presented,
so that the message can be filed, answered,
printed out, or otherwise manipulated by the
user. These actions occur at the Incoming Mail
Level, and the menu options presented there are
for that message alone.

Table 1 lists the commands and menu items
available at each level. The command "READ"
moves the user from Level C to Level I. The
commands "SEND", "ANSWER", and "FORWARD" move
the user from Levels C or I to Level O.

Level C prompts for a command with

Command?

On Levels I and O, available commands are
displayed in menu form. The Level I Incoming
menu appears as

IN:A(nswer) D(isplay) F(ile) FO(rward)
K(eep) N(ext) P(rint) Q(uit) W(rite)?

The Incoming and Outgoing menus are for use only
with the current message being read, answered,
or forwarded, or to ask for the next piece of
new mail. Typing Q<RETURN> returns the user to
the previous level.

When Level C (the Command Level) is displayed no
activity is pending. The Messenger displays the
"Command ?" prompt because it is waiting for the
user to initiate an activity by entering a
command.

Suppose that the user first asks to read new
mail (READ) and finds five messages waiting in a
queue for him. He reads the first message (at
level I) and decides to ANSWER it. He composes
and SENDs his reply at Level O, FILEs a copy

away, but then decides to delete some mail previously filed and rearrange the remaining filed messages before continuing to read his new mail. The DELETE command is a first level command. The user must type Q <RETURN> twice, returning to Level C through the Incoming READ level, before entering DELETE.

Pascal Command
Level

X(ecute)
Pascal

Pascal

Messenger

Messenger
COMMAND LEVEL
(level C)

"SEND" "ANSWER" "FORWARD"

"READ"

"Q(UIT)"

Q(UIT)

INCOMING MENU
(level I)

"A(NSWER)""F(ORWARD)"

Q(UIT)

OUTGOING MENU
(level O)

Figure 1

Command Level ———— Command ? ———— DELETE ————

READ   Q(UIT)   READ

INCOMING MAIL MENU ————————————————————

A(NSWER)   Q(UIT)

OUTGOING MAIL MENU ————————————————————
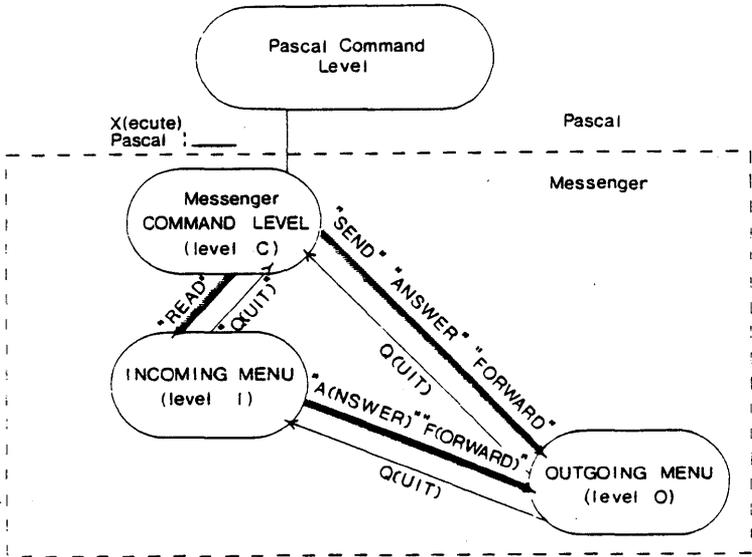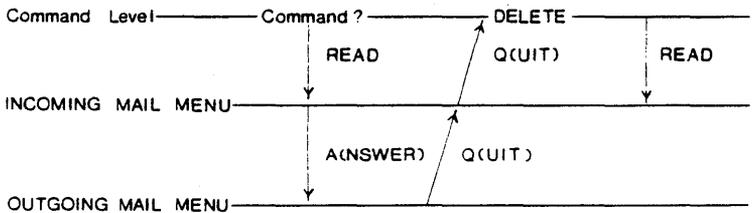
Figure 2

Command or Menu Item	Level	Section	Description
Sending and Receiving			
READ	C	3.0	Read new mail
N(ext)	I	3.1	Read next piece of mail
K(eep)	I	3.1	Keep a message in the In-basket
CHECK	C	3.4	Wait for new mail
SEND,	C	3.5	Send messages
S(end)	O	3.6	Transmit newly composed message
R(eceipt)	O	3.3	Request receipt before delivery
Filing			
F(ile)	I,O	4.1	File new mail
CLASSIFY	C	4.2	Index messages in mail file
DECLASSIFY	C	4.4	Remove message from class
RENAME	C	4.5	Change name of mail-file class
SHOW CLASSES	C,I,O	4.6	Display the current classes
DELETE	C	4.7	Delete messages from mail file
UNDELETE	C	4.8	Recover deleted messages
Using Filed Mail			
DISPLAY,	C	5.0	Display filed mail
D(isplay)	I,O	3.6	Display current message
HEADERS	C	5.1	Display filed-mail headers
ANSWER,	C	5.2	Answer a filed message
A(nswer)	I	3.6	Answer current message
FORWARD,	C	5.4	Forward a new or filed message
F(orward)	I	3.6	Forward current message
RESEND	C	5.7	Send a filed message
WRITE,	C	5.8	Write filed mail to Pascal file or print on local printer
W(rite)	I,O	3.6	Write current mail
PRINT,	C	5.9	Print message on system printer
P(rint)	I,O	3.6	Print current message
Other			
CLEAR	C	6.1	Clear the screen
HELP	C	6.2	Display a command summary
"?"	C,I,O	6.3	Prompt for expected action
NEWS	C	6.4	Display news about the system
INFO	C	6.5	Display local information
FS	C	6.6	Issue file server commands
SHOW	C	6.7	Display misc. information
Q(UIT)	C,I,O	6.8	Return to previous level

C = Command Level   I = Incoming Mail   O = Outgoing Mail

Table 1

2.4 General Rules

There are certain general rules that apply to all communication with the Messenger:

1. All input can be in upper or lower case.

2. All input (with two exceptions noted later) is terminated by pressing the <RETURN> key. Before the return key has been pressed, errors may be corrected and replacements typed using the left arrow, backspace, or delete key, depending upon the configuration of the workstation.

3. To leave the current level in the Messenger press Q <RETURN>. Q<RETURN> is equivalent to a command to "return to what was being done before".

4. If the user is unsure about how to respond to any prompt, typing ?<RETURN> causes a reminder to be displayed. The reminder describes what the Messenger expects next from the user. (Further information is available with the HELP command.)

5. If any part of a command is left out, the Messenger will ask for it. Thus, if a user can't remember what information should be supplied with a particular command, typing in the command name alone will produce a prompt.

6. Prompts that end in "(Y/N) ?" require a yes/no response; type either "Y" or "N" (or "y" or "n"), followed by <RETURN>.

7. To discontinue any activity, type <ESC><RETURN>. If a menu is being displayed, this action will return the user to the previous level. If a menu item has been

selected and input is being prompted for, this
action will return the user to the menu.

8. At the Command level, commands may be
abbreviated by the first three or more letters
(REA for READ, for example). However, all
letters typed must be in the correct order.
For example, DELETE can be abbreviated DELE,
but not DELI.

9. (This is the first exception to rule 2.) To
stop a display from scrolling off the top of
the screen, see the appendix for your
environment.

10. (This is the second exception to rule 2, and
applies to the Apple environments.) To abort a
display or other operation in progress, and go
on to something else, type <CTRL-C> (hold down
the CTRL key and press C). Pressing <RETURN>
is not necessary.

These general rules apply to all input to the
Messenger.

Chapter 3

Sending and Receiving Mail

Command or Menu Item	Level	Section	Description
READ	C	3.0	Read new mail
N(ext)	I	3.1	Read the next piece of mail
K(eep)	I	3.1	Save new mail without reading
CHECK	C	3.4	Wait for new mail
SEND,	C	3.5	Send mail
S(end)	O	3.6	Transmit a newly composed message
R(eceipt)	O	3.3	Request a receipt before mail delivery

C = Command Level
I = Incoming Mail Menu
O = Outgoing Mail Menu

3.0   The READ Command

The READ command is entered at the Command level
and is used to ask the Messenger to look for
incoming messages in the new mail queue. The
Messenger will respond to READ with

     You have no new mail

or with the identification names of any new
messages:

```
You have 3 messages:
02/19 14:24 SMITH
02/19 14:30 JONES
02/19 15:03 BROWN
Read 02/19 14:24 SMITH (Y/N)?
```

The Messenger asks whether new mail should be displayed, listing the messages one at a time.

The messages are presented in chronological order (the order in which they were generated). If more than one network segment is present, this order may not be absolutely chronological. The message identification includes the month, day, hour and minute at which the messages were created, and sender identification.

Pressing "N" <RETURN>, will cause the Messenger to go on to the next message. Messages that are not read will remain in the new mail queue for next time.

Responding with "Y" <RETURN> will cause the message to be read from the new mail queue. The header of the message will be displayed, and the Messenger will ask whether or not to display the body of the message:

```
TO: JONES,BROWN
FROM: SMITH
DATE: Thu 19-JAN-1983 14:24:29
SUBJECT: Upcoming Audit
IN-REPLY-TO: Message of Thu 19-JAN-1983 13:46:15
Display it (Y/N)? Y
```

This message was sent by Smith to Jones and Brown on February 19, in response to a previous message sent the same day. The Messenger asks whether to display the body of the message. Smith types in "Y" and the message appears.

The 1982 information is ready for your use.

Next, whether the body of the message has been displayed or not, a menu of choices is presented called the "Incoming" menu. This menu is used to determine the disposition of the message.

