How to Use the Task Force Microcomputer

Tora K. Bikson, Rick A. Eden, James J. Gillogly,
Wendell Hahm, Judith Payne, Norman Z. Shapiro

October 1987
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Prepared for
The John and Mary R. Markle Foundation
PREFACE AND SUMMARY

This Note is a manual for the computer system provided to selected participants in a RAND research project investigating how people plan for and adapt to the shift from employment to retirement and how people may use various communication media in this transition. The study is funded by the John and Mary R. Markle Foundation, a nonprofit organization that supports research on adult development and the media. It is being conducted within RAND’s Domestic Research Division.

This manual is intended primarily for participants in the project who are currently retired and using the computer system at home. An introductory guide, it does not presuppose familiarity with computers or prior keyboard skills. Along with the manual, users received about two hours of installation assistance and training. They were also provided with more detailed documentation for their equipment and software.

A parallel version of the manual, differing from this only in minor details on a few pages, has been prepared for the still-employed participants who are using similar systems in the workplace. Future reports will document other aspects of the project and will be of more direct interest to technical and policymaking audiences.
ACKNOWLEDGMENTS

Many individuals have contributed to this manual. We would like to thank Louise McLaurin, Pat Levy, Dorothy LaValle, and Lynn Anderson for their assistance in preparing and formatting the manuscript. Leonie Huddy and Jacqueline Goodchilds, research consultants to RAND’s Behavioral Sciences Department, examined the manual and provided helpful suggestions for its improvement. We are especially grateful to Cathleen Stasz, RAND Behavioral Scientist, for her extremely thorough and insightful review of the manual during a day-long session in which she used it as a self-teaching guide to the Task Force computer system. Finally, participants in the project put up good-naturedly with earlier versions of this manual, and their experiences in using the system have helped to make succeeding versions better than the first.
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I. INTRODUCTION

Your Task Force has been charged with developing a White Paper that identifies and explores the issues related to the transition to retirement and considers approaches for dealing with them. The Task Force itself will decide how to delegate this work among its members, but as a participant you can certainly expect to communicate regularly with other Task Force members, and you may want to generate material for discussion or to contribute sections to the White Paper itself.

The computer that we have provided for your use can help you in this work. For instance, you can use the computer to exchange messages with other Task Force members; to keep notes; to draft material for inclusion in the Task Force’s White Paper; to produce simple tables or figures; and to handle spreadsheets. Of course, how much—and how—you use the computer in your Task Force work is entirely up to you.

This manual explains the basics of operating the computer and using it to send and receive messages and to draft and print textual material. It does not presume any previous knowledge of computers, though we recognize that some Task Force participants already use them at home or in their work. The manual more briefly explains some other uses for the computer—such as handling spreadsheets and playing computer games—but for full explanations of these functions you will need to consult the other manuals that we have provided you. Finally, the manual describes a few policies and procedures regarding the computer and supplies.

The manual begins by briefly describing how a hypothetical Task Force member might use the computer during the course of one day. This vignette will give you a good idea of how the computer could help you in the course of your Task Force work. The remainder of the manual is divided into short lessons or tutorials on using the computer, beginning with how to turn it on and select the function you need to use (e.g., electronic mail).
II. A DAY'S USE OF THE TASK FORCE COMPUTER

To get an idea of how the computer could help you with your Task Force work, let's watch how one hypothetical Task Force member uses the computer during the course of a day.

*Leland Smith,* a recently retired supervisor, has been using the Task Force computer for about a month. He has it installed beside his desk in his den. It is connected by a phone line to the main Project Central Computer at The RAND Corporation. Although the TV-like screen glows only when actually in use, the computer is always on and ready; much like a telephone, there's rarely a reason to turn it off.

Over the past few weeks, Leland has developed the habit of checking for electronic mail first thing in the morning. This morning he walks into his den and taps a series of keys on the keyboard that indicates he wants to read any mail that may have been delivered overnight. When he sees that he has in fact received several electronic messages, he sits down to read them.

Some of the messages require no action. A few require replies. In answer to one, he types a rather long memo that he has the computer send to several members of the Task Force in addition to the person who requested the information. After he has read all his mail, Leland instructs the computer to delete one message from its memory (he has no further use for it) and to save the others in the files that he has established for specific Task Force subjects. Then he taps a key to log off the computer and heads for breakfast.

Later that morning Leland returns to his den to draft an agenda for a meeting of the Task Force scheduled for next week. He sits down at the computer and taps a key to indicate that he wants to use the computer's program for handling textual material ("word processing"). As he types the agenda, the words appear on the screen. He prefers the computer over his typewriter for composing because he can make corrections or rearrange material without having to start over again. When he is satisfied with the agenda, he instructs the computer to print what he has typed on the printer. Later that day, he will have copies made.

---

1This and other names of Task Force users in the manual are pseudonyms.
After dinner, Leland decides to use the computer for a purpose unrelated to his Task Force work. He spends half an hour playing blackjack. For once his luck is pretty good, and he has a long run of winning hands. Quitting while he’s ahead, he tells the computer there will be a change in users.

Leland’s wife Sarah then borrows the computer for a while. Leland has taught her how to use the word processor, and she has been typing and printing the family genealogy in sections. She plans to give her children a copy of it for Christmas.

Shortly before going to bed, Leland steps back into the den for a last quick visit to the computer. He logs off for the night. During the night the computer sends copies of his day’s work to the Project Central Computer. It also sends the mail he has written and collects from the Central Computer any mail that may have been sent to him during the day. When Leland enters the den the next morning and asks to see his electronic mail, it will be waiting for him.

Remember that this vignette is purely illustrative. It represents only one day’s use of the computer by one hypothetical Task Force participant. There’s no way of knowing whether Leland’s use of the computer is typical, nor do Leland’s activities on this day represent all that you could do with the computer. You are free to use the computer in any way you wish.
III. HOW TO OPERATE THE COMPUTER

This section of the manual describes the basic parts of the computer provided to you by the project; explains how to turn it on and off; and explains how to record your use of the computer ("logging on" and "logging off").

WHAT EQUIPMENT YOU HAVE
The computer itself consists of three basic parts (see Figure 1):

- A keyboard, which looks like a typewriter keyboard except that it has additional keys.
- A monitor, which looks something like a TV-screen.
- A system unit, which looks like a metal box resting under the monitor.

Two other pieces of equipment are connected to the computer:

- A printer, which can print paper copies of the material you create on the computer.
- A surge protector, which looks like a short, heavy-duty extension cord and ensures that the computer is protected from fluctuations in the power supply which might damage it.

Let’s look at the three parts of the computer itself in a little more detail so that you will understand the function of each.

The Keyboard
You give the computer instructions or "commands" by using the keyboard; in computerese, the keyboard is the primary "input" device. (The computer can also receive commands over the phone line connected to the computer.) The center portion of the computer’s keyboard is similar to a typewriter keyboard, with a few special keys. To the left and right of this "typewriter area" are two portions a typewriter doesn’t have. The function of these keys depends on what you are using the computer to do, so we will ignore them for now and take them up as we need them.
As this manual explains how to operate the computer, it will indicate what keys you need to type to give instructions from the keyboard. To ensure that you can tell exactly what to type as you read the manual, we will use the conventions listed in Table 1 to indicate what you must do.

The Monitor

The monitor allows you to see the information you store in the computer and the commands you send to the computer via the keyboard. Once the computer is turned on (below), you can adjust the brightness and contrast of the monitor's image by turning the knobs on the right side of the monitor. The flashing line you will see on the screen is called a cursor. It marks where the next character will appear on the screen when you type it on the keyboard.

Fig. 1—What equipment you have
When you are using the computer, you will notice that if you do not tap a key on the keyboard for one or two minutes, the screen will go blank. The computer does this automatically to prolong the life of the screen. To restore the screen contents:

- Tap <Enter>.

The System Unit

The System Unit is the rectangular box with the EPSON EQUITY II label on it upon which the monitor is sitting (Figure 2). It contains the computer's central processing unit (CPU). This is the part of the computer that "thinks": that is, the CPU processes and manipulates information. The System Unit also contains a hard disk and a modem. The hard disk (you can't see it or get at it) is the part of the computer that permanently "remembers": that is, the disk is where the computer stores information, including the work that you do on it.¹ The modem is the part of the computer that links it to the project phone line, allowing you to electronically communicate with another computer.

HOW TO TURN THE COMPUTER ON AND OFF

Cold Starts

When a computer is turned on, it is called a "cold start." To turn on the computer, follow these steps. If your computer halts anywhere between turning it on and the completion of step 4, below, call the Electronic Task Force Help line at RAND immediately at (213) 393-0411, ext. 6573.

1. Turn the surge protector on to protect the computer from fluctuations in electronic current that could damage it or the information you store on it.
2. Turn the printer on (switch on lower right corner).
   - The Power, Ready, and On Line panels will light up.

¹ Information can also be stored on so-called "floppy disks," which have less storage capacity than the hard disk but can be removed from the computer itself and inserted into other computers. The computer you have been provided can use floppy disks (they are inserted into the "floppy disk drive" indicated in the figure) but we will not treat the use of floppies in this manual. You can consult the reference book provided, Getting Started with the IBM PC and XT.
## Table 1

CONVENTIONS FOR REPRESENTING KEYBOARD INSTRUCTIONS

<table>
<thead>
<tr>
<th><strong>bold</strong></th>
<th><strong>italics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bold indicates that you must type the characters as they are shown. Thus, if you are told to type exit you must type the word “exit” exactly.</td>
<td></td>
</tr>
<tr>
<td>Italics indicate that you must type characters that are like the ones that are shown. They may be the name of a file or a number. For example, if you are told to type save filename you must type the word “save” exactly followed by the name of the file that you want to save.</td>
<td></td>
</tr>
<tr>
<td>Angle brackets indicate a key on your keyboard with a particular label on it. Thus, if you are told to tap &lt;Enter&gt; tap the key with the “Enter” label on it.</td>
<td></td>
</tr>
<tr>
<td>Two keys joined by a “+” indicate a key combination. The first key should be held down while the second key is pressed. Then both are released. For example, if the instructions show: &lt;Ctrl&gt;+&lt;k&gt; hold down the &lt;Ctrl&gt; key, then press the &lt;k&gt; key and release both together.</td>
<td></td>
</tr>
<tr>
<td>Two keys in separate brackets indicate successive key strokes. The first key listed should be pressed and released, then the second key should be pressed and released. For example, if the instructions show: &lt;-&gt; &lt;-&gt; press the &lt;-&gt; key, release it, and then press the &lt;-&gt; key and release it.</td>
<td></td>
</tr>
<tr>
<td>Boxed text</td>
<td>When the manual boxes text, as in this example,</td>
</tr>
<tr>
<td></td>
<td>640 KB RAM available</td>
</tr>
</tbody>
</table>

it means that you will see the text inside the box (not the box itself) on your screen. You do not need to type the text; the computer will present it to you.
Fig. 2—The system unit

3. Open the upper right panel door on front of the computer (the door has a light on it) and push the System ON/OFF button.
   - The system light next to the ON/OFF button will turn green.
   - The light on the hard drive (that is, the light on the center black panel of the system unit) will turn red as the start-up (booting) program is read by computer.
   - The screen will display this message:

```
640 KB RAM available
```

- The printer will make three grinding sounds.
- Then the screen will display this message:

```
LOGIT: Who are you? ([Your Name], [other users])
```
4. If you, the Task Force member, are using the computer, simply tap <ENTER> to identify yourself. If you like, you can type member or just m.
   - If someone in your household (your spouse, for instance) is using the computer, that person should type householder or h.
   - If people outside your household use the computer, have them type other or o.

