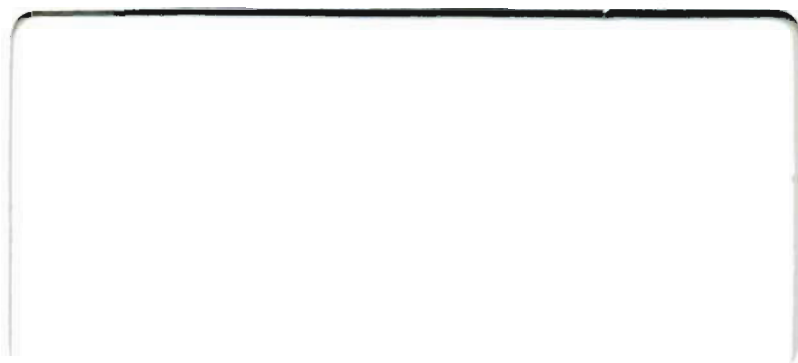


Norsk Data

Q E D **Users Manual**



Q E D

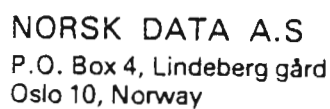
Users Manual

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1

INTRODUCTION

QED is a powerful text editing program for use with the NORD computers.

It is primarily designed for maintaining multiple language source program files, such as MAC, NORD PL, FORTRAN or BASIC, though its convenience and ease of usage makes it suitable for all kinds of text editing.

The text being edited may be read from and written to any mass storage file or I/O device and text lines may be added, modified, replaced and deleted by a few easy-to-learn commands.

Lines of text may be addressed in several ways to make it easy for the user to position a specific line or a collection of lines where editing is to be performed. Positioning to a particular line may be specified in the commands themselves; however, just a line address itself can be a command to cause positioning to occur.

1.1 HOW TO USE THE PROGRAM

The editor may be used as a stand-alone program or as a sub-system running under an operating system, NORD-TSS time sharing system, or NORD SINTRAN III real time, time sharing and multi-batch system.

With a stand-alone system, a binary tape is loaded following standard load procedures; with the operating systems, the program is invoked by submitting a card containing @ QED in front of the command deck, or typing QED in response to the herald-character @ indicating command level of the operating system.

In all cases the editor writes a line on the command-output-unit, giving its name and version, and an asterisk on the next line:

```
QED 4.0
*
```

QED is now ready to accept a command from the command-input-unit.

In this manual all commands containing parenthesis refer to the version QED 4.0 or later. For older versions, the parenthesis must be substituted with brackets [] except for the LIST (2) command where the parenthesis must be substituted with angle brackets < >.

The editor is normally used in an interactive mode with the user typing the commands on the terminal, which is the command input and output unit.

The editing session is carried out command by command until the user terminates by typing the Exit-command.