3.1 The Incoming Mail Menu

After a message has been READ, a menu of options is displayed

    IN:A(nswer) D(isplay) F(ile) FO(rward)
    K(eep) N(ext) P(rint) Q(uit) W(rite)?

To choose a menu item, type the capitalized letters (not those in parentheses), followed by <RETURN>. Q(uit) returns the user to the Messenger Command level. A(nswer) and FO(rward) move the user to the Outgoing Menu (the Messenger Level O).

A(nswer) Temporarily suspends examination of new mail, and allows the user to compose and send a reply. See the ANSWER command (Section 5.2) for an explanation of the A(nswer) prompts. When the A(nswer) process is finished, the Incoming Mail (Level I) menu will be redisplayed so that further action can be taken on the same incoming message.

D(isplay) displays the message again (header and body) and then repeats the Incoming menu.

F(ile) saves a copy of the message in the user's mail file. The Messenger asks whether to file the message in one or more particular classes; respond with one or more class names (separated by commas), or with <RETURN>, to file

the message without classifying it.

    Classes? <u>MEETINGS</u> <u><RETURN></u>
    Filed message number 37

When the message has been filed, the Messenger returns to the new mail (Incoming) menu. Filing and classifying mail is discussed in detail in Chapter 4.

FO(rward) forwards this message to someone else. This command temporarily suspends examination of incoming mail, and allows the reader to send a copy of this message to one or more people, preceded by an optional preface that the reader composes. See the FORWARD command (Section 5.4) for an explanation of the FO(rward) prompts. After the message has been forwarded, the new mail menu will be redisplayed for other action on the same incoming message.

K(eep) keeps the message in the new mail queue. Incoming mail that has been read (whether or not the body was displayed) is normally removed from the new mail queue. To keep the message in the queue, choose the K(eep) option of the menu and the message will be presented again the next time the READ command is used.

N(ext) goes on to the next message. Use this menu option after the current message has been processed. The current message will be discarded from the new mail queue unless the K(eep) option was selected first.

P(rint) For networks with a print server, the Print menu item will cause the current message to be printed out.

Q(uit) stops reading incoming mail. The current message is deleted from the new mail queue

unless K(eep) was selected before Q(uit). The user returns to the command line after typing "Q", all subsequent messages in the queue remain until next time the READ command is used.

W(rite) writes the incoming message to a text file or local printer. The Messenger will ask for the name of a text file to create and write the message to. The header and body are written in the same format as is displayed on the screen. Using such text files is discussed in Section 3.5. When the message has been written, the new mail menu will be redisplayed. Anything already in the text file is erased.

If the file is to be written to a local printer, the user must have a printer connected directly to the workstation and the printer must be supported by the operating system. The appendix for your environment contains information about printing from a printer that is connected directly to your workstaton.

NOTE: <ESC> <RETURN> - Exiting from the new mail menu by using the escape key causes the current message (and all subsequent messages) to be left in the new mail queue, and the user to be returned to the command level.

The Incoming mail menu will be displayed until the user selects Q(uit), A(nswer), F(orward), or N(ext) and is moved to another level. At the end of the new mail queue, the Messenger will display

        End of new mail.

and return to the command level. If new mail arrives after the READ command is given, the Messenger will display

New Mail has arrived

and list the new messages.

3.2 The K(eep) Menu Item

This is an incoming menu item. If a user
responds to the prompt

    You have 1 message:
    07/13 11:00 SMITH
    Read 07/13 11:00 SMITH (Y/N)?

with "N" <Return>, the piece of mail will be
kept in the new mail queue. A "Y" reply will
cause the header of the message to be displayed,
together with a second prompt:

TO: Jones
CC: Brown
FROM: Smith
DATE: Mon 13-Jan-1983 11:00:46
SUBJECT: Missing Audits
IN-REPLY-TO: Message of Mon 13-Jan-1983 10:58:16
Display it (Y/N)?

Typing "Y" displays the body of the message.
Typing "N" displays the Incoming menu.   Then,
pressing "K" <Return> for K(eep) will cause the
Messenger to keep the message in the new mail
queue, just as if the header had never been
displayed. The Incoming menu will then   be
redisplayed.

3.3 Reading Registered (Return Receipt) Mail

The sender of a message can request that "return
receipts" be sent when the message is read by
each of the recipients. A return receipt is a

small message that documents the date and time that the original message was accepted. Registered mail can also be refused, in which case the return receipt indicates refusal, and the recipient is not shown the original message.

When a registered message is delivered, the header is displayed and the recipient is asked,

OK to send return receipt (Y/N) ?

Answering "Y" causes a return receipt to be sent to the originator and the recipient may proceed to display the message. An "N" causes the Messenger to ask

Reject this mail (Y/N) ?

If "Y", a rejection message is sent to the originator indicating that the recipient has chosen not to read the mail. The Messenger then continues with the next message in the new mail queue.

"N" to both questions (neither accepting nor rejecting the message) causes the message to be left in the new mail queue and the same questions will be asked the next time the READ command is used.

To send a registered message, press "R" for Receipt when the Outgoing Mail menu is displayed, after the message has been composed but before it has been sent. The Messenger will respond with

A return receipt will be requested.

3.4   The CHECK Command

The CHECK command is very much like the READ command in that it looks at the new mail queue and allows incoming messages to be read. It differs from the READ command in the following ways:

1. If the new mail queue is empty, CHECK displays:

>   Waiting for new mail. Press space to
>   enter commands.

   and the time. The Messenger then waits for new messages to be received. When a message arrives, the computer bell rings and the Messenger displays the message identification just as if the READ command had been used.

2. After all the new mail has been read, the Messenger returns to wait for more new mail, instead of going to the command level.

   To return to the command level from Check mode, type a space. The prompt

>   Command?

   will appear.

3.5   The SEND Command

The SEND command is used to compose and send messages. To use it, type SEND <RETURN> at the outer level, as in

>   Command?   <u>SEND <RETURN></u>

The Messenger will first ask a series of

questions to obtain the information to be displayed in the header of the message, and then will ask for the text that will form the body of the message.

1. Who is to receive the message: To?

Respond with the identification of the direct recipients of the message. If there are more than one, separate them with commas. The identifications depend upon how the Messenger is installed by the System Manager; they are often the last names or the initials of the users.

    To? <u>SMITHE,JONES</u>

If an incorrect identifier is typed in response to the prompt To?, the Messenger will later display

    SMITHE: No such user

when the S(end) option is used. In this example, Jones has entered Smith's name incorrectly in response to the To:? prompt.

2. Who is to receive copies of the message: CC?

Respond with the identification of people who are to receive copies of the message. The same rules as for specifying people on the "TO" list apply here. The Messenger makes no distinction between people on the "TO" list and those on the "CC" list. The only difference is in the interpretation applied by the recipients; in some organizations the protocol may be that those on the TO list are expected to reply or take specific action, but those on the CC list are being sent copies for their information only.

Note: To have no one on the CC list, press
<RETURN> in response to the prompt.

3. What is the subject: Subject?

Respond with a short description (on a single
line) of the message. To supply no subject,
press <RETURN>.

All the information necessary for the header has
now been given. The date, time, and sender's
identification are supplied automatically. The
Messenger next asks for the body of the
message:

    Enter message or %filename; terminate with
    <ESC><RETURN>

Type in the text of the message. (Header and
body entries can include text copied from text
files; file names to be copied are preceded by
"%". A discussion of this subject is found in
Section 3.8, "Using Text Files".) Terminate each
line with <RETURN>.

When the body of the message has been completed,
type <ESC>, either on a line by itself or at the
end of the last line of the message.

The message is now completely assembled, and the
Messenger presents a menu of choices, called the
"outgoing mail menu", which can be used to
determine what is to be done with it.

3.6   The Outgoing Mail Menu

    Out: D(isplay) F(ile) P(rint) Q(uit)
    R(eceipt) S(end) W(rite)?

To choose a menu item (as with all menus presented by the Messenger), type the capitalized part of the name and press <RETURN>. For example, to D(isplay) the message, type "D<RETURN>".

D(isplay)   displays the entire message that has been composed. Both the header and the body are displayed.

F(ile)   This menu item saves a copy of the message in the sender's mail file. The Messenger will ask for an optional list of classes; respond with one or more class names separated by commas, or with <RETURN> to file a copy without assigning a class.

> Classes? <RETURN>
> Filed message number 38

The outgoing mail menu will be redisplayed for further action.

Q(uit)   stops the processing of this outgoing message. All action that you have previously specified will take place, but nothing else. If you have not F(iled), S(ent), P(rinted), or W(ritten) a copy of the message, you will be reminded that upon exiting, the message will be lost:

> OK to discard message (Y/N)?

P(rint)   For networks with the Print Server subsystem option, the Print menu item causes the current message to be printed out. Printed format is the

same as screen display format.

R(eceipt)   This requests that a "return receipt"
             be sent to you when the message is
             read by each recipient. The return
             receipt is a message that indicates
             whether the message was refused or
             accepted, and at what time. This
             option,   if it is used, must be
             specified before S(end). Receiving
             "registered" mail is described   in
             Section 3.3.

             S(end)   This sends the message to
             all people in the TO and CC lists of
             the message. As the message is sent
             to each person, the identification is
             displayed. If the message is being
             sent to a long list of people, using
             <CTRL-C> (holding down "CTRL" and
             pressing   "C")   will   stop   the
             transmissions, but any copies already
             sent cannot be rescinded.

W(rite)   writes a copy of the outgoing message
             to a text file or local printer. The
             Messenger will ask for the name of a
             text file to create and write the
             message to. After the message has
             been written, the outgoing mail menu
             will be redisplayed. If the text file
             already exists, you will be asked for
             permission to overwrite it.

             If the file is to be written to a
             local printer, the user station must
             have a local printer connected and
             the printer must be supported by the
             operating   system under which the
             Messenger is   being   run.   See
             Appendices for details.