5. Once the computer knows who the user is it will ask you how you want to use it. A list of options will appear on the screen (Figure 3). This list is called a “menu” since, as in a restaurant, you are expected to choose items from it.

The remaining sections of the manual will show you how to use the options presented in the menu, beginning with how to send and receive electronic mail. But we have a few more basics of operation to cover first.

---

Le Menu Main Course
RETIREMENT POLICY TASK FORCE SYSTEM
Time: 8:00:15a          Date: 02-28-87

A. Changing Users
B. Word Processing Sub Menu
C. Database Manager: REFLEX
D. Spreadsheet: MYCALC
[E. Electronic Mail Sub Menu]
F. Games Sub Menu
G. GW-BASIC
H. Good Bye

SELECT OPTION: [ESC]-Exit to DOS [F3]-Help
[F1]-DOS Services [F2]-Directory Management [F4]-Setup

Fig. 3—The main menu: What do you want to do?
Warm Starts

The computer may occasionally halt or “freeze up” during its operation, even if you have done nothing wrong. When this happens, the only way to resume operation may be to “reset” the computer. This is sometimes called a “warm start” because the computer is restarted without actually turning its power button off. You can warm start the computer by performing the following steps:

1. Push the button on the floppy disk drive to make sure it is empty (see Fig. 2).
2. Open the System Panel door just below the hard drive. (It is the door at the bottom, center of your computer as you face the screen.) Depress the RESET switch.
3. The screen will go black after a bright squiggle goes across it. The following message will appear, as with a cold start:

   640 KB RAM available

4. Follow steps 4 and 5 above, under “Cold Starts.” You will have to identify yourself as if you were just turning on your computer.

Turning the Computer Off

Turning the computer on and off stresses the computer, because the computer goes through warm up and cool off temperature cycles. These temperature cycles, in addition to the power surges that run through the system on start ups, tend to wear out the electrical components of the personal computer.

To minimize the wear and tear on your computer, we suggest that you let it run continuously. Turn it off only if you are going to be away from home for several days. To turn it off:

1. Open the System Panel Door on the front of your computer (upper right corner) and press the System ON/OFF button.
   - You will get the following message:

   Please Wait while the Hard Drive is Secured
2. After the screen goes blank, turn off the Printer Switch.
3. Turn off the Surge Protector Switch.

HOW TO LOG ON AND OFF THE COMPUTER

Because the study is recording your use of the computer, you must log on and off at
the start and end of a session.

Logging Off

When you are done using your computer, choose the GOOD BYE option on the
Main Menu:

- On the Main Menu, tap <h>

The GOOD BYE command makes it possible for the Project Central Computer at RAND to
make back up copies of all the work you've done during that time period. The GOOD BYE
command also allows the Project Central Computer to send any mail you've deposited in
your Mailbag or which has been sent to you by other Task Force members.

Logging On

The next time you want to use the computer after logging off, you will need to log
back on:

1. Tap <Ctrl+c>; that is, depress the <Ctrl> key first, hold it down while you tap
the <c> key, then release both at once.
2. Push the <Reset> Button.
   - The Main Menu should appear on the screen.
3. To identify yourself, tap <a>; then follow the instructions in Step 4 under "Cold
   Starts," above.

Logging On Another User

If you are logged on to the computer and someone else wants to use the computer,
please have that person log on separately. In this way, the study will be able to differentiate
between your use of the computer and the other user's. You do not have to log off to let
them log on. Simply choose option A, "Changing Users," on the Main Menu:
• Tap <a>
• Have the new user identify himself or herself by typing the appropriate letter (h or o) and tapping <Enter>.

If you return to using the computer after someone else has used it, you must log back on, too. Choose option A again from the Main Menu:

• Tap <a>
• Identify yourself:
  - Type your name or initials and tap <Enter>.
IV. HOW TO SEND AND RECEIVE ELECTRONIC MAIL

One of the functions that the Task Force computer provides you is electronic mail. The electronic mail system, called QM, works much like normal (that is, paper) mail. You can write, send, receive, scan, read, store, and file your messages using the computer; of course, if you want a paper copy of a message, you can print it using your printer. The Project Central Computer at RAND serves as a Post Office for the electronic mail system: it picks up the mail from each Task Force member and distributes it to the addressees. This section of the manual will tell you enough to allow you to become a regular user of the mail system.

To begin using electronic mail, choose option E on the system’s Main Menu. To do this, move the cursor with the arrow keys to line E on the Main Menu and tap <Enter> or simply type e.

The Mail Menu will then appear, showing two menu choices (see Figure 4).

Choose the “A” menu option when you want to read and file mail or compose new messages. Choose the second option (B) when you want the Project Central Computer at RAND to pick up the messages you have written and deliver those that other Task Force

---

<table>
<thead>
<tr>
<th>Le Menu Sub Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Mail Sub Menu</td>
</tr>
<tr>
<td>Time: 8:00:15a</td>
</tr>
</tbody>
</table>

| A. Read, Write, File Messages |
| B. Pickup & Deliver Mailbag |

Select Option: [ESC]-Exit to Parent Menu  [F3]-Help  [F1]-DOS Services  [F2]-Directory Management  [F4]-Setup

Fig. 4—The mail menu
members have sent to you. Whenever you want to return to the main list of Le Menu options, tap <ESC>.

HOW TO RECEIVE ELECTRONIC MAIL

Let’s begin by receiving mail: The project team has already sent electronic messages to you and other members of the Task Force. To have this mail delivered to your computer, first select option B on the main Mail Menu:

- Tap <b>.

When B is chosen, you will see text messages on your screen: Ignore these. They simply mean that the computer is communicating (via the phone line) with the Project Central Computer at RAND and exchanging mail. When the exchange is complete, the phone line will be automatically disconnected and the Main Menu will reappear.

If you want to handle your mail, first choose A on the Mail Menu:

- Tap <a>.

Now you will see the Mail Screen (Figure 5). The Mail Screen will list the latest messages you have received (see top of figure) and display the commands available to you (see bottom of figure). These commands represent the ways in which QM allows you to handle your electronic mail. We’ll discuss some of these in the following sections.

If your computer has received from the Project Central Computer messages that you have not yet seen, a NEW MAIL message will appear at the top of the screen (see Figure 5). To add this new mail to the list of messages on the screen,

- Tap <i>

(“i” here stands for “incorporate” new mail, in the sense of to combine or include). The new mail will then be added at the bottom of the list of messages already there. The screen shows up to twelve messages at a time.
You have new mail.

1 Wendell Hahm 13 Mar INTRODUCTORY MESSAGE: Did you have to
2 Judith Payne 15 Mar INQUIRY RESPONSE: Yes we found the sh
3 Tori Bikson 15 Mar MEETINGS SCHEDULED: There will be a s
4 John Jones 20 Mar Re:MEETING SCHEDULED: I can make that
5 Wendell Hahm 25 Mar Can You Read This?: I'm sending you

QM COMMANDS

t: type message on screen
s: send a message
r: reply to a message
d: delete message
l: list mail folders
i: incorporate new mail
*: permanently get rid of all deleted messages
n: new posting to Usenet
+/-. change window size

p: print message on local printer
m: move message to another folder
f: forward message
u: undelete last deleted message
c: change to different folder
#: renumber messages
g: followup to Usenet Group
<ESC>: leave OM

Fig. 5—Selecting option A will give you the mail screen

The messages are listed according to a standard format that is designed to help you use electronic mail flexibly. Reading from left to right in the list (Figure 5), you will see the following pieces of information for each message:

- Number in the list.
- Name of person sending the message (or the first person to whom you addressed the message if the message is your copy of a message you sent).
- The date the message was sent.
- A subject line (like the “Re:” or “Subject:” line on paper memos) that indicates the subject of the message.
- The first few words of the body of the message, if the length of the subject line permits.
HOW TO READ YOUR MAIL

To read a specific message in the list, you must first indicate to the computer which message you want. Notice that one of the lines of the message list (the upper panel of Figure 5) is highlighted. You can change which message is highlighted by moving the Up and Down Arrow keys. Try it.

Once you have highlighted the message you want to read first, tap the <I> KEY. The computer will then display that message on the screen (see Figure 6.).

Notice that each displayed message has three parts:

- The message header is the top part of the message; it includes the lines beginning with Received through Subject.
- The body of the message appears in the middle portion of the screen.
- The menu below the body indicates which command keys on your keyboard can be used to control the display of a message.

---

Received: from markle by pc; Wed, 25 Mar 87 1:35:04 pst
From: Wendell Hahnm <markle|hahnm>
Message-ID: <8912162243.AA14102@markle>
To: Sam Smith <markle!smith>, Bill King <markle!king>
cc: John Sato <markle!sato>
Subject: Can You Read This?

I'm sending you this message to test whether we solved the problem with your modem which we discussed yesterday. If you can read this, reply to me. If I don't receive a response by noon today, I'll give you a call and we'll try again.

---

Command Key: 
PgUp PgDn Home End

Fig. 6—Reading an electronic message
The header includes several pieces of information regarding the message:

- Where it came from and when
- Who sent it
- What number it was assigned by the Project Central Computer
- Who it was sent to (you may not be only recipient)
- Who received copies
- What the subject is (as designated by the sender)

The menu at the bottom of the screen reminds you how to use command keys to handle the message. Try using these command keys on one of the messages you have received. When you have finished experimenting, tap <Esc> to get back to the Mail Screen (Figure 5) that lists your messages.

- Tap <PgUp> to show the previous 24 lines of the message displayed.
- Tap <PgDn> to show the next 24 lines of the message displayed.
- Tap <Home> to return to the beginning of the message.
- Tap <End> to display additional lines of the message.
- Tap <*> to display these and additional message display commands.
- Tap <X> to close the message screen (the <Esc> key also does this) and return to general Mail Screen (Figure 5).

**HOW TO COMPOSE AND SEND ELECTRONIC MAIL**

When you want to compose and send a message, return to the Mail Screen (Figure 5) and

- Tap <S> (for “send” a message).

A blank message form will appear on your screen as shown in Fig. 7.

Begin by addressing the message. Use the arrow keys to move the cursor to the point on the screen after the “To:” in the header and simply type in the name of the person (or persons) to whom you wish to send the message. You can send messages to anyone on the Task Force. You can use the backspace, arrow, or delete keys to erase mistakes.
If you want anyone else to receive a copy of the message (just as you might with paper memos), move the cursor to a point after the "cc:" and type in the name. You may list yourself, too, if you want to have a copy of the message.