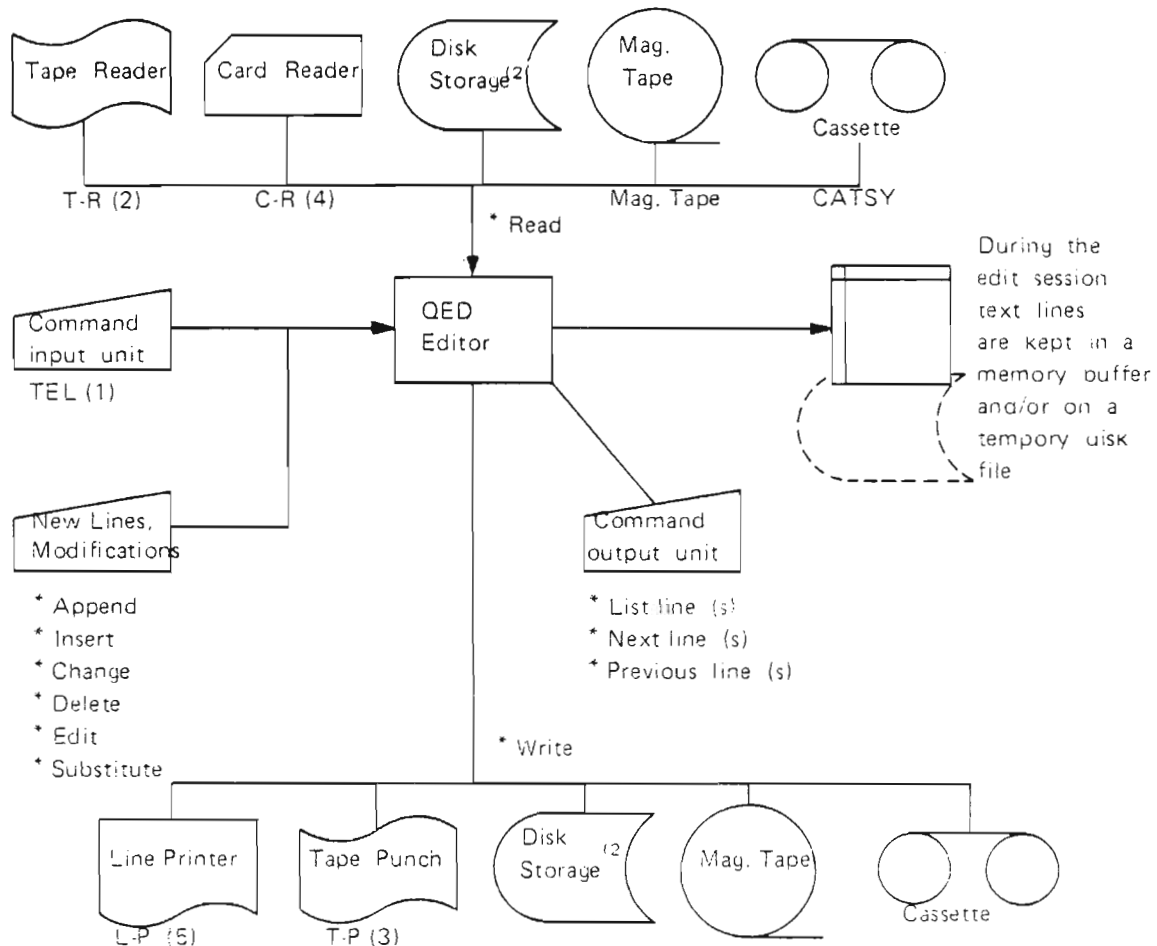
In the batch-mode operation all commands must follow the initial command, on single lines or cards, and the program must be terminated by the Exit-command. Changing of command-input or output unit is automatically done by the operating system.

A normal editing session may be illustrated as follows:

@QED ↵ QED 4.0	— the editor is invoked, and types out the start-line and an asterisk, ready to accept command.
*R M—T—1 ↵ nnn WORDS READ	— the user wants to Read a text-file from the mag-tape, and QED responds with the number of words read.
*L/HERE/ ↵ THE LINE IS HERE	— the user wants to List the first line containing the string HERE.
*A ↵ any text ↵ ↵ ↵ (CTRL) L ↵ *W TEXT-FILE ↵ nnn WORDS WRITTEN	— the user wants to Append some lines following the line found, each line terminated by carriage return. When all new lines are typed, the control-key together with the L terminates the command.
*EX ↵ @	— the user terminates QED and returns to the operating system.

1.2 SYSTEM COMPONENTS, INPUT/OUTPUT UNITS

The following figure illustrates the input and output units (with their normal names and device numbers)⁽¹⁾ and related commands.



Some additional commands:

- * Tabulator setting/read out
- * Mode program parameter setting/read out
- * Exit

⁽¹⁾ Device name as in NORD-TSS and SINTRAN III, i.e., for TAPE READER, abbreviated T—R, device number is 2.

⁽²⁾ Disk storage names from 1 to 16 characters, default file type :SYMB. — see NORD FILE SYSTEM and related operating system.

1.3 NOTATIONS USED IN THIS MANUAL

Certain symbols have been used in this manual to illustrate operators, termination of lines and typing of special non-printing characters.

Such symbols and characters are described below:

↵	carriage-return, terminator of an input-line.
*	asterisk; command level indicator, signals that the command has been successfully executed and that QED is ready to accept a new command.
{ }	brackets; used to illustrate optional operators.
/ . . . /	single-slants; delimit a string of characters.
(CTRL)X	control-key + another character; indicates that the key marked CONTROL is typed together with the character itself.
LINE	specifies that a line-address, in any of the allowed formats, may be given so that QED locates the line before action is taken. Line address formats are explained in Chapter 2.

2 TEXT LINE ADDRESSING

While being edited, the text is held in a buffer in memory and on a temporary disk-file, as a string of characters or lines. Each line may be as long as 136 characters and a carriage return and a line-feed character. These lines may be addressed and are usually specified in the QED-command. The presence of a line address causes QED to locate the line before any action is taken.

