


**Burroughs** 

**B 1000 Series  
Text Management and  
Communication System  
(TMCS)**

**TERMINAL OPERATOR'S MANUAL**

**PRICED ITEM**

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Text Management and  
Communication System  
(TMCS)**

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PRICED ITEM

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## INTRODUCTION.

This manual is a reference to assist you in using the Burroughs Text Management and Communication System (TMCS).

Section 1 contains an overview of TMCS.

Sections 2 and 3 describe the video display terminal and typing keyboard.

Sections 4 through 7 present detailed operating instructions for each module of TMCS.

Appendix A provides a summary of error messages in the PATT, CAT, and SPELLER Programs.

Other publications which provide further information about TMCS include:

1. Burroughs B 1000 Series Text Management and Communication System (TMCS) Capabilities Manual, form 1141355.
2. Burroughs B 1000 Series Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.

The style identification number for this product is B1000 TMS.

## SECTION 1. OVERVIEW

The Burroughs Text Management and Communication System (TMCS) is designed to help you efficiently prepare and distribute documents. This section describes the various areas of your job where the different modules of TMCS can help.

### TYPING AND EDITING TEXT.

The PETT (Pretty Easy Typing on the Terminal) Program and the video display terminal make the original typing of text easier. Special keys (described in Appendix A) help you arrange text. Letters, words, lines or space can be inserted or deleted as needed. Also, you do not have to format the document while typing it; the system performs this based upon the commands entered with the text.

PETT also enables you to access a document quickly when editing is required. Only the changes or corrections need to be typed; the remaining text is adjusted accordingly.

### CHECK SPELLING.

The SPELLER Program checks your spelling by comparing the words in your document with a dictionary stored on the computer.

### PRINTING DOCUMENTS.

The CAT (Computer Assisted Typing) Program prints your document on any of several devices. You can print the entire document or selected pages, on separate sheets of paper, or continuous, fan-folded paper.

### TRANSMITTING DOCUMENTS.

The TOM (Transfer of Messages) Program electronically sends correspondence, so that you can quickly deliver information to others.



## SECTION 2. TERMINAL DESCRIPTION

A computer terminal has three main components: the cathode ray tube (CRT), the memory, and the keyboard. The CRT is used to display the text being transmitted to or received from the central computer. The memory stores text until it is ready to be transmitted to the central system. The keyboard, which resembles a standard typewriter keyboard, contains terminal controls and alphanumeric and special character keys used in the composition of text. Figure 1 illustrates a terminal device.

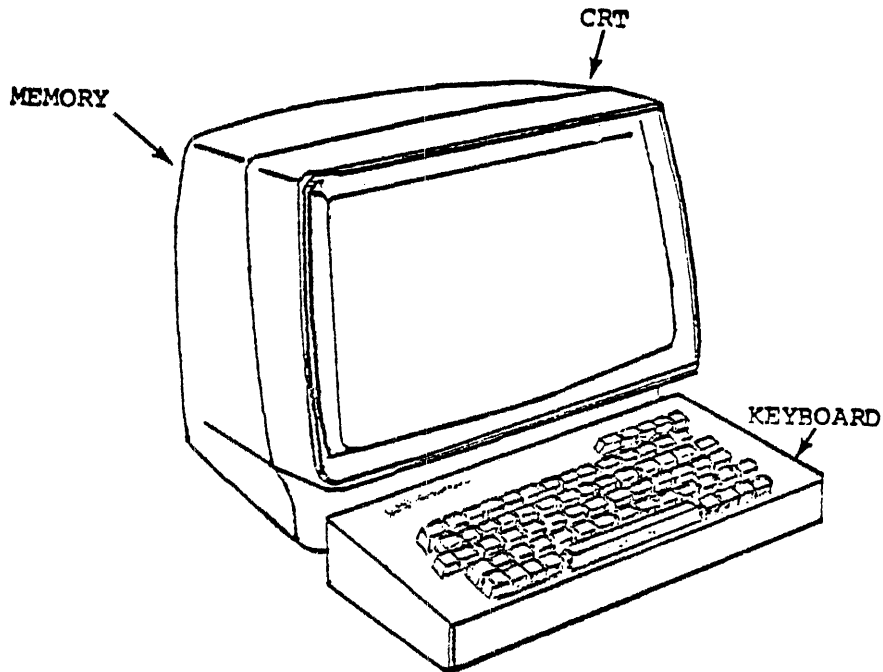


Figure 1. Terminal Device

## CATHODE RAY TUBE.

The cathode ray tube (CRT) looks much like an ordinary television screen. Characters appear on the screen as light images against a black background. The available screen display area is 24 lines with 80 characters per line for a total of 1920 characters per screen.

## MEMORY.

The terminal memory is an area within the terminal device which stores text. The memory, like the CRT, also has a 1920-character capacity. Text entered by an operator is stored until the transmit key (XMT) is pressed. Therefore, an entire page of text can be composed before transmission.

## KEYBOARD.

The keyboard of a terminal device is similar to a typewriter keyboard. It contains letters, numbers, special characters, and special function keys. In addition, the keyboard contains indicator lights which indicate what mode the terminal is presently in.

## CHARACTERS.

A character is any number, letter or special symbol on the keyboard. Letters are called alpha characters, numbers are called numeric characters or digits, and combined they are called alphanumeric characters.

## CURSOR.

The cursor is a small, bright, rectangular image of light against the CRT dark background. It indicates where to enter the next character of text. The cursor is an important point of reference in the performance of certain terminal functions. As these functions are explained, the importance of cursor positioning becomes apparent.

## FORMATTED SCREENS.

Screens show stored information which a operator may need, as well as data entered from the keyboard. For example, in the PETF Program, stored information appears on a formatted selection screen, the PETF menu screen. Enter information by filling in certain preprinted items or fields on the menu screen with the appropriate information and transmitting.

Screen formats for the PETF Program are displayed through the use of Forms mode. In Forms mode, data is divided into entry and nonentry display fields.

### Entry Fields.

Entry fields are areas where data may be entered or acted upon by an operator. These fields are set off by delimiters, which are small, triangular-shaped portions of video (▷ ◁). The left-side limit to an entry field (▷) is called the opening delimiter and the right-side limit (◁) is called the closing delimiter. Only data entered within these delimiters is transmitted to the computer.

### Nonentry Fields.

Nonentry fields display data automatically provided by the computer. These fields are fixed and an operator is prevented from altering any data within these fields. Information such as headings describing fields is displayed in nonentry fields. These fields are not set off by delimiters.

### KEYBOARD OPERATION.

Except for the brightness control and the on/off switch, which are located on the CRT just beneath the screen, all terminal controls are found on the keyboard. Figure 2 illustrates the typical terminal device keyboard. The keys and lights on the keyboard are grouped into:

1. Function keys.
2. Control keys and indicator lights.
3. Alphanumeric and special character keys.

### FUNCTION KEYS.

The function keys are used for moving the cursor on the screen and for shifting and editing text. All of the function keys except the CHAR INS key repeat the function when held down. The function keys are as follows:

1. CLEAR/HOME.
2. RTAB.
3. SKIP/TAB.
4. GS/ETX.
5. EOP/CLR/EOL.
6. CHAR INS.
7. REVERSE LINE FEED (↑).
8. BACKSPACE (←).
9. FORWARD SPACE (→).
10. LINE FEED (↓).
11. CHAR DEL.
12. DEL/LINE/INS.
13. RET.

Some of these keys have two functions. The function of the key is changed when the SHIFT key (shifted or unshifted position) is used with the function key.

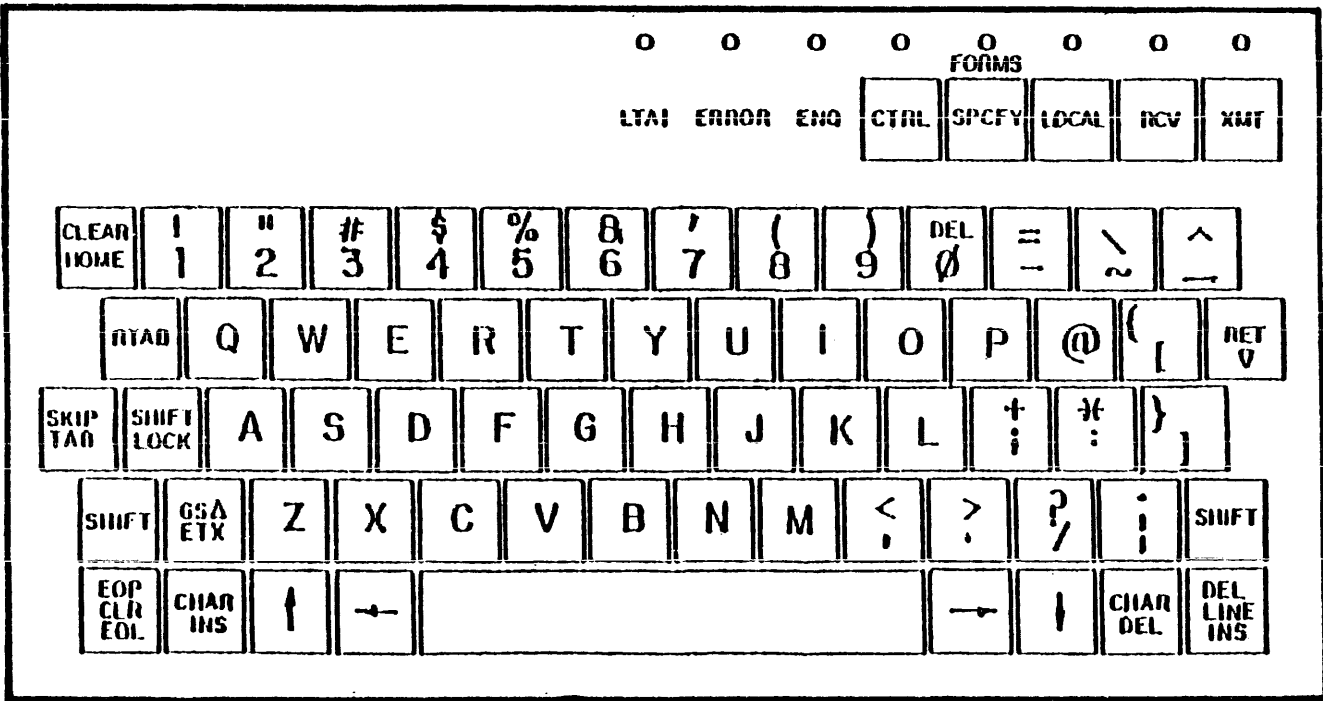


Figure 2. Terminal Keyboard



### Clear/Home (CLEAR/HOME).

The CLEAR/HOME key functions in a shifted and unshifted position. The basic function of the CLEAR/HOME key (in the unshifted position) is to return the cursor to the HOME position on the screen. The HOME position is the leftmost character position on the first line. To avoid losing text, always transmit with the cursor in HOME position.

The CLEAR/HOME key in the shifted position (i.e., holding the SHIFT key down and then pressing the CLEAR/HOME key) activates the clear function. This function clears all text on the screen and returns the cursor to the HOME position.

### Reverse Tab (RTAB).

The RTAB key moves the cursor back to the preceding tab stop. If the cursor is in HOME position when RTAB is pressed, it is moved to the end of the last line on the page.

### Skip/Tab (SKIP/TAB).

The SKIP/TAB key moves the cursor to the next tab stop.

### GS/ETX (GS ETX).

The GS/ETX key is not used in the Burroughs Text Management and Communication System.

### End-of-Page/Clear/End-of-Line (EOP/CLR/EOL).

The EOP/CLR/EOL key functions in a shifted and an unshifted position. In the unshifted position, pressing this key clears all text from the location of the cursor to the end of that line. In a shifted position, pressing this key clears all text from the location of the cursor to the end of the page.

### Character Insert (CHAR INS).

The CHAR INS key performs two functions: single or multiple character insertion. For single character insertion, this key must be pressed twice to insert a space at the position of the cursor. The character on which the cursor is located, and all other characters on the line, are shifted one space to the right. For multiple character insertion, this key must be pressed only once. The initial space is created and all remaining text is continually shifted to the right as typing resumes. Characters which are shifted off the end of the line are lost. To stop the continual shifting of characters, the CHAR INS key must be pressed again before the last character of the last word to be inserted is typed.

### Reverse Line Feed (↑).

The reverse-line-feed key moves the cursor up from line to line. When the cursor is in the top line, this key moves it to the bottom line. The characters through which the cursor passes are not erased.

### Backspace (←).

The backspace key moves the cursor one space to the left. When the cursor is at the left edge of a line, it is moved to the right edge of the line above. When the cursor is in HOME position, it is moved to the end of the last line on the page.

### Forward Space (→).

The forward space key moves the cursor one space to the right. When the cursor is at the right edge of a line, it is moved to the first position on the line below.

### Line Feed (↓).

The line-feed key moves the cursor down from line to line. When the cursor is in the bottom line, this key moves it to the top line. The characters which the cursor passes through are not erased.

### Character Delete (CHAR DEL).

The CHAR DEL key removes the character within the cursor. All following characters on that line are moved one space to the left. Holding the key down causes the continual removal of characters on that line.

### Delete Line/Insert Line (DEL/LINE/INS).

The DEL/LINE/INS key functions in a shifted and unshifted position. Pressing this key in the unshifted position causes a blank line to be inserted at the location of the cursor and all remaining text on the page to be shifted down one line. Holding this key down causes continual insertion of blank lines and continual movement of text downward. Pressing this key in the shifted position causes the line in which the cursor is located to be erased, and all remaining text on the page is shifted up one line.

### Return (RET).

The RET key moves the cursor from any position in a line to the first position on the next line. When the cursor is in the last line, this key moves it to HOME position.

## CONTROL KEYS AND INDICATOR LIGHTS.

The control keys are the five blue keys located in the upper right-hand corner of the keyboard. These keys allow an operator to select the mode of operation of a terminal. The control keys and the CHAR INS key are the only nonrepeating keys on the keyboard.

The indicator lights, located adjacent to the control keys, indicate the current operation mode of the terminal.

The control keys and indicator lights are:

1. XMT.
2. RCV.
3. LOCAL.
4. FORMS.
5. SPCFY.
6. CTRL.
7. ENQ.
8. ERROR.
9. LTAI.

### Transmit Key (XMT)/Transmit Mode Indicator.

The XMT key places the terminal in the Transmit mode of operation and transmits the screen contents to the computer. The XMT indicator light goes out and the RCV indicator lights when transmission is completed.

### Receive Key (RCV)/Receive Mode Indicator.

The RCV key places the terminal in the Receive mode and lights the RCV indicator. This means that the terminal is ready to receive data. The RCV key can only be used in the Local mode.

### Local Key (LOCAL) and Local Mode Indicator.

The LOCAL key places the terminal in the Local mode of operation and lights the LOCAL indicator. The terminal must be in the Local mode before entry of text.

### Forms Mode Indicator (FORMS).

The FORMS indicator lights when the displayed page on the terminal is in the Forms mode. In the PETT Program, for example, this occurs when the menu screen is displayed.

### Specify Key (SPCFY).

The SPCFY key places the terminal in the Transmit mode and lights the XMT indicator. In the PETT Program, this key is used to quickly move from one screen of text to the next, to restore a screen to its appearance before changes were made, to split a line of text.

### Control Key (CTRL) and Control Mode Indicator.

Pressing the CTRL key places the terminal in the Control mode and lights the CTRL indicator. Pressing the CTRL key prior to pressing one or more keyboard keys causes the entry to be interpreted as a single Control code. When pressed with the SHIFT key held down, the CTRL key locks the terminal in the Control mode until it is pressed again. When the CTRL key is pressed a second time, the terminal goes out of the Control mode and the CTRL indicator light goes out.

The CTRL key is used for the following functions:

1. To shift the alpha keys to upper-case and lower-case letters, press the CTRL key and the Y key for upper-case letters. Press the CTRL key and the T key to return to lower-case letters.
2. To set terminal tab stops (they can be changed at any time), place the cursor at the desired point, press the CTRL key, then press P. Repeat these steps until all tab stops are set. To remove a single tab stop, move the cursor to the unwanted tab setting, press the CTRL key, then press P. To remove all tab stop settings, press the CTRL key, then press O.
3. In the PETT Program, a TAB command can be used to set tabs within a document. These can be specified as left-justified, centered, right-justified, or decimal tabs.
4. To move the screen forward to the second page stored in the terminal (not the next page in the PETT Program), press the CTRL key, then the forward space key (➡). Use this second page to communicate with the computer without affecting the text format.

Press the CTRL key, then the backspace key (←) to return to the screen of text.

5. To move a line upward, place the cursor on the line to be moved, press the CTRL key, then press V. To move a line down, place the cursor on the line to be moved, press the CTRL key, then press B. To continue moving one line through several lines, press and hold the SHIFT key before pressing the CTRL key.

### Enquiry Indicator (ENQ).

The ENQ indicator light is lit whenever the terminal is not in the Receive mode, and it shows that the central computer is attempting to transmit a message or data to the terminal. In addition, to alert the operator, an alarm sounds when the ENQ indicator lights.

Both the light and the alarm are turned off by pressing the RCV key. The audible alarm may also be disabled by the following:

1. Press the CTRL key.
2. Hold down the SHIFT key.
3. Press the ? key.

This same procedure also enables the alarm.

#### Error Indicator (ERROR).

The ERROR indicator light is lit whenever the terminal detects an internal error (not an operator error) in the data received from the computer. The light is turned off by transmitting a correct message, by receiving a new incoming message, or by pressing the LOCAL key.

#### Line Terminal Activity Indicator (LTAI).

The LTAI indicator light is lit whenever the computer is transmitting to any terminal on line. The LTAI indicator goes out when the terminal is transmitting to the computer. An LTAI indicator which remains off indicates that the computer is not receiving the transmission, and an LTAI indicator which remains lit indicates that the terminal is not responding.

#### ALPHANUMERIC AND SPECIAL CHARACTER KEYS.

The letters, numbers, and special character keys on the keyboard are used in the same manner as on a regular typewriter.

#### KEYBOARD SECURITY LOCK.

A optional security lock is provided with each keyboard. The security lock electrically prevents unauthorized use of the keyboard by disabling the keyboard. The lock is a tumbler type with a removable key and is located on the right side of the keyboard assembly. The keyboard can only be locked in the Receive or Local mode.



### SECTION 3. TERMINAL OPERATION

To acquaint you with basic terminal operations, this section explains how to log on and off the terminal, and how to enter, correct, and transmit data.

A usercode/password is needed before operating the computer. These are assigned by the system manager and identify your files and current operating status to the computer.

#### LOGGING ON AND OFF.

A session begins by logging-on and ends with logging-off. To begin a session, do the following:

1. Turn the power switch on.
2. Press the CLEAR/HOME key to clear the screen and place the cursor in HOME position.
3. Enter ?-S and press the XMT key to disable the automatic scrolling feature of the terminal. (The response is SCROLL DISABLED.)
4. Enter your usercode/password in HOME position and press the XMT key. (The response is a session number, starting time, and the date.)

To end a session, do the following:

1. Enter BYE in HOME position, then press the XMT key. (The response is an end-of-session message, giving elapsed time, processing time, and input/output time used.)
2. Turn the power switch off.

#### ENTERING DATA AND TEXT.

All data and text is entered at the terminal. The requirements for making terminal entries, the types of checks the computer performs on entries, and the methods used to add, delete, or modify data are described in the following text.