<ESC> <RETURN>   Exiting from the outgoing mail
                   menu by using the escape key
                   is the same as typing Q(uit).
                   If you have not F(iled),
                   S(ent),   P(rinted),   or
                   W(ritten) a copy of the
                   message, you will be reminded
                   that upon exiting the message
                   will be lost:

                        OK to discard message
                        (Y/N)?

The outgoing mail menu will continue to be
displayed until the Q(uit) option or <ESC>
<RETURN> are used to return to the Command or
Incoming Mail level.

3.7   The S(end) Menu Item

The S(end) outgoing menu item is executed by
pressing "S" <Return> when the Outgoing menu is
presented.   S(end) causes the Messenger to
deliver the message that has just been
composed.

If Send is not used, the newly composed message
will not be sent. Note that by composing but not
sending messages, the user can use the Messenger
to write notes or messages to be filed (using
the File menu item) in one's own mail file under
some convenient class name.

To compose a message and send it at a later
date, use the RESEND command (Section 5.7).

Having composed and sent a message using S(end),
the user will often want to compose and send
another. To do so, press Q(uit) to return to the

Command level, and type SEND again to repeat the process. Typing S(end) again <u>without</u> returning to the Command level will cause the Messenger to display

Already sent. Send again? (Y/N)?

for each recipient in the TO: list. This is to remind the user that in order to compose a new message, "SEND" must be typed in at the Command level.

3.8 Using Text Files

Text files can be included in message headers (except for subject: field) and bodies by specifying the filename, preceded by "%", in response to the Messenger's prompts.

For example, the prompt and response

To? %<u>STAFF</u>

will cause the Messenger to send the message being composed to the mailing list found in the file STAFF. This option is especially useful when messages are frequently sent to a long list of recipients. Recipients should be listed in the file just as they would be in the To: and CC: headers. (For readability, carriage returns may be used between names in the file.) Names that are not part of the file may be included either before or after specifying the file. For example,

To? %<u>TECHSTAFF,JONES,SMITHE</u>

For detailed rules about the construction of text file names, see the appropriate appendix for your environment.

If a file with text other than a list of recipient identifications is used for a message header, or if recipients are not identified properly in the specified file, the Messenger will display

SMITHE: No such user

when the S(end) option is used.

Text files may be inserted into the body of a message in any order. To include a previously prepared text file at any point, type

%filename <RETURN>

on a separate line at the place where the file is to be inserted. Note that % must be placed in the first space of the line; otherwise it is treated like any other character. The Messenger will display the contents of the file as it is being used. Include as many files as desired, interspersed in any fashion with text entered from the keyboard.

In the case of multiple insertions of large files, all available space in the local user workstataion memory may be used up. The message

MEMORY OVERFLOW

will then be displayed. The part of the message that fit into memory can be sent, together with a few more lines of text, by accepting it with <ESC> and using S(end). To start over, use <ESC>, Q(uit), and type SEND again from the Command level.
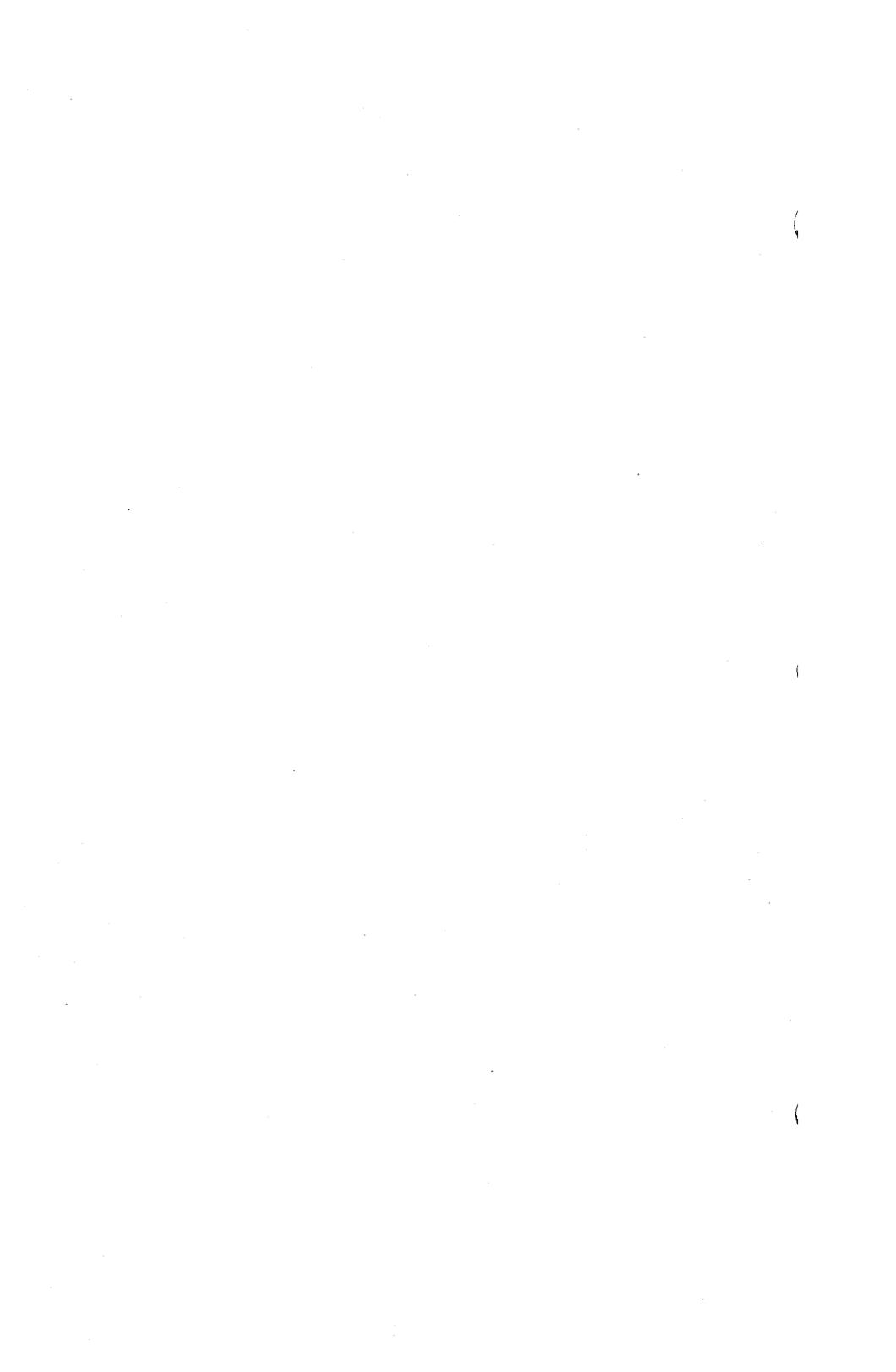
Chapter 4

Filing Mail

Command or Menu Item	Level	Section	Description
F(ile)	I,C	4.1	File new mail
CLASSIFY	C	4.2	Classify messages in one or more classes in mail file
DECLASSIFY	C	4.4	Remove message from classes in mail file
RENAME	C	4.5	Change the name of a mail-file class
SHOW CLASSES	C,I,O	4.6	Display the current classes
DELETE	C	4.7	Delete messages from mail file
UNDELETE	C	4.8	Recover messages accidentally deleted

Level C = Command Level
Level I = Incoming Mail Menu
Level O = Outgoing Mail Menu

4.0 Filing Commands

The Messenger's filing system is simple to use. Prompts are provided for the user by the system. Remember, however, that not all commands and menu items are available at all levels of the system.

For instance, the F(ile menu item is only available at the incoming and outgoing message levels, for use with the message currently being read, sent, answered, or forwarded. In this

list of commands and menu items above, five
(CLASSIFY, DECLASSIFY, RENAME, DELETE, and
UNDELETE) are available only at the command
level, and can not be used when the incoming or
outgoing menus are being displayed.

4.1   The F(ile Menu Item

The F(ile menu item saves a copy of the message
that is currently being read, sent, answered, or
forwarded, storing it in the user's mail file
(as if it were an electronic filing cabinet).
This file can be cross-indexed with as many as
24 subjects or categories (called "classes"). A
message can be cross-indexed in any or all
classes, and classifying and declassifying the
messages stored in them, are discussed in
Sections 4.2 through 4.5.

A mail class is simply a name chosen by the user
to characterize a set of messages; the class
name can be used in commands to the mail system.
24 classes are allowed by the Messenger, and
each filed message can belong to any set of
them. In addition to any class names given to
it, each filed message also has a message number
that can be used to reference it.

A new class name is created when the first
message is put into that class. When a message
is displayed, its message number and the classes
to which it belongs are also displayed.

When the F(ile option is selected from the
Incoming or Outgoing menu, the Messenger asks

    Class?

Respond with one or more class names (separated
by commas) to file the message under specific

class names, or with <RETURN> to file the message without a class.

For example, at the Outgoing level, a message is composed and the Outgoing menu is displayed:

    Out: D(isplay) F(ile P(rint Q(uit R(eceipt
    S(end W(rite F <RETURN>

Class? MEETING, CUSTOMERS <RETURN>

    Filed message number 37

In this example, the user, having composed a message, files it in two classes, MEETING and CUSTOMERS. As discussed in the following sections, class names and message numbers are used to identify messages to be stored, displayed, and sent. Responding to the "Class?" prompt with <Return> causes the Messenger to file the message being sent without assigning it to any class.

After filing the message, the Messenger redisplays the Incoming or Outgoing menu for further action at the current level.