A line address may be given in any of the following six forms:

Line Number

Line Label

String of Characters on a Line

Current Line Reference

Last Line Reference

Relative Line Reference

2.1 *LINE NUMBER*

A decimal number for each line in the text-buffer, the first line starting with 1.

N.B. the number is not a part of the line but used for addressing only.

- *L1,10 ↙ list lines 1 to 10
- *D286 ↙ delete line 286
- *A100 ↙ append new text lines after line number 100.

2.2 *LINE LABEL*

A string of characters starting at the beginning of a line and terminated by a comma, a space, or by non-alphabetic character.

In commands the label string must be enclosed by colons (:).

- *L:START: ↙ list the first line that begins with the label START.
- *C:BEGIN: ↙ change the line that starts with the label BEGIN.

The matching on each line is done character by character, and terminated by the first non-alphabetic character or the first non-matching character on the line. Then the next line is searched and the label matching restarts from the beginning of the line.

2.3 *STRING OF CHARACTERS ON A LINE*

A line may be located by searching all lines for the occurrence of the specified string.

In commands the string must be enclosed by a set of characters not within the string itself, normally the slant (/) or semi-colon (;) is used.

*L/DATA/ ↵ list the first line that contains DATA in any position.

*C; END; ↵ change the first line that contains END in any position.

The matching of each line is done character by character, terminated by the first non-matching character, and repeated through the whole line until the end of line is met. Then the next line is searched and the string matching restarts from the beginning of the line.

If no line is found, *STRING NOT FOUND* is typed.

Some characters having special meaning in QED must not be used as string-delimiters, these are:

parenthesis	()
brackets	[]
colon	:
dollar-sign	\$
comma	,
minus	—
plus	+
point	.
astrisk	*

However, they may occur in the string itself.

2.4 *CURRENT LINE REFERENCE*

Once a line has been located by QED, it may be referenced as the current line.

In commands the current line may be specified using the point (.).

*D. ↵ delete the current line

*A. + 10 ↵ append new text lines after the current line plus 10.

*L. — 10,. list the lines from current line — 10 until current line.

The current line reference is the default line if no line address is specified in the commands. It is normally used together with + or — a number of lines as shown in the example above.

2.5 *LAST LINE REFERENCE*

As the line number of the last line in the text buffer is often changed when adding or deleting lines, it is easily referred to by a \$ character.

- *L\$ ↵ list the last line
- *A\$ ↵ append new lines at the end of text-buffer
- *I\$ ↵ insert new lines before the last line.

2.6 *RELATIVE LINE REFERENCE*

A decimal number preceded by a plus or minus sign may be used together with any of the line-address formats described above.

- *L\$-5 ↵ list the 6th. line from the end of the text-buffer.
- *A:START: +3 ↵ add new lines following the 3rd line after the one beginning with the label.

3 QED COMMANDS

3.1 *RECOGNITION OF A COMMAND*

A command consists of a single alphabetic character specifying the action to perform, together with any necessary operands separated by comma (,) and terminated by a carriage return (↵).

Operands must be given in the order shown, or omitted by typing their corresponding comma if other operands follow on the line.

Commands are executed when the carriage-return (↵) is encountered, and when the action is performed successfully, an asterisk (*) is typed to indicate that a new command may be given.

If errors are encountered in the command line, a question-mark (?) is typed, but if the error occurs during the processing of the command, an error message is given.

Typing errors on the command line may be corrected before the carriage return is typed, using any of the EDIT-command facilities (i.e., command lines can also be edited, not only text lines).

It is also possible to repeat a single command by simply typing (CTRL) D or (CTRL) F after the asterisk (*). This is very useful when searching for a specific line for listing or editing.

After QED has been started, a normal editing sequence consists of:

- 1) A READ-Command to get the old text from a file, or an APPEND if there are only new lines from the terminal.
- 2) APPENDING/INSERTING/CHANGING and DELETING text. LIST specific parts and EDIT single lines to correct errors.
- 3) a WRITE-Command to save the new text-buffer on a disk file or other output device.
- 4) an EXIT-Command to leave QED and return to the operating-system.

Remember to save your edited text, or it will be lost when a new program is started.

If you are running under SINTRAN III, you can leave QED to reserve peripheral-units, and return by typing CONTINUE. The text-buffer remains intact as long as a new program has not been started.

3.2 *COMMANDS FOR READING AND WRITING TEXT FILES*

3.2.1 *File-Name/Number in Read and Write Commands*

The Read and Write commands transfer lines or group of lines between the text-buffer and a file-unit. To specify which file-unit to use in a particular transfer, a file reference is included as the first operand in the command.