The next three paragraphs pertain to the formatted menu screen which is shown in figure 3.

## REQUIRED AND OPTIONAL FIELDS.

Required fields on a screen are those fields into which an entry must be made. An error message is given after transmitting a screen if a required field is not filled. Data may be entered or omitted in all optional entry fields.

## TABBING THROUGH FIELDS.

Sometimes it is desired to skip quickly through a number of fields which require no additional data. Use any of the following keys to move the cursor swiftly from field to field without deleting any data.

1. TAB key.
2. RTAB key.
3. RET key.

Refer to section 2 for a complete explanation of these keys.

## DEFAULT ENTRY FIELDS.

For faster input of commonly used data, certain fields are automatically supplied with default data; that is, an operator does not enter this data. It is automatically entered when the display is transmitted. All default values may be changed when desired by a manual operator entry.

## SYSTEM EDITS AND ERROR MESSAGES.

Once data is transmitted, the computer system automatically edits or checks the entries. Depending upon the specific data entered, fields are checked for the following:

1. Accuracy of numeric content.
2. Existence of required entries.
3. Verification of file-contained data.

An entry which fails any of the edits described above causes a displayed error message. The field in which the error exists is highlighted. The entry must then be corrected before proceeding to the next display.

## CORRECTING DATA.

Information added to the system may be corrected by any of the following means:

1. Adding data.
2. Deleting data.
3. Modifying data.

Data may be changed either during or after original operator input.



### ADDING DATA.

Place the cursor in the first character position of an entry field and enter the desired data, or use the character insert (CHAR INS) key to add data.

### DELETING DATA.

The character delete (CHAR DEL) key is used to delete single characters. To delete the data in an entire field, use the End-of-Page/Clear/End-of-Line (EOP/CLR/EOL) key. To clear the entire screen, use the CLEAR/HOME key.

Refer to section 2 for a complete explanation of these keys.

### MODIFYING DATA.

Text may be changed either by deleting any data and entering new data, or by simply typing over the old data. To modify data, use any of the methods described for adding and deleting data.

### TRANSMITTING DATA.

After all necessary fields are filled, place the cursor in HOME position and press the XMT key to transmit the data to the computer. The system returns an empty screen for entry of text.



## SECTION 4. THE PETT PROGRAM

The PETT Program is designed to assist you in preparing and editing document files. This program was developed especially for personnel with no computer background to provide a quick and easy way to produce documents.

PETT stands for Pretty Easy Typing on the Terminal. PETT is easy because it allows you to create and edit document files on a terminal device without using technical commands. When creating a file, the text is typed on the terminal screen; no sequence numbers are required, and an entire screen of text can be transmitted at one time. To edit a file displayed on the screen, the text-editing capacity of the terminal can be used to make whatever changes are necessary.

PETT has a formatted selection screen, the PETT menu screen, which is the starting point for creating and editing files. Figure 3 is an illustration of this screen. Basically, the menu screen is used to inform the program when to create or update a Document file, an Output Device Table or a Formdata file.

If you want to make a new file, PETT returns a blank screen on which the text can be typed. When the first screen of text is transmitted, another blank screen appears. The program continues to send blank screens until the command to return to the menu screen is given.

If you want to proofread or update an existing file, the program displays the text on a series of screens. It is easy to move from one screen to the next. Any changes made to the text on a screen are stored after that screen is transmitted. Return to the menu screen from any screen of text by typing the command QUIT CON in HOME position. PETT provides additional editing flexibility by allowing you to specify how many lines of text are to be displayed on each screen. There also are commands that can be used to move directly to a particular section of a file. These are discussed in the following text.

```

                                P E T T
-----
1.  CREATE NEW DOCUMENT FILE.
2.  PROOFREAD OR UPDATE EXISTING DOCUMENT FILE.
3.  CREATE OR UPDATE OUTPUT DEVICE TABLE.
4.  CREATE OR UPDATE FORMDATA FILE.
5.  INSTRUCTIONS.
6.  QUIT.

ENTER OPTION NUMBER > <

NAME OF DOCUMENT   >         <

AUTOMATIC NOEDIT  > < (STORES FIRST 72 CHARACTERS OF EACH LINE AS
                    TRANSMITTED)

SAVE DOCUMENT FOR > < DAYS OR UNTIL MONTH > < / DAY > <

PROOFREAD:
  LINES PER SCREEN > 20 <
  BEGIN DISPLAY   > < SCREENS AFTER START OR > < SCREENS FROM END

FORMDATA FILE     >         <

```

Figure 3. PETT Menu Screen

OPERATING INSTRUCTIONS FOR THE PETT PROGRAM.

When using the PETT Program, keep the following points in mind:

1. Acquire the habit of transmitting with the cursor in HOME position (upper-left corner of the terminal screen). Put the cursor in HOME position by pressing the CLEAR/HOME key. Always transmit with the cursor in HOME position to ensure that you do not accidentally transmit incomplete data.

On the formatted PETT menu screen, the HOME position is the ENTER OPTION NUMBER box.

2. Several PETT commands may be transmitted from unformatted screens. These commands are used to return the menu screen, or to move around in the file. Always type these commands in the HOME position. If they are not typed from this position, the program treats them as part of the file. To transmit these commands, place the cursor immediately following the last character of the command and press XMT. Do not return to HOME position. These commands are discussed under SPECIAL FEATURES on page 29.
3. Remember that when a command is transmitted from an unformatted screen, none of the newly typed text on that screen is stored. Transmit screens with newly typed text on them independent of sending PETT a command.

#### STARTING THE PROGRAM.

To start PETT, log on at a terminal, disable scrolling, and type ?EX PETT in HOME position. Press XMT - the menu screen appears. (see figure 3). For detailed operating instructions for starting the PETT Program, refer to Table 1 - Creating a Document, and Table 2 - Editing a Document.

#### ENDING THE PROGRAM.

To end the PETT Program, enter 6 in the ENTER OPTION NUMBER box on the menu screen and press XMT. The following message appears on the screen:

#### Example:

```
FILES UPDATED WERE:-----  
  
<file name>  
<file name>  
etc.
```

All files created or proofread during the run of the program are listed. When the elapsed time, processing time, and input/output time appear, the program ends. Table 1 - Creating a Document, and Table 2 - Editing a Document, include detailed operating procedures for ending the PETT Program.

## CREATING A FILE.

Three kinds of files can be created through the PETT Program: the Output Device Table, the Formdata file and the Document file.

Detailed operating procedures for creating these files are outlined in Table 1 - Creating a Document. Start the PETT Program following the instructions above for STARTING THE PROGRAM.

### OUTPUT DEVICE TABLE.

To create an Output Device Table, enter a 3 in the ENTER OPTION NUMBER box on the menu screen. This file allows automatic selection of devices for printing. Section 5 contains a discussion of the Output Device Table.

### FORMDATA FILE.

On the menu screen enter a 4 in the ENTER OPTION NUMBER box to create a Formdata file. This file allows generation of multiple form letters. (The formdata file is discussed under FORMDATA SPECIFICATIONS on page 32.)

### DOCUMENT FILE.

To produce documents using the TMCS system, follow these procedures:

1. Begin by creating a file which contains overall format specifications for a document. This file is known as a Format Description file. Detailed instructions on creating Format Description files are covered in Burroughs Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.
2. Next create a file which contains the actual text of the document, along with a series of embedded commands. These embedded commands tell TMCS how to format the text of the document on the page. This file is known as a Document file.

To create a Document file, enter a 1 in the ENTER OPTION NUMBER box on the menu screen and type the file name in the NAME OF DOCUMENT field. These two fields are required for the creation of a Document file.

The SAVE DOCUMENT FOR ▷ ◁ DAYS OR UNTIL MONTH ▷ ◁ / DAY ▷ ◁ feature on the menu screen can be used as a reminder to supervisory personnel to set expiration dates for files. If this optional field is to be completed, contact your supervisor for further instructions.

When the menu screen is transmitted, the message WHEN THIS MESSAGE DISAPPEARS YOU CAN START flashes briefly. The program is now ready for text entry.

### ENTERING TEXT.

A Document file contains "general" text and no-edit text. These are discussed below.

#### General Text.

General text is consolidated by the PETT Program. Specific instructions for entering general text are as follows:

1. The first record of a Document file must indicate the name of the associated Format Description file. This file name must be preceded by an asterisk.
2. Immediately following the Format Description file name, any input associated with the New commands established in the Format Description file must be specified.

NOTE: When entering text in connection with New commands, type the first line of input text on the same line as the command itself. This contradicts the standard practice of entering commands on lines separate from the text.

3. Formdata specifications may precede or follow New commands as described later in this section.
4. The remainder of the input file simply contains the actual text of the document along with the appropriate CAT commands for formatting the text.
5. Asterisked CAT commands must be typed on a line that does not contain any other text. The asterisk appears in the first print position.

NOTE: If you are working with no-edit text (refer to the following discussion), the points below do not apply.

6. The PETT Program consolidates the text with blank spaces between words. These blank spaces allow text to be entered at a later time.
7. If blank lines are left within the text or at the bottom of the screen, they are closed when the PETT Program consolidates the text.

8. If you are typing a word and reach the end of a line on the terminal screen, continue typing the word at the beginning of the next line. As long as no blank spaces are left within the word, it is not split when the PETT Program consolidates the text. This only applies from line to line. Text is not carried over from screen to screen.

When you have filled the entire screen with text, press the CLEAR/HOME key, then the XMT key to receive a blank screen. PETT returns as many blank screens as needed to complete the file.

#### No-edit Text.

Text which is printed exactly as typed is called no-edit. No-edit text for a Document file may consist of:

1. Text created by selecting the AUTOMATIC NOEDIT option on the PETT menu screen (refer to RELATED MENU SCREEN OPTIONS on page 28.)
2. Text created by using CAT no-edit commands (discussed in section 5).
3. The Output Device Table (discussed in section 5).
4. The Formdata file (discussed later in this section).

#### ENDING THE CREATE ACTIVITY.

After transmitting the last screen of text, inform PETT that you have finished creating a file. There are several ways to do this:

1. Type QUIT CON in HOME position and press XMT. This instructs the program to consolidate and save the file. The Menu screen returns. (File consolidation is discussed in the following text.)

If QUIT CON is typed, the program sends the following message.

```
[QUIT CON]
***WORK FILE BEING CONSOLIDATED...STANDBY
```

After consolidation, this message appears.

```
COMPLETED <(USERCODE)> <FILE NAME> on <PACK NAME>
```



The PETT Program then returns the menu screen.

NOTE: If the spelling of QUIT is incorrect, the PETT Program does not recognize it as a command and the word itself becomes part of the file.

2. Type QUIT in HOME position. The Save screen appears, giving you the option to save or remove information.
3. Transmit a blank screen. The Save screen is displayed.

#### THE SAVE SCREEN.

The Save screen shown in figure 4 appears when you type QUIT or you transmit a blank screen. It gives you the option to save or remove your newly created file.

To save your file, press XMT. The default value Y (yes) is used.

To remove your file, type N (No) and press XMT.

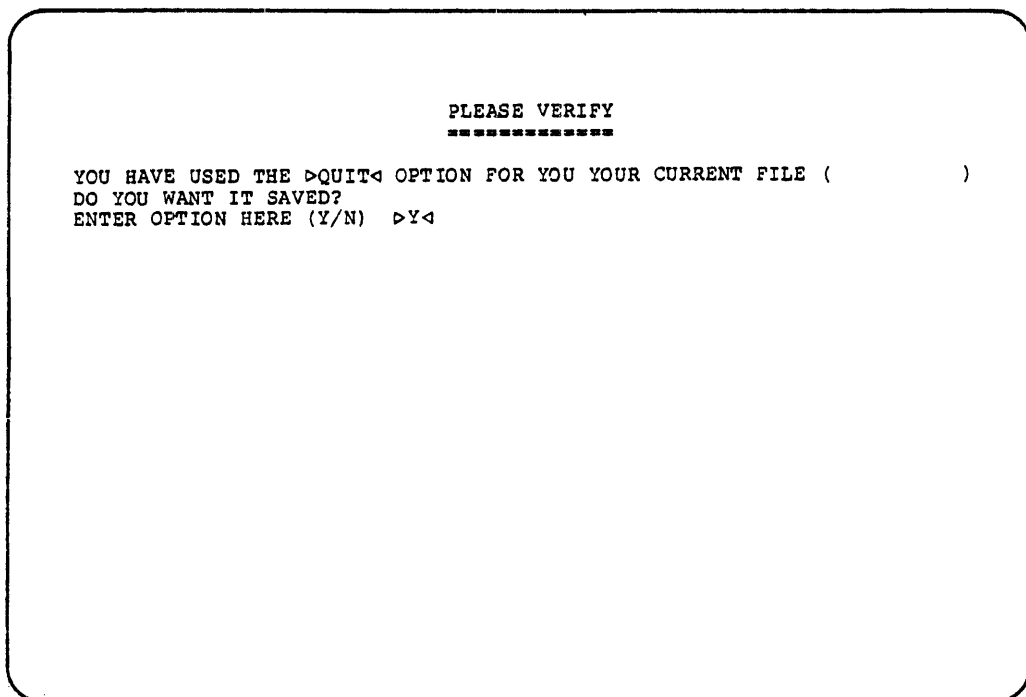


Figure 4. Save Menu Screen

### FILE CONSOLIDATION.

The PETT Program must consolidate a file before it can be printed by the CAT Program. During consolidation the following takes place.

1. The text is reformatted to allow a maximum of 60 characters on each line. This allows space for the insertion of additional text. However, consolidation does not reformat asterisked CAT commands.
2. Any blank lines that were left within the text are closed.

The above points do not apply to no-edit text since PETT does not consolidate this type of text. File consolidation as it applies to no-edit text is discussed under NOEDIT FILE CONSOLIDATION.

There are two circumstances under which the PETT Program consolidates a file automatically. These are:

1. When using an unformatted screen, you can instruct PETT to consolidate the file by typing QUIT CON in HOME position and pressing the XMT key. After the file is consolidated, the menu screen appears.
2. When you transmit Y (Yes), the default value in the Save screen.

Whenever a file is consolidated, the following message appears:

\*\*\*WORK FILE BEING CONSOLIDATED...STANDBY

### NOEDIT FILE CONSOLIDATION.

When no-edit text is consolidated, the following occurs:

1. The first 72 characters of every line are stored exactly as typed.
2. Characters typed past the 72nd character position on a line are not stored.
3. Blank lines left within the text are not closed.

Figures 5 and 6 show how the same file looks on the terminal screen before and after consolidation. Figure 7 shows how the file looks after it is printed by the CAT Program.

```
*Format File Name
*L
July 26, 1979
*skip 1
PETT: How to Input Text
Burroughs Corporation
PETT Program Readers
*p
Remember these points when inputting text:
*g
a.=When the PETT Program consolidates the text, it leaves blank spaces
between words in order to allow insertion of text at a later
time.
*g
b.=If you leave blank lines within the text or at the bottom of
the screen, they are closed when the PETT Program consolidates the
text. This does not apply to no-edit text.
*g
c.=If you are typing a word and reach the end of a line on the terminal
screen, continue typing the word at the beginning of the next line.
As long as you do not leave any blank space within the word, it is not
split when the PETT Program consolidates the text. Remember, the PETT
Program consolidates only from line to line, not from screen to screen.
This means that during file consolidation, a word carried over from
line to line is treated as one word, while a word carried over from screen
is treated as two words.
```

```
*g
d.=Type asterisked CAT commands on a line that does not contain any
other text. Type the asterisk in the leftmost character position
on the line.
*skip 2
CAT:BC
```

Figure 5. File Before Consolidation

```

*Format File Name
*L
July 26, 1979
*skip 1
PETT: How to Input Text
Burroughs Corporation
PETT Program Readers
*p
Remember these points when inputting text:
*g
a.=When the PETT Program consolidates the text, it leaves
blank spaces between words in order to
allow insertion of text at a later time.
*g
b.=If you leave blank lines within the text or
at the bottom of the screen, they are closed when the
PETT Program consolidates the text. This does not apply to no-edit text.
*g
c.=If you are typing a word and reach the end of
a line on the terminal screen, continue typing the word
at the beginning of the next line. As long as you
do not leave any blank space within the word, it
is not split when the PETT Program consolidates the text.
Remember, the PETT Program consolidates only from line to line,
not from screen to screen. This means that during

```

```

file consolidation, a word carried over from line to
line is treated as one word, while a word carried
over from screen to screen is treated as two words.
*g
d.=Type asterisked CAT commands on a line that does
not contain any other text. Type the asterisk in the
leftmost character position on the line.
*skip 2
CAT:BC

```

Figure 6. File After Consolidation

COMPANY LOGO

Office Memorandum

---

DATE: July 26, 198-  
SUBJECT: PETT: How to Input Text  
FROM: Burroughs Corporation  
TO: PETT Program Readers

Remember these points when inputting text:

1. When the PETT Program consolidates the text, it leaves blank spaces between words in order to allow insertion of text at a later time.
2. If you leave blank lines within the text or at the bottom of the screen, they are closed when the PETT Program consolidates the text. This does not apply to no-edit text.
3. If you are typing a word and reach the end of a line on the terminal screen, continue typing the word at the beginning of the next line. As long as you do not leave any blank space within the word, it is not split when the PETT Program consolidates the text. Remember, PETT consolidates only from line to line, not from screen to screen. This means that during file consolidation, a word carried over from line to line is treated as one word, while a word carried over from screen to screen is treated as two words.
4. Type asterisked CAT commands on a line that does not contain any other text. Type the asterisk in the leftmost character position on the line.

CAT:BC

Figure 7. File as Printed by the CAT Program

## PROOFREADING/UPDATING A FILE.

Start the PETT Program following the instructions on page 19 for STARTING THE PROGRAM. Detailed operating instructions for proofreading/updating a file are outlined in Table 2 - Editing a Document.

### RELATED MENU SCREEN OPTIONS.

On the menu screen, enter 2 in the ENTER OPTION NUMBER box. Then type the Document file name in the NAME OF DOCUMENT field. These are the only two required fields on the screen.

The program displays 20 lines of text per screen unless an alternate number of lines per screen is specified. To request an alternate number of lines, type a number between 5 and 24 in the LINES PER SCREEN box.

This option is a considerable convenience when inserting text into the file. In order to insert text, choose an appropriate number of lines per screen to allow enough blank lines for the insertion. The number selected is used for the current activity unless it is changed.

A starting point may also be selected when proofreading a file. To select a starting point, inform the program how many screens after the start of the file or how many screens back from the end of the file to begin proofreading. (Refer to the options labeled BEGIN DISPLAY▷ ◁ SCREENS AFTER START OR▷ ◁ SCREENS FROM END on the menu screen.). If both options are completed, the SCREENS FROM END option takes precedence.

For example, to go directly to the third screen of text, specify that proofreading is to begin two screens after the start. To add text to the very end of the file, instruct the program to start at one screen back from the end. This takes you directly to the last screen of text.

The selected starting point is used for the current activity unless it is changed. If a starting point is not selected, the program automatically starts with the first screen of text.

If the AUTOMATIC NOEDIT option is checked, the X remains for the current activity unless it is removed. Each time an automatic no-edit file is proofread, an X must be placed in the AUTOMATIC NOEDIT box on the menu screen. Otherwise, the file is reformatted during file consolidation and the no-edit text is not retained.