When entering names in the header, follow these rules:

- Type the person's full first and last name (e.g., leland smith), last name only or his first and last initials separated by a space (ls), referring to your list of Task Force members. The names can be all in lowercase letters or the first letter of the first and last names can be capitalized (John Doe, john doe). If two people on the task force have the same initials, type an extra letter or two with the initials to make the initials unambiguous. For example, if John Smith and Joe Small are members, you would need to type joh s or j smi or smi to identify John.
- Separate names by commas: lb, s m, re.
- If you need more than one line for names, open a blank line by tapping <F10> and indent the additional name on the next line a few spaces.

You should fill in the "Subject" of the message as a courtesy to the recipients. Type a topic or a brief synopsis of message so that recipients will be able to tell whom the message concerns when they scan the message list. The subject line also aids in filing and recalling messages.

---

File: \jones\drafts\2, last modified 3/10/87 195k left INSERT #1/1 @

| To:    |   |
| cc:    |   |
| Subject: |   |

Command → _ Key: ↑ PgUp ↓ PgDn ← → X=Exit ?=Help    Home End

---

Fig. 7—Blank message form
Be careful as you fill in the recipients and subject of your message that you do not type over the existing lines of the header. Also, do not insert blank lines between the header lines. Any changes to the header material may make it impossible for the Project Central Computer to deliver your mail.

After you have addressed the message by filling in the header, you are ready to compose your message below the dashed line. Simply move the cursor to where you wish to begin and start typing your message. You can move around the message and correct it as you did the header, using the backspace, arrow and delete keys.

When you have finished the message and wish to send it, do the following:

- Tap <Esc>.
- Type exit
- Tap <Enter>.

The message form will disappear and the system will ask you:

```
What now?
```

You have a choice of the following responses:

- send: This stores the message in the Task Force computer until it can be picked up by the Project Central Computer for delivery.
- edit: When you want to change the message, this allows you to edit or revise.
- quit: This allows you to exit without sending the message. The computer will save the message with other draft messages that you have chosen not to send.
- ?: This displays all the other commands available.
- name: You can check an addressee’s name, address, or phone number by typing name followed by the person’s initials or more letters, if the initials are not unique to a Task Force member.
Type your choice and tap <Enter> and the Mail Screen will reappear.

If you have made a mistake in the addressee’s name, the message will not be sent. Instead, the system will inform you that there is an error. You can use the “edit” option to correct the name and then send the message.

HOW TO REPLY TO MESSAGES

If you read a message and want to reply to the sender and the same people (or some of the same people) to which it is addressed, you can avoid retyping the header information by choosing the “Reply” (r) option on the Mail Screen (see Figure 5). This option automatically reverses the names in the TO and FROM fields in the message to which you are responding. It also attaches “Re:” to the original subject line to inform the receiver to which message you are replying. The text area is left blank — ready for your reply just as with the <s> command.

To reply to a message:

- Move the cursor up or down on the Mail Screen to highlight the message to which you want to reply.
- Tap <r> (for “reply” to message).

A message form will then appear with the header already completed (Figure 8). Be sure to check the header: If you wish to add or delete some names from the header, or change the subject, you may do so. Then write your response. To send it, follow the same procedures for sending messages described in the section above.

HOW TO FORWARD A MESSAGE

Forwarding messages works similarly to replying to messages, but the full message is automatically placed in a message form for you and the header is left blank for you to complete (see Figure 9).
LIST C: \ mail \ drafts \ 3

To: Jim Doe <jim@markle>
Subject: Re: Next Sub-Committee Meeting
In-reply-to: Your message of Fri, 06 Mar 1987 14:24:36 PST.

Command ➤  Key:   
PgUp  PgDn  ←  →  X=Exit  ?=Help

Fig. 8—Replying to a message

LIST C: \ > mail \ drafts \ 5

To:
cc:
Subject:

--- Forwarded Message

From: Tom Jones <tom@markle>
Date: Fri, 06 Mar 1987 14:24:36 PST
To: Jim Doe <jim@markle>
Subject: Next Sub-Committee Meeting

The meeting will be at 4PM at my house.

--- End of Forwarded Message

Command ➤  Key:   
PgUp  PgDn  ←  →  X=Exit  ?=Help

Fig. 9—Forwarding a message
If you want to forward a message:

- Move the cursor up or down on the Mail Screen to highlight the message you want to forward.
- Tap <f> (for “forward” message).

A message form will then appear with the header blank and the forwarded message so labeled in the body of the message form. Complete the header as you wish and add text above or below the forwarded message, if you so choose. To open extra lines in the message body, tap the <F10> key (once for each new line). To close lines in the message body, tap <F1>. If you only want to forward parts of the message, you can delete whole lines (by tapping <F1>) or portions (by using the delete key).

HOW TO PRINT A MESSAGE

If you want a paper copy of a message, follow these steps:

- Move the cursor up or down on the Mail Screen to highlight the message you want to print.
- Make sure your printer is on and the green “Ready” and “On Line” lights are on.
  - If the “Ready” light is off, check to make sure the paper is loaded correctly. If it still does not go on, consult the Printer Manual.
  - If the “On Line” light is off, press the button below it to turn it on. Otherwise the computer will “freeze up” and you will not be able to use it until the printing is complete.
- Tap <p> (for “print” message on local printer).

HOW TO FILE MESSAGES IN FOLDERS

The computer automatically stores your messages in groups that you can think of as electronic folders comparable to folders in a filing cabinet. When you first “incorporate” your mail so that it appears at the end of the list on the Mail Screen, it is placed in a folder called the “inbox” (an analogy to what would happen to paper mail in an office).
If you wish to separate your messages into other folders—say, by topic or by sender—you can do so. To create a new folder,

- Move the cursor up or down on the Mail Screen to highlight the message you want to file in a folder.
- Tap <m> to show you wish to “move” the message to a folder. The screen will prompt you for a folder name.

- **Move message to folder** ____________

- Type in a folder name with up to eight characters. If a folder with this name does not already exist, you will be asked:

- **Can’t find folder <new name>; Shall I create it? [y]**

- Tap <y> for “yes” if you want a new folder. The current highlighted message is then sent to the named folder.
- If you change your mind for any reason—either about creating a new folder, creating it with that name, or placing that message in it—tap <n> for “no.”

Follow the same procedure to file a message in an existing folder. When the computer asks you which folder to move the message to, simply type in the name of the folder you want it to use.

If you want to continue working on a message you have not finished, you must retrieve it from the “drafts” folder and insert in a blank message form. To do this, first move to the “drafts” folder and note the message’s number. Then follow these steps:

- Tap <s> to create a blank message form.

- Tap <Esc> and type

  merge \(your\ login\ name\) \drafts\ (message number)
You will see your login name each time you log in when the computer flashes a message to you saying, "Current username set to (______)". If you don’t know your login name, call the Electronic Task Force Help phone line. For example, if your login name is jones and you want to continue working on draft message 3, you would type

`merge \jones\drafts\3`

then tap <Enter>.

Your unfinished message will then appear in the message form. Delete the redundant message header at the top of the form by tapping <Home>, then <F1> four times.

**HOW TO LIST YOUR FOLDER NAMES**

If you forget the names of the folders you have created, you can ask to see a list of your existing folders:

- Tap `<l>` (for “list”) when you are viewing the Mail Screen. The lower panel of mail commands on the Mail Screen will be replaced by a list of existing folders, as in Figure 10.
- To redisplay the mail commands, tap `<h>`.

If your folder list becomes too large to view all at once on your Mail Screen, you may want to alter the size of the area below the list of messages. To change the size of this area:

- While you are viewing the Mail Screen, tap the `<+>` to expand the lower window. Tap repeatedly until it is the size you want.
- To reduce the window’s size, tap the `<->` repeatedly.

This action is illustrated in Figure 11.
HOW TO HANDLE MESSAGES IN DIFFERENT FOLDERS

If you want to get at messages that you have filed in folders other than inbox, you will need to change folders.

- Tap <c> (for “change folders”) on the Mail Screen. The screen will prompt you with:
- 26 -

Change to folder: ________________________________

• Enter the name of the folder you want. The Mail Screen will then be redrawn to show a list of the messages in the new folder. The folder’s name will appear in the upper center of the Mail Screen.

HOW TO DELETE AND RENUMBER MESSAGES

Just as you can throw away paper mail, you can remove electronic messages from the files stored in your computer:

• Move the cursor up or down on the Mail Screen to highlight the message you want to delete.
• Tap <d> (for “delete” message).

The message will disappear from the Mail Screen list of messages. (If you delete the last message in a folder, the system will ask you if you want to delete the folder. Do not delete the folder unless you think you will have no future need for it.)

As a precautionary measure, the mail system on the computer does not actually destroy messages that you have deleted. Deleted messages are actually just moved to a special “deleted” folder. (In other words, the computer throws the message in the trashcan but it doesn’t take the trash out.) This precaution means that you can get back a message if you delete it accidently. You can change to the “deleted” folder to do this or you may instead use the “undelete” command on the Mail Screen.

• Tap <u> (for “undelete” the last deleted message).

The last message you deleted will reappear on the message list on the Mail Screen.

To expunge messages from the deleted folder,
• Tap (*)
The computer will ask you if you really want to destroy them. If you say yes, all messages within the deleted folder will then disappear permanently. (That is, the computer takes the trash out.)

When you delete messages from folders, you will create gaps in the numbering of the messages. If you want to renumber the messages in a folder to make them sequential again:

• Move to the folder whose messages you want to renumber.
• Tap <#> for numbering.
• The screen will blink, indicating that all the numbers on the folder’s messages are now sequential.

HOW TO USE THE TASK FORCE ADDRESS AND BULLETIN BOARD

If you want to send messages to all Task Force members at once, you do not have to list them all name by name in the message header. The electronic mail system includes two methods for communicating via the computer with all Task Force members at once: a Task Force address and a Task Force bulletin board.

How to Use the Task Force Address

If you want to send a message to all members at once, you can enter the Task Force address behind the “To:” in the header of your message:

• force!

When you send this message, it will be delivered to all Task Force members and the RAND research team.

How to Use the Task Force Bulletin Board

The Task Force bulletin board works similarly: If you address a message to the bulletin board and send it, it will be automatically placed in the Task Force bulletin board folder (named BBTF) in each Task Force member’s electronic mail system. It will not be listed in members’ inbox folders, but it will be available in their BBTF folder if they look for it.
To post a message on the Task Force bulletin board, address it to:

- bbtf!

If you want to view the bulletin board, you can change to your Task Force bulletin board folder (named BBTF) as you would to any of your electronic mail folders.

HOW TO ESTABLISH ADDITIONAL ADDRESSES AND BULLETIN BOARDS

The electronic mail system also permits you to set up additional addresses and bulletin boards. These features are useful if you want an address for a specific subgroup (for example, the members of a committee) or a bulletin board devoted to a specific topic (for example, health).

To establish an address for a subgroup or a special topic bulletin board, call the RAND Electronic Task Force Help line, (213) 393-0411, ext. 6573, and provide the following information:

- Whether you want to set up a subgroup or a bulletin board.
- The name for it (this should be one word with no more than 8 letters).
- If a subgroup, who the members will be. (Everyone will have use of each bulletin board, so no members need be given.)