The operand marked FILE may take one of the following forms:

- 1) *a file name* as in the SINTRAN III, used to specify mass-storage-files and peripheral devices.
- 2) *a file number* as assigned when opening files in SINTRAN III.

3.2.2 The READ Command

PURPOSE:

Transfer text from existing files into the text buffer, either appending to the end or inserting between lines already in the buffer. It is possible to read the entire file, or only a number of lines.

FORMAT:

*R FILE {,LINE} {(LINE-1, LINE-2)}

FILE: a file name or file number containing the text to be read.

LINE: a line address where the new text lines are to be appended. If no operand is given, the new text lines follow the last line (\$ line) in the buffer.

LINE 1, LINE 2: where Line₁ and Line₂ denote the first and the last line addresses of the file part to be read into the text buffer. The line addresses must be a number in the range 1-65535 and Line₁ ≤ Line₂. The parenthesis are mandatory (See Section 1.1).

COMMENTS:

The operands are separated by a comma (,) and must appear in the positions shown. Empty operands to the left must be "nulled" by typing a comma if other operands are to follow.

In the version QED 3.9 or later, the input file to be read can be specified when activating QED in response to the herald character @. See the following example:

```
@QED TEST
212 words read
*
```

EXAMPLES:

*R DATA, 10 ↓ read all lines from the file named DATA:SYMB, append after line number 10 in the existing text buffer.

*R LARGE, (10000,12000) ↓ read the lines 10000 through 12000 of the file named LARGE:SYMB.

*R TEST, 10, (50,70) ↓ read the lines 50 through 70 of the file named TEST:SYMB and append after Line 10 which is already in the text-buffer.

NOTE:

For those who are running under stand-alone systems, see Appendix C for additional information.

3.2.3 The WRITE Command

PURPOSE:

Transfers text lines from the buffer to a file or a device unit, either the complete buffer or a specified interval of lines. The buffer is not changed so the same group of lines may be written several times.

FORMAT:

* W FILE {,LINE-1, LINE-2} {,A}

FILE: a file name or file number to receive the text lines. If FILE is set equal to * (asterisk), the file receiving the text lines is the file displayed by the X-command (See Section 3.7.7).

LINE-1: a line address from where to start writing. No operand means line number 1.

LINE-2: a line address of the last line to be written. No operand means last line of the text buffer (\$-line).

A: means write append, i.e., the lines written will be appended to the old contents of the receiving file.

COMMENTS:

As in the READ command, omitted operands must be "nulled" by a comma if other operands follow.

The write process obeys the settings of the MODE command for the parameters TO and PO. See Section 3.7.5.

TO controls the replacement of contiguous blanks with a tabulation character and PO controls the generation of parity control on output characters. This must be observed when writing text lines on the line printer, where removal of blanks may reduce readability. The TO operand of the MODE command may be turned off by issuing the command:

*M TO(0) ✓

and later reset to normal compression by the command:

*M TO(1) ✓

Considerable amount of disk space may be saved with this feature and the various language processors will expand the tabulation characters with blanks according to the normal tabulation settings when reading source input. Normal tabulation setting — See Section 3.7.3.

A new file may be created by enclosing the file name in double quotes.

EXAMPLES:

<i>*W DATA ↓</i>	write the entire text buffer on the file named DATA.
<i>*W "MYFIL", 1, 200 ↓</i>	create a new file with the name MYFIL:SYMB and write lines 1—200.
<i>*WL-P,:BEGIN:;/EOF/ ↓</i>	writes on the line printer the lines between the label BEGIN and the string EOF.
<i>*W ACCUM,,,A</i>	append the entire text buffer to the file named ACCUM.

NOTE:

For those who are running under stand-alone systems, See Appendix C for additional information.

3.3 *COMMANDS FOR LISTING TEXT LINES*

The three following commands are used for listing text-lines on the terminal:

The LIST Command

The NEXT Command

The PREVIOUS Command

At the end of execution for all these three commands, the last line listed becomes the current one (. — line).

3.3.1 *The LIST Command (1) & (2)*

LIST COMMAND (1)

PURPOSE:

To list text-line(s) on the terminal.

FORMAT:

**L { LINE-1} {,LINE-2}*

LINE-1: a line address of the first line to be listed. No operand means the current line (. — line).

LINE-2: a line address of the last line to be listed. No operand means that only one line is listed — the one at the first line-address.

The line address may take any of the forms described in Section 2.