When the menu screen is transmitted, and TMCS finds the file, the message @@LOADING...PLEASE STANDBY appears in HOME position. This message is immediately followed by the specified screen. If no screen is specified, the first page of the file appears.

### CHANGING TEXT.

Make whatever changes are necessary by simply typing over the old text with the new. Keep in mind that the terminal has special editing keys which make deletions and insertions very easy. When all necessary changes to a screen have been made, press the XMT key. The program stores the changes and the next screen of text is provided.

Each screen contains 24 lines. The number of text lines per screen is specified in the LINES PER SCREEN box on the PETT menu screen. On the remaining blank lines, the PETT Program displays the word <PETT> at the beginning of each line. Each of these blank lines may be used to insert text. To enter text in these lines, simply type over the word <PETT> and continue typing as usual.

### SPECIAL FEATURES.

PETT has certain features that can be used to increase proofreading and editing flexibility. These features are described below.

#### THE SPECIFY (SPCFY) KEY.

Move from one screen of text to the next by pressing the SPCFY key instead of the XMT key. When the SPCFY key is pressed with the cursor in HOME position, PETT does not store changes made to the screen. Since PETT does not have to scan the text for changes, the next screen is received faster than if the XMT key was pressed. Therefore, it is suggested that the SPCFY key be used to move from one screen to the next whenever text has not been changed. Press the CLEAR/HOME key and press the SPCFY key to quickly receive the next screen of text.

The SPCFY key is also convenient for restoring a screen of text to its original appearance after the text has been changed. By pressing the CLEAR/HOME key and then pressing the SPCFY key, the PETT Program automatically stores the unchanged screen and displays the next screen of text.

Also use the SPCFY key to split a line of text. Simply position the cursor where the text is to be split and press the SPCFY key. The screen is redisplayed and the text that was to the right of the cursor appears on the following line.

If text appears on the 24th line of the screen, the text cannot be split on any other line with the SPCFY key.

#### THE REFILL COMMAND.

If you alter a screen of text and then want to restore it to its original appearance, type REFILL in the HOME position and press the XMT key. The screen is redisplayed in its original appearance.

As previously mentioned, the SPCFY key can also be used to restore a screen. The difference is that the SPCFY key displays the next screen and the REFILL command displays the same screen.

THE QUIT +/- <Number> COMMAND.

This command enables you to move forward or backward in a file by a specified number of screens. Press the CLEAR/HOME key to return the cursor to the HOME position. Then type QUIT+<number> or QUIT-<number>. (Use a hyphen for a minus sign.)

For example, suppose you want to alter a paragraph which you expect to find five screens beyond the currently displayed screen. Type QUIT+5 in the HOME position and press the XMT key. The PETT Program then moves five screens forward and displays the specified screen. Suppose that at this point you realize you went two screens too far. Type QUIT-2 in the HOME position and press the XMT key to move two screens backward.

You may move forward by an unlimited number of screens. If this takes you beyond the existing text, you may return to the last screen of text by typing QUIT-1 in HOME position and pressing the XMT key. However, PETT does not take you further back than the first screen of text. For example, if you are on the second screen in your file and specify QUIT-4, the first screen of text is displayed.

NOTE: If this command is used on a screen that has just been altered, the changes are not stored by the PETT Program.

THE QUIT <Number> COMMAND.

This command allows you to go directly to a specified number of screens after the start of a file regardless of which screen is currently displayed. Place the cursor in HOME position and type QUIT<number>. Press the XMT key. The specified screen is displayed. Suppose, for example, that you are currently on the fifth screen after the start and want to move to the ninth screen. Type QUIT9 in HOME position and press the XMT key to move four screens ahead to the ninth screen. Suppose that you are currently on the twelfth screen after the start and want to move to the ninth screen. Again, type QUIT9 in HOME position and press the XMT key to move three screens backward to the ninth screen.

NOTE: If this command is used on a screen that has just been altered, the changes are not stored.



### BLANK SCREEN TRANSMISSION.

To go directly to the end of a file from any screen of text, transmit a blank screen. Press the CLEAR/HOME key. Then press the XMT key. The message: FILE COPIED TO END. ADD MORE OR QUIT is briefly displayed, followed by a blank screen. This is the end of the file; add more text as necessary.

NOTE: If a blank screen is transmitted from the end-of-file position, the PETT Program returns to the Save screen.

### USING SPECIAL FEATURES IN CREATE MODE.

The special features described above may also be used when creating a file. For example, suppose that you are creating a file and have just transmitted the last screen of text. Before returning to the menu screen, you want to edit a paragraph three screens back. Use the command QUIT-3 to move backward three screens. Suppose too that after changing this paragraph, you decide to restore it to its previous appearance. This can be accomplished with the REFILL command or by pressing the SPCFY key. If, at this point, you decide to add more text to the end of the file, move there directly by transmitting a blank screen.

The important thing to remember is not to use these commands on a screen of text that is being transmitted for the first time, since the content of the screen is not stored. Use these commands only on screens that already have been transmitted or on a blank screen at the end of a file.

### RETURNING TO THE MENU SCREEN.

Whether creating or proofreading a file, the same command is used to return to the menu screen.

Type QUIT CON in HOME position from any screen of text and press XMT. This informs the program to consolidate and save the file. After these activities are complete, the menu screen returns.

### USING THE SAVE SCREEN.

You may request the Save screen for both the Create or Proofread activities. Type QUIT or transmit a blank screen.

When it is displayed for CREATE, save or remove your file.

When it is displayed for PROOFREAD OR UPDATE, save or remove changes to your file. If you enter N (No), edits are cancelled. The last saved version becomes the current version of your file.

The Save screen gives you an opportunity to change your mind. It also protects source information when a file is updated. For instance, when you enter incorrect changes, use the Save screen to cancel those changes and return the file to its original condition.

### FORMDATA SPECIFICATIONS.

The formdata capability is used by TMCS to merge and format standard text with variable items of information. The Formdata capability is best suited for form letters, allowing the same letter to be sent to many people without being retyped each time.

Three files are needed to create a form letter (or similar document):

1. A Format Description file, to format the document.
2. A Document file, to provide text for the document.
3. A Formdata file, to store the variable items of information such as names and addresses.

Formdata entries may be used in the Format Description file, the Document file, or in both files. The following paragraphs describe how to initiate form letter specification in the Document file. Entry of Formdata information in the Format Description file is described in Burroughs B 1000 Series Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.

### THE DOCUMENT FILE.

To produce a form letter, you must first create a Document file using the PETT Program. In the Document file, enter the following:

1. The name of the Format Description file you are using.
2. The Formdata file specification and Formdata file name.
3. A name and specification for each Formdata item needed.
4. New commands, if any, required for the document.
5. Text for the document.

A Document file containing this information and text follows:

#### Example:

```
*LETTER/FORMAT
*FORMDATA OVERDUES
ADDRESSEE 25 3
BALANCE 10
*Date May 5, 198-
*L # 1
<ADDRESSEE(1)>
```

<ADDRESSEE(2)>

<ADDRESSEE(3)>

\*p

It has come to our attention that your account currently has a balance <BALANCE>, which is overdue. As indicated by our billing, our terms are 30 days.

An explanation of this example follows:

1. \*LETTER/FORMAT is the name of the Format Description file. (The format file name is entered on the first line of any Document file you are creating.)
2. \*FORMDATA OVERDUES is the Formdata specification and the Formdata file identified to store items of information. \*FORMDATA is specified starting in the first character position, followed by a series of characters comprising a Formdata file name which you create. The complete entry must be typed on one line.
3. ADDRESSEE 25 3 and BALANCE 10 are Formdata item names and specifications. Formdata items must be declared following the Formdata specification if they are to be used in a document. Item names are names which you create and may include up to 18 characters. A Formdata item specification is not preceded by an asterisk (\*) and must be typed on one line.

Each item name may be followed by two numbers. The first number is required and defines how much text may be used for the item. (ADDRESSEE may use up to 30 characters; BALANCE, 10.) The maximum number of characters allowed for a Formdata item is 72.

The second number indicates how many lines may be used for the Formdata item. ADDRESSEE may have 3 lines. BALANCE does not have a number entry. TMCS uses a value of 1 line if a number is not entered.

4. \*DATE May 14, 198- is a New command entry. New commands, which are established and positioned in the Format Description file, may be used in the heading of a document as in this example. New command entry in the Document file may occur either before or after Formdata entries preceding the main text for the document.

NOTE: If Formdata items are to replace New commands text (as described later in this section), then the Formdata specifications must precede New command entries.

5. <ADDRESSEE(1)>, <ADDRESSEE(2)>, <ADDRESSEE(3)>, and <BALANCE> are Formdata items used within the document to position text. As shown, Formdata items used in text must be enclosed within these symbols < > to be valid.

To create your own Document file containing Formdata entries, follow the sequence and format of the previous example. After completing the Document file, return to the PETT menu by typing QUIT CON in the HOME position.

### THE FORMDATA FILE.

The Formdata file also must be present to produce a form letter. The Formdata file is created (or updated) using the PETT Program. To make this selection on the PETT menu as shown in figure 8, do the following:

1. Enter option number 4 (CREATE OR UPDATE FORMDATA FILE) in the ENTER OPTION NUMBER field.
2. Type in the name of your Document file in the NAME OF DOCUMENT field.
3. Type in the name of your Formdata file in the FORMDATA FILE field.
4. Press CLEAR/HOME, then press XMT.

-----  
PETT  
-----

1. CREATE NEW DOCUMENT FILE.
2. PROOFREAD OR UPDATE EXISTING DOCUMENT FILE.
3. CREATE OR UPDATE OUTPUT DEVICE TABLE.
4. CREATE OR UPDATE FORMDATA FILE.
5. INSTRUCTIONS.
6. QUIT.

ENTER OPTION NUMBER >4<

NAME OF DOCUMENT >FORMLTR1 <

AUTOMATIC NOEDIT > < (STORES FIRST 72 CHARACTERS OF EACH LINE AS TRANSMITTED)

SAVE DOCUMENT FOR > <DAYS OR UNTIL MONTH > < / DAY > <

PROOFREAD:

  LINES PER SCREEN >20<

  BEGIN DISPLAY > < SCREENS AFTER START OR > < SCREENS FROM END

FORMDATA FILE >LTRINFO <

Figure 8. PETT Menu Requesting the Formdata File

After the menu is transmitted, TMCS displays a formatted screen for data entry. Items of information are labeled and an area is provided for typing as shown in figure 9. When you have entered text for the items available on the screen, press CLEAR/HOME, then press XMT. Another screen is presented for data entry. After all data is entered, type QUIT CON in the HOME position to return to the PETT menu to select another activity.

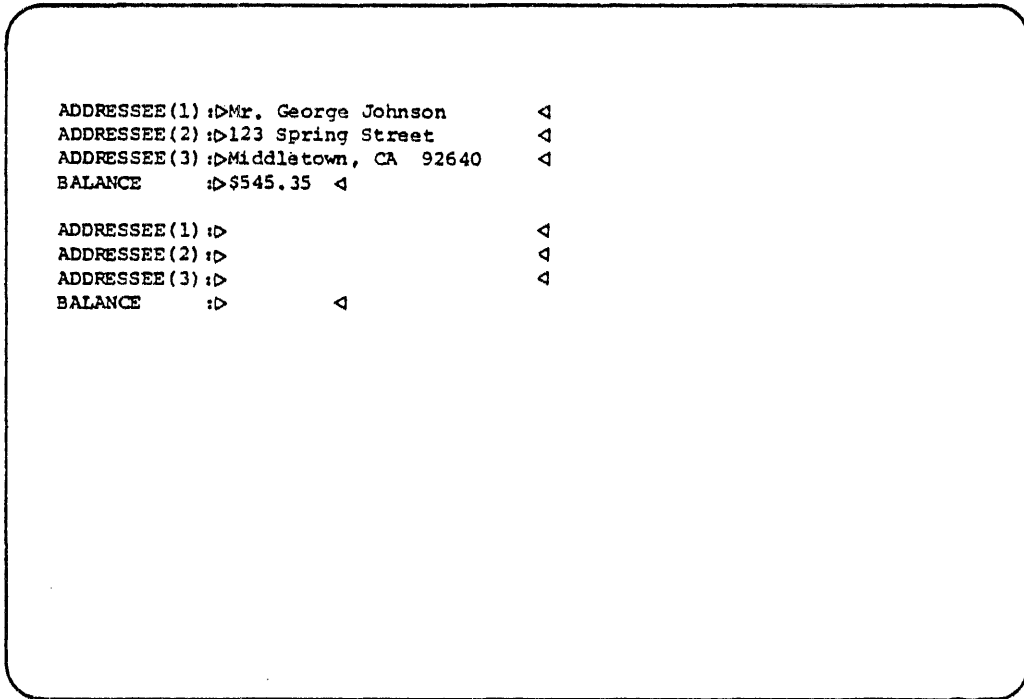


Figure 9. Formatted Screen and Data, Formdata File

Information may be added to or changed in a Formdata file. When creating or updating this file, it is important to remember the following:

1. Always proofread (or update) a Formdata file by using option 4 on the PETT menu. Accurately specify the name of the Document file in the NAME OF DOCUMENT field, and the name of the Formdata file in the FORMDATA FILE field.
2. Once data has been entered in a Formdata file, do not change Formdata item declarations. Changes in specification could affect data in the file.

Step-by-step operating procedures for creating and updating Formdata files are provided in Table 1 - Creating a Document and Table 2 - Editing a Document.

## PRINTED DOCUMENTS.

Text and data are merged, formatted, and printed automatically with a single print instruction to the CAT Program (refer to section 5). Multiple form letters are printed until all data is used in the Formdata file. Following is an example of final text, the first in a series of form letters.

### Example:

Mr. George Johnson  
123 Spring Street  
Middletown, CA 92640

It has come to our attention that your account currently has a balance of \$545.35, which is overdue. As indicated by our billing, our terms are 30 days.

## REPLACING NEW COMMAND TEXT WITH FORMDATA SPECIFICATIONS.

Formdata items may replace New commands text if an existing Format Description file is suitable for your document. For instance, suppose a Format Description file were specified with New commands for a single document and you later required a letter sent to multiple recipients. To replace New commands text with Formdata specifications, follow this procedure:

1. Enter the name of the Format Description file.
2. Enter the Formdata specification and Formdata file name.
3. Declare the Formdata items required for the document.
4. Enter each New command followed by a Formdata item.

The following is a Document file with this type specification. Formdata information must precede New command entry in this instance. Also, the number of Formdata items may not exceed the number of entries allowed for the New command.

### Example:

```
*LETTER/FORMAT
*FORMDATA AUGLETTER
ADDRESSEE 30 3
INVOICENO 8
BALANCE 10
*ADDRESS <ADDRESSEE(1)>
<ADDRESSEE(2)>
<ADDRESSEE(3)>
*INV <INVOICENO>
```

The preceding example allows you to format a document for multiple recipients using an existing Format Description file.

INCLUDING ADDITIONAL FORMDATA ITEMS.

Formdata items may be added to a Formdata specification in the Format Description file. For example, suppose items of information were needed but not declared in the format file. Provided no data has been entered in the Formdata file, you may declare these additional items in the Document file as illustrated following. In this instance, the Formdata file name is not entered because it is already included in the Format Description file.

Example:

*FORMAT/LETTERS	(Format Description file name)
*FORMDATA	(Formdata specification)
INVOICENO 10	(Formdata item declaration)
CUSTOMERNO 10	(Formdata item declaration)

If data has been entered in a Formdata file, you may not change specifications for that Formdata file. However, if you enter the name of a new Formdata file in the Document file, you may use or add to an existing Formdata specification. (Data appearing in the existing Formdata file is not included in the new Formdata file which you name in the Document file.) This capability allows you to use Formdata specifications repeatedly for various Formdata files.

The following information may help you use existing or combined Formdata specifications:

1. A Formdata file may be specified in both the Document file and the Format Description file. If this occurs, the Formdata file used to process the document is the one named in the Document file.
2. TMCS checks both the Format Description file and the Document file for Formdata items. Should a duplicate item be found, an error message appears. In this case, either delete or rename the duplicate item.
3. Formdata items declared in both the Format Description file and the Document file are used to build the Formdata file. In the Formdata file, items declared in the Format Description file precede those items declared in the Document file.

RESTART PROCEDURE.

If, due to a computer service interruption, PETT is abnormally terminated while creating or proofreading a file, that file is not consolidated. Do not attempt to print the file with the CAT Program until you re-execute PETT and consolidate the file.

When you re-execute PETT and indicate on the menu screen that you want to proofread the file, this message appears:

RESTART FILE BEING CONSOLIDATED...STANDBY

After the restart file has been consolidated, this message appears:

RESTART...CONTINUE

This is followed by the message:

%&@LOADING...PLEASE STANDBY.\*\*\*

Then the file is displayed. All text that was transmitted before the interruption is stored.

If the interruption occurs when the menu screen is displayed, and the file is currently consolidated, the file can be printed by the CAT Program without re-executing PETT. No restart is necessary for a consolidated file.

### CANDE FILES.

Documents can be efficiently created and edited using only the PETT Program. However, since PETT automatically creates a CANDE (Command AND Edit) workfile, you also have the option of using CANDE for greater editing flexibility.

The CANDE Language is used to create files which may be edited and saved for later use. CANDE files can be listed in a variety of formats and transferred to or from various devices. For instance, while PETT is designed for use at a terminal display, CANDE may also be used on a printing terminal. CANDE uses sequence numbers for each line and requires that each line be transmitted separately. However, when necessary, CANDE may be used to create documents at a printing terminal, thereby extending the use of this equipment.

CANDE commands are especially useful in arranging text to save time and keyboarding. For instance, text can be moved from one portion of a document to another in seconds. Text that is frequently duplicated need not be retyped each time it is used. A CANDE command can duplicate this text from one file to another as often as necessary. Documents can also be merged without retyping.

Another feature of CANDE is the ability to find and display portions of text and to find and replace specific text. For instance, if a word is misspelled throughout a document, you can specify a command to find and display all the places the word is used. After you correct the spelling, CANDE can search the file and replace the incorrect word throughout the document.

CANDE is also helpful in file maintenance. Through CANDE you can change file names, duplicate files, and remove files as required. Further information about the use of CANDE to create and edit text is provided in the CANDE User's Manual, form 1090586.



CANDE self-study training materials are also available. Introduction to B 1000 CANDE, Course number EL6275, Catalog number 3259 8716 may be ordered through your Burroughs representative.

#### INSTRUCTIONS.

To receive a screen of instructions on some of the PETT commands described in this section, enter a 5 in the ENTER OPTION NUMBER box on the menu screen and press the XMT key. Press the XMT key again to receive a second screen of instructions. When the second screen is transmitted, the menu screen reappears.

These instructions help you to use the PETT commands.