If the mail file is full and no more messages can be filed in it, the Messenger will display, for example,

    Not enough free blocks; need 9, have 3

(A block holds about 500 characters.) To save the current message when this occurs, use the Incoming menu's K(eep option to retain the message in the new mail queue; then make more room in the mail file by DELETING some messages from the mail file. (To save message before deleting them, P(rint them or W(rite them to a textfile first.) Execute READ to return to the new mail queue and F(ile the message waiting

there. (DELETE and WRITE are discussed in Sections 4.6 and 5.8.)

4.2   The CLASSIFY Command

The CLASSIFY command allows the user to add new classifications to one or more messages saved in the mail file. The syntax is

    CLASSIFY <messages>,<classes>

where <messages> describes which messages are to have classes added, and <classes> is a list of one or more class names. For example,

    CLASSIFY 33
    Class? COMPETITORS,SALES

(This example shows how information not supplied is asked for.)

If, as in this example, the Messenger asks for the class name, the user can name a class or classes, or respond with "SHOW CLASSES" to have the current list of known classes displayed. The "Class?" question will then be asked again. Pressing <RETURN> or <ESC><RETURN> returns the user to the Command? prompt.

When a class name is used that has never been used before, the Messenger prompts

    No class xxx exists.
    Create it (Y/N) ?

For "Y", the class name is entered into the class table and assigned to the messages; for "N", the class is not created.

If 24 classes already exist, the Messenger will

display the message

Too many classes

If this happens, the current message can be filed temporarily without a class. Before it can be placed in a new class using CLASSIFY, one or more existing classes must be removed using the RENAME command (Section 4.5) at the outer Command level.

Using the CLASSIFY command to place a message in new classes does not create extra copies of the message with new message numbers; the single copy is simply recorded as a member of additional classes.

As explained in the previous section, this same sequence may be used when classes are being assigned to mail that is filed using the F(ile) option of the Incoming and Outgoing menus.

4.3   Specifying Messages in the Mail File

Many of the Messenger commands operate on one or more messages in the mail file. There are many ways to specify which messages are to be affected by a command; a complete formal description is provided in 4.3.1 below. Some of the common ways, shown using the DISPLAY command (discussed in Section 5.1) are:

1. A message number. Simply give the number of the message.

    Example: DISPLAY 21

2. A message class. Give the name of a message class preceded by "&" (ampersand) or by "@" (at-sign). All messages which belong to that

class will be selected.

Example: DISPLAY &MEETINGS

3. A range of message numbers. Give the starting
   and ending message numbers separated by ":"
   (a colon).

Example: DISPLAY 2:5

4. All messages in your message file. Just say
   "ALL".

Example: DISPLAY ALL

5. All unclassified messages. Type "&NONE"

Example: DISPLAY &NONE

6. The   current   message. The   last message
   accessed in the mail file is refered to as
   the "current" message and can be specified by
   using "." (period).

Example: DISPLAY .

7. The first, last, next, or previous message.
   "First" and "last" refer to the first message
   in the mail file (message number 1) and the
   last message in the mail file (the highest
   numbered message). "Next" and "previous"
   refer to the messages before and after the
   current message.

Examples: DISPLAY F   (first message)
           DISPLAY L   (last message)
           DISPLAY P   (previous message)
           DISPLAY N   (next message)

More complicated expressions can be constructed
using these basic elements plus some others

described in Section 4.3.1.

Here are some examples and their interpretations:

DISPLAY L-5   Display the fifth message from the last.

DISPLAY @NOTES IN 1:10

            Display any of the
            first ten messages
            that are also in the
            class "NOTES".

DISPLAY .!5   Display the next five messages.

In descriptions of the commands, the symbol ⟨messages⟩ is used to indicate that some messages from the mail file are to be specified. Use any of the ways to describe messages in place of the symbol ⟨messages⟩. For example, the DISPLAY command is described as

     DISPLAY ⟨messages⟩,⟨classes⟩

and any of the examples in this section can be used in place of ⟨messages⟩.

4.3.1 Formal Definition of ⟨Messages⟩

The symbol ⟨messages⟩ is used in the command description wherever the Messenger expects a specification of some subset of the messages in the mail file. The following is a formal recursive grammer specification of the syntax of ⟨messages⟩.

⟨messages⟩ ::=

ALL   All the messages in MAIL

<expr>   A single message, by number

<expr1>:<expr2> Message numbers from <expr1>
                    to <expr2>, inclusive.

 <expr1>!<expr2> <expr2> messages, starting
                    with message number <expr1>

 @<classname> [IN <messages>] All messages
                    in <messages> which are
                    also in the class
                    <classname>. IN ALL assumed
                    if it is omitted.

<expr>   ::=   <number>   A specific message
number

                    L   The last message

                    F   The first message

                    .   The current message

                    N   The next message (.+1)

                    P   The previous message
(.-1)

<expr1>+<expr2>   The sum of two expressions
                      (usually a message number
                       plus a constant, like
                       "F+2").

<expr>-<expr>   The difference of two
                      expressions (usually a
                      message number minus a
                      constant, like "L-1").
                      Mulitple expressions are
                      allowed and performed from

the right: 1-2-3 =1-(2-3)
= 0.

<classname> ::= <a 1-15 character name>

<number>   ::= <a positive integer>

4.4   The DECLASSIFY Command

The DECLASSIFY command allows the user to remove classifications from one or more messages in the mail file. The syntax is:

    DECLASSIFY <messages>,<class>

where <messages> indicates which messages   are to have classifications removed, and <class> indicates which classification   is   to   be removed.   For example

    DECLASSIFY L,SALES

will   remove the   last message in   the mail file from   the   "SALES"   class,   if   the   message   is currently so classified.

If   any of the specified messages are not in the named class, the prompt

    Message #nn is not in class.

will appear.   If there   is no   such class   name, messenger displays

    No such class.

4.5   The RENAME Command

The   RENAME   command   allows   any classification name to be changed. The syntax is:

RENAME <oldname>,<newname>

where <oldname>   is   the   current   name   of   the classification, and <newname> is the new name of the classification. For example,

RENAME DATES,APPOINTMENTS

This. moves all messages in the DATES class to a new class   named   APPOINTMENTS,   and   the   DATES class no longer exists. This does not affect any of   the   other   classes that   messages   in DATES might also have been in.

RENAME can be used to eliminate unwanted classes completely (e.g.,   when   24   classes   have   been named,   and room for new class names is needed). For example,

RENAME DATES, <blank>

will remove   the classification   DATES from   all messages filed in that class. The Messenger will make   sure that <newname> is not being forgotten by   asking "New Class?". Type <RETURN> and DATES will   be   eliminated   as   a   class   name.   The Messenger   will display   the message   number and subject header of each message in DATES as it is declassified.

Typing RENAME   <blank>,newname   will   create   an empty class named newname.

4.6   The SHOW CLASSES Command

The command SHOW CLASSES lists all the
classification names that are currently defined.
At the Command level, type in SHOW CLASSES in
response to the prompt "Command?",   or to
"Class?", which appears when the commands
CLASSIFY or DECLASSIFY are given.   At the
Incoming or Outgoing menu levels, after
selecting the F(ile) option, type in SHOW
CLASSES when the Messenger prompts with
"Class?". For example,

        Command? <u>classify 5</u> <Return>
        Class? <u>show classes</u> <Return>
                CONTRACTS   DATEBOOK
                  AUDITS   AJAX FILE
                  FISCAL
            5 of 24 classes are named
        Class? <u>Fiscal</u> <Return>

Here, the user has decided to classify message
number 5 in the mail file, but wishes to see a
listing of current classes first. Message 5 is
then classified in "Fiscal".

The same action at the Incoming level:

    In:A(nswer) D(isplay) F(ile) FO(rward)
    K(eep) N(ext) P(rint) Q(uit) W(rite)? <u>F</u> <u><RETURN></u>
    Class? <u>show classes</u> <Return>
                CONTRACTS   DATEBOOK
                  AUDITS   AJAX FILE
                  FISCAL
            5 of 24 classes are named
        Class? <u>Fiscal</u> <Return>

Pressing <Return> in response to the prompt
"Class?" at the Incoming and Outgoing levels
will cause the Messenger to file message 5
without classifying it.

4.7   The DELETE Command

The DELETE command is used to remove one or more messages from the mail file. The syntax is

>   DELETE <messages>

where <messages> describes which messages are to be deleted.

>   DELETE 1:10
>   DELETE &NOTES

As each message is deleted, its message number will be displayed. If, in the example above, a message belongs to the class &NOTES and to another class, it <u>will</u> <u>not</u> be deleted, but only removed from the class &NOTES.

WARNING: Message numbers are always consecutive in the Messenger. For example, immediately after deleting, for example, message number 12, the message whose number was 13 is now 12, the message whose number was 14 is now 13, etc. Take care, in doing a sequence of DELETE commands, that this implicit renumbering of the messages does not cause accidental deletions of the wrong messages. To delete several messages by message number, delete the highest numbered messages first.

4.8   The UNDELETE Command

The UNDELETE command is a seldom-used command used to retrieve filed messages that have been accidentally deleted. The syntax is simply

>   UNDELETE

All previously deleted messages that can be recovered will be filed at the end of the user's mail file. If no new messages have been filed since the last DELETE command, then at least all the messages recently deleted will be recovered. It is likely that additional messages deleted earlier will also be recovered, in which case it may be necessary to display all the recovered messages and delete those not wanted.

Undelete will not retrieve messages that were read but not filed.