COMMENTS:

The QED program may be used to search for the occurrence of a particular character-string to be found before typing the lines on the terminal. The search will start at the next line in the text-buffer, and continue through the entire buffer, going back to the first line after the last line and continue to the current line.

If the operands are line-numbers and the second operand is located before the first, then the LIST command lists backwards through the text-buffer.

If no line is found, *STRING NOT FOUND* is typed.

EXAMPLES:

** L 1, 20* list lines 1 to 20 on the terminal.

** L /TEXT/* list the first line which contains the character-string 'TEXT'

*LIST COMMAND (2)**PURPOSE:*

To list a text line within a specified search interval.

FORMAT:

* L LINE-1 {(LINE-2, LINE-3)}

LINE-1: a line address of the line to be listed

LINE-2: the line address where the search shall start.

LINE-3: the line address where the search shall end.

COMMENTS:

If no search interval limit is given, the search will be as for LIST Command (1).

NOTE:

The parenthesis () are mandatory when setting up the search interval (See Section 1.1).

EXAMPLES:

*L/TEXT/(200,:STOP:). search for a line containing the character string 'TEXT' between line 200 and label STOP.

3.3.2 The NEXT Command

PURPOSE:

To list a specified number of lines.

FORMAT:

* N number

a number of lines to be listed, starting with the one after the current lines.

No operand means only one line.

COMMENTS:

If the number is negative, the NEXT command works backwards through the text buffer.

EXAMPLES:

* N 20 list the next 20 lines in the text-buffer.

* N-10 list the previous 10 lines in the text-buffer.

3.3.3 *The PREVIOUS Command*

PURPOSE:

To list a specified number of lines.

FORMAT:

* P number

a number of lines to be listed, starting one line before the current one, and working backwards through the text buffer.
No operand means only one line.

COMMENTS:

If the number is negative, then the PREVIOUS command acts exactly like the NEXT command, typing lines following the current line.

EXAMPLES:

*P 15 list the previous 15 lines in the text-buffer.

*P-5 list the next 5 lines in the text-buffer

3.4 *COMMANDS FOR ADDING, REPLACING AND DELETING TEXT LINES*

The following commands work on whole lines and may expand or reduce the number of lines in the text buffer.

During the typing of a line, the user may correct errors and / or duplicate parts of lines using all features described for the EDIT command (See Section 3.5).

Each line typed is terminated by a carriage-return, and the addition or replacement of several lines must be terminated by (CTRL) L.

3.4.1 *The APPEND Command*

PURPOSE:

To append new lines to the text-buffer or to move lines internally within the text-buffer.

FORMAT:

	<i>* A LINE</i> { {,D} (LINE-1, LINE-2) }
<i>LINE:</i>	a line-address after which the new lines are place. No operand means after current line.
<i>D:</i>	a D if original lines should be DELETED after moving.
<i>LINE-1, LINE-2:</i>	a line-interval specified by one or two line-addresses enclosed in a pair of brackets. If D is not given, the original lines remain intact.

COMMENTS:

The command is terminated by typing CONTROL + L — key.

EXAMPLES:

* A ↵	New lines are placed after the current line.
-- new text line -- ↵	
-- new text line -- ↵	
(CTRL) L	The command is terminated by typing CONTROL + L — key

EXAMPLES OF INTERNAL MOVE:

* A10,D (50, 100) ↵	moves lines 50-100 after line 10, deleting original lines.
* A\$, (1,\$) ↵	duplicates the text-buffer by moving all lines after the last line (\$), without deleting original text.

NOTE:

The parenthesis are mandatory (See Section 1.1).

3.4.2 THE INSERT Command

PURPOSE:

To insert new lines to the text-buffer or to move lines internally within the text-buffer. This command works like the APPEND command except that lines are placed ahead of the line specified instead of behind.

FORMAT:

* I LINE { {,D} (LINE-1, LINE-2) }

LINE: a line-address where the new lines are placed ahead. No operand indicates ahead of the current line.

D: a D if original lines should be DELETED after moving.

LINE-1; a line-interval specified by one or two line-addresses
LINE-2: enclosed in a pair of parenthesis (See Section 1.1). If D is not given the original lines remain intact.

COMMENTS:

The command is terminated by typing CONTROL + L — key.

EXAMPLES:

* I 10 ↓ New lines are placed ahead of line number 10.

- - new text line - - ↓

(CTRL) L

The command is terminated by typing CONTROL + L — key.