TABLE 1  
Creating a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
1	<p><u>CREATING A DOCUMENT</u></p> <p>Log on the CRT terminal and disable scrolling.</p> <p>a. To log on, place cursor in HOME position (upper-left corner), enter your usercode/password, and press XMT.</p> <p>b. To disable scrolling, type ?-S in HOME position, and press XMT.</p>	<p>Version, usercode, time, date, and station information appear on the screen.</p> <p><u>Example:</u></p> <pre>B1000 CANDE MARK 9.1 VERSION 00 (10/03/80 10:37) USER &lt;USERCODE&gt; LOGGED ON AT 01:26:51.7 PM 09/21/81 YOU ARE AT STATION 25 (TD832)</pre> <p>The message SCROLL DISABLED is displayed.</p>	2
2	<p>Initiate the PETT Program by entering ?EX PETT in HOME position, and press XMT.</p>	<p>A beginning-of-job message appears:</p> <p><u>Example:</u></p> <pre>&lt;USERCODE&gt; PETT=7238 BOJ PP=4, MP=4 TIME=13:30:57.8</pre> <p>The PETT menu screen appears as shown in figure 3. Cursor is in the ENTER OPTION NUMBER box.</p>	3 or 12

TABLE 1  
 Creating a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
3	Choose one:  a. To create a document file, enter 1 in the ENTER OPTION NUMBER box.  b. To create a Formdata file, enter 4 in the ENTER OPTION NUMBER box.  c. To create the Output Device Table, enter 3 in the ENTER OPTION NUMBER box.	Cursor advances to NAME OF DOCUMENT.  NOTE: The phrase "Cursor advances to..." indicates the automatic movement of the cursor from box to box. For an explanation of cursor movement, refer to Cursor and SKIP/TAB in section 2.	4
4	NAME OF DOCUMENT - This field is required (except if creating an Output Device Table). Enter name of new Document file to be created, or name of Document file to be used when creating a Formdata file.		5
5	Choose one:  a. If no optional items are desired, go to step 6.		

TABLE 1  
 Creating a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
5 cont	<p>b. If optional items are desired, fill in one or both of the following boxes. (If no entries are made, default values are assigned.) Press SKIP/TAB to advance cursor from box to box.</p> <p>1) AUTOMATIC NOEDIT - Enter X.</p> <p style="padding-left: 40px;">NOTE: This exists only for the current activity. To retain no-edit, select this option each time a file is edited.</p> <p>2) SAVE DOCUMENT FOR ▷ ◁          DAYS OR UNTIL MONTH ▷ ◁          /DAY ▷ ◁ - This is used as a reminder for supervisory personnel to set up file expiration dates (if no entries are made, a 14 day default value exists.)</p>	<p>The first 72 characters of every line are stored exactly as typed. Blank lines and spaces left within text are not closed.</p> <p style="padding-left: 40px;">NOTE: Characters typed past the 72nd character position on a line are lost.</p>	6

TABLE 1  
Creating a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
6	Choose one:  a. If creating an Output Device Table, items are completed. Press CLEAR/HOME.  b. If creating a new Document file, items are completed. Press CLEAR/HOME.  c. If creating a Formdata file, press SKIP/TAB and move cursor to FORMDATA FILE.	Cursor appears in the ENTER OPTION NUMBER box.  Cursor appears in the ENTER OPTION NUMBER box.  Cursor advances to FORMDATA FILE.	17  17  7
7	FORMDATA FILE - Enter the name of the file to be created, and press CLEAR/HOME.	Cursor appears in the ENTER OPTION NUMBER box.	8
8	Press XMT.	The menu screen disappears and a formatted screen appears.  <u>Example:</u>  ADDRESSEE (1) :▷ ◁ ADDRESSEE (2) :▷ ◁ ADDRESSEE (3) :▷ ◁ INTRO :▷ ◁ MANAGER :▷ ◁	9

TABLE 1  
 Creating a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
9	Enter the variable information desired.  <u>Example:</u>  Mr. J. Johnson 123 Our Place Middletown, CA Mr. Johnson Bill Doe	The formatted screen appears as:  <u>Example:</u>  ADDRESSEE(1):▷Mr. J. Johnson   ◁ ADDRESSEE(2):▷123 Our Place    ◁ ADDRESSEE(3):▷Middletown, CA  ◁ INTRO           :▷Mr. Johnson    ◁ MANAGER         :▷Bill Doe        ◁	10
10	Press XMT to transmit the screen and receive another formatted screen.	Additional formatted screens are received as needed.	11
11	When variable data is complete, do one of the following:  a. Type QUIT CON in the HOME position, and press XMT.  b. Type QUIT in HOME position, and press XMT.  c. Transmit a blank screen.	The file is consolidated and saved. The PETT menu screen returns with the cursor in the ENTER OPTION NUMBER box.  The Save (PLEASE VERIFY) screen appears. Cursor is in option box.  The Save (PLEASE VERIFY) screen appears. Cursor is in option box.	12 or 22  21  21

TABLE 1  
 Creating a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
12	If further instructions on the PETT Program are desired, press CLEAR/HOME.	Cursor is returned to the ENTER OPTION NUMBER box.	13
13	Enter 5 in the ENTER OPTION NUMBER box, and press XMT.	PETT commands and special features are displayed.	14
14	Press XMT.	A second screen of instructions is displayed.	15
15	Press XMT.	The PETT menu screen reappears.	3 or 16
16	Press CLEAR/HOME.	Cursor appears in the ENTER OPTION NUMBER box.	17
17	Press XMT.	<p>The menu screen disappears and one of the following occurs:</p> <ul style="list-style-type: none"> <li>a. If creating an Output Device Table, a formatted screen appears. (Refer to Burroughs Text Management and Communication System (TMCS) Installation and Implementation User's Guide.)</li> <li>b. If creating a document file, the message WHEN THIS MESSAGE DISAPPEARS YOU CAN START appears</li> </ul>	18



TABLE 1  
 Creating a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
18	<p>In HOME position, enter an asterisk followed by the name of the Format Description file to be used. The name of the format file must always be the first record in a Document file. Enter text on the following lines. The entire screen can be filled before data is transmitted. (Refer to section 5 for CAT commands.)</p> <p>Asterisked CAT commands must be typed on lines by themselves.</p> <p>Type free form. When typing a word and the end of a line is reached, continue typing the word at the beginning of the next line. Do not leave any blank space within the word.</p>	<p>briefly. Then a blank screen appears.</p> <p>Blank lines left within text or at the bottom of the screen are closed when PETT consolidates the text.</p> <p>NOTE: The text associated with certain asterisked CAT commands is printed exactly as typed. These commands are identified in section 5.</p> <p>The word appears intact when PETT consolidates the text.</p>	19
19	<p>To transmit a page of text, place cursor in HOME position, and press XMT.</p>	<p>A blank screen appears.</p>	20

TABLE 1  
Creating a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
20	<p>NOTE: Always transmit from HOME position. To avoid possible loss of data, do not transmit from any other position on the screen.</p> <p>After the last screen of text is transmitted, end the Creating a Document option by one of the following methods:</p> <p>a. Enter QUIT CON in HOME position, and press XMT.</p> <p>b. Enter QUIT in HOME position, and press XMT.</p> <p>c. Transmit a blank screen.</p>	<p>The file is consolidated and saved. The PETT menu appears. The cursor is in the ENTER OPTION NUMBER box.</p> <p>The Save (PLEASE VERIFY) screen appears. The cursor is in the option box.</p> <p>The Save (PLEASE VERIFY) screen appears. The cursor is in the option box.</p>	<p>12 or 22</p> <p>21</p> <p>21</p>

TABLE 1  
 Creating a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
21	Complete the Save screen.  a. To save your file, press XMT. The default value Y (Yes) is used.  b. To remove your file, enter N (No).	The file is consolidated and saved. The PETT menu returns with the cursor in the ENTER OPTION NUMBER box.  The file is removed. The PETT menu returns with the cursor in the ENTER OPTION NUMBER box.	12 or 22  12 or 22
22	Enter 6 in the ENTER OPTION NUMBER box and press XMT.	A list of the updated files and an end-of-job message appears.  <u>Example:</u>  <USERCODE> PETT=7238 EOJ. TIME=13:31.31.5	23
23	To end the session, enter BYE in HOME position. Press XMT.	An end-of-session message appears.  <u>Example:</u>  USER <USERCODE> LOGGED OFF CANDE AT 01:32:50.8 PM 09/21/81 (TIME=00:00:43.1)	

TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
1	<p><u>EDITING A DOCUMENT</u></p> <p>Log on to the CRT terminal and disable scrolling.</p> <p>a. To log on, place cursor in HOME position (upper-left corner), enter your usercode/password, and press XMT.</p> <p>b. To disable scrolling, type ?-S in HOME position, and press XMT.</p>	<p>Version, usercode, time, date, and station information appear on the screen.</p> <p><u>Example:</u></p> <pre>B1000 CANDE MARK 9.1 VERSION 00 (10/03/80 10:37) USER &lt;USERCODE&gt; LOGGED ON AT 01:26:51.7 PM 09/21/81 YOU ARE AT STATION 25 (TD832)</pre> <p>The message SCROLL DISABLED is displayed.</p>	2
2	<p>Initiate the PETT Program by entering ?EX PETT in HOME position, and press XMT.</p>	<p>A beginning-of-job message appears:</p> <p><u>Example:</u></p> <pre>&lt;USERCODE&gt; PETT=7238 BOJ PP=4, MP=4 TIME=13:30:57.8</pre> <p>The PETT menu screen is displayed (see figure 3). Cursor is in the ENTER OPTION NUMBER box.</p>	3 or 11

TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
3	<p>Choose one:</p> <p>a. To proofread or update an existing Document file, enter 2 in the ENTER OPTION NUMBER box.</p> <p>b. To update a Formdata file, enter 4 in the ENTER OPTION NUMBER box.</p> <p>c. To update the Output Device Table, enter 3 in the ENTER OPTION NUMBER box.</p>	<p>Cursor advances to NAME OF DOCUMENT.</p> <p>NOTE: The phrase "Cursor advances to..." indicates the automatic movement of the cursor from box to box. For an explanation of cursor movement, refer to Cursor and SKIP/TAB in section 2.</p>	4
4	<p>NAME OF DOCUMENT - This field is required (except if updating an Output Device Table). Enter name of document to be proofread, or document to be used with Formdata file.</p>		5
5	<p>Choose one:</p> <p>a. If no optional items are desired, go to step 6.</p>		6

TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
5 cont	<p>b. If optional items are desired, fill in one or more of the following boxes. (If no entries are made, default values are assigned.) Press SKIP/TAB to advance cursor from box to box.</p> <p>1) AUTOMATIC NOEDIT - Enter X.</p> <p style="padding-left: 40px;">NOTE: This exists only for the current activity. To retain no-edit, select this option each time a file is edited.</p> <p>2) PROOFREAD: LINES PER SCREEN ▸ ◀ - Specify number of text lines to be displayed (5 to 24 lines). If this is left blank, a default value of 20 lines per screen is displayed.</p> <p style="padding-left: 40px;">NOTE: When inserting text, choose a number of lines per screen</p>	<p>The first 72 characters of every line are stored exactly as typed. Blank lines and spaces left within text are not closed.</p> <p style="padding-left: 40px;">NOTE: Characters typed past 72nd character position on a line are lost.</p> <p>The number of lines selected (or the default value) is displayed throughout the current activity, unless it is changed.</p>	6

TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
5 Cont	<p style="text-align: center;">to allow enough space for the insert.</p> <p>3) BEGIN DISPLAY ▷ ◀ SCREENS AFTER START OR ▷ ◀ SCREENS FROM END - Specify desired number of screens forward from the menu screen as a starting point (if left blank, a default value of the first screen of text is used) or specify desired number of screens back from the end of file.</p>	<p>The particular screen of text selected (or the default value) is displayed. This starting point re- mains throughout the current activ- ity, unless it is changed.</p>	
6	<p>Choose one:</p> <p>a. If updating an Output Device Table, items are completed. Press CLEAR/HOME.</p> <p>b. If updating a Document file, items are completed. Press CLEAR/HOME.</p> <p>c. If updating a Formdata file, press SKIP/TAB and move cursor to FORMDATA FILE.</p>	<p>Cursor appears in the ENTER OPTION NUMBER box.</p> <p>Cursor appears in the ENTER OPTION NUMBER box.</p> <p>Cursor advances to FORMDATA FILE.</p>	<p>16</p> <p>16</p> <p>7</p>

TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
7	FORMDATA FILE - Enter name of file to be updated and press CLEAR/HOME.	Cursor appears in the ENTER OPTION NUMBER box.	8
8	Press XMT.	<p>The menu screen disappears and a formatted screen appears.</p> <p><u>Example:</u></p> <pre> ADDRESSEE(1):▷Mr. J. Johnson  ◀ ADDRESSEE(2):▷123 Our Place  ◀ ADDRESSEE(3):▷Middletown, CA ◀ INTRO           :▷Mr. Johnson  ◀ MANAGER        :▷Bill Doe     ◀ </pre>	9
9	Enter additions or deletions as desired. Press XMT to transmit the screen and receive another formatted screen.	Additional formatted screens are received as needed.	10
10	<p>When variable data is complete, do one of the following:</p> <p>a. Enter QUIT CON in HOME position, and press XMT.</p>	The file is consolidated and saved. The PETT menu returns with the cursor in the ENTER OPTION NUMBER box.	21



TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
10 Cont	b. Enter QUIT in HOME position, and press XMT.	The Save (PLEASE VERIFY) screen appears. Cursor is in the option box.	20
	c. Transmit a blank screen.	The Save (PLEASE VERIFY) screen appears. Cursor is in the option box.	20
11	If further instructions on the PETT Program are desired, press CLEAR/HOME.	Cursor is returned to the ENTER OPTION NUMBER box.	12
12	Enter 5 in the ENTER OPTION NUMBER box, and press XMT.	PETT commands and special features are displayed.	13
13	Press XMT.	A second screen of instructions is displayed.	14
14	Press XMT.	The PETT menu screen reappears. The cursor is in the ENTER OPTION NUMBER box.	3 or 16
15	Press CLEAR/HOME.	Cursor appears in the ENTER OPTION NUMBER box.	16
16	Press XMT.	The menu screen disappears and one of the following occurs:  a. If updating an Output Device Table, a formatted screen appears. (Refer to Burroughs Text	

TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
16 Cont		<p>Management and Communication System (TMCS) Installation and Implementation User's Guide.)</p> <p>b. If updating a Document file, the selected screen (or the default value) is displayed.</p>	17
17	<p>Enter changes, additions, and deletions. To change text, simply type over the old text with the new.</p> <p>Use the special editing keys (refer to section 5, THE CAT PROGRAM) to make deletions and insertions, and move data in the file. CAT formatting commands are also detailed in section 5.</p> <p>The entire screen can be filled before the data is transmitted.</p> <p>Asterisked CAT commands must be typed on lines by themselves.</p> <p>Type free form. When typing a word, and the end of a line is reached, continue typing the word at the beginning of the next line. Do not</p>	<p>Blank lines left within text or at the bottom of the screen are closed when PETT consolidates the text.</p> <p>The word appears intact when PETT consolidates the text.</p>	18

TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
18	<p>leave any blank space within the word.</p> <p>To transmit a page of text, press CLEAR/HOME and press XMT.</p> <p>NOTE: Always transmit from HOME position. To avoid possible loss of data, do not transmit from any other position on the screen.</p>	<p>NOTE: The text associated with certain asterisked CAT commands is printed exactly as typed. These commands are identified in section 5.</p> <p>The next screen of text appears.</p>	19
19	<p>After the last screen of text is transmitted, end the Editing a Document option by doing one of the following:</p> <p>a. Enter QUIT CON in HOME position and press XMT.</p> <p>b. Enter QUIT in HOME position and press XMT.</p>	<p>The file is consolidated and saved. The PETT menu returns with the cursor in the ENTER OPTION NUMBER box.</p> <p>The Save (PLEASE VERIFY) screen appears. The cursor is in the option box.</p>	11 or 21  20

TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
19 Cont	c. Transmit a blank screen.	The Save (PLEASE VERIFY) screen appears. The cursor is in the option box.	20
20	<p>Complete the Save screen.</p> <p>a. To save the changes to your file, press XMT. (The default value of Y (Yes) is used.)</p> <p>b. To cancel changes, enter N (NO), and press XMT.</p>	<p>Your file is consolidated and changes are saved. The PETT menu returns with the cursor in the ENTER OPTION NUMBER box.</p> <p>Changes to your file are removed. The last saved version becomes the current version of your file. The PETT menu returns with the cursor in the ENTER OPTION NUMBER box.</p>	<p>11 or 21</p> <p>11 or 21</p>
21	Enter 6 in the ENTER OPTION NUMBER box and press XMT.	<p>A list of the updated files and an end-of-job message appears.</p> <p><u>Example:</u></p> <p>&lt;USERCODE&gt; PETT=7238 EOJ TIME=13:31:31.5</p>	22

TABLE 2  
Editing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
22	To end the session, enter BYE in HOME position. Press XMT.	An end-of-session message appears. <u>Example:</u>  USER <USERCODE> LOGGED OFF CANDE AT 01:32:50.8 PM 09/21/81 (TIME=00:00:43:1)	



## SECTION 5. THE CAT PROGRAM

Formatting is the process of arranging text on a page. This includes specifying page size, margins, line spacing, lines per page, tabs, headings, etc. within the text of a document.

The CAT (Computer Assisted Typewriter) Program is the automatic formatting program of Burroughs Text Management and Communication System. At the time of printing, the CAT Program reads the CAT formatting commands embedded in the text, applies the specified formatting, and prints the finished document either on a printing device you indicate, or on a default printing device.

This section describes each of the various CAT options and how to use them to format text in a document. It also explains the procedure for printing a document.

### CAT COMMANDS.

The following text contains an alphabetized list of all CAT commands. Each command must be entered on a separate line and must be preceded by an asterisk in the first character position.

NOTE: Except where noted, each of the following CAT commands is discontinued with the use of any other asterisked CAT command.

If a command is followed by one or more numbers, a space must be typed between the command and the number, and between the numbers themselves.

Several CAT commands are no-edit commands. That is, the text following the command appears exactly as input, or in no-edit format. Remember that blank lines are preserved when a no-edit CAT command is in effect. Following is a list of the no-edit CAT commands:

1. \*C (CENTER command)
2. \*CON (CONTENTS command)
3. \*DT (TAB DATA command)
4. \*HEAD (HEADLINE command)
5. \*L (LEFT-JUSTIFY command)
6. \*NOE (NO-EDIT command)
7. \*NOTE (NOTE command)
8. \*R (RIGHT-JUSTIFY command)
9. \*SE (SECTION command)

Some commands are followed by parameters which denote specifications for formatting. Identify these parameters only if you wish to override the default command specifications or the specifications

you establish for the command in the Format Description file. Thus, if only a command itself is used, the default specifications are invoked. To change only one of the command parameters, type the number sign (#) in place of the specifications which are to remain unchanged.

Some command parameters include a number that denotes the number of lines to be skipped after the command. If a number is not specified for this parameter, no lines are skipped.

For instance, the CONTENTS command is followed by three variables. To retain the default for the first and second parameters, but change the third so that five blank lines are skipped after the content item, type the following specification:

Example:

```
*CON # # 5
```

CENTER.

The CENTER command is used to center information on a page. The command itself, \*C, is followed by three numbers. The first and second numbers denote the print positions on a page between which to perform centering. The third number denotes the number of blank lines to skip after the last centered item.

For instance, to center an item between print positions 10 and 60 and skip five blank lines after the item, type:

Example:

```
*C 10 60 5
```

When the CENTER command is used, the text prints exactly as it was input, or in no-edit format. Be careful not to exceed the margins you have established or an error message appears. (Refer to Appendix A for a list of PETT and CAT error messages.)

COLUMN.

The COLUMN command is used to establish columns within a document. The command, \*COL, is followed by two or more integers. The number of integers specified denotes the number of columns to set. The value of the integers denotes the relative proportions of the columns on the page.