To see which subgroup addresses and special topic bulletin boards exist at any time, read the most recent message in your mail folder for the Task Force Bulletin Board (BBTF) with “Bulletin Board and Sub-Groups” as its subject line. The project team will mail a new message with this subject line each time the list of bulletin boards and subgroups changes.

HOW TO USE WORLDWIDE SPECIAL INTEREST BULLETIN BOARDS

Users of electronic mail around the country—and indeed the world—have established special interest bulletin boards. USENET is a worldwide collection of such bulletin boards. USENET messages are distributed throughout North America, Europe, Asia, and Australia. Topics range from computer architecture to California news and humor. A sampling of topics is listed in Table 2. (If you’d like to see a more complete list of topics, call the Task Force Help line.) If you wish, you can use the special bulletin boards on USENET via the Task Force computer.
If you think you might wish to subscribe to a USENET bulletin board so that you can read and post messages, consult the list in Table 2 and make a note of the topics that interest you. Then call the Task Force Help line and specify which bulletin boards you would like.

On a nightly basis, all new entries to the bulletin boards you selected will be delivered to you along with your other electronic mail. If you decide that you do not wish to remain on the distribution list for a given bulletin board, call the Task Force Help line and cancel the delivery.

To read the messages “posted” on the electronic bulletin boards, use your electronic mail system. All articles will be sent directly to a mail folder named NEWS. You can change to that folder just as you would to any other.

If you want to post a message on one of the USENET bulletin boards, call the Task Force Help line for assistance. We will acquaint you with the rules and electronic etiquette that the USENET group has developed over time.

If you wish to join into the discussions there are three ways to do so:

- Replying directly to the author of a USENET message.
- Replying to the author of the USENET message and posting your reply on the USENET bulletin board so that all users of the bulletin board can read it.
- Adding a new message to the global USENET bulletin board.

To reply directly to the author of a bulletin board message, first use the arrow keys to highlight the message you want to reply to:

- Tap <r>.

A clean message screen will appear with the address of the author of the highlighted message you wished to respond to.

To post your reply to a specific message so that all users of the bulletin board will receive it:
• Tap <g> (for followup to USENET “group”).

A clean message screen will appear with the address of the USENET bulletin board you are responding to.

To post a message on the bulletin board:

• Tap <n> (for “new” posting to USENET).

A message screen will appear. In this case, you will need to type the address of the bulletin board in the message header: e.g., mod.music. Addresses will be provided by the Task Force Help line when you subscribe.
Table 2

SELECTED SUBJECTS OF USENET BULLETIN BOARDS

Art
- Books
- Comics
- Movies
- Poems
- Science Fiction
- NPR's Prairie Home Companion
- Music

Computers
- Artificial Intelligence
- IBM PC

Games
- Bridge
- Chess
- Go
- Trivia

Miscellaneous
- California News
- Consumer News
- Handicap News
- Investments
- Headlines
- Legal Issues
- Taxes
- Politics
- Philosophy
- Religion

Recreation
- Audio
- Autos
- Aviation
- Bicycles
- Food
- Ham Radio
- Humor
### Table 3

#### SUMMARY OF BASIC ELECTRONIC MAIL COMMANDS

<table>
<thead>
<tr>
<th>Command Description</th>
<th>Key(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>To use Electronic Mail</td>
<td>&lt;↵&gt;</td>
<td>On Main Menu. Mail Sub Menu appears.</td>
</tr>
<tr>
<td>To return to Main Menu</td>
<td>&lt;ESC&gt;</td>
<td>On Mail Sub Menu.</td>
</tr>
<tr>
<td>To receive new mail and send messages (handling your &quot;Mailbag&quot;).</td>
<td>&lt;↵&gt;</td>
<td>On Mail Sub Menu. The computer connects to RAND momentarily to send and gather messages.</td>
</tr>
<tr>
<td>Note: The computer automatically sends and gathers mail for you each night. Use the above command only if you want this service immediately.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To see Message List and begin handling messages</td>
<td>&lt;↵&gt;</td>
<td>On Mail Sub Menu. Mail Screen appears. Current message highlighted.</td>
</tr>
<tr>
<td>To exit from Message List</td>
<td>&lt;ESC&gt;</td>
<td>On Mail Screen. Mail Sub Menu appears.</td>
</tr>
</tbody>
</table>

#### ON MAIL SCREEN:

<table>
<thead>
<tr>
<th>Command Description</th>
<th>Key(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>To add new messages to List</td>
<td>&lt;↵&gt;</td>
<td>for &quot;incorporate.&quot; New messages will appear at bottom of Message List.</td>
</tr>
<tr>
<td>To read highlighted message in Message List</td>
<td>&lt;↵&gt;</td>
<td>for computer &quot;types&quot; message. Tap &lt;ESC&gt; to return to Message List.</td>
</tr>
<tr>
<td>To compose a message</td>
<td>&lt;↵&gt;</td>
<td>for &quot;send.&quot; Blank Message Form appears. Complete &quot;To,&quot; &quot;cc:,&quot; &quot;Subject&quot; lines in Header. Type message. Use any word processing commands to edit message.</td>
</tr>
<tr>
<td>To send message</td>
<td>&lt;ESC&gt;</td>
<td>When finished writing message.</td>
</tr>
<tr>
<td>then exit &lt;ENTER&gt;</td>
<td></td>
<td>Computer responds: &quot;What now?&quot;</td>
</tr>
<tr>
<td>To respond to &quot;What now?&quot;</td>
<td></td>
<td>Sends message to Mailbag to await transfer to RAND.</td>
</tr>
<tr>
<td>send or edit or quit</td>
<td></td>
<td>To re-edit message.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To return to Mail Screen without sending message. (Message in &quot;drafts&quot; mail folder for later use.)</td>
</tr>
<tr>
<td>To reply to highlighted message</td>
<td>&lt;↵&gt;</td>
<td>Message Form appears with addresses reversed. Edit header, if needed, and compose message.</td>
</tr>
<tr>
<td>To forward highlighted message</td>
<td>&lt;↵&gt;</td>
<td>Message Form appears with original message enclosed. Complete header and add message, if needed.</td>
</tr>
<tr>
<td>To print highlighted message</td>
<td>&lt;↵&gt;</td>
<td>Make sure printer on and &quot;On Line.&quot;</td>
</tr>
<tr>
<td>To file highlighted message</td>
<td>&lt;↵&gt;</td>
<td>Type folder name after prompt.</td>
</tr>
<tr>
<td>To list folder names</td>
<td>&lt;↵&gt;</td>
<td>Tap &lt;↵&gt; to return to mail commands.</td>
</tr>
<tr>
<td>To handle messages in a different folder or read Task Force bulletin board</td>
<td>&lt;↵&gt;</td>
<td>Type folder or bulletin board name at prompt. Task Force bulletin board is &quot;BBTF.&quot;</td>
</tr>
<tr>
<td>To delete highlighted message</td>
<td>&lt;↵&gt;</td>
<td>Message moved to &quot;deleted&quot; folder.</td>
</tr>
</tbody>
</table>
V. HOW TO COMPOSE TEXTUAL MATERIAL ON THE COMPUTER

If you have been sending electronic messages as explained in Section IV, you already know the rudiments of using the Task Force computer to compose textual material. This section explains how you can use the computer to compose material in formats other than electronic messages. The computer's "word processing" function allows you to write, revise, and edit text of any sort—notes, letters, memos, reports, chapters—even a book if you are feeling ambitious. You can then print your documents with the Task Force printer provided for your use. And if you decide that you would like to send the document to other members of the Task Force, you can copy the document into an electronic message and send it off by computer.

In this section we usually refer to the computer's word processing function as the "editor" because it allows you to write and edit documents. This section explains enough to make you a regular user of the editor. For fuller explanations and for more specialized (though not any more difficult) commands, you should consult the copy of *The ESP Editor User Guide* provided for your use. ESP is the editor's commercial name.\(^1\)

HOW TO WORK ON A DOCUMENT ON THE COMPUTER

If you want to work on a document (that is, write, revise, or edit) using the computer, first select the word processing function on the main menu:

- Tap <b>.

A sub-menu will appear listing choices of what you can do with the editor (Figure 12).

---

\(^1\) ESP is a product of Software Resources. It was developed by Bill Rogers, a RAND statistician, and has been used by RAND employees since 1983.
Now select the first option on the sub-menu:

- Tap <a>.

The computer will then ask for the name of the directory of the file you want to copy (Figure 13). Your file will be in the directory “drafts” unless you have stored it in another directory you created. If it is in “drafts,” simply tap <Enter>. If it is a different directory, type its name and tap <Enter>.

You will then see a new screen asking for the name of the document (Figure 14):

As you can see, the computer will refer to the document as a “file,” just as a secretary might ask you what file you wanted to work with.

---

**Le Menu Sub Menu**

**Word Processing Sub Menu**

Time: 4:43:25P  Date: 02-23-1987

A. Work on a File  
B. List Files  
C. Copy a File  
D. Rename a File  
E. Delete a File  
F. Print a File, Unformatted  
G. Print a File, Formatted

Select Option  
[F1]-DOS Services  
[ESC]-Exit to Parent Menu  
[F3]-Help  
[F2]-Directory Management  
[F4]-Setup

Fig. 12—Word processing sub menu
Type in the name of the document you want to work with and tap <Enter>. When naming document files on the computer, you must keep in mind a few conventions. The name can have up to eight characters. And you should choose a name that describes the document clearly so you can easily recall the name the next time you want to work on it: for example, *agenda*. If you like, you can append an extension of up to three letters on the file...
name to more clearly identify it. Separate the extension from the file name with a period <.> For example, you might name one file letter.son and another file letter.sue.

Now the editor will check the computer’s memory to see if a file by this name already exists. If it finds no such file, it will create a new file by that name. In this case, the editor will momentarily flash the following message across your screen:

```
esp 1.81 (c) 1983-86 Software Resources
2677 Centinela Ave, Santa Monica, 90405
Transferring file form disk into computer
Beta test version — please report bugs to Bill Rogers
```

Then the editor will create a screen for you to use, as in Figure 15.

The top line of the file, called the “status line,” is not part of the document. For your convenience, it provides the following information (reading left to right):

- The name of the file you are working in.
- When you created the file (if you’re just creating the file, it won’t show a date until the next time you look at it).
- How much space you have left to work with (explained below).
- Where the cursor is located, by column and row; this marks where letters will appear if you begin typing.

The number referring to how much “space” you have remaining in the file is important because the editor’s capacity to remember everything you add to or change in a file, though large, is of course limited. If you continue to work once this limit is exceeded, the computer will not be able to remember some of the work you did on the document. If you ever notice

```
File: letter.son, created 2/25/87 506K left INSERT # 1/1
```

Fig. 15—Begin working on a new document
that the number in the status line has fallen below 100 (this is very unlikely), stop working
and have the editor store your work. Then you can resume without worry. If you ever
accidently let the number go to 0, consult page 41 of The ESP Editor User's Guide to see
how to split your file or call the Task Force Help line.

If the editor finds that you already have a file by the name you give it, put the
beginning of the file on the screen so that you can work on it (Figure 16).