Chapter 5

Using Filed Mail

Command or Menu Item	Level	Section	Description
DISPLAY,	C	5.0	Display filed mail
D(isplay)	I,O	3.6	Display current message
HEADERS	C	5.1	Display only the headers of filed mail
ANSWER,	C	5.2	Answer a filed message
A(nswer)	I	3.1	Answer current message
FORWARD,	C	5.4	Forward a filed message
F(orward)	I	3.1	Forward current message
RESEND	C	5.7	Send a filed message
WRITE,	C	5.8	Write a filed message to a Pascal file or local printer
W(rite)	I,O	3.1	Write current message to a Pascal file or local printer
PRINT,	C	5.9	Print a filed message on system printer
P(rint)	I,O	3.1	Print current message on system printer

Level C = Command Level
Level I = Incoming Mail Menu
Level O = Outgoing Mail Menu

5.0 The DISPLAY Command

The DISPLAY command, when typed at the Command level, is used to display one or more messages (both header and body) that have been filed in

the user's mail file. When selected from the
Incoming or Outgoing mail menu, D(isplay)
redisplays the message that has just been read
or composed. At the Command level, the syntax
is:

    DISPLAY <messages>

where <messages> describes which messages are to
be displayed. For example

    DISPLAY L

displays the last message (the one most recently
filed) in the mail file. As discussed in
Section 4.4, there are many ways to specify
which messages are to be affected by a command;
a complete formal description is given in
Appendix A. The most common ways are to give the
number of the message, or specify "ALL", or give
the name of a message class or range of message
numbers.

Remember that, as with other commands, there are
two ways to interrupt the output of the DISPLAY
command:

1. Temporarily, using <CTRL-S> to stop and again
   to start.

2. Permanently, using <CTRL-C>. The Messenger
   will display "...ABORTED" and return to the
   outer command level. However, <CTRL-C> is for
   use with operations in progress only, not for
   static prompts such as "Class?". Also, when
   displaying new messages, the Messenger will
   stop automatically when the screen is full,
   and ask MORE (Y/N)?

5.1   The HEADERS Command

The HEADERS command will print a one-line
summary of one or more messages that have been
filed in the mail file. The command syntax is:

    HEADERS <messages>

where <messages> describes which messages are to
be summarized. For example

    HEADERS ALL

HEADERS output has the format

```
#1<=Smith        Tue 19-Feb Tomorrow's meeting [1]
#2=>Jones        Tue 19-Feb Audit for meeting  [1]
#3=>JDN,SKF,... Wed 20-Feb Audit format       [2]
```

    ... and so on ...

The number in the first column of this example
is the message number in the mail file; this
number can be used to refer to this message as
part of the <messages> item in other commands.
The arrow indicates whether the message was to (
=>) or from (<=) the person listed in the
next column. If the message was sent by the user
to other people, then the arrow will point to
the right

    => names

An ellipsis (...) will appear if there are too
many names to fit in the field. For a message to
the user from someone else, the arrow will point
left

    <= name

away from the initials of the sender.

The next two fields display a partial date and
the subject of the message. The last field in
each header, in parentheses, gives a rough idea
of the length of the message; each increment
corresponds to about 500 characters.

5.2   The ANSWER Command

The ANSWER command is a variant of the SEND
command, used to reply to messages stored in the
mail file. ANSWER supplies suggestions for some
of the header fields, to make it easier to
compose a response to the filed message.

To use the ANSWER command, type

      ANSWER <messages>

where <messages> identifies the message (or
messages, although there usually will be only
one) in the mail file to be answered.

The sequence described here for the ANSWER
command can also occur by selecting the A(nswer)
option of the new mail menu. In that case the
message being answered is the one being read.

Note: The Messenger cannot ANSWER, FORWARD, or
RESEND long messages, and will display "Memory
Overflow" to indicate that a message is too long
for ANSWER to be used.

When constructing the header of the message
using ANSWER, the Messenger will suggest values
based on the header lines of the message being
answered or forwarded. The sender can either

1. accept the suggested value by pressing
   <RETURN>, or

2. supply a substitute by typing it followed by
   <RETURN>. To remove the suggestion and leave
   it blank, type a blank followed by <RETURN>.
   Or

3. add to the suggested value by typing in
   ,<addition><RETURN>.

If the sender supplies a substitute for the
suggested value, the Messenger will again
display the information for confirmation, this
time using the substitute as the suggestion. It
will continue to prompt with suggested values
until <RETURN> only is pressed.

5.3 Header Line Suggestions Supplied by ANSWER

These are the suggestions supplied automatically
by the Messenger for the header lines of a
message that is answering an earlier message:

1. For the "TO" header line, the suggested value
   is the sender of the message being answered.

2. For the "CC" header line, the suggested value
   is the concatenation of the "TO" and "CC"
   header lines of the message being answered,
   except that the current sender is removed.

3. For the "SUBJECT" header line, the suggested
   value is the subject of the message being
   answered, with "Re:" before it.

When the header has been completely constructed,
enter the body of the message just as for the
SEND command. The outgoing mail menu, as for the
SEND command, is then used to control the
disposition of the message.

5.4 The FORWARD Command

The FORWARD command is a variant of the SEND
command. Use it to send a message from the mail
file to one or more people, along with any
desired prefatory remarks.

To use the FORWARD command, type

        FORWARD <messages>

where <messages> identifies the message (or
messages, although there usually will be only
one) in the mail file to be forwarded.

Note: The sequence described here for the
FORWARD command can also occur by selecting the
FO(rward) option of the Incoming mail menu
(Section 3.1.1). In that case the message being
forwarded is the one currently being read. As
with the ANSWER command, the Messenger cannot
FORWARD long messages and will display "Memory
Overflow" to indicate that a message is too long
to be forwarded.

5.5 The FORWARD Header

When constructing the header of the message
using FORWARD, the Messenger will, as with
ANSWER, suggest values based on the header lines
of the message being answered or forwarded.
Either

1. accept the suggested value, by pressing
   <RETURN>, or

2. supply a substitute by typing it followed by
   <RETURN>. To remove the suggestion and leave
   it blank, type a blank followed by <RETURN>.

Or

3. add to the suggested value by typing
,<addition><RETURN>.

If a substitute is supplied for the suggested
value, the Messenger will again ask for the
information, this time using the replacement as
the suggestion. It will continue to prompt with
suggested values until one is accepted. Again,
press <RETURN> to do this. The substitute can
include external files by using the %file
notation.

5.6   Header Line Suggestions for FORWARD

The Messenger supplies these suggesions for
headers of forwarded messages.

1. For the "TO" header line there is no
   suggested value; supply the direct recipients
   just as for SEND.

2. For the "CC" header line there is no
   suggested value; supply the CC recipients
   just as for SEND.

3. For the "SUBJECT" header line, the suggested
   value is the subject of the message being
   answered, with "Re: " before it.

After the header has been constructed, the
Messenger prompts for a preface to the message:

> Enter preface or %filename,
> terminate with <ESC> RETURN

Enter the text of the preface just as for the
body of a message being composed with SEND. When
the preface is finished, type <ESC>. The

Messenger then will append the message being forwarded, surrounded by the lines

    --- BEGIN FORWARDED MESSAGE ---

    --- END FORWARDED MESSAGE ---

so that it is clear to the recipients that the message is imbedded within another message.

After the forwarded message has been copied, the standard outgoing mail menu is used to control the disposition of the entire package, including the new header, preface, and the embedded message.

5.7   The RESEND Command

The RESEND command is used to send messages that have been filed in the user's mail file:

    Command? <u>Resend</u> <u><Return></u>
    Message range? <u>3</u> <u><Return></u>

The Messenger will prompt for recipient and copies using the identifiers in the filed headers. These may be changed by the user in the same way as the FORWARD and ANSWER prompts:

    To: Smith? <u><Return></u>
    CC: Jones,Brown? <u><Space><Return></u>
    CC:? <u><Return></u>
    Copying message...
    OUT:D(isplay) F(ile) P(rint) Q(uit)
    R(eceipt) S(end) W(rite)?

Here, after requesting that filed message #3 be sent, the user accepts the To: prompt by pressing <Return>, and changes CC: from "Jones,Brown" to "no copies" by pressing the

space bar and <Return>. The Messenger then
prepares the message to be sent ("Copying
message...") and displays the Outgoing mail
menu.

Messages in a class can be sent by entering
"&classname" in response to the "Message range?"
prompt.

As with the ANSWER and FORWARD commands, the
Messenger will not RESEND long messages, and
will indicate with "Memory Overflow" that a
message is too long for use with RESEND.

5.8   The WRITE Command

The WRITE command is used to write one or more
messages to a text file or local printer. The
syntax is:

    WRITE <messages>

where <messages> specifies which messages are to
be written. The Messenger asks

    To what file?

Respond with the name of the text file to be
created or written into; see the appropriate
appendices for your environment for information
about file name conventions. To use a local
printer, type "Printer:". Messages to be printed
can be specified in the same way as messages to
be displayed or written. See the appendix for
your environment for the exact syntax. See also
Section 4.4. Both the header and body of each
message are written, and the number of the
message is displayed on the screen as it is
written to the file. As with all commands,
<CTRL-C> will abort the operation.

WARNING: The write command DOES NOT append messages to a file of messages. When a file name is specified and the file already exists, everything in it is replaced. However, the Messenger will warn that this is about to happen.

For example, suppose that Mr. Jones decides to store all of his correspondence regarding company audits in a Pascal file, and issues the command

    WRITE &AUDITS

The Messenger asks,

To what file? Audits
4: =>SMITH   Wed 10-Jun Audit Needs   [1]
8: <=SMITH   Tues 14-Jul Audit Situation [2]
etc

Later in the day Mr. Jones decides to add a new message and issues the command

    WRITE 11
    To what file? Audits

The warning will appear

    OK to overwrite existing AUDITS.TEXT (Y/N)?

Mr. Jones must write his new message to another file and merge the files using the Pascal Filer or Editor. If he replies "Y" to the prompt, the messages written earlier will be erased. Refer to the appropriate appendix for your environment for information about file name conventions.