3.4.3 The CHANGE Command

PURPOSE:

This command may be used to replace a single line with several new lines, or a group of lines with a single line and vice versa.

FORMAT:

* C LINE-1 {, LINE-2 }

LINE-1: a line-address of the first (or only) line to be replaced. No operand means the current line.

LINE-2: a line-address of the last line to be replaced.

COMMENTS:

As for the APPEND and INSERT commands, the new lines must follow the command, each line terminated by carriage-return, and replacement is ended when typing (CTRL) L.

EXAMPLES:

* C 3,5 the lines 3-5 are changed with the lines following this command.

* C /TEXT/, \$ change the lines from the line which contains the character string 'TEXT' to the end of the text-buffer with the lines following this command.

3.4.4 The DELETE Command

PURPOSE:

This command may be used to delete one or several lines in the text-buffer.

FORMAT:

* D LINE-1 { , LINE-2 }

LINE-1 a line-address of the first (or only) line to be deleted. No operand means the current line.

LINE-2 a line-address of the last line to be deleted. No operand means that only the single line from operand 1 is deleted.

EXAMPLES:

*D1,\$ ↵ the complete text-buffer is deleted.

*D,\$ ↵ all lines from the current to the last line are deleted.

*D ↵ or D . ↵ only the current line is deleted.

*D/STOP/ ↵ deletes the first line with the character-string STOP.

3.5 *EDITING A SINGLE LINE*

This command may be used to insert, add, delete or replace characters on a single line.

The editing functions may also be invoked when typing a command-line or a new text line after the APPEND, INSERT, or CHANGE commands.

THE EDITING WORKS AS FOLLOWS:

A new line is built internally by moving characters from the line-buffer according to an edit character typed by the user.

An edit character is recognized by depressing the CONTROL-key together with an alphabetic character from the list below. For each edit character typed, one or more characters are moved from the old line to the new-line keeping track of the actual positions of both the old and new line.

A new line is terminated either by a carriage-return or one of the edit-characters itself. Some of the edit characters may request an additional character to perform its function, for example copying all up to a certain character. Several edit characters may be needed to perform the necessary modifications, until there are no more characters left or a terminator is typed.

Typing characters without depressing the CONTROL-key will simply replace the characters of the old line,

3.5.1 *The EDIT Command*

PURPOSE:

This command must be used to indicate the line in the text-buffer that should be modified.

FORMAT:

* E LINE {, L}

LINE: a line address for the line to be edited, using any of the formats described in Section 2. No operand means the current line.

L: an L if the line should be listed on the terminal before editing begins.

COMMENTS:

The line referred to is made current and listed if so requested, and the command is ready to accept edit-character for the first position.

When using label or string address, the first line that matches will be ready for editing.

The editing characters are described on the following pages.

3.5.2 The EDIT Characters

The following list describes the various edit characters, organized in stated functions.

Some functions require an additional character; this is illustrated by a X.

(CTRL) C	copies one character at a time
(CTRL) I	copies blanks to next tabulation stop (See TAB-command, Section 3.7)
(CTRL) ZX	copies all characters including the specified one
(CTRL) OX	copies all characters excluding the specified one
(CTRL) N	copies next word, all characters to the next blank
(CTRL) U	copies up to the next tabulation stop
(CTRL) H	copies up to the last character of the line, awaiting more characters
(CTRL) D	copies the rest of the line including the carriage return, terminating the EDIT command
(CTRL) F	same as (CTRL) D but the line is not shown during the copying
(CTRL) A	deletes last character typed or copied of the new line, responds a ↑
(CTRL) S	deletes the character of the old line, responds with %
(CTRL) G	deletes the next word of the old line, all the characters to the first blank, responds with %
(CTRL) W	deletes the last word of the new line, all the characters to the first blank, respond with \
(CTRL) Q	deletes all characters of the new line, responds with a ←
(CTRL) PX	deletes up to but <i>not including</i> the specified character responds with a % for each
(CTRL) XX	deletes up to <i>and including</i> the specified character, responds with a % for each
(CTRL) E	inserts characters from keyboard; the line is expanded with new characters until another (CTRL) E is typed to terminate insertion, responds with a < for the first and a > for the second (CTRL) E. <i>N. B.</i> The (CTRL) E's are not inserted in the text.
(CTRL) VX	<i>allows any edit character or control character to be accepted as normal characters</i>
(CTRL) T	types the rest of the old line and the new lines so you can see how they align each other, then awaits more edit characters.