Whether you have been presented with a (virtually) blank screen or the last version of
an existing document, you can now begin work. Table 4 lists the basic commands that you
can use to work on the document.

The project team has created a sample file on the computer called text.doc. You can
use this file to experiment with these commands if you do not want to draft a document of
your own at this time.

The editor also has more advanced capabilities: for instance, you can use it to “cut
and paste” sections of your document, copying and moving blocks of text. These and other
features are described in Section III of The ESP Editor User Guide.

| File: letter.sue, last modified 2/5/87 506K left INSERT #1/1 |
| Dear Susan, |
| We still are planning to drive out to visit you at the beginning |
| of May, leaving on |

Fig. 16—Sample screen showing a draft document
<table>
<thead>
<tr>
<th>KEY</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;&gt;</td>
<td>Moves cursor to the right one character.</td>
</tr>
<tr>
<td>&lt;&lt;</td>
<td>Moves cursor to the left one character.</td>
</tr>
<tr>
<td>↑</td>
<td>Moves cursor up one line in the same column.</td>
</tr>
<tr>
<td>↓</td>
<td>Moves cursor down one line in the same column.</td>
</tr>
<tr>
<td>&lt;-&gt;</td>
<td>Erases character to left of cursor. This is the arrow key above ENTER.</td>
</tr>
<tr>
<td>&lt;Del&gt;</td>
<td>Deletes character at cursor.</td>
</tr>
<tr>
<td>&lt;Tab&gt;</td>
<td>Moves cursor right to the nearest tab stop, preset to every 8 columns.</td>
</tr>
<tr>
<td>&lt;Shift+Tab&gt;</td>
<td>Moves cursor left to the nearest tab stop, preset to every 8 columns.</td>
</tr>
<tr>
<td>&lt;Home&gt;</td>
<td>Moves cursor to top left corner of window.</td>
</tr>
<tr>
<td>&lt;End&gt;</td>
<td>Moves cursor to end of text on current line. If already at the end, moves cursor to beginning of the same line. &lt;End&gt; will not move cursor on a blank line.</td>
</tr>
<tr>
<td>&lt;Pg Up&gt;</td>
<td>Moves cursor and window 24 lines toward beginning of file.</td>
</tr>
<tr>
<td>&lt;Pg Dn&gt;</td>
<td>Moves cursor and window 24 lines toward end of file.</td>
</tr>
<tr>
<td>&lt;F1&gt;</td>
<td>Erases current line.</td>
</tr>
<tr>
<td>&lt;F2&gt;</td>
<td>Restores erased material, beginning with the last line erased.</td>
</tr>
<tr>
<td>&lt;F10&gt;</td>
<td>Inserts blank line above cursor line.</td>
</tr>
</tbody>
</table>
HOW TO SAVE YOUR DOCUMENTS

When you no longer wish to work on your document, you will want to save what you have done:

- Tap <Esc>
- Type exit and tap <Enter>.

The computer will store the latest version of the document under the file name you have given it and return you to the Word Processing Sub Menu.

Note: the file that is saved contains only the latest version of the document.

Just as the computer saves your electronic messages in groups called folders, it stores your files in groups called directories. The computer is initially set up to put all your files in a directory called “drafts.” But you may create other directories for storing related documents in groups.

To learn how to create directories, and list your directories and files within them, consult the Le Menu Manual, pages 25 and 26.

HOW TO LIST YOUR DOCUMENTS

If you can’t recall the name of an existing file you want to work on, you can have the computer list the names of all of your files:

- On the Word Processing Sub Menu, tap <b> for the “List Files” command.

You will see a screen like that in Figure 17 asking you for which directory you want to see the list of files.

If you have set up no directories yourself, your files will be in the “drafts” directory, as shown on the screen. Just tap <Enter> to see the list of files in that directory.
Le Menu Sub Menu
Word Processing Sub Menu

Type Name of LISTED Directory (Default=drafts)

|drafts|

[Esc]-Exit [F3]-Help

SELECT OPTION:
[F1]-DOS Services
[F2]-Directory Management
[F3]-Help
[F4]-Setup

Fig. 17—What directory’s files do you want listed?

If you have created your own directory, type in the name of the directory you would like to see listed.

Volume in drive C has no label
Directory of C:\DRAFTS

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>.</td>
<td>&lt;DIR&gt;</td>
<td>2-11-87 12:03p</td>
</tr>
<tr>
<td>..</td>
<td>&lt;DIR&gt;</td>
<td>2-11-87 12:03p</td>
</tr>
<tr>
<td>TEST1</td>
<td>451</td>
<td>2-12-87 2:55p</td>
</tr>
<tr>
<td>TEST2</td>
<td>451</td>
<td>2-12-87 2:55p</td>
</tr>
<tr>
<td>TESTFILE</td>
<td>451</td>
<td>2-12-87 2:55p</td>
</tr>
<tr>
<td>TKB</td>
<td>52</td>
<td>2-13-87 10:40a</td>
</tr>
</tbody>
</table>

6 File(s) 16035840 bytes free
Strike a key when ready . . .

Fig. 18—A typical list of the files in one directory
This sample list of files (Figure 18) shows the names of files (test1, test2, etc.), their sizes (451 bytes, 52 bytes) and the time and date they were last worked on using the editor. Ignore the two directories, shown as "." and ".."; they are for the computer’s use to keep track of your work.

If you wish to work on one of the files, make a mental note of the filename and tap any key to return to the Word Processing Sub Menu. Then follow the previous instructions for working on a document (see pg. 33).

**HOW TO COPY A DOCUMENT**

Sometimes you may want to copy the contents of one file into a second file. For example, if you want to write a letter using much of what you wrote in another letter, you could copy the first letter into a new file and then change it as necessary to fit into the second letter. You would still have the first letter in a separate file.

To copy a document from one file to another in this way, choose option C on the Word Processing Sub Menu:

- Tap <c>

The computer will then ask for the name of the directory containing the file you want to copy (Figure 19).

Your file will be in the directory “drafts” unless you have stored it in a file you created. If it is in “drafts,” simply tap <Enter>. If it is a different directory, type its name and tap <Enter>.

You will then see the screen displayed in Figure 20.

To copy your file:

- Type the name of the file you want to copy followed by a blank space.
Le Menu Sub Menu
Word Processing Sub Menu

Type Name of Directory (Default=drafts)

drafts

[Esc]-Exit  [F3]-Help

SELECT OPTION:  [ESC]-Exit to Parent Menu  [F3]-Help
[F1]-DOS Services  [F2]-Directory Management  [F4]-Setup

Fig. 19—where is the file you want to copy?

Le Menu Sub Menu
Word Processing Sub Menu

Original-File <space> Copy-File

[Esc]-Exit  [F3]-Help

SELECT OPTION:  [ESC]-Exit to Parent Menu  [F3]-Help
[F1]-DOS Services  [F2]-Directory Management  [F4]-Setup

Fig. 20—Where do you want the file copied?
• Type the name you want to give for the new file.
• Tap <Enter>.

The editor will create the second file: the files will have different names but their content will be the same until you change one or the other. You will be returned to the Word Processing Sub Menu.

If you then want to work in either file, select <a> on the Sub Menu and give the name of the file you want to work on.

HOW TO ERASE A DOCUMENT

To delete or erase a document from your computer, choose option E on the Word Processing Sub Menu:

• Tap <e>

You will see a screen like that in Figure 21 asking you which directory the file you want deleted is in.

If you have set up no directories yourself, the file will automatically be in the “drafts” directory, as shown on the screen. Just tap <Enter>. If the file you want to delete is in a directory you created, type in the name the directory name, then tap <Enter>.

The computer will then ask you which file you want to delete, as in Figure 22.

Type the name of the file you wish to delete, then tap <Enter>. The file will be deleted and the Word Processing Sub Menu will appear. If you accidentally delete a file, you can recover the version of it prior to your last changes, because the computer automatically makes a back-up copy of each of your files. Each back-up file has the file name with an extension “.bak” on it. So, if you accidentally deleted a file called “letter,” you could recover the prior version of it by using “letter.bak.” To do this, make a copy of “letter.bak,” naming it “letter” or anything else you like. If you have questions, call the Electronic Task Force help line.
Le Menu Sub Menu
Word Processing Sub Menu

Type Name of Directory (Default=drafts)
drafts

[Esc]-Exit ——— [F3]-Help

<table>
<thead>
<tr>
<th>SELECT OPTION:</th>
<th>[ESC]-Exit to Parent Menu</th>
<th>[F3]-Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>[F1]-DOS Services</td>
<td>[F2]-Directory Management</td>
<td>[F4]-Setup</td>
</tr>
</tbody>
</table>

Fig. 21—Where is the file you want to delete?

Le Menu Sub Menu
Word Processing Sub Menu

Enter Name of File to be DELETED

[Esc]-Exit ——— [F3]-Help

<table>
<thead>
<tr>
<th>SELECT OPTION:</th>
<th>[ESC]-Exit to Parent Menu</th>
<th>[F3]-Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>[F1]-DOS Services</td>
<td>[F2]-Directory Management</td>
<td>[F4]-Setup</td>
</tr>
</tbody>
</table>

Fig. 22—Which file do you want to delete?
HOW TO RENAME A DOCUMENT FILE

If you want to rename a file, choose option D on the Word Processing Sub Menu:

- Tap <d>

The computer will first ask you where the file is located (i.e., in what directory), presenting you with the screen in Figure 23. If you have set up no directories yourself, the file will be in the "drafts" directory, as shown on the screen. Just tap <Enter>. If the file you want to rename is in a directory you created, type in the name of the directory and then tap <Enter>.

The computer will then ask you which file you want to rename and what you now want to name it (Figure 24).

Type in the file’s current ("old") name, followed by a space, then the new name you wish to give the file: for example, memo, letter. Tap <Enter> and the file will be renamed and you
Le Menu Sub Menu  
Word Processing Sub Menu

Old-Name <space> New-Name

[Esc]-Exit  [F3]-Help

<table>
<thead>
<tr>
<th>SELECT OPTION:</th>
<th>[ESC]-Exit to Parent Menu</th>
<th>[F3]-Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>[F1]-DOS Services</td>
<td>[F2]-Directory Management</td>
<td>[F4]-Setup</td>
</tr>
</tbody>
</table>

Fig. 24—How do you want the file renamed?

will return to the Word Processing Sub Menu. If you want to work on the file later, you will need to use its new name.

**HOW TO INCLUDE A DOCUMENT IN AN ELECTRONIC MESSAGE**

At some point you may wish to send one of your documents to another member of the Task Force via electronic mail. To include one of your documents in an electronic message, select option E (electronic mail) on the Main Menu, option A (read, write, and mail) on the Mail Menu, and option s (send a message) on the Mail Screen (as described in Section IV above).

When the electronic message screen appears, complete the message header by indicating the addressee(s) and subject. Then, to incorporate one of your document files into the message, do the following:

- Place the cursor on the lefthand margin of the message body where you wish the document to begin.
- Tap <Esc>
- 47 -

- Type **merge \directory name file name**, where *directory name* is the name of the directory where your file is stored (*drafts* unless you have created subdirectories) and *filename* is the name of the file you want incorporated. This command identifies your file by its full “pathname” for the computer, that is, its directory and name.