For example, to set three columns with the second column twice as large as the first and third, type:



Example:

```
*COL 1 2 1
```

When the column option is used, the following can also be specified:

1. The buffer space between each column. This is done through the use of the BUFFER SPACE command, BU. The BU command is followed by a number which specifies the number of blanks between each column. One buffer space is automatically left between columns. Specify your desired buffer space if more than one space is desired.
2. The spacing of each line of text within the columns; i.e., single, double or triple spacing. This is specified with the SPACE command, SP. Single spacing is used as a default.

For instance, suppose you want a buffer space of five between each of the columns set in the above example, columns one and three double spaced, and column two single spaced. This is accomplished with the following command specifications:

Example:

```
*COL 1 2 1 BU 5 SP 2 1 2
```

The BUFFER SPACE and SPACE commands are optional.

Once specifications for columns have been entered, the actual text to appear in those columns is entered. Columnar text is signaled by the inclusion of the column number in which text is to appear. Put this command on a separate line of the file and always precede it with an asterisk.

For instance, to print a line of text in the first column, type the following:

Example:

```
*1  
<text>
```

To print the next line of text in the second column, type:

Example:

```
*2  
<text>
```

To print the next line of text in the third column, type:

Example:

```
*3  
<text>
```

To print information in a new column each time, specify the column number on a separate line of the file. To format the text within the columns differently, type another CAT command after this.

To terminate column format, use the \*END command. Once terminated, column format may be restored by typing \*COL. The data following this command prints in column format according to the last column specification in your file.

When in column format, any other CAT command can be used, except another COLUMN command.

NOTE: A column identifier must be specified immediately following the \*COL command specifications or an error results.

CONTENTS.

The CONTENTS command is used to automatically include an item in the table of contents. This command, \*CON, is followed by three variables.

The first number denotes the nesting value. For instance, to indent the item five spaces in the table of contents, the increment for nesting indicated in the Format Description file is 5, and a nesting value of 1 is indicated in the text of the document. A value of 2 specified in the text means the item is to be indented 10 spaces in the table of contents.

The second variable denotes the positioning of the item within the text of the document. This is represented in one of three ways:

1. Type L to left-justify the contents item within the document.
2. Type R to right-justify the contents item within the document.
3. Type C to center the contents item within the document.

The last variable denotes the number of blank lines to skip after the contents item within the document. For instance, to skip five blank lines between the item and the text, type the number 5 after the first and second variables.

The following are examples of content items specifications:

Example:

```
*CON 0 R 3  
*CON 2 C 5
```

In the first example, the content item is not nested; rather, it appears in the extreme left margin of the table of contents. Within the document, the item is right-justified and three blank lines are skipped before the subsequent text is printed. In the second example, the content item is nested two times the nesting increment specified in the Format Description file. It is centered within the text of the document and five blank lines are skipped after the item.

Contents items are automatically underlined within the text of a document. However, they are not underlined within the table of contents. The \*CON command as used in the table of contents is discussed in Burroughs B 1000 Series Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.

#### DJDE.

The \*DJDE command (Dynamic Job Descriptor Entries) causes an identification field and a series of left/right parameters to be inserted into the printer backup tape. The \*DJDE command is used with the page printer and is further discussed in that section in the Burroughs B 1000 Series Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.

#### DOJUSTIFICATION.

The DOJUSTIFICATION command, \*DOJ, is used to justify each line of text at the left and right margins of the page. This causes additional spaces to be inserted between each word on a line, with the exception of the last line of text. This line is left-justified only. The NOJUSTIFICATION command, \*NOJ, is used to terminate the DOJUSTIFICATION command.

#### DTAB.

The DTAB command, \*DT, indicates that the following data is to be tabbed according to the last tab specifications in the file.

Once tab format is terminated, the DTAB command can be used to restore the same tab specifications without resetting them.

#### END.

The END command, \*END, is used to terminate column format. The text following this command automatically prints in paragraph format unless otherwise specified.

## FONT.

The FONT command, \*FONT <integer> is used in TMCS to interface with the page printer. This command inserts the Font Index value in the printer backup tape at the position specified by the FONT INDEX command (discussed next). Therefore, it is necessary to specify the Font Index prior to using this command. The \*FONT command is further discussed in Burroughs B 1000 Series Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.

## FONT INDEX.

The FONT INDEX command, \*FI <integer>, is also used to interface with the page printer. It indicates to the CAT Program where to put the Font Index value in the user portion of the printer backup tape. The FONT INDEX command is further discussed in Burroughs B 1000 Series Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.

## GLOSSARY.

The GLOSSARY command is used to itemize information or list terms and their definitions within a document. The command itself, \*G, is followed by two numbers. The first number denotes the number of spaces to indent the glossary definition from the current left margin; the second number indicates how many lines to skip after each glossary item.

For instance, to indent the definition eight spaces from the current left margin and skip one line after the item, type the following:

### Example:

```
*G 8 1
```

When typing the text which is to be printed in glossary format, separate the term from the definition with an equal sign (=). The following examples show how glossaries appear in a file.

### Example:

```
*G 3 1
l.=Item.
 *G 5 2
Term:=Definition.
```

In the first example, the glossary format is used to list information in a document. The item is indented three spaces from the current left margin, with one line skipped after the item. In the second example, the GLOSSARY command is used to define a term. In this case, the definition is indented five spaces from the current left margin, with two lines skipped after the definition.

## HEADLINE.

The HEADLINE command is used to center and underline an item in a document. The command, \*HEAD, is followed by three numbers. The first and second denote the print positions between which to center the item. The third denotes the number of blank lines to skip after the headlined item.

For instance, to center and underline an item between print positions 20 and 40, with two blank lines skipped after the item, enter the following:

### Example:

```
*HEAD 20 40 2
```

## HYPHENATION.

The HYPHENATION command, \*HYP, is used to hyphenate text which does not fit within the established margins of a page. Since this function is performed automatically, it is necessary to use this command only if hyphenation has been discontinued and is to be restored. To discontinue hyphenation, the NOHYPHENATION command, \*NOH, must be used.

## INDENT.

The INDENT command is used to indent an item or a body of text. This command, \*IN, is followed by a number which denotes the number of spaces to indent from the left margin. A second number, which denotes the number of spaces to indent from the right margin, may also be indicated with this command.

For example, to indent eight spaces from the left and five from the right, type:

### Example:

```
*IN 8 5
```

NOTE: Once indentation is established, it is maintained until it is reset.

To return to the original margins, again specify the INDENT command. Precede the specified parameters with a minus sign (-).

For instance, in the above example, type the following specification:

### Example:

```
*IN -8 -5
```

### LEFT-JUSTIFY.

The LEFT-JUSTIFY command is used to justify text at the left margin. The command, \*L, is followed by two numbers. The first number denotes the number of spaces to indent from the left margin; the second number indicates the number of lines to skip after the last left-justified item.

Remember that the first character position is counted as zero. Therefore, if you specify \*L 5, text begins in the sixth character position.

The LEFT-JUSTIFY command prints the text exactly as it is entered.

For example, to left-justify and indent a line of text five spaces, with two lines skipped after the last item, type:

#### Example:

```
*L 5 2
```

### LENGTH.

The LENGTH command is used to establish the number of printed lines per page. This includes lines at the top and bottom of the page for heading and footer information. This command, \*LEN, must be followed by a number. The LENGTH command remains in effect until it is terminated by another \*LEN command.

For instance, to specify 66 lines per page on a 8 1/2" x 11" paper size, type:

#### Example:

```
*LEN 66
```

If the length of the page is to be changed, this command must be specified immediately following the PAGE command.

### MARGIN.

The MARGIN command is used to establish margins for a document. The command, \*MAR, is followed by two numbers. The first number denotes the left margin; the second denotes the right margin.

In the MARGIN command, the first character position is zero. Therefore, if you enter \*MAR 15 70, the text actually begins at the sixteenth character position.

For instance, to set margins for a document at character positions 15 and 70, type the following:

Example:

\*MAR 15 70

NOTE: When changing the margins of a particular page, this command must follow the PAGE command.

NOEDIT.

The NOEDIT command, \*NOE, is used to print an item in a document exactly as it was input. The automatic hyphenation performed when text does not fit on a line of the page is not provided when this option is used. Therefore, each line of text printed in no-edit format must be typed within the established margins or an error message appears.

NOHYPHENATION.

The NOHYPHENATION command, \*NOH, is used to suppress the automatic hyphenation performed when text does not fit within the established margins of a page. To resume hyphenation, the HYPHENATION command must be used.

NOJUSTIFICATION.

The NOJUSTIFICATION command, \*NOJ, is used to terminate DOJUSTIFICATION mode. The text following this command automatically prints in paragraph format.

Since other CAT commands can be used while in DOJUSTIFICATION mode, it is necessary that the NOJUSTIFICATION command be used to return to the default format.

NOTE.

The NOTE command, \*NOTE, is used to print an item at the bottom of a page. The item itself prints in no-edit format, or exactly as it was typed. Therefore, make sure not to exceed the established margins or an error message appears. If a page has both a note and a footnote, the note prints first.

NOWLC.

The NO WIDOW LINE CONTROL command, \*NOWLC, is used to terminate the WIDOW LINE CONTROL command. With the \*NOWLC command, widow lines are allowed to appear within the document. To terminate this command, use the \*WLC command.

## PAGE.

The PAGE command is used to establish a new page within a document. The command, \*PAGE, can be followed by a positive or negative number which, when added or subtracted from the last page number, is the basis for numbering the new page.

For instance, to skip 15 page numbers before printing the new page, type:

### Example:

```
*PAGE 15
```

## PAGING.

The PAGING command is used to specify the method of page numbering within a document. The command, \*PAGING, is followed by one or more variables which represent the paging method. Each is listed below.

To number the pages with Arabic numerals, type:

### Example:

```
*PAGING A
```

To number the pages with upper case Roman numerals, type:

### Example:

```
*PAGING RC
```

To number the pages with lower case Roman numerals, type:

### Example:

```
*PAGING RL
```

For unnumbered pages, type:

### Example:

```
*PAGING NO
```

The method of paging can be changed at any time. Since the \*PAGING command does not cause a page break, the new paging method prints on the current page. To change page numbering on a specific page, precede the \*PAGING command with the \*PAGE command.

When you change the method of page numbering in a document, you can also have the first page start with any particular page number. This is done by following the paging method specification with a



number. Use a number one less than the number you want page numbering to begin.

For instance, to change the page numbering from Arabic numerals to lower case Roman numerals, with the new page to begin as page number 1, type:

Example:

\*PAGING RL 0

To begin the new page with page number 5, type:

Example:

\*PAGING RL 4

PARAGRAPH.

The PARAGRAPH command is used to establish a new paragraph within a document. The command, \*P, is followed by two numbers. The first number denotes the number of spaces to indent the first line of the paragraph from the left margin; the second number indicates how many vertical lines to skip after the paragraph.

For instance, to indent a paragraph five spaces from the left margin and skip two vertical lines after the paragraph, type:

Example:

\*P 5 2

PITCH.

The PITCH command is used to establish the number of characters and lines to print per inch on a page. The command itself, \*PI, is followed by two numbers. The first number denotes the horizontal pitch, or the number of characters per inch. The second number denotes the vertical pitch, or the number of lines per inch.

For example, to print 12 characters per inch and six lines per inch on a page, type the following:

Example:

\*PI 12 6

The default value for the PITCH command is 10 characters per inch and six lines per inch.

Unlike most CAT commands, pitch is not terminated when a new command is specified. To return to the default pitch size, again use the PITCH command.

### REPLACE.

The REPLACE command is used to replace the asterisk, which precedes all CAT commands, with a new symbol. The command itself, \*REP, is followed by the new symbol.

For instance, to use the percent sign for all commands, type the following:

#### Example:

```
*REP %
```

To return to using the asterisk, type:

#### Example:

```
%REP *
```

Other allowable replacement symbols include the "at" sign (@), the dollar sign (\$), the ampersand (&) and the number sign (#).

### RIGHT-JUSTIFY.

The RIGHT-JUSTIFY command is used to justify text at the right margin on a page. The command, \*R, is followed by two numbers. The first number denotes the number of spaces to indent from the left margin; the second number indicates the number of lines to skip after the item.

For instance, to print an item 10 spaces from the left margin, with two lines skipped after the item, type:

#### Example:

```
*R 10 2
```

When the RIGHT-JUSTIFY command is used, the text prints exactly as it was typed, or in no-edit format.

### SECTION.

The SECTION command, \*SE, is used to left-justify and underline an item in a document. If the item includes a period or parenthesis symbol, only the text following this sign is underlined. If you do not want to underline the item at all, type the letter N after this command.

Example:

\*SE N

NOTE: This command automatically skips the number of lines specified by the SPACE command.

SIZE.

The SIZE command is used to establish page size for a document. The command, \*SI, is followed by two numbers. The first number denotes the length of the page in inches; the second denotes the page width. Fractions are expressed as decimals.

For instance, to type a document on 8-1/2 X 11 inch paper held vertically, type:

Example:

\*SI 11 8.5

To terminate the SIZE command and establish a different page size, the SIZE command must again be specified. This command must follow the PAGE command.

SKIP.

The SKIP command is used to skip blank lines within a document. The command itself, \*SKIP, is followed by a number which denotes the number of blank lines to be skipped.

For example, to skip five blank lines after an item, type:

Example:

\*SKIP 5

SPACE.

The SPACE command is used to specify the spacing of each line of text within a document. This command, \*SP, is followed by a number which denotes single, double, or triple spacing.

For instance, to double space the text of a document, type:

Example:

\*SP 2

This command can also be used to suppress the automatic line skipping provided by the SECTION command. To suppress this space, type:

Example:

\*SP 0

SPACE CONTENTS.

The SPACE CONTENTS command, \*SPCON, specifies the spacing of each line of text within the table of contents. It is used to change the automatic single spacing established for table of contents items. Follow this command with a number to denote single, double or triple spacing.

When the CAT Program processes a document prior to printing, the last \*SPCON value entered is in effect for the table of contents. If this command is not used, the table of contents prints in single space by default.

For example, to double space the text within the table of contents, type:

Example:

\*SPCON 2

STOP.

The STOP command, \*STOP, is used to change format files (i.e., from a letter to a form, etc.) during the printing of a single Document file. After specifying this command in the file, follow it with the Format Description file name and required entries for the new format and text.

NOTE: The STOP command causes the page counter to be reset to zero.

When using the STOP command, only one closing (#CLOSING) is printed for the entire Document file. (Refer to Burroughs B 1000 Series Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.)

CAUTION: The STOP command must not be used within a file that uses formdata information.

TAB.

The TAB command is used to set tabulations within a document. The command itself, \*T, is followed by several variables.

1. The first variable, either L, C, R, or D indicates whether to left-justify, center, or right-justify the tabbed item. The variable, D, indicates that the tab is for decimals.

2. The second variable is a number which denotes the print position of each tab.
  - 1) If a tab is left-justified, specify a number denoting how many spaces are to be indented from the left margin before printing text.
  - 2) If a tab is right-justified, specify a number denoting how many spaces are to be indented from the left margin before printing text.
  - 3) If a tab is centered or a decimal tab, specify the positions within which to begin and end printing. For instance, a tab centered between print positions 25 and 35 is indicated by typing:

Example:

C 25-35

When establishing a decimal tab, these parameters are followed by a third number. This number denotes the positioning of the decimal point from the right margin of the tab. If the number of decimal places in the item exceeds the number specified, the extra numbers are truncated.

The following is an example of tab specifications.

To create a table which begins five spaces from the left margin, type:

Example:

\*T L 5

To add another tab, centered between print positions 20 and 30, follow the above specification with:

Example:

C 20-30

To add a third tab which ends at print position 45, follow both of the above specifications with:

Example:

R 45

The entire specification for this 3-column table is:

Example:

```
*T L 5 C 20-30 R 45
```

To have error messages displayed if the tabs overlap, type ST after the TAB command. The specification appears as follows:

Example:

```
*T ST L 5 C 20-30 R 45
```

After the tab settings are established, type \*DT on the next line of the file. Then type each horizontal line of data as you want it to print in the table. Separate the information belonging to each column with a caret (^). End each line with one or two brackets (]). The first bracket indicates the end of a line of data; the second bracket causes one line to be skipped between each line of text in the table.

The following example shows how the file looks when the TAB option is used.

Example:

```
*T L 5 D 30-45 2
*DT
Item^Price]]
Dress^$45.50]
Shoes^30.00]
Nylons^2.50]
```

In the above example, two columns were established. The first is left-justified and begins five spaces from the left margin; the second is a decimal tab. The items included here appear between print positions 30 and 45. The decimal point appears two spaces from the right margin of the tab.

The actual output for this sample file is illustrated below:

Example:

Item	Price
Dress	\$45.50
Shoes	30.00
Nylons	2.50

Since the second column is a decimal tab and the word "Price" does not include a decimal place, this item is centered within the established margins. Since this line was ended with two brackets, one line was skipped between this line and the subsequent line. No

lines were skipped between the subsequent items because these lines were ended with only one bracket.

When using decimal tabs, all figures line up automatically. When decimal tabs are not used, however, these numbers must be lined up in the file. This is because the TAB command automatically prints the text in no-edit format, or exactly as it was input.

#### WIDOW LINE CONTROL.

The WIDOW LINE CONTROL command, \*WLC, assures that a single line of text is never separated from the body of a paragraph or glossary due to pagination; at least two lines of text appear on the same page. This command is automatically in effect. It may be discontinued by use of the \*NOWLC command.

#### SPECIAL EDITING FEATURES.

In addition to those commands already mentioned, several special editing features are also provided in TMS. Unlike the CAT commands, these features need not be preceded by an asterisk or specified on separate lines of the file. Instead, they are indicated within a line of text in the document.

These special editing features, with the exception of the underlining feature, are initiated and terminated by the backward slash symbol (\).

NOTE: To use any of these features on a particular word or body of text, one space must be typed between the command syntax and the text.

In addition, type one space after the closing backward slash to indicate that one space is to appear after the item in the text. Type two spaces after the closing backward slash to indicate that two spaces are to appear after the item in the text. If no space is to appear after the item in the text, leave no space after the closing backward slash.

Each special editing feature is described in the following text.

#### BOLDFACE TYPE PRINTING.

To print information in boldface type, specify the following instruction:

#### Example:

\b boldface type\ appears as boldface type

### FOOTNOTING.

To footnote information in a document, type the following instruction:

#### Example:

\f footnote text\ appears as 1. footnote text

Each footnote and its corresponding text is automatically numbered in the printed document. Footnotes appear at the bottom of the page they are referencing. The text prints in l2 pitch and in no-edit format, or exactly as it was input. When typing the text of a footnote, be careful not to exceed the specified margins or an error message appears. If the information to be footnoted contains more than one line of text, end each line of the file with a bracket (]).

### NO-EDIT PRINTING.

The purpose of this feature is two-fold. Do not confuse it with the NOEDIT (\*NOE) command.

- a. First, it is used to print information exactly as it was input. In this way, it is similar to the \*NOE command.
- b. It is also used to prevent the CAT Program from hyphenating or separating text onto two separate lines within a page. Use of this option instructs the program to print the information together.