The write command can be used to print messages

on a local printer (on which is connected directly to your workstation). See the appendix for your environment for detailed instructions about this feature.

5.9   The PRINT Command

The PRINT command can be used at any level of the Messenger to print messages on a shared printer if your information has the Print Server subsystem option. PRINT creates print-request files that specify which messages are to be printed. These request files are read by the Printer Server Program, which causes the specified messages to be printed. The Printer Server need not be in operation when the print requests are queued.

Messages to be printed can be specified in the same way as messages to be displayed or written. A complete description of syntax is given in Appendix A. For example

```
Command? Print
Message Range? 1:2
# 1: <=Smith      Thu 09-Jul  Re:Audit Plans  [2]
# 2: =>Jones      Fri 10-Jul  Re:Audit Snafu  [1]
Print request queued
Command?
```

and the Messenger has queued the messages filed #1 and #2. At the Incoming and Outgoing menu levels, selecting menu item P(RINT) causes the Messenger to queue the message currently being read, sent, or otherwise manipulated.
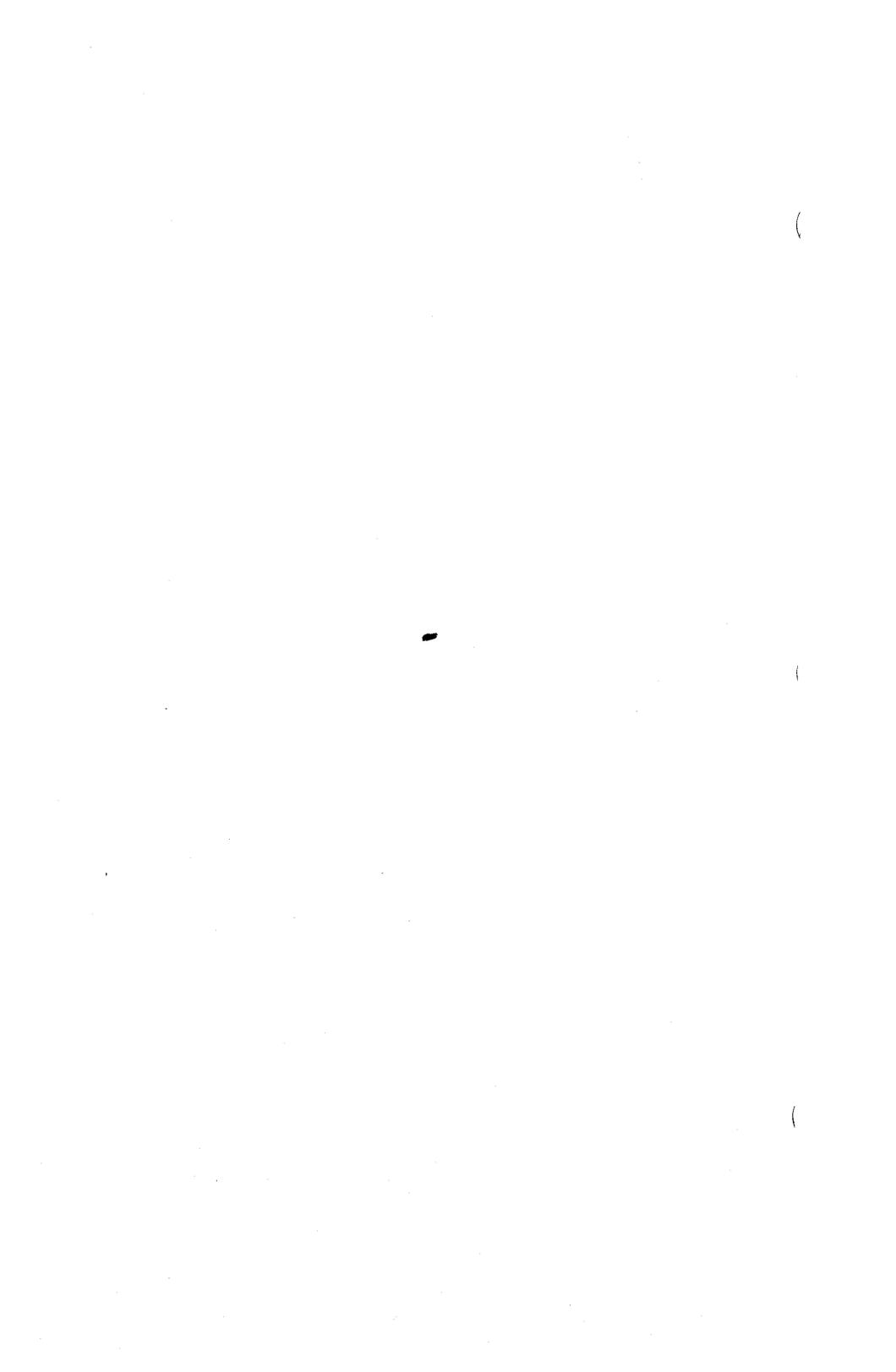
Chapter 6

Other Commands

Command Level or Menu Item		Section	Description
CLEAR	C	6.1	Clear the screen
HELP	C	6.2	Display a command summary
"?"	C,I,O	6.3	Prompt for next action
NEWS	C	6.4	Display news about the system
INFO	C	6.5	Displays local information
NET	C	6.6	Issue Network File Server commands
SHOW	C	6.7	Display miscellaneous information
Q(UIT)	C,I,O	6.8	Return to previous level

Level C = Command Level
Level I = Incoming Mail Level
Level O = Outgoing Mail Level

6.0 Other Commands

With the exception of Q(uit) and "?", these commands are available only at the Command level.

6.1 The CLEAR command

The CLEAR command clears the display screen.

6.2   The HELP Command

The HELP command displays one-line summaries of
most of the commands available at the Command
level of the Messenger. For example,

```
Command? Help
 Commands are:
   ANSWER <msgseq> - Reply to message(s)
   CHECK - Continually check for new incoming mail
   CLASSIFY........

   and so on.
```

6.3   The "?" Command

Entered in response to any prompt, "?" causes
the Messenger to explain what the user is
expected to do next. For example,

```
Command? ?
Enter <cmd> [<operand>]] or HELP to list commands
```

and

```
Command? send
To: ? ?
Initials, or %file, or RETURN to accept default
To:?
```

6.4   The NEWS Command

The NEWS command displays the contents of a news
file. The news file is maintained by the System
Manager at each installation, and can contain
information specific to   the Messenger,   or
information of a more general nature.

6.5 The INFO Command

The INFO command displays the contents of an information file. The information file is maintained by the system manager and can contain anything of interest to the users.

6.6 The NET Command

The NET command is used to issue commands to the File Server. There are two forms:

> NET <command> This form allows the user to specify a single NET command. The Messenger executes the command and returns the user to the Command level.

> NET This form allows the user to enter a submode from which to enter repeated NET commands. The Messenger prompts with

> > NET command or Q(uit):

> > Enter any NET command, except "local" commands. The command will be executed and the prompt repeated. Entering "Q" causes the Messenger to return to the Command level.

One common use of the NET command is to MOUNT a virtual disk, onto which filed messages can be written using the WRITE command, and from which Pascal files can be copied into headers and messages using the % option.

The NET command SET DIR should not be used from
the Messenger. SET DIR is used by the mail
system in reading new mail; changing directory
default values will prevent the system from
reading new messages.

6.7   The SHOW Command

The SHOW command can be used to display various
information about the Messenger and its
environment. The syntax is:

> SHOW <option> where <option> is one of the
> following:

> CLASSES   Display the classifications of
>   mail in the mail file.

> VERSION   Display the version number of the
>   Messenger being used.

> FREE   Display the number of free blocks
>   in user's mail file. Each free
>   block can store about 500
>   characters.

> SPACE   Display the amount of free space
>   in the local memory of the
>   computer. The free space is in
>   "words" and each word can hold 2
>   characters.

6.8   The QUIT Command or Menu Item

The QUIT Command, entered as Q at all three
levels, returns the user to the previous level:

> Typing Q at the Command level cause the

user to exit from the Messenger.

Typing Q from the Incoming menu returns the user to the Command level.

Typing Q from the Outgoing menu returns the user to the Incoming menu or to the Command level, depending upon which command, SEND, ANSWER, or FORWARD, was used to reach the Outgoing level.

Chapter 7

Tailoring Your System

7.0 Automatic Startup

PLAN 4000 has two startup command facilities
which can be used to facilitate entry into the
mail system: NESTAR.START and DEFAULTS.TEXT.

The startup facilities described below are
currently available in the Apple // Pascal,
Apple /// SOS and IBM PC p-System environments.
In the Apple /// SOS and IBM PC p-System
environments, the NESTAR.START program is
available as SYSTEM.STARTUP on the boot
diskette.

7.1 NESTAR.START

NESTAR.START is a program that can run
automatically when the user station is booted.
NESTAR.START first checks the booted disk for a
file named SYSTEM.STARTUP. If present,
SYSTEM.STARTUP is chained to. Otherwise,
NESTAR.START attempts to read a file from the
booted disk called STARTCMD.TEXT, and interprets
each line as a command. Including the word
"MAIL:" as a command line in STARTCMD.TEXT will
cause the mail system to be run automatically
when the station is booted.

NESTAR.START commands that do not relate to the
mail system are described in detail in the File
Server User's Manual.

7.2   DEFAULTS.TEXT

When the Messenger is executed, its first action
is to read the file DEFAULTS.TEXT, if it exists
on the station's boot volume. Any command lines
in this textfile that begin with the word
"Mail:" are executed automatically.

The following mail commands are allowed (all
commands must be preceded by "mail:"; upper and
lower case are allowed). Underlined values are
variables input by the user:

Mail: Set User name

Identifies the user as "name". The Messenger
will mount

> /Prefix/Name/Mail

and

> /Prefix/Name/Newmail/MessageID

automatically. A password may be included, in
the form name:password.   When the Set User
command is present, the Messenger will not ask
"Who are you?" at initialization.