After a brief pause, the contents of your document file will appear in the body of your electronic message. The original file also still exists.

You can revise, edit, or add to the message as usual before sending it.

**HOW TO GET HELP ON EDITOR COMMANDS**

You can display a summary of editor commands on your screen at any time you are working in one of your document files:

- Tap <Esc>.
- Type **help** and tap <Esc>.

You will see a HELP screen like that in Figure 25.

To remove the HELP screen and return to your document file,

- Tap <Esc>
- Type **esp** and tap <Esc>. To see more, tap <PgDn>.

For additional help, you can refer to the summary sheet at the end of this section or to *The ESP Editor User's Guide*. 
ESP COMMAND SUMMARY

<table>
<thead>
<tr>
<th>To get the COMMAND line: &lt;Esc&gt;</th>
<th>To get out of help: &lt;Alt+F9&gt;</th>
</tr>
</thead>
</table>

**SINGLE STROKE FUNCTION KEYS**

<table>
<thead>
<tr>
<th>&lt;F1&gt; delete line</th>
<th>&lt;F2&gt; restore line</th>
<th>&lt;Alt+F1&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;F3&gt; delete to eol</td>
<td>&lt;F4&gt; restore block</td>
<td>&lt;Alt+F3&gt;</td>
</tr>
<tr>
<td>&lt;F5&gt; split</td>
<td>&lt;F6&gt; join</td>
<td>&lt;Alt+F5&gt; cntr</td>
</tr>
<tr>
<td>&lt;F7&gt; copy (pick)</td>
<td>&lt;F8&gt; copy (put)</td>
<td>&lt;Alt+F7&gt; justify</td>
</tr>
<tr>
<td>&lt;F9&gt; replay</td>
<td>&lt;F10&gt; ins blank line</td>
<td>&lt;Alt+F9&gt; altfile</td>
</tr>
</tbody>
</table>

**ALT + FUNCTION KEYS**

<table>
<thead>
<tr>
<th>&lt;Alt+F1&gt;</th>
<th>&lt;Alt+F2&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Alt+F3&gt;</td>
<td>&lt;Alt+F4&gt;</td>
</tr>
<tr>
<td>&lt;Alt+F5&gt; cntr</td>
<td>&lt;Alt+F7&gt; justify</td>
</tr>
<tr>
<td>&lt;Alt+F8&gt; fill</td>
<td>&lt;Alt+F9&gt; altfile</td>
</tr>
<tr>
<td>&lt;Alt+F10&gt;</td>
<td></td>
</tr>
</tbody>
</table>

**<Fl> Delete to end of line**

<table>
<thead>
<tr>
<th>&lt;Home&gt; Upper Left of Screen</th>
<th>&lt;End&gt; End/Begining of Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;PgUp&gt; Move up 24 lines (-PAGE)</td>
<td>&lt;Ctrl+PgUp&gt; Move up 6 lines(-LINE</td>
</tr>
<tr>
<td>&lt;Pg_n&gt; Move down 24 lines (+PAGE)</td>
<td>&lt;Ctrl+Pg_n&gt; Move dn 6 lines(+LINE</td>
</tr>
<tr>
<td>&lt;Ins&gt; Insert mode on/off</td>
<td>&lt;Del&gt; Delete character</td>
</tr>
</tbody>
</table>

***Press <Pg_n> to Continue***

Press <Alt+F9> to leave HELP ***

Fig. 25—Help me with the editor commands
Table 5

SUMMARY OF BASIC WORD PROCESSING COMMANDS

<table>
<thead>
<tr>
<th>Command</th>
<th>Key(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>To use Word Processing</td>
<td>&lt;b&gt;</td>
<td>On Main Menu. Word Processing Sub Menu appears.</td>
</tr>
<tr>
<td>To return to Main Menu</td>
<td>&lt;ESC&gt;</td>
<td>On Word Processing Sub Menu.</td>
</tr>
<tr>
<td>On Word Processing Sub Menu:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: Default directory for word processing files is “drafts”.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To work on a document (“file”)</td>
<td>&lt;a&gt;</td>
<td>Identify directory if not default directory, tap &lt;Enter&gt;, then identify file to work on or create.</td>
</tr>
<tr>
<td>To list files</td>
<td>&lt;b&gt;</td>
<td>Identify directory if not default.</td>
</tr>
<tr>
<td>To delete a file</td>
<td>&lt;c&gt;</td>
<td>Identify directory if not default, tap &lt;Enter&gt;, then identify file to delete.</td>
</tr>
<tr>
<td>To print a file (Turn printer “On” and “On Line”)</td>
<td>&lt;f&gt;</td>
<td>Prints unformatted document.</td>
</tr>
<tr>
<td>or</td>
<td>&lt;g&gt;</td>
<td>Prints formatted document with page breaks, page numbers.</td>
</tr>
<tr>
<td>To Write and Edit a Document:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To move around document</td>
<td></td>
<td>Use arrow keys, space bar.</td>
</tr>
<tr>
<td>To erase character</td>
<td>&lt;----&gt;</td>
<td>Deletes first character to left of cursor. (This key is above Enter.)</td>
</tr>
<tr>
<td>or</td>
<td>&lt;Del&gt;</td>
<td>Deletes character at cursor.</td>
</tr>
<tr>
<td>To delete line</td>
<td>&lt;F1&gt;</td>
<td>Deletes line where cursor is.</td>
</tr>
<tr>
<td>To UNdelete last line deleted</td>
<td>&lt;F2&gt;</td>
<td>Restores line on line above cursor.</td>
</tr>
<tr>
<td>To delete text to end of line</td>
<td>&lt;F3&gt;</td>
<td>Deletes text to right of cursor.</td>
</tr>
<tr>
<td>To UNdelete text to end of line</td>
<td>&lt;F4&gt;</td>
<td>Restores text last deleted with &lt;F3&gt;.</td>
</tr>
<tr>
<td>To split line in two at cursor</td>
<td>&lt;F5&gt;</td>
<td>Moves part of line to next line.</td>
</tr>
<tr>
<td>To join two lines</td>
<td>&lt;F6&gt;</td>
<td>Joins line below with cursor’s line.</td>
</tr>
<tr>
<td>To copy a line</td>
<td>&lt;F7&gt;</td>
<td>Copies line to buffer.</td>
</tr>
<tr>
<td>then</td>
<td>&lt;F8&gt;</td>
<td>(Move cursor to place to copy line.)</td>
</tr>
<tr>
<td>To insert a blank line</td>
<td>&lt;F10&gt;</td>
<td>Adds one line above cursor’s line.</td>
</tr>
<tr>
<td>To leave a document, saving it for later use.</td>
<td>&lt;Esc&gt;</td>
<td>To reach ESP “Command” line. Then type exit and tap &lt;Enter&gt;.</td>
</tr>
<tr>
<td>To save a document while you are working on it.</td>
<td>&lt;Esc&gt;</td>
<td>Then type save and tap &lt;Enter&gt;.</td>
</tr>
</tbody>
</table>
VI. HOW TO USE THE PRINTER

The project has provided you with a printer so that you can produce paper copies of the material that you have stored on the computer. For instance, you can print copies of your electronic messages and of textual material (notes, letters, reports, etc.) that you have composed. This section of the manual explains enough about printing material on the computer to get you started. For additional instructions, please consult the *EPSON Printer User's Manual*.

HOW TO PREPARE THE PRINTER

Regardless of what you plan to print, you should prepare the printer in the same way. Before printing, make sure that:

- *The printer is turned on.* If not, flip black switch on right side of printer behind paper roll knob.
- *The “On Line” light is on.* If not, tap button below On Line label to turn it on.
- *The “Ready” light is on.* If not, try reloading the paper. If the light is still off, consult the printer manual to figure out why.
- *The “Paper Out” light is off.* If it is on, reload the paper following the instruction in the printer manual.
- *The paper is well centered.* The perforated edges should line up with the ends of the roller. If not, release the paper clutch (gray vertical knob extending out of top left of printer) and realign the paper.
- *The top of the first sheet of paper emerging from the printer is above the slot where incoming paper feeds into the printer.* Some users have had paper roll back into the printer.
- *The printer is set to the printing mode you want.* The printer has two modes: Draft, which is faster but lower quality, and Near Letter Quality (NLQ), which is slower but higher quality. The printer is automatically set on Draft mode when you turn it on. To change to NLQ, press the NLQ button on the top right of the printer. The printer should beep twice quickly. (To return to Draft mode, tap the NLQ button again.)
If you have trouble printing as you follow the instructions below, you should first review the above steps on preparing the printer. If you suspect you may have made a mistake in the setup, you might try turning your printer off and following the steps again.

**HOW TO PRINT ELECTRONIC MESSAGES**

When you want to print a message, use the cursor to highlight the message in the list on the Mail Screen and then

- Tap `<p>` (for “print”).

**HOW TO PRINT A COPY OF WHAT IS ON YOUR SCREEN**

At times you may want to save a paper copy of what you see on the computer screen. For instance, you may wish to print a screen in one of the games. To print what is on your screen, simply

- Press `<Shift>` `<PRT SCR>` (that is, press them simultaneously).

The *ESP Editor User's Guide* describes how to print a partial screen or more than one screen at a time (p. 56).

**HOW TO PRINT TEXTUAL MATERIAL**

There are two ways to print the textual material you have composed on the computer:

- **As an unformatted file.** Printing an unformatted file means printing the text just as you view it on the computer screen—that is, with no page breaks or page numbers.
- **As a formatted file.** Printing a formatted file means printing a version of the text that the computer has “formatted” to include page breaks, page numbers, and, if you wish, different fonts (e.g., italics and bold).

A formatted text is more “presentable” and easier to read, but for many purposes (for instance, when you are not planning to distribute the paper copy to anyone) you may prefer simple drafts.
HOW TO PRINT AN UNFORMATTED FILE

To print a copy of your document just as it appears on the screen, select option F (Print a file, unformatted) on the Word Processing Sub Menu:

- Tap <f>.

The computer will then ask you what directory the file you want to print is stored in.

- Tap <ENTER> to choose the "drafts" directory, where all of your document files are stored unless you have set up your own directory.
- If you have set up your own directory, type its name and tap <ENTER>.

The computer will then ask you for the name of the file you want to print.

- Type in the file’s name and tap <ENTER>.

If your printer is on, the file will then be printed.

HOW TO PRINT A FORMATTED FILE

To print a formatted copy of your document, select option G (Print a File, Formatted) on the Word Processing Sub Menu (END is the name of the software that formats the document):

- Tap <g>.

The computer will then ask you what directory the file is in that you want to print.

- Tap <ENTER> to choose the “drafts” directory, where all of your document files are stored unless you have set up your own directory.
- If you have set up your own directory, type its name and tap <ENTER>.

The computer will then ask you which file in the directory you want to print.
• Type in the file’s name and tap <ENTER>.

If your printer is on, the file will then be printed with page numbers, 7-column margins, and page breaks every 52 lines.