Thus, to have information printed in this format, type the following specification:

#### Example:

\n MO 887 65 A 392\ appears as MO 887 65 A 392

### SUBSCRIPTING.

Subscripting is performed by typing the following specification:

#### Example:

H\d 2\0 appears as H<sub>2</sub>0

### SUPERSCRIPTING.

Superscripting is performed by typing the following specification:

#### Example:

Px(1+R)\u N\ appears as Px(1+R)<sup>N</sup>



## UNDERLINING.

Underlining is performed by preceding and following the item to be underlined (whether blank spaces or text) with the underline character. This tells the program where to begin and end underlining.

To underline a combination of blank spaces and text, it is necessary to use the underline character before and after the blank spaces and again preceding and following the text characters. (If separate underline characters are not used, PETT consolidates the text and the blank spaces are closed.)

The following are examples of the underline character.

### Examples:

<u>underlined text</u>	appears as	<u>underlined text</u>
-	appears as	_____
- <u>  AB  </u>	appears as	_____ AB _____ 40

## PRINTING A DOCUMENT.

The printing of a document is performed on a hard-copy terminal, system line printer, page printer, or CRT terminal by the CAT Program. Documents may be printed on devices other than the originating terminal, thereby releasing the originating terminal for other work. Printing is automatically held in wait until a particular device is free to print the document. Additionally, by merely stating a PRINT instruction with no output device specified, the CAT Program prints the document at the originating terminal or a default terminal specified in the Output Device Table (discussed later).

The actual steps in printing a document are quite simple. Basically, a single sentence command, illustrated below, is used to designate one or more printing options that may be selected. These options are described in 1. thru 11. below. Items within angle brackets (<>) require variable information to be entered by you.

Required

Optional  
Select One

Optional  
Select One Or More

PRINT <file name>    HERE  
                         ON <terminal type>  
                         ON PRINTER  
                         ON UPPERCASE PRINTER  
                         ON PAGE PRINTER

PAUSE or WITH PAUSE  
ANNOUNCE  
<number> COPIES

NOTE: When specifying pages (below) the terms PAGE and/or LOG may precede the first <number> and a hyphen (-) may be used instead of THRU. Only one page option may be specified in each print statement.

<number>  
<number> THRU <number>  
<number> THRU END

1. PRINT <file name> tells the CAT Program which document file to print. This is the only required statement. The document prints on the originating terminal or on a default terminal specified in the Output Device Table (discussed later).
2. The HERE option causes the document to be printed at the originating terminal.
3. The ON <terminal type> option instructs the CAT Program to print the document on a specific terminal. Terminal type may be a terminal mnemonic from the Output Device Table or a number that specifies the LSN on which the document is to be printed.
4. The ON PRINTER option causes the document to print on the system line printer.
5. The ON UPPERCASE PRINTER option causes the document to print on a system line printer with uppercase characters only.
6. The ON PAGE PRINTER option specifies that the document is to be sent to a printer backup tape for subsequent printing on a page printer. (The page printer option is discussed in detail in Burroughs Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.)
7. The PAUSE or WITH PAUSE options cause CAT to pause before each page is printed.

8. The ANNOUNCE option causes the CAT Program to "announce" or tell the operator when the CAT Program is ready to print the document. This option may be used when special paper is required. For example, type:

PRINT ON HARDCOPY ANNOUNCE

The following message prints on the hard-copy terminal:

<document file name> READY TO PRINT.

The operator can then prepare the hard-copy terminal for printing. When the ANNOUNCE option is not used, the document prints on the first available HARDCOPY <terminal type> with no operator intervention necessary.

9. To print multiple copies of a document, use the <number> COPIES option. For example, to print five copies of a document on a terminal called HCT, type:

PRINT <file name> ON HCT 5 COPIES

Printing of the document begins on terminal HCT.

10. The PAGE options, <number>, <number> THRU <number>, or <number> THRU END, are used when a particular page or range of pages needs to be printed. For example, to print page 12, type:

PRINT <file name> HERE PAGE 12

To print pages 9 thru 14, type:

PRINT <file name> ON HCT PAGE 9 THRU 14

To print page 12 thru the end of the document, type:

PRINT <file name> HERE PAGE 12 THRU END

11. The logical page options, LOG or PAGE LOG <number>, <number> THRU <number>, or <number> THRU END, are used to print pages according to their physical location in the document. TMCS counts all pages sequentially, whether or not the pages contain numbers.

For example, the first three pages of a document may consist of a title page, a blank page, and a page of text which is numbered as page 1. Since the first page of text is actually the third physical page in the document, it is called logical page 3. To print this text page, type:

PRINT <file name> HERE PAGE LOG 3

The page of text numbered as page 1 begins printing.

As another example, to print the third, fourth and fifth unnumbered pages in a document, type:

PRINT <file name> ON 11 LOG 3 THRU 5

Pages 3, 4, and 5 begin printing.

#### THE OUTPUT DEVICE TABLE.

TMCS provides the ability to create an Output Device Table (see figure 10). This table is an aid to printing because it tells the CAT Program where to print a document by default. Before printing a document, obtain a copy of this table from supervisory personnel. (For further discussion of the Output Device Table, refer to Burroughs Text Management and Communication System (TMCS) Installation and Implementation User's Guide, form 1141363.

HOST TERM.	DEFAULT TERM.	DEFAULT TERMINAL MNEMONIC	DEFAULT TERMINAL DESCRIPTION FILE
▷ 1◄	▷ 11◄	▷POOLPRINTER ◄	▷AGILE ◄
▷ 2◄	▷ 12◄	▷POOLPRINTER ◄	▷AGILE ◄
▷ 3◄	▷ 13◄	▷POOLPRINTER ◄	▷DIABLO ◄
▷ 4◄	▷ 14◄	▷POOLPRINTER ◄	▷AGILE ◄
▷ 5◄	▷ 15◄	▷NOTEPRINTER ◄	▷DIABLO ◄
▷ ◄	▷ 16◄	▷MEMOPRINTER ◄	▷AJ832 ◄
▷ ◄	▷ 17◄	▷LOCALPRINTER ◄	▷AGILE ◄
▷ ◄	▷ 18◄	▷LOCALPRINTER ◄	▷DIABLO ◄

Figure 10. Output Device Table.

The Output Device Table is referenced when the following print options are selected:

1. PRINT <file name> (no printing device is specified).
2. PRINT <file name> HERE (printing is directed to the originating terminal).
3. PRINT ON <terminal type> (printing is directed to a remote terminal).

In the Output Device Table there are four items contained in each entry:

1. HOST TERMINAL is the terminal on which you are working and is the terminal from which the print command is issued.
2. DEFAULT TERMINAL is the terminal on which the document prints when a particular terminal is not specified.
3. TERMINAL MNEMONIC is the logical name by which the destination terminal may be referenced in the print statement.
4. TERMINAL DESCRIPTION FILE is the terminal description file to be used for the destination terminal.

The Output Device Table shown in figure 10 describes a system with five host terminals and six output (or printing) terminals. Two of the default terminals are referenced twice.

If the terminal on which the document is to be printed is not listed in the Output Device Table, the following message is displayed on the originating terminal:

PLEASE ENTER TERMINAL TYPE.

You must enter the name of the terminal description file for the destination terminal before processing can continue.

If the originating terminal is not listed as a host terminal in the Output Device Table and PRINT <file name> was specified as the print statement, the following message is displayed on the originating terminal and the document is not printed.

NO DEFAULT DESTINATION DECLARED FOR THIS TERMINAL.  
PLEASE ENTER NEXT TASK.

You must re-enter the print statement to include the name of the destination terminal (which in this case is the originating terminal).

EXAMPLES OF PRINT INSTRUCTIONS USING THE OUTPUT DEVICE TABLE.

Following are some sample print statements illustrating use of the Output Device Table and the resulting action from TMCS:

1. A typist who is working at host terminal with LSN 1 issues the following command:

PRINT MYFILE

This command causes the document named MYFILE to be printed on the output terminal with LSN 11.

2. A typist who is working at host terminal 2 issues the following command:

PRINT MYFILE ON POOLPRINTER

This command causes TMCS to interrogate (question) terminals with LSN 11, 12, 13, and 14 (in that order) and print MYFILE on the first terminal available.

3. A typist who is working at host terminal 3 issues the following command:

PRINT MYFILE ON LOCALPRINTER

This command causes TMCS to interrogate terminals 12 and 13 (in that order) and print MYFILE on the first terminal available.

4. A typist who is working at host terminal 4 issues the following command:

PRINT MYFILE ON MEMOPRINTER

This command causes TMCS to interrogate terminal 16 and print MYFILE when it is available.

5. A typist who is working at host terminal 3 issues the following instruction to print the file LETTER3 with a pause on the first printer available:

PRINT LETTER3 ON POOLPRINTER WITH PAUSE

The document prints on the default terminal in the Output Device Table when a destination terminal is not specified. In this case, POOLPRINTER allows the document to be printed on any one of four terminals. When a terminal is not specified, the document prints on terminal 13.

### THE HELP OPTION.

An explanation of the print statement may be requested while running the CAT Program by using the HELP option. To use this option:

1. Enter ?EX CAT in HOME position to initiate the CAT Program. The following message appears:

Example:

```
<USERCODE> CAT=7238 BOJ PP=4, MP=4 TIME=13:30:57.8  
PLEASE ENTER NEXT TASK.
```

2. Press CLEAR/HOME, type PRINT HELP, and press XMT. A screen of information about the CAT print command is displayed, followed by the message:

```
PLEASE ENTER NEXT TASK.
```

3. Press CLEAR/HOME. Then resume the CAT Program by typing a variation of the print statement and pressing XMT. The CAT Program continues.

The procedure for using the CAT Program to print a document is described in Table 3 - Printing a Document.





TABLE 3  
Printing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
1	<p><u>PRINTING A DOCUMENT</u></p> <p>To log on to a hard-copy terminal, enter your usercode/password, and press RETURN (transmit).</p> <p>To log on to a CRT terminal, place cursor in HOME position (upper-left corner), enter your usercode/password, and press XMT.</p> <p>To use the CRT, you must also enable scrolling. Type ?+S in the HOME position, then press XMT.</p>	<p>Version, usercode, time, date, and station information appear.</p> <p><u>Example:</u></p> <pre>B1000 CANDE MARK 9.1 VERSION 00 (10/03/80 10:37) USER &lt;USERCODE&gt; LOGGED ON AT 01:26:51.7 PM 09/21/81 YOU ARE AT STATION 25 (TD832)</pre> <p>The Logical Station Number (LSN) identifies your terminal.</p> <p>On the CRT, the message SCROLL ENABLED also appears.</p>	2
2	<p>Initiate the CAT Program by entering ?EX CAT in HOME position and transmitting.</p>	<p>The following message is displayed:</p> <pre>&lt;USERCODE&gt; CAT=7238 BOJ PP=4, MP=4, TIME=13:30:57.8 PLEASE ENTER NEXT TASK.</pre>	3
3	<p>In HOME position, enter a variation of the following print statement.</p>	<p>An incorrect print statement causes an error message to be displayed. Re-enter the print statement and transmit.</p>	3

TABLE 3  
Printing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
3 cont	<p><b>Required:</b></p> <p>PRINT &lt;file name&gt;</p> <p><b>Optional: (Select One)</b></p> <p>HERE ON &lt;terminal type&gt; ON PRINTER ON UPPERCASE PRINTER ON PAGE PRINTER</p> <p><b>Optional: (Select One Or More)</b></p> <p>PAUSE or WITH PAUSE ANNOUNCE &lt;number&gt; COPIES</p> <p>NOTE: When specifying pages (below) the terms PAGE and/or LOG may precede the first &lt;number&gt; and a hyphen (-) may be used instead of THRU. Only one page option may be specified in each print statement.</p> <p>&lt;number&gt; &lt;number&gt; THRU &lt;number&gt; &lt;number&gt; THRU END</p>	<p>If CAT does not find the specified file, it displays the message:</p> <p>FILE NOT PRESENT. PLEASE ENTER NEXT TASK.</p> <p>If a default terminal(s) is included in the Output Device Table, the following message is displayed on the originating terminal:</p> <p>PROCESSING.</p> <p>If no default terminal is included in the Output Device Table, this message is displayed:</p> <p>PLEASE ENTER TERMINAL TYPE.</p> <p>In HOME position, enter the name of the terminal description file of the device on which the document is to print and transmit. This message appears on the originating terminal:</p> <p>PROCESSING.</p>	3

TABLE 3  
 Printing a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
3 cont		<p>If the originating terminal is not listed as a host terminal in the Output Device Table and PRINT &lt;file name&gt; was specified as the print statement, the following message is displayed on the originating terminal, and the document is not printed.</p> <p style="text-align: center;">NO DEFAULT DESTINATION          DECLARED FOR THIS TERMINAL.          PLEASE ENTER NEXT TASK.</p> <p>In HOME position, re-enter the print statement to include the name of the destination terminal (in this case it is the originating terminal) and transmit. This message appears on the originating terminal:</p> <p style="text-align: center;">PROCESSING.</p>	

TABLE 3  
 Printing a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
3 cont		<p>If there are errors in the Format Description file, a document file is not created. The following message is displayed:</p> <p style="padding-left: 40px;">DOCUMENT FILE NOT CREATED. PLEASE ENTER NEXT TASK.</p> <p>Choose one:</p> <p>a. To end the CAT Program to correct errors.</p> <p>b. To print another document.</p> <p>CAT then processes the document. If errors are encountered, error messages are displayed.</p> <p><u>Example:</u></p> <p style="padding-left: 40px;">\$noe ---ERROR --- AT SEQ NO: 1500 IN INPUT FILE CAT COMMAND EXPECTED</p>	<p>6</p> <p>3</p> <p>4</p>

TABLE 3  
 Printing a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
3 cont		<p>Error messages are followed by this message:</p> <p style="text-align: center;">ERRORS ENCOUNTERED            DO YOU WISH TO PRINT DOCUMENT?            ENTER 'YES' OR 'NO'</p> <p>Then one of the following occurs:</p> <p>a. If printing is directed to a remote device, this message appears on the originating terminal:</p> <p style="text-align: center;">PLEASE ENTER NEXT TASK.</p> <p>At this time the originating terminal can be used to initiate printing of another document or to do other work by ending the CAT Program.</p> <p>b. If printing is directed to the system line printer, printing starts immediately or is held until the printer is free.</p>	<p>3 or 6</p> <p>6</p>

TABLE 3  
 Printing a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
3 cont		c. If PAGE PRINTER is selected, printing is directed to a magnetic tape.	6
		d. If printing is directed to an originating or remote terminal, one of the following occurs, depending on the print statement entered:	5
		1) The document prints immediately.  2) If ANNOUNCE was selected, CAT signals with a beep and the following message:  <file name> READY TO PRINT.  3) If PAUSE or WITH PAUSE was selected, a beep sounds.	5

TABLE 3  
Printing a Document  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
3 cont		<p>When printing is complete, the following messages appear:</p> <p>1) On originating terminal:</p> <p style="padding-left: 40px;">&lt;PACK-ID&gt;/&lt;USERCODE&gt;/&lt;TIME&gt; REMOVED &lt;PACK-ID&gt;/&lt;USERCODE&gt;/&lt;TIME&gt; REMOVED PLEASE ENTER NEXT TASK.</p> <p>2) On remote terminal:</p> <p style="padding-left: 40px;">REMOTE PRINTING COMPLETE.</p>	3 or 6
4	<p>Choose one:</p> <p>a. To cancel printing, type NO in HOME position, and press XMT.</p> <p>b. To print the document, type YES in HOME position, and press XMT.</p>	<p>This message appears:</p> <p style="padding-left: 40px;">DOCUMENT WILL NOT BE PRINTED PLEASE ENTER NEXT TASK.</p> <p>Printing is initiated according to the particular print statement entered.</p>	3 or 6

TABLE 3  
 Printing a Document  
 Operating Procedures

Step	Option/Operator Action	Result	Go To Step
5	From HOME position, transmit to initiate printing.	Printing is initiated according to the particular print statement entered.	
6	To end the CAT Program on the originating terminal, type QUIT in HOME position, and press XMT.	An end-of-job message is displayed.  <u>Example:</u>  <USERCODE> CAT=7238 EOJ. TIME=13:31:31.5	
8	To end the session, type BYE in HOME position, and press XMT.	An end-of-session message appears:  <u>Example:</u>  USER <USERCODE> LOGGED OFF CANDE AT 01:32:50.8 PM 09/21/81 (TIME=00:00:43.1)	



## SECTION 6. THE SPELLER PROGRAM

SPELLER is the Computer-Assisted Typing Program which helps you check the spelling accuracy of all words within any indicated file. When run, this program reads the file and compares the spelling of each word to the computer dictionary. If any word in the file does not appear in the dictionary, it is noted so the appropriate corrections can be made.

The SPELLER Program can be run from either a hard-copy terminal or a CRT device, and instructions for using each source follow.

### USING SPELLER ON A CRT TERMINAL.

To use the SPELLER Program on a CRT device, follow the operating procedures outlined in table 4.

### USING SPELLER ON A HARD-COPY TERMINAL.

To use the SPELLER Program on a hard-copy terminal, follow the operating procedures outlined in table 5.