Mail: Set DriveA x

Sets the drive used for filed mail to drive x;
otherwise the Messenger looks for any available
drive. The drive must be virtual.

Mail: Set DriveB y

Sets the drive used to mount new mail to drive
y; otherwise the Messenger looks for any
available drive. Drive must be virtual.

Mail: Set Height n

Sets screen page height to n lines; default is
24. When displaying messages, the Messenger
asks MORE?(Y/N) after n lines.

Mail: Set Width n

Sets screen width to n columns. Screen width
will affect the formatting of some prompt lines.
The default is 80.

Mail: Set Prefix path

Sets pathname prefix for mail and newmail
files. Default is /MAIN/USERS. READ access must
be provided for all directories in the prefix
path. Passwords may be included. All users of
the Messenger must have the same prefix and
Newmail; otherwise, messages will not be sent
correctly.

Mail: Set Mailfile path

Sets the complete pathname for Mailfile. This
command overrides default pathname
Prefix/User/Mail and uses the specified
pathname. READ, WRITE access must be provided.
Passwords may be used.

Mail: Set Newmail name

Sets final name of Newmail pathname, appended to
Prefix/User/. Used for incoming and outgoing
mail. Default is "NEWMAIL". DELETE and READ
access must be provided for the NEWMAIL
directory, and CREATE access must be provided
for outgoing newmail directories. Passwords may
be included.

Mail: READ

Causes the Messenger to automatically execute the READ command after initialization.

Mail: CHECK

Causes the Messenger to automatically execute the CHECK command after initialization.

7.3 Access, Usage, and Protection

PLAN 4000 file protection facilities are discussed in detail in the File Server User's Manual. Briefly, the mail system user can prevent access to his or her Mail and Newmail files by setting passwords in the file pathnames and limiting public and group access rights to those files. From within the mail system, this is accomplished by issuing NET PROTECT commands. For example,

    NET PROTECT /MAIN/USERS/SMITH/NEWMAIL,
        PUBACC=C,GRPACC=,PRVACC=RWECD,PRVPW=XYZ

causes the private password "xyz" to be set for Smith's Newmail file, and read and write access to be restricted to private use. No group access is allowed, but the public is given "create" access so that messages from other mail users can be created in the Newmail directory. The Mail file is accessed only by the user who owns it; there need be no public access to it at all.

The following access must be provided for the system to function:

  1. READ access for Mail/Newmail prefix (all users must have same prefix and Newmail).

2. READ and WRITE access for your own Mailfile.

3. DELETE and READ access for your own Newmail directory.

4. CREATE access for other Newmail directories.

A private password, once it has been set, can be entered in several ways:

1. By issuing a network "SET PRVPW" command from the NET program before the Messenger is used.

2. By including the SET PRVPW command in the boot volume startcmd.text.

3. By including the private password in the appropriate Mail Set commands in the boot volume Defaults.text.

The system default is no protection.

Chapter 8

The Nestar CVAL Convention

8.0 Introduction

If you are an applications programmer, you will
need to know how to your Nestar programs can be
used with the next of your programs. This
chapter describes the Nestar convention for
chaining programs.

8.1 CVAL

Pascal Release 1.1 allows one program to chain
to another, and provides for a global string
called CVAL to be passed as a parameter.

See Pages 2 and 3 of the "Addendum to the Apple
Pascal Language Reference Manual" (Apple Part
#031-0101-00) for a discussion of   chaining
programs in the Apple Pascal environment. To use
these procedures in the FS environment with the
Nestar shared library, the line

        USES CHAINSTUFF;

that immediately follows the Program heading
must be replaced by

        USES (*$U LIB:NESTAR.LIB*) CHAINSTUFF;

The Nestar definition of the CVAL variable
allows it to be used both to specify a series of
program to be executed, and to supply parameters
to those programs. Programs which obey this
convention can thus be called as subroutines or
be linked in a chain of consecutive program
executions.

8.2   Format of CVAL String

The general format of the CVAL string as a program begins execution is:

    parm//program2, parm2//program3 ...

where "parm" is a parameter that is being passed to the current program. When it terminates, program1 is the next program to be executed, and it is passed the string starting with parm2.

For example, if the CVAL string has the following value when program ABC is executed

    verbose//DEF,nosend

then program ABC will be executed with "verbose" as a parameter, after which program DEF will be executed with "nosend" as a parameter.

8.3   Complex Chain Sequences

Complex CHAIN sequences may be implemented by programs which add to as well as remove names from the CVAL string. Two procedures that manipulate the CVAL string in accordance with this convention are shown here:

GETPARM (parm-string);
This procedure sets "parm-string" to the parm provided to this program. In addition, if a CHAIN program name was given then a SETCHAIN is done (for this reason, GETPARM should be called even if the invoking program doesn't expect/accept a parm). This procedure should only be called once per program since multiple calls will unstack multiple parm/program list

entries.

SETPARM (parm-string, program-name-string);
This procedure sets the parm for the next
program which will be executed. In addition, the
program name of the program to be executed after
the next program has completed can be specified
(e.g, the program name could be the original
program name to cause a "return" to the original
program when the next program has completed).
SETPARM always returns and multiple SETPARM
calls are legal (to set up a list of programs to
execute).

```
PROCEDURE GETPARM (VAR PARM:STRING):

VAR
  P: INTEGER;
  CVAL,PGM:STRING;

BEGIN
  GETCVAL (CVAL);
  P := POS ('//',CVAL); (*find the end of our
                            parm*)
  IF P = O THEN BEGIN
    PARM := CVAL;
    CVAL := ''
  END
  ELSE BEGIN
    PARM := COPY (CVAL,1,P-1);
    DELETE (CVAL,1,P+1);
    P := POS (',',CVAL);
    IF P = O THEN BEGIN
      PGM := CVAL;
      CVAL := ''
    END
    ELSE BEGIN
      PGM := COPY (CVAL,1,P-1);
      DELETE (CVAL,1,P)
    END;
```

CVAL


```
      IF PGM <> '' THEN SETCHAIN (PGM);
                    (* XCTL pgm name *)
    END;
    SETCVAL (CVAL)
END;


PROCEDURE SETPARM (PARM,PGM:STRING);


VAR
  CVAL: STRING;

BEGIN
  GETCVAL (CVAL);
  SETCVAL (CONCAT (PARM,'//',PGM,',',CVAL))
END;
```

Appendix A

Using The Messenger Program in the
Apple // PASCAL Environment

A.0   Introduction

This Appendix includes instructions and
information specific to the Apple // Pascal
environment. It is meant to be read in
conjunction with Chapters 1-8 of this manual.
It includes the following information and
instructions.

1. Invoking the mail program (to be read in
   conjunction with Chapter 2).

2. Invoking the mail program automatically at
   startup of your workstation (to be read in
   conjunction with Chapter 2).

3. Proper syntax of file names when storing and
   using text files in conjunction with the mail
   program (to be read in conjunction with
   Chapters 5 and 6).

4. Printing messages on a local printer (to be
   read in conjunction with Section 5.9).

5. Freezing the screen display.

A.1   Invoking the Mail Program

The mail program resides on

    /MAIN/LIB/APPLE2/UCSD/PASCAL

which is the shared library volume for this
environment.

To invoke the mail program, select the execute
function from the main Pascal command line by
typing "X". Then supply the following
specifier:

  LIB:MAIL

A.2 Invoking the Mail Program Automatically Upon
Startup of Your Workstation

The network software includes special auto-start
features which can cause your mail program to be
invoked automatically when your system is
powered up. In order to make use of this
capability, you will need to add instructions to
your Startcmd.Text file, which is located on
your boot volume.

To learn how to configure this STARTCMD.TEXT
file you will need to refer to the User's Guide
for the Apple // Pascal Environment.

In addition to being made to start up
automatically upon system power up, the mail
program can be given commands so that it will
automatically show you how many new messages you
have and ask you if you would like to read the
first one.

You should get together with your system manager
if you would like to use these automatic
start-up features.

Your system manager may have already configured
your Startcmd.Text file to include startup of
the mail program. If you don't like this, it
can be changed. Speak with the system manager
about it.

A.3 Proper Syntax for File Names When Storing and Using Text Files

In Chapters 5 and 6, we tell you how to file messages and how to use text files as messages. There are some rules about specifying file names under the Apple // Pascal Environment which are important for you to know.

When you use the "Write" command or menu option, you are asked for a file name. When you read in the text of a message from a file, you will need to specify a file name.

When you are specifying these file names there are some Pascal conventions you should keep in mind.

If you ask for a text file to be created or found and you supply a name without the .text extension, that extension will be appended.

If you ask for a file to be created or found and you supply a name which has a .text extension, the file created or found will have the exact file name that you typed including the .text extension.

If you ask for a file to be created or found and you end the file name with a period, the file that is created or found will not (can not) have a .text extension.

Examples of instances involving these conventions are as follows:

1. If you ask for "mymail" to be created a file called "mymail.text" will be created.

2. If you ask that a file called "Letter.text"

be used as a message (after the % character).
The file "Letter.text" will be used.

3. If you ask that a file called
"#3:appointments." be used as a message, the
file called "#3:appointments" will be used.
In this case, if there is a file called
"appointments.text" on the volume Smith:
(which can be specified as #3:), that file
will not be used because the existence of the
period in your specification tells Pascal not
to automatically append .text to your
specification, but to look instead for a file
name that exactly matches your
specification.

4. If you create a file and supply the name
"goals.", the file will be created and will
be called "goals", not "goals.text".