(CTRL) R	types the rest of the old line and the new line and awaits more edit characters
(CTRL) Y	copies the rest of the old line to the new line, and starts editing again from the first position
(CTRL) K	erase page on display.

When listing lines at the terminal, QED will mark control characters in the line by preceding them with a &-symbol.

& I	means tabulating character
& M	means carriage return character
& L	means form feed character

Remember that such characters count only for one position in the line.

3.6 REPLACING A STRING OF CHARACTERS

3.6.1 The SUBSTITUTE Command

PURPOSE:

This command allows searching through the text for a given string of characters and replacing it with another.

FORMAT:

	* S: options/new string/old string/ {LINE-1,LINE-2 }
:options	one or more of the options listed below. Each option must be preceded by a colon (:).
new string old string	the text of the new string and the text of the old string. Both strings must be enclosed and separated by the same delimiter characters (/ ; etc.). This character must <i>not</i> be contained within the strings themselves.
LINE-1 LINE-2	a set of line-addresses used to limit the search-interval. If LINE-1 is omitted the search is performed around the text buffer until the current line reappears, as described under Section 2.3.

COMMENTS:

The search may be performed on a single line, a group of lines or all lines, the replacement may be performed on all occurrences, a number of occurrences or only one, both the old and the new line may be listed for verification, all under user control, determined by the option operand.

STRING DELIMITING CHARACTERS

The strings must be enclosed in and separated by the same delimiting character not within the strings themselves, and must not be a colon (:).

Blanks in the strings are taken as *part* of the strings. The strings may be of different lengths and the new string may also be empty.

3.6.2 Options For *SUBSTITUTE*

The options which may be invoked for the *SUBSTITUTE* commands may be the following:

- :number the number of replacements to be done. If not given, all occurrences of the old string will be replaced by the new
- :W list each line as it is found, surround the old string with a pair of quotes, then wait for the user to type:
 - a) a S to perform replacement and continue search
 - b) any character *except* S or colon which means do not replace but continue
 - c) any other option with the preceding colon (except : number) followed by a) or b)
- :L list the lines where replacement is done
- :V the combination of :W and :L
- :G do not list any lines

If no option is specified, the :G is assumed.

3.7 MISCELLANEOUS COMMANDS

3.7.1 Moving The Current Line Printer

PURPOSE:

To move the current line pointer.

FORMAT:

	* number
<i>number</i>	a positive or negative number may be typed, therefore making a new line current. Positive numbers without (+) sign.

EXAMPLE:

* 5↓	move current pointer five lines forward
* -5↓	move current pointer five lines backwards

3.7.2 VALUE of a Specific Line

PURPOSE:

To type out the line number of a specific line without making this line current.

FORMAT:

	* V.LINE
<i>LINE:</i>	a line address. .(point) or no operand means type line number of the current line.

EXAMPLES:

* V\$↓	types the line number for the last line in the text buffer.
* V/END/↓	types the line number for the first line that contains the character string END.

3.7.3 The TABULAR Setting

PURPOSE:

This command is used to both examine the current tabulator positions and to set them to the user's choice.

FORMAT:

- | | |
|-----|--|
| (1) | * T |
| (2) | * T number, n, n - - - |
| (1) | type out the current settings |
| (2) | set tabulation stop at the specified positions, maximum 12 stops |

COMMENTS:

The tabulator settings work in conjunction with the (CTRL) I edit character when typing, and the WRITE and READ commands for saving and retrieving text files.

NOTE:

If the text is to be started in the same columns as in the original text, note that the tabular setting must be the same when reading from the text file as it was when writing the text on the file.

The tabulator settings may be ignored in the WRITE and READ command by using the MODE command.

EXAMPLES:

- | | |
|------------------------|---|
| * T | types the current settings |
| 8,14,30,40,50,60,70,80 | |
| * T 7,14,30 | sets tabulator stops in column 7, 14 and 30 |

3.7.4 *Column Guide*

PURPOSE:

This command displays a record of 72 characters, where each digit signifies its column position (module 10) on the line. Multiples of 10 are denoted by points.

FORMAT:

* G ↓

123456789 . 123456789 . 123456789 . 123 (up to 72)

3.7.5 The MODE Command

PURPOSE:

This command is used both to examine and to set various parameters which the QED-program works upon.