TABLE 4  
Using SPELLER on a CRT Terminal  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
1	<p>To log on to a CRT terminal, place cursor in HOME position (upper-left corner), enter your user-code/password, and press XMT.</p> <p>To enable scrolling, type ?+S in HOME position and press XMT.</p>	<p>Version, usercode, time, date, and station information appear on the screen.</p> <p><u>Example:</u></p> <pre>B1000 CANDE MARK 9.1 VERSION 00 (10/03/80 10:37) USER &lt;USERCODE&gt; LOGGED ON AT 01:26:51.7 PM 09/21/81 YOU ARE AT STATION 25 (TD832)</pre> <p>The message SCROLL ENABLED is displayed.</p>	2
2	<p>Request the SPELLER Program by entering ?EX SPELLER in HOME position, and press XMT.</p>	<p>The following message appears:</p> <pre>&lt;USERCODE&gt; SPELLER=7238 BOJ PP=4, MP=4 TIME=13:30:57.8 ARE YOU A CRT DEVICE?</pre>	3

**TABLE 4**  
**Using SPELLER on a CRT Terminal**  
**Operating Procedures**

Step	Option/Operator Action	Result	Go To Step
3	Press CLEAR/HOME. Enter YES, and press XMT.	The terminal goes into the Forms mode. In the Forms mode, entries can be made only within the delimiters on the screen. The message ENTER FILE NAME ▷ ◀ appears.	4
4	Enter name of desired file within the delimiters. Press XMT.  NOTE: To receive a screen containing more information on how the SPELLER Program works, enter HELP within the delimiters instead of a file name, and press XMT.	The message PROCESSING appears temporarily while the program begins checking the spelling of words within the file. When the program locates a word which does not appear in its dictionary, it displays the line of text and the sequence number of the line in which the word appears. Below this, the word in question appears in brackets.  <u>Example:</u>  Details are as follows: SEQUENCE 800 (flows)	5

TABLE 4  
Using SPELLER on a CRT Terminal  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
5	<p>Choose one:</p> <p>a. To correct the misspelled word, type the correct spelling over it and press XMT.</p> <p>b. If the word is actually spelled correctly, delete the word by pressing the EOP/CLR/EOL key, and then pressing XMT.</p>	<p>The correction is accepted and the next misspelled word appears.</p> <p>The new word is accepted by the SPELLER Program and placed into a special file which is later used as a basis for updating the CAT dictionary.</p> <p>The program continues searching for words not in its dictionary and presents them for correction.</p> <p>After the program has checked the spelling of every word in the file, it prints the message SPELLING CHECK COMPLETED, the elapsed time, processing time, and input/output time used.</p>	6

TABLE 4  
Using SPELLER on a CRT Terminal  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
5 Cont		<p><u>Example:</u></p> <p>SPELLING CHECK COMPLETED            &lt;USERCODE&gt; SPELLER=7238 EOF.            TIME=13:31:31.5</p>	6
6	To end the session, enter BYE in HOME position and press XMT.	<p>An end-of-session message appears.</p> <p><u>Example:</u></p> <p>USER &lt;USERCODE&gt; LOGGED OFF CANDE            AT 01:32:50.8 PM 09/21/18            (TIME=00:00:43.1)</p>	

TABLE 5  
Using SPELLER on a Hard-Copy Terminal  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
1	Activate your terminal by following the instructions accompanying the terminal. Press RETURN.	A usercode is requested.  <u>Example:</u>  #ENTER USERCODE PLEASE	2
2	Type your usercode/password and press RETURN.	Version, usercode, time, date, and station information are printed.  <u>Example:</u>  B1000 CANDE MARK 9.1 VERSION 00 (10/03/80 10:37) AT 01:26:51.7 PM 09/21/81 YOU ARE AT STATION 25 (TD832)	3
3	Request the SPELLER Program by typing ?EX SPELLER and pressing RETURN.	The following message prints out:  <USERCODE> SPELLER=7238 BOJ PP=4, MP=4 TIME=13:30:57.8 ARE YOU A CRT DEVICE?	4
4	Type NO and press RETURN.	The SPELLER Program is identified and a file name is requested.	5

TABLE 5  
Using SPELLER on a Hard-Copy Terminal  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
4 Cont		<p><u>Example:</u></p> <p>SPELLER 07/26/81-11:21 ENTER FILE NAME</p>	
5	Type name of desired file, and press RETURN.	<p>The following message prints out:</p> <p>PROCESSING</p> <p>When the program locates a word in the desired file which does not appear in its dictionary, it prints out the line in which the word (underlined) appears, the sequence number of the line, and the word again.</p> <p><u>Example:</u></p> <p>appea in this order: SEQUENCE 1200 appea</p>	6

TABLE 5  
Using SPELLER on a Hard-Copy Terminal  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
6	<p>Choose one:</p> <p>a. To correct the misspelled word, type the correct spelling next to it, and press RETURN.</p> <p>b. If the word is actually spelled correctly, just press RETURN.</p>	<p>The correction is accepted and the next misspelled word appears.</p> <p>The new word is accepted by the SPELLER Program and placed into a special file which is later used as a basis for updating the CAT dictionary.</p> <p>The program continues searching for words not in its dictionary and presents them for correction.</p> <p>After the program has checked the spelling of every word in the file, it prints the message SPELLING CHECK COMPLETED, the elapsed time, processing time, and input/output time used.</p> <p><u>Example:</u></p> <p>SPELLING CHECK COMPLETED &lt;USERCODE&gt; SPELLER=7238 EOJ. TIME=13:31:31.5</p>	7



TABLE 5  
Using SPELLER on a Hard-Copy Terminal  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
7	To end the session, type BYE and press RETURN.	<p>An end-of-session message prints out.</p> <p><u>Example:</u></p> <p>USER &lt;USERCODE&gt; LOGGED OFF CANDE AT 01:32:50.8 PM 09/21/81 (TIME=00:00:43.1)</p>	



## SECTION 7. THE TOM PROGRAM

The TOM (Transfer Of Messages) Program is used to send documents and correspondence from one office to another (or several others) using the Burroughs Text Management and Communication System. Documents are prepared using the PETT Program (refer to section 4). TOM then "sends" documents by placing them in a computer mailbox from which the receivers may obtain them.

To receive correspondence, each office executes CAT to print the message. Documents may then be printed on the office's own stationery as original copies with carbons.

This section explains the procedures for both sending and receiving documents through the TOM Program.

### PROCEDURES FOR SENDING DOCUMENTS.

In order to send documents through the TOM Program, there are five steps to follow. These five steps are presented in the following text.

1. Begin by creating a document using the PETT Program. Use the heading described in FORMATTING DOCUMENTS FOR THE TOM PROGRAM and the CAT formatting commands (refer to Section 5, THE CAT PROGRAM) to format the document.
2. Once the document has been written, make necessary corrections or revisions using the PROOFREAD activity of the PETT Program (refer to section 4).
3. Check the spelling of all words in the document by using the SPELLER Program (refer to section 6). This procedure is optional.
4. Execute CAT to obtain a typewritten copy of the document you have created. This is also optional.
5. Use the TOM Program to send the document.

### FORMATTING DOCUMENTS FOR THE TOM PROGRAM.

To send documents and to use the special features of the TOM Program, it is necessary to enter a series of commands at the beginning of an input or document file. These commands are used to indicate such information as addressees' names, the date, and the subject of the document to be sent. These commands, which are presented following, must precede other new commands and the text of the document file. Commands following the Format Description file

name may be specified in any order, and all commands may be upper or lower case.

1. \*<FORMAT DESCRIPTION FILE NAME>. The Format Description file name must be specified on the initial line of a document file to use this program.

NOTE: Indicate a confidential document with a space and the letter C following the Format Description file name such as \*<FORMAT DESCRIPTION FILE NAME> C.

2. \*TO. This is a required command used to list the name(s) of the person(s) or office(s) to whom the document is being sent. This command is not abbreviated. Enter the command, leave a space, and type the first complete name. Type each additional name on a separate line below the previous name. Any number of names may be listed using this command.
3. \*D (DATE). This optional Date command may be specified as \*D or \*DATE. When this command is typed, leave a space, and enter the appropriate date. If omitted, the system date is used by the computer.

NOTE: Text must not exceed one line.

4. \*S (SUBJECT). This optional command may be specified as \*S or \*SUBJECT, and is used to indicate the subject of a document. After this command is typed, leave a space, and enter the appropriate subject information.

NOTE: Only one line of text can be used for the subject portion of the document.

5. \*F (FROM). This is an optional command used to indicate the author(s) of a document. When using this command, type \*F or \*FROM, leave a space, and enter the name(s) of the author(s).

NOTE: More than one name may be entered, but text must not exceed one line for this command.

6. \*CC (COPIES). This command is optional and is used to list the receivers of copies of documents and correspondence. Copies may be directed to people or to offices if these names are included in the TOM Name Directory (described following). Any number of copies may be sent. This command uses the abbreviation, entered as

\*CC. It is followed by a space, and the first complete name is typed. Each additional name is typed on a line of its own below the previous name.

### THE TOM NAME DIRECTORY.

In connection with the \*TO and \*CC portions of the document heading, it is important to note the function of the TOM Name Directory.

The TOM Program maintains a directory of names in which various personnel are listed according to the office in which they work. In other words, each employee is assigned a mailbox number which corresponds to the box number of the office in which he/she works.

TOM uses these box numbers when sending messages. Each time a document is sent, TOM checks the names listed in the TO and CC portions of the document heading against the names included in the Name Directory. TOM then sends copies of the document or correspondence to the appropriate offices by placing a copy of the original file under each office's usercode.

Since TOM uses the Name Directory as a means of locating receivers of a document, it is important that you consider the directory when addressing documents or correspondence. In some cases, however, the directory does not include the name of someone to whom a copy of your document is to be sent. When this is the case, address the document to the office name rather than to the individual. Then list specific names in the CC portion of the document heading.

If you do list names from the directory, be sure to use the same spellings.

An example of the opening lines of a document file follows.

#### Example:

```
*<FORMAT DESCRIPTION FILE NAME>
*TO Your Company, New York
*D January 1, 19--
*S A Sample Memo
*F Your Company, Los Angeles
*CC Name One
    Name Two
    Name Three
    Name Four
```

The above example represents a document heading for the TOM Program. Following this document heading, list any other new commands that are required, and then begin the actual text portion of the document.

The text of a document also contains CAT commands. These commands specify how to format the remainder of the document. These are the same commands used in formatting other documents. (Refer to section 5, THE CAT PROGRAM.)

#### SENDING DOCUMENTS.

Once you have created and edited your document, use the TOM Program to send the document. Follow the operating procedures outlined in table 6, The TOM Program.

#### RECEIVING DOCUMENTS.

Documents which have been sent by TOM are placed in the receiver's mailbox. In order for the receiver to obtain mail, the TOM Program must be executed to find out if there is mail and to learn the name of the file that represents the mail. The procedure for receiving documents is outlined in table 6.

TABLE 6  
The TOM Program  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
1	<p><u>SENDING AND RECEIVING DOCUMENTS</u></p> <p>To log on to a hard-copy terminal, follow the operating instructions for the particular terminal.</p> <p>To log on to a CRT terminal, place the cursor in HOME position (upper-left corner), enter your usercode/password, and press XMT.</p> <p>NOTE: To transmit from a hard-copy terminal, press RETURN. To transmit from a CRT terminal, press XMT.</p> <p>You must also disable scrolling on the CRT. Type ?-S in HOME position, and press XMT.</p>	<p>Version, usercode, time, date, and station information appear.</p> <p><u>Example:</u></p> <pre>B1000 CANDE MARK 9.1 VERSION 00 (10/03/80 10:37) USER &lt;USERCODE&gt; LOGGED ON AT 01:26:51.7 PM 09/21/81 YOU ARE AT STATION 25 (TD832)</pre> <p>The message SCROLL DISABLED is displayed on the CRT.</p> <p>The following message appears:</p> <pre>&lt;USERCODE&gt; TOM=7238 BOJ PP=4, MP=4 TIME=13:30:57.8</pre>	2
2	<p>Request the TOM Program by entering ?EX TOM in HOME position and transmitting.</p>		

TABLE 6  
The TOM Program  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
2 cont		<p>The TOM Program checks your computer mailbox.</p> <p>If there is no mail, the following messages appear:</p> <p style="padding-left: 40px;">SORRY - NO MAIL FOR YOU TODAY DID YOU WISH TO: SEND MAIL? (TYPE SEND OR S) OR QUIT? (TYPE QUIT OR Q)</p> <p>Choose one:</p> <p>a. To end the TOM Program.</p> <p>b. To send a document.</p> <p>If there is mail, the terminal displays or prints:</p> <p style="padding-left: 40px;">I HAVE &lt;NUMBER&gt; DOCUMENT(S) FOR YOU</p>	<p>5</p> <p>3</p>



TABLE 6  
The TOM Program  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
2 cont		<p>NOTE: TOM does not deliver mail to anyone who has the same mailbox number as the usercode of the sender.</p> <p>Then the heading portion of each document and the document file name appear. This information is displayed one time only for each usercode recipient. In subsequent executions of TOM this heading information is shown only for mail received since the last execution of TOM.</p> <p><u>Example:</u></p> <pre>*&lt;FORMAT DESCRIPTION FILE NAME&gt; *DATE &lt;text&gt; *SUBJECT &lt;text&gt; *FROM &lt;text&gt; *TO &lt;text&gt; *CC &lt;text&gt; FILENAME:</pre>	

TABLE 6  
The TOM Program  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
<p style="text-align: center;">2 cont</p>		<p>NOTE: The heading *&lt;FORMAT DESCRIPTION FILE NAME&gt; C indicates that a confidential document has been delivered. Since the TOM Program does not list the file name of this document, it cannot be received under your office usercode/password.</p> <p>To print the confidential document, it is necessary to log on under your office confidential usercode/ password. Then, when TOM is executed, the file name of the confidential document is indicated, and the document can be printed by using CAT.</p> <p>The terminal then displays or prints instructions on running the CAT Program to print the documents in the mailbox. (Refer to table 3, Printing a Document.)</p> <p>The following message then appears:</p>	

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TABLE 6  
The TOM Program  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
2 cont		<p style="text-align: center;">DID YOU WISH TO SEND MAIL?</p> <p>Choose one:</p> <p>a. To send mail. (Documents in the mailbox can be printed at a later time.)</p> <p>b. To print the documents in the mailbox at this time (by ending the TOM Program and executing the CAT Program.)</p>	<p style="text-align: center;">3</p> <p style="text-align: center;">5</p>
3	To send a document, type S, and press XMT.	<p>This message appears:</p> <p style="text-align: center;">THE NAME OF YOUR FILE, PLEASE?</p>	<p style="text-align: center;">4</p>
4	Type name of document file, and press XMT.	<p>The TOM Program performs the following tasks:</p> <p>a. TOM copies the document file and gives it a new name.</p> <p>b. TOM places a copy of the document in the computer mailbox of each addressee listed in the TO or CC portions of the document. The</p>	

TABLE 6  
The TOM Program  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
4 cont		<p>TOM Program uses a Name Directory to locate receivers and then automatically sends a copy of the document to the appropriate office of each receiver.</p> <p>c. TOM indicates whether or not the document has been successfully sent by displaying this message:</p> <p style="text-align: center;">MAIL SUCCESSFULLY SENT</p> <p>NOTE: If TOM is unable to send a document copy to one or more addressees (either because a receiver is located in another office, or because a name is not included in the Name Directory), it displays the names of the people to whom the mail was sent.</p> <p>d. TOM then asks if another document is to be sent:</p> <p style="text-align: center;">AGAIN, TYPE S(SEND) OR Q(QUIT).</p>	3 or 5

TABLE 6  
The TOM Program  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
5	To end the TOM Program, type Q, and press XMT.	<p>An end-of-job message appears:</p> <p><u>Example:</u></p> <p style="padding-left: 40px;">&lt;USERCODE&gt; TOM=7238 EOJ. TIME=13:31:31.5</p> <p>Choose one:</p> <p>a. To end the session.</p> <p>b. To execute the CAT Program to print a document. (Follow the operating procedures outlined in table 3. Printing a Document.</p> <p>NOTE: The number of receivers determines whether to print the document on single or multi part paper.</p> <p>When running the CAT Program, use the Document file name supplied by the TOM Program.</p>	6

TABLE 6  
The TOM Program  
Operating Procedures

Step	Option/Operator Action	Result	Go To Step
6	To end the session, type BYE, and press XMT.	An end-of-session message appears.  <u>Example:</u>  USER <USERCODE> LOGGED OFF CANDE AT 01:32:50.8 PM 09/21/18 (TIME=00:00:43.1)	

## APPENDIX A. PETT AND CAT ERROR MESSAGES

This appendix contains a list of error messages in the PETT and CAT Programs. In the PETT Program, when the menu screen is displayed, if you transmit information that is recognized by the program as inaccurate or incomplete, an error message appears at the top of the menu screen, in the following format:

ERROR: PROOF FILE NOT PRESENT - REENTER NAME.

When the CAT Program is used, a Document file is proofread by an editing program. This program checks both the Format Description file and Document file for proper command syntax. If errors exist in these files, error messages are displayed. This procedure provides an opportunity to correct formatting errors before printing.

In the CAT Program, error messages appear in the following format:

```
<actual line of text>  
*** ERROR *** AT SEQ NO:<number> IN <FORMAT/INPUT> FILE  
<error message>
```

When error conditions exist in CAT, the program indicates whether the error appears in the Format Description file or the input file.

If errors exist in the Format Description file a document cannot be processed. This message appears following the error messages:

```
DOCUMENT FILE NOT CREATED  
PLEASE ENTER NEXT TASK
```

At this time you must either print another document or end the CAT Program.

When all errors contained in the Document file are displayed, CAT asks you if you want to print the document. You can either:

1. Terminate the program (refer to table 3) and correct the errors. CAT provides a sequence number for each error. Use PETT or the CANDE Language (refer to the CANDE User's Manual, form 1090586) to locate the errors. Corrections can then be made by using the PETT Program.
2. Print the document as it exists; correct the errors later. (Refer to table 3 for printing instructions.)

An alphabetized list of PETT and CAT error messages follows. Some of these messages are for errors in the Format Description file only; correction may be reserved for appropriate personnel. The cause of each error listed and the method of correction is also provided.

#### BOLD OPTION ALREADY SET

Cause: The boldface-type, special editing feature is still in effect.

Correction: Use the backward slash symbol (\) to terminate boldface-type printing.

#### BU OR SP EXPECTED

Cause: A command other than BU or SP was specified with the column option.

Correction: Use the BU command to denote the buffer space between columns and the SP command to denote the spacing within each column.

#### CAN ONLY USE #@\$\*%& FOR COMMAND PREFIX

Cause: A symbol other than those shown was used as a prefix for CAT commands.

Correction: Only use #@\$\*%& for a command prefix.

#### CANNOT FIND LOGICAL PAGE

Cause: The CAT Program is unable to locate the specified logical page for printing.

Correction: Specify a logical page within the range of your file.

#### CAT COMMAND EXPECTED

Cause: A specified command does not exist.

Correction: Check your input; a typographical error may be the cause of the error. Enter correct CAT command.

#### CLOSING <BACKWARD SLASH> EXPECTED ON THIS LINE

Cause: A special editing feature was not ended before indicating the beginning of another.

Correction: Use the backward slash (\) to initiate and terminate the use of all special editing features except underlining.

#### # CLOSING EXPECTED

Cause: The CLOSING section of the Format Description file was not present or in its proper place within the file.



Correction: Enter the command #CLOSING immediately preceding the LASTPAGE entry in the Format Description file.

#### COLUMN RANGE EXPECTED

Cause: No print positions were indicated for a decimal or center tab.

Correction: For decimal and center tabs, indicate print positions in ranges (for example, 35-45).

#### COLUMNS REMAIN NOT SET

Cause: An error exists in the column settings. This message follows other messages which relate specifically to errors in column settings.

Correction: Enter correct column specifications.

#### COLUMNS WERE NOT SET

Cause: Columnar input was invoked without having set column specifications, for instance typing \*1 to indicate the column in which text is printed.

Correction: Enter correct column specifications.

#### COMMAND CANNOT EXCEED 6 CHARACTERS

Cause: A user-defined command, included in the #COMMANDS section of the Format Description file, was longer than six characters.

Correction: Enter a user-defined command up to 6 characters in length.

#### COMMAND NOT ACCEPTABLE IN GLOBALS

Cause: Commands were included in the GLOBALS section of the Format Description file which do not belong.

Correction: Include only required commands in the GLOBALS section of the Format Description file.

#### # COMMANDS EXPECTED

Cause: The COMMANDS section of the Format Description file was not present or in its proper place within the file.

Correction: Enter the COMMANDS section following the GLOBALS section in the Format Description file.

#### COPIES SPECIFIED TWICE

Cause: The word "COPIES" is duplicated.

Correction: Enter the word "COPIES" only once.

#### DECIMAL COMPONENT TOO LARGE

Cause: The number of decimal places indicated in a TAB command exceeded the width of the decimal specification.

Correction: The number of decimal places to the right of the decimal point must be less than or equal to the width of the associated field.

#### DUPLICATE FORMDATA VARIABLE NOT ALLOWED.

Cause: Duplicate variable names were specified within the Formdata variable list.

Correction: Each Formdata variable must be unique.

#### = (EQUAL) SIGN EXPECTED

Cause: No equal sign appeared in a glossary format.

Correction: To invoke glossary format, separate the term from the definition with an equal sign.

#### FILE NOT PRESENT. PLEASE RE-ENTER FILE NAME

Cause: The specified document file does not exist. This may be a typographical error.

Correction: Check your input and enter the correct file name.