NOTE: In the above examples we have
sometimes specified the volume and sometimes
not. You should know that if you want to
retrieve or create a file, you will need to
specify the volume name or number only if the
volume you are specifying is not your prefix
volume.

A.4 Printing Messages On A Local Printer

If you intend to use a local printer for
printing mail messages, you must have the
appropriate interface card for your printer
installed in slot 1 of your Apple // computer.
You must set drive 6 real, either by executing
LIB:NET, or by modifying the Startcmd.text file
on your boot volume.

Having invoked the MAIL program, you can then
invoke the "Write" function from any of the

three levels.

1. You can type "WRITE" after the Command?
   prompt.

2. You can select the "Write option from the
   Incoming Command option line by typing "W".

3. You can select the Write" option from the
   Outgoing Command option line by typing "W".

When you select this option you will to asked
the following: To what file?

Your response can be either of the following:

    Printer:

    #6:

A.5 Freezing the Screen Display

Type <Ctrl><S> to freeze a scrolling screen
display (such as a listing of all headers), and
<Ctrl><S> to resume scrolling.

Appendix B

Using The Messenger Program
in the Apple /// SOS Environment

B.0   Introduction

This   Appendix   includes   instructions   and
information   specific   to   the   Apple ///   SOS
environment.   It   is   meant   to   be   read   in
conjunction with Chapters 1-8 of this manual.
It   includes   the   following information   and
instructions.

1. Invoking   the   mail   program (to   be   read in
   conjunction with Chapter 2).

2. Invoking the mail program automatically at
   startup of your workstation (to be read in
   conjunction with Chapter 2).

3. Proper syntax of file names when storing and
   using text files in conjunction with the mail
   program (to   be   read   in   conjunction with
   Chapters 5 and 6).

4. Printing messages on a local printer (to be
   read in conjunction with Section 5.9).

5. Freezing the screen display.

B.1   Invoking The Mail Program

The mail program resides on

    /MAIN/LIB/APPLE3/SOS

which is the   shared library   volume for this
environment.

To invoke the mail program, select the execute function from the main Pascal command line by typing "X". Then supply the following specifier:

/LIB/MAIL

B.2 Invoking The Mail Program Automatically Upon
      Startup of Your Workstation

The network software includes special auto-start features which can cause your mail program to be invoked automatically when your system is powered up. In order to make use of this capability, you will need to add instructions to your Startcmd.Text file, which is located on your boot volume.

To learn how to configure this Startcmd.Text file you will need to refer to the User's Guide for the Apple /// SOS Environment.

In addition to being made to start up automatically upon system power up, the mail program can be given commands so that it will automatically show you how many new messages you have and ask you if you would like to read the first one.

You should get together with your system manager if you would like to use these automatic start-up features.

Your system manager may have already configured your Startcmd.Text file to include start up of the mail program. If you don't like this, it can be changed. Speak with the system manager about it.

B.3 Proper Syntax For File Names When Storing And Using Text Files

In Chapters 5 and 6, we tell you how to file messages and how to use text files as messages. There are some rules about specifying file names under the Apple /// SOS Environment which are important for you to know.

When you use the "Write" command or menu option, you are asked for a file name. When you read in the text of a message from a file, you will need to specify a file name.

When you are specifying these file names there are some Pascal conventions you should keep in mind.

If you ask for a text file to be created or found and you supply a name without the .text extension, the file created or found will have the exact file name that you specified.

If you ask for a file to be created or found and you supply a name which has a .text extension, that extension will be appended.

If you ask for a file to be created or found and you end the file name with a period, the file that is created or found will not (can not) have a .text extension.

Examples of instances involving these conventions are as follows:

1. If you ask for "mymail" to be created a file called "mymail.text" will be created.

2. If you ask that a file called "Letter.text" be used as a message (after the % character).

The file "Letter.text" will be used.

3. If you ask that a file called
   ".N1/appointments." be used as a message, the
   file called ".N1/appointments" will be used.
   In this case, if there is a file called
   "appointments.text" on the volume Smith:,
   (which can be specified as .N1) that file
   will not be used because the existence of the
   period in your specification tells Pascal not
   to automatically append .text to your
   specification, but to look instead for a file
   name that exactly matches your
   specification.

4. If you create a file and supply the name
   "goals.", the file will be created and will
   be called "goals", not "goals.text".

NOTE: In the above examples we have sometimes
specified the volume and sometimes not. You
should know that if you want to retrieve or
create a file, you will need to specify the
volume name or number only if the volume you are
specifying is not your prefix volume.

B.4 Printing Messages On A Local Printer

If you intend to use a local printer for
printing mail messages, you must have the
appropriate interface at the rear of your Apple
/// computer. And, you must have the appropriate
printer driver code file in the SOS.Driver file
on your boot volume. Finally, you must know the
device name of your printer driver file (i.e.
.Printer).

Having invoked the MAIL program, you can then
invoke the "Write" function from any of the
three levels.

APPLE /// SOS

1. You can type "WRITE" after the Command?
   prompt.

2. You can select the "Write option from the
   Incoming Command option line by typing "W".

3. You can select the Write" option from the
   Outgoing Command option line by typing "W".

When you select this option you will to asked
the following:

    To what file?

Your response will be:

    .Name

where .Name is the SOS device name for the
printer driver file that is used to communicate
with your Printer (e.g., .Printer).

B.5 Freezing the Screen Display

Type <Ctrl><7> to freeze a scrolling screen
display (such as a listing of all headers), and
<Ctrl><7> to resume scrolling.

Appendix C

Using The Messenger Program
in the IBM PC UCSD p-System Environment

C.0   Introduction

This Appendix includes instructions and information specific to the IBM Personal Computer UCSD p-system environment. It is meant to be read in conjunction with Chapters 1-8 of this manual. It includes the following information and instructions.

1. Invoking the mail program (to be read in conjuntion with Chapter 2).

2. Invoking the mail program automatically upon start up of your workstation (to be read in conjunction with Chapter 2).

3. Proper syntax of file names when storing and using text files in conjunction with the mail program (to be read in conjunction with Chapters 5 and 6).

4. Printing messages on a local printer (to be read in conjunction with Section 5.9).

5. Freezing the screen display.

C.1   Invoking The Mail Program

The mail program resides on

/MAIN/LIB/IBMPC/UCSD/PASCAL

which is the shared library volume for this environment.

To invoke the mail program, select the execute
function from the main p-system command line by
typing "X". Then supply the following (
specifier:

   LIB:MAIL

C.2 Invoking The Mail Program Automatically Upon
     Start Up of Your Workstation

The network software includes special auto-start
features which can cause your mail program to be
invoked automatically when your system is
powered up. In order to make use of this
capability, you will need to add instructions to
your STARTCMD.TEXT file which is located on your
work volume.

To learn how to configure this STARTCMD.TEXT (
file you will need to refer to the File Server
User's Manual for the IBM Personal Computer UCSD
p-System Environment.

In addition to being made to start up
automatically upon system power up, the mail
program can be given commands so that it will
automatically show you how many new messages you
have and ask you if you would like to read the
first one. You should get together with your
system manager if you would like to use these
automatic startup features.

Your system manager may have already configured
your STARTCMD.TEXT file to include start up of
the mail program. If you don't like this, it
can be changed. Speak with the system manager (
about it.

C.3 Proper Syntax For File Names When Storing And Using Text Files From Messenger

In Chapters 5 and 6 we tell you how to file messages and how to use text files as messages. There are some rules about specifying file names in Messenger under the IBM PC UCSD p-System environment which are important for you to know.

When you use the "Write" command or menu option, you are asked for a file name. When you read in the text of a message from a file, you will need to specify a file name.

When you are specifying these file names there are some conventions you should keep in mind.

If you ask for a text file to be created or found and you supply a name without the .text extension, that extension will be appended.

If you ask for a file to be created or found and you supply a name which has a .text extension, the file created or found will have the exact file name that you typed including the .text extension.

If you ask for a file to be created or found and you end the file name with a period, the file that is created or found will not (can not) have a .text extension.

Examples of instances involving these conventions are as follows:

1. If you ask for "mymail" to be created a file called "mymail.text" will be created.

2. If you ask that a file called "Letter.text" be used as a message (after the % character).

The file "Letter.text" will be used.

3. If you ask that a file called "#5:appointments." be used as a message, the file called "#5:appointments" will be used. In this case, if there is a file called "appointments.text" on the volume on #5:, that file will not be used because the existence of the period in your specification tells the system not to automatically append .text to your specification, but to look instead for a file name that exactly matches your specification.

4. If you create a file and supply the name "goals." the file will be created and will be called "goals" not "goals.text".

NOTE: In the above examples we have sometimes specified the volume and sometimes not. You should know that if you want to retrieve or create a file, you will need to specify the volume name or number only if the volume you are specifying is not your prefix volume.

C.4 Printing Messages on a Local Printer

If you intend to use a local printer for printing mail messages, you must have the appropriate interface card for your printer installed in your IBM Personal Computer.

Having invoked the MAIL program, you can then invoke the "Write" function from any of the three levels.

1. You can type "WRITE" after the Command? prompt.

2. You can select the "Write option from the Incoming Command option line by typing "W".

3. You can select the Write" option from the Outgoing Command option line by typing "W".

When you select this option you will to asked the following:

   To what file?

   Your response will be:

   Printer:

or

   #6:

C.5 Freezing the Screen Display

Type <Ctrl><S> to freeze a scrolling screen display (such as a listing of all headers), and <Ctrl><S> to resume scrolling.

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the use of the PLAN 4000 system.

You are encouraged to use this form to
communicate to Nestar any problems or
suggestions associated with the system. We would
like your comments on improving the system
itself, as well as on this documentation.
Possible topics for comment are: clarity,
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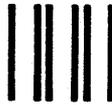Nestar installation location:

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