If you want your document to be printed with italics or bold characters or a variety of other special print features, you must insert symbols into the file before you use the Print Formatted command so that the computer will know where you want the special features. Refer to the ESP Editor User’s Guide for instructions.

HOW TO PRINT FILES OTHER THAN DOCUMENTS

Many software applications include instructions on how to print copies of their output. For example, MYCALC, the electronic spreadsheet described in Section VII of this manual, includes instructions for printing all or part of any MYCALC spreadsheet. Refer to the documentation of the specific application you are using or use the MS-DOS “print” command, described in your MS-DOS User Guide (page 9-21).
VII. OTHER USES FOR THE TASK FORCE COMPUTER

The Task Force computer has many uses other than handling electronic mail and textual material. The project has provided you with the following:

- REFLEX, a tool for managing databases
- MYCALC, a tool for creating spreadsheets electronically
- Several computer games, including Monopoly, Black Jack, Poker, Golf, and Empire

This section is intended only to introduce you to these uses of the computer. The project will supply you with separate manuals for REFLEX and MYCALC, and you will need to consult these in order to become a regular user of either. Instructions for the games are stored on the computer along with the games themselves, as explained below.

HOW TO USE THE REFLEX DATABASE MANAGEMENT SYSTEM

REFLEX is a system for managing databases. A database is simply an organized collection of information: for instance, a box of 3 x 5 notecards (with notes) is a database. In REFLEX, a database is organized into “records” of information and individual items within a record are called “fields.” To continue the notecard analogy, if you kept a 3 x 5 card of all your acquaintances, each card would be considered a “record.” Each entry on a card, e.g., the person’s name, would be called a “field.”

You can use a database management system such as REFLEX to organize and manage information of any sort: a club mailing list, an inventory of a stamp or coin collection, a list of things to do, or a list of birthdays and other dates to remember. REFLEX allows you to store this information on the computer so that you can sort and re-sort it electronically and present it in various ways called “views.” There are four types of REFLEX views:

- The Form View: The Form View displays one complete record (that is, one “notecard”) at a time.
- 55 -

- **The List View:** The List View displays records in rows and columns. Each record is a row with each of its fields in a separate column.

- **The Graph View:** The Graph View displays a visual representation of the information in five alternative ways: scatter graph, line graph, bar chart, cumulative (stacked) bar chart, and pie chart.

- **The Crosstab View:** The Crosstab View displays a numeric summary of the information in a database as a cross-tabulation with summaries for each information category.

- **The Report View:** The Report View displays the information in a customized way you design.

See the REFLEX User’s Manual (pp. 1-4 through 1-8) for samples of each view type.

To use REFLEX, select it on the Main Menu:

- Tap <c>.

The REFLEX Sub Menu will appear (Figure 26).

Choose the A option (that is, tap <a>) to create REFLEX files or use existing ones. Choose the B option (tap <b>) to print reports. Tap <ESC> to get back to the Main Menu from REFLEX.

To learn about using REFLEX, refer to the REFLEX User’s Manual. Since the project team has already installed REFLEX on the computer you have been provided, you can skip Chapter 2 of the Guide and proceed directly to Chapter 3. Part II includes two tutorials.

Once you have read the User’s Guide and experimented a bit with REFLEX, you may find the summary sheet on the page 56 to be a handy summary of REFLEX commands keyed to the appropriate pages of the REFLEX User’s Manual.
Table 6
SUMMARY OF BASIC REFLEX COMMANDS

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>To use REFLEX</td>
<td>Choose Option C. (Database Manager: REFLEX) on the Main Menu by tapping &lt;c&gt;.</td>
<td></td>
</tr>
<tr>
<td>To return to Main Menu from REFLEX</td>
<td>/Vq and tap &lt;ENTER&gt; Confirm request with &lt;Yes&gt; when queried. (See Section 3, page 15 of REFLEX Manual.)</td>
<td></td>
</tr>
<tr>
<td>To get on-line help while using REFLEX</td>
<td>&lt;F1&gt;</td>
<td>Section 5, page 11</td>
</tr>
<tr>
<td>To see main REFLEX Menu when using REFLEX</td>
<td>&lt;/&gt;</td>
<td>Section 5, page 11</td>
</tr>
<tr>
<td>To cancel a REFLEX command before it is executed</td>
<td>&lt;ESC&gt;</td>
<td>This is called the &quot;changing your mind&quot; key in the REFLEX Manual.</td>
</tr>
<tr>
<td>To get on-line information on the choices appropriate to fill in a REFLEX command</td>
<td>&lt;F10&gt;</td>
<td>Section 5 pg 11</td>
</tr>
<tr>
<td>To Design a data FORM</td>
<td>FD</td>
<td>Section 3 pg 18</td>
</tr>
<tr>
<td>To Edit FORM design</td>
<td>FE</td>
<td>Section 3 pg 21</td>
</tr>
<tr>
<td>To enter data into a FORM</td>
<td>VF</td>
<td>Section 3 pg 22</td>
</tr>
<tr>
<td>To save a REFLEX file</td>
<td>PS</td>
<td>Section 3 pg 28</td>
</tr>
<tr>
<td>To return to an existing REFLEX file</td>
<td>PR</td>
<td>Section 3 pg 6</td>
</tr>
</tbody>
</table>

To choose a View Type

<table>
<thead>
<tr>
<th>View Type</th>
<th>Key</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>VF</td>
<td>Section 3 pg 18</td>
</tr>
<tr>
<td>List</td>
<td>VL</td>
<td>Section 3 pg 31</td>
</tr>
<tr>
<td>Graph</td>
<td>VG</td>
<td>Section 4 pg 17</td>
</tr>
<tr>
<td>Crosstab</td>
<td>VX</td>
<td>Section 4 pg 30</td>
</tr>
</tbody>
</table>

To design a REPORT See Section 4, page 53.

To print a REPORT See Section 5-91 for printing lists, forms and crosstab tables. See Section 6 and Appendix B for printing graphs.

See REFLEX User's Guide for information on these and other commands.
HOW TO USE THE MYCALC ELECTRONIC SPREADSHEET

MYCALC is a basic electronic spreadsheet that allows the user to electronically create a worksheet to analyze numerical information. This worksheet can be used for anything you would write out on a piece of ledger sheet or a page with rows and columns of numbers. For example, many people use electronic spreadsheets to record, calculate, and analyze their budgets, expenses, or other financial records. An electronic spreadsheet can also be used to analyze alternative investment strategies or keep track of things like car repair expenses.

If you are familiar with LOTUS, a popular electronic spreadsheet software package, you will find MYCALC somewhat similar but less sophisticated.

To use MYCALC on the computer, select option D on the Main Menu:

- Tap <d>.

To learn about MYCALC, refer to the MYCALC Manual. Since the project team has already installed MYCALC on the Task Force computer provided for your use, you can skip Sections 1.3 through 1.9 of Chapter 1 (although experienced spreadsheet users should read Section 1.6). Begin reading Chapter 2, A Tutorial Introduction. Proceed to other chapters once you are comfortable with the tutorial information.
Note: Because MYCALC has been installed on the Task Force computer as an option of the Main Menu, you should ignore references to the "mc" command in the MYCALC Manual. That is the command to use MYCALC for computers without a menu system like yours.

After you have read the Manual and experimented with using MYCALC, you may find the summary sheet on the following page to be a useful list of MYCALC commands. To see the command options at any time while using MYCALC on the computer, tap <>. To get out of MYCALC and back to the Main Menu, tap <F7>.
Table 7
SUMMARY OF BASIC MYCALC COMMANDS

<table>
<thead>
<tr>
<th>To use MYCALC</th>
<th>Choose Option D. (Spreadsheet: MYCALC) on the Main Menu.</th>
</tr>
</thead>
<tbody>
<tr>
<td>To return to Main Menu from MYCALC</td>
<td>Q</td>
</tr>
<tr>
<td>To get on-line help while using MYCALC</td>
<td>? (Press &lt;ESC&gt; to return to spreadsheet)</td>
</tr>
<tr>
<td>To save a spreadsheet</td>
<td>FW (Enter spreadsheet name at prompt, e.g., “budget”)</td>
</tr>
<tr>
<td>To return to an existing MYCALC spreadsheet</td>
<td>FR (Enter spreadsheet name at prompt, e.g., “budget”)</td>
</tr>
<tr>
<td>To determine cell address</td>
<td>Move cursor to cell. Address will appear in lower right corner of screen, showing row letter, column number, e.g., a1 or b8.</td>
</tr>
<tr>
<td>To move cursor to specific cell</td>
<td>&gt; &lt;type cell address&gt;</td>
</tr>
<tr>
<td>To make entries in spreadsheet:</td>
<td></td>
</tr>
<tr>
<td>numbers</td>
<td>Type number with no commas.</td>
</tr>
<tr>
<td>labels</td>
<td>Type label. If it does not begin with letter, begin it with “&quot; character.</td>
</tr>
<tr>
<td>formulas</td>
<td>= followed by the formula in MYCALC format,</td>
</tr>
<tr>
<td></td>
<td>=sum(a1..a4) To sum of range of cells from a1 to a4 (a column)</td>
</tr>
<tr>
<td></td>
<td>=a1+c3-d4 To add and subtract cells</td>
</tr>
<tr>
<td></td>
<td>=a1*1.04 To multiple cell value by a constant</td>
</tr>
<tr>
<td>To print a spreadsheet.</td>
<td>FP When the file you want to print is shown on the screen. Refer to Manual to learn how to print partial spreadsheets.</td>
</tr>
</tbody>
</table>

See also MYCALC Command Summary on page 72 of MYCALC Manual.
HOW TO PLAY THE GAMES PROVIDED ON THE TASK FORCE COMPUTER

If you want to try out the games the project team has installed on the Task Force computer, select option F on the Main Menu:

- Tap <f>.

The sub-menu for games will appear, as illustrated in Figure 27.

As the sub-menu indicates, the Task Force computer has been provided with five games. Tap the key corresponding to the game that you want (e.g., tap <a> for Option A: Monopoly.)

The instructions for each game are included on the computer with the game itself. The first four games (Monopoly, Blackjack, Poker and Golf) assume you already know how to play their noncomputer forms. Therefore, if you don't know the rules to Monopoly, refer to the instructions for the actual board game before getting started.

---

Le Menu Sub Menu
Word Processing Sub Menu
Time: 5:01:38P        Date: 02-23-1987

A. Monopoly
B. Black Jack
C. Poker
D. Golf
E. Empire: Documentation
F. Empire: Begin Game
G. Empire: Resume Play

SELECT OPTION: [ESC]-Exit to Parent Menu
[F1]-DOS Services [F3]-Help
[F1]-Directory Management [F4]-Setup

Fig. 27—What do you want to play?
Empire is a fairly complex wargame for two emperors: the computer is one and you are the other. Before beginning Empire, read the documentation by tapping <e> on the Games Sub Menu for “Empire: Documentation.” When you are ready to begin, tap <f>. For the first time you play, it will take about five minutes for the computer to set the game up. Each game provides its own instruction for getting back to the Main Menu.
VIII. HOW TO USE ADDITIONAL CAPABILITIES OF THE TASK FORCE COMPUTER

You may find that you want to use the task force computer for additional functions, such as for using other packages you have, programming your own applications or making a back up copy of a file on a floppy disk. In this section, we describe how you can try out these and other capabilities of the computer.