#### FILE TO CREATE ALREADY PRESENT

Cause: A 1 (CREATE) was entered on the menu screen and the name of a file that already exists was entered.

Correction: When creating a new file, give it a unique name.

#### <FILENAME> IN USE BY ANOTHER PROGRAM

Cause: The indicated file is being used by another program or CANDE.

Correction: Program must end before you can proceed, or you must remove the CANDE workfile. Refer to B 1000 Systems Command AND Edit Language (CANDE) User's Manual, form 1090586, for instructions on removing the workfile.

#### FIRST PAGE NUMBER EXPECTED

Cause: The first number in a location range is not specified in the PRINT option.

Correction: Specify a first page number.

# FOOT1 EXPECTED

Cause: The FOOT1 section of the Format Description file was not present or in its proper place within the file.

Correction: Enter the FOOT1 section following the HEAD1 section in the Format Description file.

# FOOT2 EXPECTED

Cause: The FOOT2 section of the Format Description file was not present or in its proper place within the file.

Correction: Enter the FOOT2 section following the HEAD2 section in the Format Description file.

FORMAT FILE IS INCORRECT

Cause: An error exists in the Format Description file. This message follows the messages which specifically relate to errors in the Format Description file.

Correction: Check Format Description file specifications and enter the correct commands.

FORMAT FILE NOT PRESENT

Cause: The specified Format Description file does not exist. This may be a typographical error.

Correction: Check your input and enter the correct name of the Format Description file.

FORMDATA FILE IS NOT PRESENT

Cause: The Formdata file specified by the Formdata statement cannot be located.

Correction: Check for the Formdata file; if it does not exist, create the Formdata file.

# GLOBALS EXPECTED

Cause: The GLOBALS section of the Format Description file was not present or in its proper place within the file.

Correction: Enter the GLOBALS section as the first section in the Format Description file.

# HEAD1 EXPECTED

Cause: The HEAD1 section of the Format Description file was not present or in its proper place within the file.

Correction: Enter the HEAD1 section following the NEW COMMANDS section in the Format Description file.

#### # HEAD2 EXPECTED

Cause: The HEAD2 section of the Format Description file was not present or in its proper place within the file.

Correction: Enter the HEAD2 section following the FOOT1 section in the Format Description file.

#### INTEGER EXPECTED

Cause: Numbers were not indicated for commands which require specific parameters.

Correction: Indicate the appropriate numbers following commands requiring specific parameters. For instance, to specify the length of a page, the command \*LEN must be followed by a number.

#### INTEGER OR REAL EXPECTED

Cause: Numbers were not indicated for commands which require specific parameters.

Correction: Follow commands requiring specific parameters with the appropriate whole or real numbers.

#### INVALID <BACKWARD SLASH> OPTION

Cause: A special editing command which does not exist was specified.

Correction: Enter the correct special editing command, preceded and followed by the backward slash symbol.

#### INVALID CENTERING SPECIFICATION

Cause: A centering parameter was specified which the CAT Program considers invalid. For instance, the first parameter specified was greater than the second.

Correction: Check parameters indicated and enter the correct specifications.

#### INVALID COMMAND

Cause: A command was specified that is neither a CAT command nor a valid user-devised command.

Correction: Check the spelling of the command used or check for the existence of the associated user-devised command in the Format Description file.

#### INVALID CLAUSE SPECIFIED

Cause: The specified clause is not recognized by the CAT Program. (This may be due to a misspelling.)

Correction: Check your spelling; re-enter the PRINT statement.

#### INVALID FONT SPECIFICATION

Cause: The parameter specified for font is not valid.

Correction: The font parameter must be between 1 and 15.

#### INVALID FONTINDEX SPECIFICATION

Cause: An incorrect parameter was specified for font index.

Correction: The font index parameter must be an integer greater than zero.

#### INVALID INDENTION

Cause: The parameter specified for paragraph or glossary indention exceeded the margin specifications.

Correction: Check the margin specifications and the indention indicated and enter the correct specifications.

#### INVALID LEFT INDENT

Cause: A parameter was specified for left indention which the CAT Program considers invalid. For instance, if the left margin was indented five spaces and then reset as \*IN -8, the indented parameter does not coincide with the reset parameter and this error message results.

Correction: Check the indicated parameters and enter the correct numbers for indention.

#### INVALID LEFT JUSTIFICATION

Cause: The specified parameter for left-justification exceeded the right margin.

Correction: When the left-justification command is followed with a number, the text is indented from the left margin of the page. Check the indicated number and enter the correct number.

#### INVALID MARGINS SETTING

Cause: Invalid margins for a page were specified. For instance, the left margin was greater than the right margin.

Correction: Check margin specifications and enter the correct parameters.

#### INVALID OPTION NUMBER

Cause: A number other than 1 thru 6 was entered in the ENTER OPTION NUMBER field on the PETT menu screen.

Correction: Enter a number from 1 to 6 that corresponds to the option desired.

#### INVALID REFERENCE

Cause: Specifications used in the HEAD1 or HEAD2 section of the Format Description file did not agree in syntax with those declared in the #COMMANDS section of the Format Description file.

Correction: Check the corresponding entries in the #COMMANDS section and the HEAD1 or HEAD2 sections of the Format Description file and enter the correct syntax.

#### INVALID RIGHT INDENT

Cause: A parameter was specified for right indentation which the CAT Program considers invalid. For instance, the specified parameter for resetting the right margin did not coincide with that specified for indenting the margin.

Correction: Check indicated parameters and enter the correct indent specification.

#### INVALID RIGHT JUSTIFICATION

Cause: The parameter for right-justification exceeded the left margin.

Correction: When you follow the RIGHT-JUSTIFICATION command with a number, the text is indented from the right margin. Check indicated parameter and enter correct specification.

#### INVALID SYNTAX

Cause: A decimal or center tab was set with no hyphen placed between the print position parameters. This message also results if concatenated items in the Format Description file are not separated with the ampersand (&) symbol.

Correction: Use a hyphen to separate print position parameters for decimal or center tabs. Use an ampersand symbol to separate concatenated items in the Format Description file.

#### INVALID TAB SPECS L R C OR D EXPECTED

Cause: A variable other than L, R, C, or D was used to set tabs.

Correction: Use only L, R, C, or D to set tabs.

#### INVALID TERMINAL TYPE

Cause: An invalid terminal type is specified.

Correction: Specify the correct terminal type.

#### L C R EXPECTED

Cause: There was no specification made in the Format Description file to left-justify, center, or right-justify a contents item within the document.

Correction: Follow contents items with a specification indicating left-justification, centering, or right-justification.

#### LASTPAGE EXPECTED

Cause: A section heading other than #LASTPAGE was used following the #CLOSING section of the Format Description file.

Correction: Enter the last page specification as #LASTPAGE following the #CLOSING section of the Format Description file.

#### LAST PAGE NUMBER EXPECTED

Cause: The last number in a location range is not specified in the PRINT option.

Correction: Specify a last page number.

#### LENGTH OF FORMDATA ITEM EXCEEDS 72

Cause: The Formdata variable was specified with more than 72 characters per item.

Correction: Maximum size of each item may not be greater than 72 characters.

#### LENGTH OF FORMDATA VARIABLE NAME GREATER THAN 18

Cause: A Formdata variable was specified with more than 18 characters.

Correction: Specify a variable name which does not exceed 18 characters.

#### LINES AFTER CENTER EXPECTED

Cause: The number of lines to skip after centering was not specified in the Format Description file.

Correction: In the Format Description file, indicate the number of lines to skip after centering.

#### LINES AFTER HEADLINE EXPECTED

Cause: The number of lines to skip after headlining was not specified in the Format Description file.

Correction: In the Format Description file, indicate the number of lines to skip after headlining.

#### MARGINS TOO WIDE FOR CURRENT SIZE PAPER

Cause: The specified left and/or right margin parameters indicated in the Format Description file exceeded the paper size.

Correction: Check your input and enter the correct margin specifications.

#### MISSING RIGHT QUOTE

Cause: There was no closing quotation mark to indicate the end of a string item in the Format Description file.

Correction: Strings are used in the Format Description file to have information printed in a document as it is input in the Format Description file. Use a quotation mark to indicate the end of a string item.



#### MORE INPUT REQUIRED

Cause: In the Format Description file the appropriate parameters were not specified for a command. This message also results if the new command prefix is not specified when using the REPLACE command in text.

Correction: Check the commands in the Format Description file and enter the correct parameters or enter the appropriate new command prefix when using the REPLACE command.

#### MULTIPLE DESTINATIONS NOT ALLOWED

Cause: Multiple destinations are specified in the PRINT option.

Correction: Specify only one destination.

#### N EXPECTED

Cause: A variable other than N was used after the SECTION command.

Correction: To prevent underlining, follow the SECTION command with the letter N.

#### NEW DOCUMENT FILE NOT CREATED, WILL PRINT OLD ONE

Cause: This message appears if a document file, which has already been processed and printed, cannot be reprocessed and printed because an error exists in the Format Description file. In this case, CAT prints the old document file.

Correction: Check the Format Description file for errors. If changes have been made to the input file, they cannot be processed until the Format Description file is corrected.

#### NO DEFAULT DESTINATION DECLARED FOR THIS TERMINAL

Cause: No printing output location is specified and no default location is specified.

Correction: Using a print statement, specify a printing output location.

#### NO FORMDATA FILE NAME SPECIFIED

Cause: A Formdata statement was specified without an accompanying file name.

Correction: Modify the Formdata statement to include a file name.

#### NO OPTIONS SET

Cause: The backward slash symbol (\) was not followed with the appropriate syntax to indicate use of a special editing feature.

Correction: Check your input and indicate the appropriate syntax for the special editing feature desired.

#### PAGE LENGTH TOO SMALL

Cause: Not enough lines were specified in an \*LEN command.

Correction: Increase the number of lines specified per page to accommodate heading and footing spacing.

#### PAGE WIDTH TOO LARGE

Cause: The horizontal paper size specified in an \*SI command was too large.

Correction: Page width may not be greater than 13.2 inches.

#### PAGENO NOT ALLOWED IN CLOSING

Cause: The reserved word PAGENO was entered in the #CLOSING section of the Format Description file.

Correction: PAGENO may only be used in the HEAD1, FOOT1, HEAD2 or FOOT2 sections of the Format Description file.

#### PAUSE EXPECTED AFTER WITH

Cause: PAUSE is not specified after WITH in the PRINT statement.

Correction: If this option is used, it must be specified as WITH PAUSE.

#### PROOF FILE NOT PRESENT. RE-ENTER NAME

Cause: The name of a file that does not exist was entered on the PATT menu screen.

Correction: To proofread a file that already exists, enter its name correctly.

#### PROPORTIONAL SPECS EXCEED MARGINS

Cause: When setting columns, the indicated proportional size of each column exceeded the specified margins.

Correction: Check your input and enter correct specifications.

#### PROPORTIONAL SPECS EXPECTED

Cause: The proportional size of each column was not specified.

Correction: The COLUMN command is followed by several integers; the number of integers specified denotes the number of columns to set, and the value of the integers denotes the relative proportions of the columns.

#### REQUIRED COMMAND NOT SPECIFIED IN INPUT

Cause: A command which was required by the Format Description file was not specified in the document file.

Correction: The commands included in the #COMMANDS section of the Format Description file may be required or optional depending on the specifications established for each command.

#### RESERVED COMMAND

Cause: An existent CAT command was used as a user-devised command in the Format Description file.

Correction: An existent CAT command cannot be used as a user-devised command in the Format Description file.

#### RIGHT BRACKET EXPECTED

Cause: Text following an \*DT command did not contain a bracket (]).

Correction: Each line of tabular input must be ended with a bracket.

#### \(SLASH) EXPECTED, BOLD TERMINATED

Cause: A new CAT command was invoked without terminating the use of the boldface, special editing feature. This message also results if boldface printing is not terminated at the end of a document file.

Correction: Boldface printing must be both initiated and terminated with the backward slash symbol.

\(SLASH) EXPECTED, FOOTNOTE TERMINATED

Cause: A new CAT command was invoked without terminating the use of the footnote feature. This message also results if the footnote feature is not terminated at the end of a document file.

Correction: Footnotes must be both initiated and terminated with a backward slash symbol.

\(SLASH) EXPECTED, NOEDIT TERMINATED

Cause: The use of the no-edit, special editing feature was not terminated before invoking a new CAT command. This message also appears if no-edit printing was not terminated at the end of an input file.

Correction: The no-edit special editing feature must be both initiated and terminated with the backward slash symbol.

\(SLASH) EXPECTED, SUBSCRIPT TERMINATED

Cause: The use of the subscript feature was not terminated before invoking a new CAT command. This message also appears if subscripting was not terminated at the end of an input file.

Correction: Subscripting must be both initiated and terminated with the backward slash symbol.

\(SLASH) EXPECTED, SUPERSCRIPPT TERMINATED

Cause: The use of the superscript feature was not terminated before invoking a new CAT command. This message also appears if superscripting was not terminated at the end of an input file.

Correction: Superscripting must be both initiated and terminated with the backward slash symbol.

SP EXPECTED

Cause: A command other than SP was indicated after a BU command in a column specification.

Correction: Use the SP command to denote the spacing within each column.

SPACING SPECS ARE REQUIRED FOR ALL COLUMNS

Cause: The spacing specifications for one or more columns were omitted.

Correction: When using the SP command, indicate the spacing for each column set.

#### SPACING CANNOT BE GREATER THAN 3

Cause: A specified parameter for spacing was greater than three. Triple-spacing is the maximum spacing allowed within TMCS. This message applies to spacing established either through the SPACE command or within column specifications.

Correction: Specify single, double or triple-spacing only. When a spacing error exists, the program automatically sets the parameter to triple-spacing.

#### TAB DATA EXCEEDS RIGHT MARGIN

Cause: The text included in a tab exceeded the right margin specification.

Correction: Check your input and enter the appropriate tab positions so that text does not exceed the right margin.

#### TAB DATA OVERLAP

Cause: The text included in a tab exceeded its specified settings and overlaps the text included in the subsequent tab. This message only appears if ST is used with the TAB command.

Correction: Check your input and enter the appropriate tab positions to avoid text overlap.

#### TABS CANNOT BE SET OUTSIDE CURRENT MARGINS

Cause: A tab position was specified which exceeds the established margins.

Correction: Check your input and enter the appropriate tab positions to fit within the established margins.

#### TABS MUST BE SET IN ASCENDING ORDER

Cause: The print positions of each tab were not set in ascending order. For instance, the first tab was set at position 30 and the next tab was set at 15.

Correction: Check your input and enter the correct tab specifications.

TERMINAL NOT DECLARED IN OUTPUT DEVICE TABLE

Cause: The CAT Program is unable to locate the terminal type specified.

Correction: Specify the correct terminal type

TEXT TOO LONG FOR COLUMN

Cause: Text did not fit within the margins of a column. In this case, the extra text was truncated.

Correction: Check your input and enter the correct column specifications.

TEXT TOO LONG FOR CURRENT MARGINS

Cause: Text printed exactly as it was input, or in no-edit format, did not fit within the established margins.

Correction: When using commands which cause text to be printed in no-edit format, be careful not to exceed the established margins.

TEXT TOO LONG FOR TABLE OF CONTENTS

Cause: A line of text was too wide for the table of contents.

Correction: Increase the size of the table of contents by increasing the margins or decreasing the nesting increment.

TEXT TOO LONG TO BE CENTERED

Cause: Text which was to be centered on a page does not fit within the margins established for centering.

Correction: The CENTER command causes text to print in no-edit format. Check your input and re-enter the correct text.

TEXT TOO LARGE WILL BE OMITTED

Cause: A word was too large to fit within the current margin or column specifications.

Correction: Increase the size of the margins or increase the size of the columns in a \*COL command to accommodate larger words.

TOO MANY INPUT LINES IN CLOSING

Cause: Text in the #CLOSING section of the Format Description file exceeded the maximum limit.

Correction: The #CLOSING section of the Format Description file may not exceed 132 lines.

TOO MANY INPUT LINES IN FOOT1

Cause: Text in the FOOT1 section of the Format Description file exceeded the maximum limit.

Correction: The FOOT1 section of the Format Description file may not exceed 132 lines.

TOO MANY INPUT LINES IN FOOT2

Cause: Text in the FOOT2 section of the Format Description file exceeded the maximum limit.

Correction: The FOOT2 section of the Format Description file may not exceed 132 lines.

TOO MANY INPUT LINES IN HEAD1

Cause: Text in the HEAD1 section of the Format Description file exceeded the maximum limit.

Correction: The HEAD1 section of the Format Description file must not exceed 132 lines.

TOO MANY INPUT LINES IN HEAD2

Cause: Text in the HEAD2 section of the Format Description file exceeded the maximum limit.

Correction: The HEAD2 section of the Format Description file must not exceed 132 lines.

TOO MANY INPUT LINES IN LASTPAGE

Cause: Text in the LASTPAGE section of the Format Description file exceeded the maximum limit.

Correction: The LASTPAGE section of the Format Description file may not exceed 132 lines.

TOO MANY INPUT LINES SPECIFIED

Cause: The number of lines used for a particular command in the document file exceeded the specification established for that command in the Format Description file. For instance, the

number of input lines specified for a command was two in the Format Description file. However, in the document file three lines were specified for this command.

Correction: Be sure that commands used in a document file do not exceed the number of lines specified for those commands in the Format Description file.

#### TOO MANY LINES TO BE SKIPPED

Cause: The number of lines to skip indicated by the SKIP command exceeded the page length specification.

Correction: The number of lines to skip must not exceed the page length specification.

#### TOO MANY LINES TO SKIP AFTER TEXT

Cause: In a command parameter, the number of lines indicated to skip after text was greater than the number of lines left on the page.

Correction: Check the command parameters and reduce the number of lines to be skipped.

#### TRYING TO USE MORE COLUMNS THAN SET

Cause: More columns were specified than were set.

Correction: When specifying the column in which to print text, do not indicate the number of a column that has not been set.

#### TRYING TO USE MORE TABS THAN SET

Cause: When entering tabular text, more tabs were specified than were set.

Correction: Text to appear in each tab is separated by the caret symbol (^). Since each caret denotes the beginning of a new tab, the number of carets included in a line of tabular text can not be greater than the number of tabs set.

#### (UNDERLINE) EXPECTED, UNDERLINE TERMINATED

Cause: The underlining of text was not terminated before invoking a new CAT command. This message also appears if underlining is not terminated at the end of an input file.

Correction: Underlining must both be initiated and terminated with the underline character.



#### UNEXPECTED INPUT

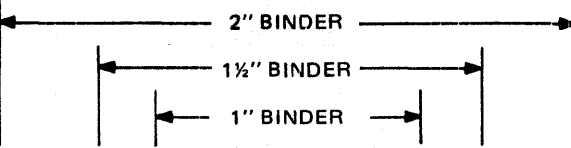
Cause: A CAT command was followed with its associated input text on the same line.

Correction: Each command must be stored on a separate record of the file. Only parameters associated with the command are stored on the same record of the file as the command itself.

#### UNRECOGNIZED PAGING SCHEME

Cause: A paging method which does not exist was specified.

Correction: Follow the PAGING command with either RL, RC, A, or NO to denote lowercase Roman numerals, Arabic numerals or no page numbers.



**B 1000 Series**  
**Text Management and Communication System (TMCS)**  
**TERMINAL OPERATOR'S MANUAL**

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