Each of these functions can be used in two ways: through the computer’s menu system (Le Menu) or by “escaping” from the menu system and using “operating system” commands directly. You may want to do the latter to avoid the slight delays caused by the menu system or because you are accustomed to using operating system commands directly.

The computer’s operating system, MS-DOS (Microsoft Disk Operating System), handles routine work such as handling files and directing output to the printer. The computer needs the operating system to make the software, such as the Le Menu menu package and REFLEX, work. You can refer to the MS-DOS Manual provided (combined in an EPSON binder with the EPSON User’s Guide) to learn about all the operating system commands available.

You can use the MS-DOS commands through the menu system because it has a “DOS and Other Services” Sub Menu. Tap <F1> while viewing any menu to see this sub-menu of common DOS commands (Figure 28), such as one for copying files or formatting a floppy disk (diskette). If the DOS command you want to use is not on the sub-menu, you can choose “e(X)ecute a Command” by tapping <x> and type the command you want.

If you want to use MS-DOS commands directly without using the “DOS and Other Services” Sub Menu, tap <Esc> while viewing a menu. The menu will disappear and the MS-DOS “prompt” will appear:

```
C:\>
```

Type any MS-DOS command after the prompt, then tap <Enter> to execute the command. To return to the Main Menu, type go then <Enter>. 
[B]ackup Files to Diskette  c[O]mpare Diskettes
[C]opy Files  [P]rint Time Usage  [R]estore Files from Backup
[D]iskette Duplication  [T]ime and Date
[F]ormat a Diskette  e[X]ecute a Command
[G]et Disk Statistics
Set Pro[J]ect Code

[ ]Execute [ ]Select [Esc]-Menu  [F2]-Dir Mgmt  [F3]-Help

---

Fig. 28—DOS and other services sub menu

In the following subsections we assume you are using Le Menu's DOS and Other Services Sub Menu, not the MS-DOS commands directly. Feel free to use either approach.

HOW TO LOOK UP PHONE NUMBERS AND ADDRESSES OF FELLOW TASK FORCE MEMBERS

If you want to look up the name, address, or phone number of fellow task force members or members of the RAND research team, you can refer to an electronic copy of this information. When looking at any Le Menu menu (they all say "Le Menu" at the top),

- Tap <F1>. The "DOS and Other Services" Sub Menu will appear.
- Tap <x> to choose "e[ ]ecute a Command."
- Type name followed by a space then the person's first initial and last name.
- Tap <Enter>.
- Tap <F1> to continue.

The person's name, address, and phone number will appear. For working members, the phone number after "phone" is their home phone number. Their work phone number, if known, will be listed as their alternate phone number.

To return to the "DOS and Other Services" Sub Menu, tap <Esc>.
HOW TO ADD FUNCTIONS TO THE COMPUTER

You can add functions to the computer by installing additional software on it. To install the new software as a choice on one of the Le Menu menus,

- Tap <F4> while viewing the menu to which you want to add the software. This begins the menu's "Setup" function.

Then refer to the Le Menu Reference Manual, reading pages 5 through 6 as an introduction, then pages 7 through 13. Call the Task Force Help phone line if you need assistance.

HOW TO MAKE BACK-UP COPIES OF FILES ON FLOPPY DISKS

The information in the project computer is stored on a hard disk. To protect you from losing information if the hard disk or computer is damaged, we will make a back-up copy of your files each night after you choose the GOOD BYE option. If you later find that some of your information has been destroyed, call the RAND Task Force Help line and we will restore the information to the form it was in on the previous night.

If you want to make back-up copies of information yourself, you can do so on floppy disks, sometimes called diskettes. Refer to Getting Started with the IBM PC and XT, to learn how to care for floppy disks (pages 147 to 148).

Before copying a file on to a floppy disk, you must format it so that it can later be read by the computer's operating system. To do this, refer to the Le Menu Reference Manual, page 19, or follow these steps:

- From the Main Menu, tap <F1> for "DOS Services."
- The "DOS Services" Sub Menu will appear. Tap <f>, for "Format a Diskette."
- Insert a floppy disk in your floppy disk drive, the slot to the left of the System Unit's On/Off door. Push the disk firmly into the slot, then push in the rectangular button above the slot.
- Follow the instructions on the screen that appears. "A," by convention, is the symbol for your floppy disk drive. Type <n> (for "No") in response to the question, "Install Operating System?"
When the disk is formatted, the “DOS and Other Services” Sub Menu will appear. Then follow these steps (and refer to page 17 in the Le Menu Reference Manual) to copy your file on to the floppy disk:

- Tap <c> for “Copy Files.” (If the files you are copying will fill more than one floppy disk, choose “Backup Files to Diskette.” Refer to the Le Menu Reference Manual, page 17.)
- Enter <c> as the “Original Disk” to indicate the disk where the file you want to copy is. (“C,” by convention, indicates your hard disk.)
- Enter the name of the file’s directory. If it is an ESP document in your standard ESP directory, your response will be drafts.
- Type in the name of the file to be copied.
- Enter <a> for “Disk Where Files Go?” to indicate your floppy disk drive.
- If you have set up a directory on your floppy, type in its name in response to “To What Directory?” If not, leave the question blank.
- Tap <F1> and the file will be copied from your hard disk to your floppy disk.

HOW TO LEARN TO PROGRAM USING GW-BASIC

You may want to create your own functions to use on your computer instead of using the software packages we provided or you have from other sources. For example, you might want to write a program to create your own computer game.

To do this, you must use a programming language. We have provided you with such a language, GW-BASIC.

To learn to program in GW-BASIC, refer to the GW-BASIC Manual. You can also refer to sections on programming in Getting Started with the IBM PC and XT. The examples in this book are helpful, but there are some differences between the BASIC language the book uses and GW-BASIC. Before using any commands in Getting Started with the IBM PC and XT, look them up in the GW-BASIC Manual to make sure they will work.

To begin programming, tap <G> for “GW-BASIC” on the Main Menu. When you are finished programming,
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- Type **system**
- Tap `<Enter>`.

and the Main Menu will reappear.
IX. HOW TO GET HELP

If you need help using the Task Force computer or have questions about how it works, feel free to contact the RAND technical support staff by phone or electronic mail.

- By Phone: Call the RAND operator at (213) 393-0411. Ask the operator for “Electronic Task Force Help” or for extension 6573.
- By Electronic Mail: Address your message to: help!

If you are contacting the support staff because you are having a problem operating the computer or using one of its functions, jot down exactly what has occurred and the timing and content of any error messages that appeared on the screen relating to your problem. You may also want to review the Trouble-Shooting subsection, below.

Whether you contact the support staff by phone or electronic mail, they will try to solve your problem within 48 hours. If the staff cannot reach you by phone, they will send you an electronic message. The staff will do whatever they can to solve the problem, including visiting you to examine the equipment and repairing or replacing it if necessary.

TROUBLE-SHOOTING

If the Task Force computer “freezes up” so that it refuses to accept or act on any commands, or if you have some other problem with it, there is one thing not to do and several things you may want to try.

- Do NOT press the On/Off button for the computer repeatedly in quick succession. This is one of the few actions that can damage your computer.

You should turn the computer off and contact the project staff at RAND if you have reason to believe that the computer has been damaged:
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- If the screen displays cryptic messages like “1703” or “301” just after you have turned it on (these may indicate a problem with the circuitry).
- If the computer seems excessively hot or it smells of smoke or ozone.
- If any of the computer components have been dropped or badly bumped.

When the computer freezes up but shows no signs of damage, you may want to try one of the following to solve your problem:

- Tap <ESC>.
- Tap the RESET button, which will restart your system without turning it off. (Refer to Section III under “Warm Starts.”)
- Turn the System OFF once, wait two minutes, and turn it back on.
- Verify that the light on the surge protector is on. If not, turn the surge protector on.
- If the computer has “frozen” when you were trying to print, check to make sure the printer is on and the On Line light is on. If not, turn them on. If the Paper Out light is on, add paper. If the READY light is not on, refer to the Printer Manual.
- If the monitor is blank, but the red light in its lower right front corner is on, turn up the “Brightness” and “Contrast” thumbwheels on the right side of the monitor.
- If the monitor light is not lit, make sure the monitor is turned on by checking the “Turn-On” thumbwheel on the monitor’s right side.
- If the red light on the hard disk is flickering (center front of your computer), that means the hard disk is working. It just may need time to finish its operation, so wait until the light goes out to try to perform your next step.
- Refer to the trouble-shooting section of the manual or user’s guide for the function you are using (e.g., ESP, REFLEX, etc.).
X. PROJECT POLICIES, SUPPLIES, AND EXPENSES

This section describes a few policies regarding the use of the project computer and software, what supplies the project will provide, and how to handle your project expenses.

POLICIES CONCERNING THE PROJECT EQUIPMENT AND SOFTWARE

Ownership of Equipment and Software
The equipment and software provided to you is owned and insured by The RAND Corporation for your use. All the software provided, excluding the games, is covered by licensing agreements between RAND and the software licensor. The licensing agreements for all but UULink are included in the reference manuals you have. The agreement for UULink, the software used for linking your computer to the Project Central Computer, is in Figure 29. Essentially, these licensing agreements prohibit the software user from using it on more than one computer, copying the software, or distributing it. As the software user, you are expected to follow the terms of these agreements.

Use of the Project Equipment, Software by You and Others
You, and any others you permit, are encouraged to use the computer as a stand-alone computer for any use you choose. That means that you can use any software provided or any other software you have on the computer for any purpose, not just Task Force activity.

When others use this system, please follow the steps for changing computer users described in Section III, page 11.

Use of the Project Phone Line
The phone line the project has paid to have installed in your home is intended to be used only for electronic mail communication with task force members, the RAND project team, and available information services such as USENET.
Support Provided by Project Technical Staff

The RAND project team will provide support to help you use the project software: electronic mail; ESP, the word processor; REFLEX, the database manager; MYCALC, the electronic spreadsheet; and the games listed in your GAMES sub-menu.

You are free to add other software to your system or learn to use GW-BASIC, the programming language provided in your system. However, we cannot provide support for these uses.

Logging of Computer Activity for Research Purposes

Software will automatically collect the following kinds of information on computer usage:

- Which user is using the system
- What applications are being used and for how long
- The sender and recipients of each electronic message (the message header exclusive of subject line).

This information is collected by software developed by the research team as well as by LOGIT, a proprietary software package.

SUPPLIES

The RAND research team will provide you with the supplies you need to conduct your Task Force work and use the computer. During your training session, you received the following supplies:

- 2 boxes of floppy diskettes
- 1 extra printer ribbon
- A supply of printer paper

If you need more of any of these computer supplies, call or send a message to the Electronic Task Force at RAND. Let us know what you need, how much, and by when. Try to give us a warning of about a week, so we are able to get the additional supplies to you before you run out of your current supply. When you install the new printer ribbon, request another so you always have one on hand. Keep your paper supply flat and dry so it will run through your printer easily.