FORMAT:

(1)	* M
(2)	* M operand (value), operand (value)
(1)	list the current settings of the parameters
(2)	set the value to the parameter named as operand

COMMENTS:

The parameters are as follows:

TI (n)	expands tabulation characters to blanks up to the next tabulation stop on input if n is not 0.
TO (n)	compresses blanks to tabulation characters up to the next tabulation stop on output if n is not 0.
PI (n)	Checks parity on input if n is not 0.
PO (n)	Checks parity on output if n is not 0.
B (n)	Converts input characters from terminal to lower case characters if not 0. If an upper case character is to be stored in the QED-buffer, (CTRL) B must precede the character. This modus is useful for those who have terminals with only upper case, but want to store the input to QED as lower case characters.
L (n)	lists line numbers in front of each line listed by the LIST commands if not 0.
E (n)	will terminate an input line on single LINE-FEED or single CARRIAGE RETURN if n is not 0. If 0, the input line is terminated on CARRIAGE RETURN - LINE FEED. May be useful if the message - TOO LONG LINE occurs. This modus has only effect if reading to an empty text buffer.

NOTE:

The parameters B and L are only available in the version QED 4.0 or later.

3.7.6 *The EXIT Command*

PURPOSE:

To exit from QED and return to the operating system.

FORMAT:

* EX

COMMENTS:

Remember to save your text file before you exit from QED.

3.7.7 The EXAMINE FILE-NAME Command

PURPOSE:

To display the file specified by the first READ command or the file name specified in the QED command.

FORMAT:

```
* X ↓
<name of file>
```

COMMENTS:

If the whole text buffer is deleted with the following command:

```
* D 1, $
```

and a new READ command is performed, the file name displayed will be the file name in the new READ command.

EXAMPLES:

@ QED TEST 1 14 words read	Read from file TEST 1 to text buffer
* X TEST 1	Display the file name
* W *	Write the contents of the text buffer back to file TEST 1
* D 1, \$	Delete the whole text buffer
* R TEST 2	Read from the file TEST 2 to the text buffer
* X TEST 2	Display the file name
* W *	Write the contents of the text buffer back to file TEST 2

4 ERROR MESSAGES

While using QED, the user may encounter certain warning messages which indicate conditions that the user may not be aware of. Following is a list of these messages and a description of what they mean:

STACK OVERFLOW STACK UNDERFLOW	These should never happen; however if they do, then something is wrong with QED.
PARITY ERROR AT LINE n	Indicates that, during a READ operation, a character with wrong parity was read at line n. The bad character is replaced with a ?.
NO MORE BUFFER SPACE	No more space for the text buffer. Current operation aborted.
?	A situation exists which QED thinks is impossible or which it does not know how to handle. This error happens when the user tries to use lines longer than 128 characters.
WRITE <file name> FORGOTTEN?	This message occurs at the EX command when a modified text buffer is not saved by the W command. The file name is identical to that displayed by the X command.
INCORRECT FORMAT	The given command does not have correct format.
STRING NOT FOUND	The string to be searched for is not in the text buffer.

5

VALUE OF CURRENT LOCATION

The symbol . (point) has as its value the number of the current line. It is important that the effect of the various commands on point are precisely specified. The following is such a specification:

UPON ENTRY TO QED (.) EQUALS 0.

APPEND	. = last line appended
INSERT	. = last line inserted
CHANGE	. = last line entered
DELETE	. = the line before the deleted line or lines
EDIT	. = the line being edited unless the line becomes deleted in which case . = the line before the line being edited
LIST	. = last line listed
NEXT	. = last line listed
PREVIOUS	. = last line listed
VALUE	. = not changed
n	. = . + n
READ	. = last line read
WRITE	. = last line written
SUBSTITUTE	. = last line in which a substitution was made

APPENDIXES

APPENDIX A

QED COMMANDS

<i>FUNCTION</i>	<i>SYNTAX:</i>
APPEND	* A LINE { {, D} { (LINE-1, LINE-2) } }
INSERT	* I LINE { {, D} (LINE-1, LINE-2) }
CHANGE	* C LINE-1 {, LINE-2 }
DELETE	* D LINE-1 {, LINE-2 }
EDIT	* E LINE {, L }
LIST	* L { LINE-1 } {, LINE-2 } or * L LINE-1 { (LINE-2, LINE-3) }
NEXT	* N number
PREVIOUS	* P number
VALUE	* V { LINE }
READ	* R FILE {, LINE } {, (LINE-1, LINE-2) }
WRITE	* W FILE {, LINE-1, LINE-2 } {, A }
SUBSTITUTE	* S :options/new string/old string/ { (LINE-1, LINE-2) }
EXIT	* EXIT
MODE	* M operand (value), operand (value), . . .
TABS	* T number, n, n . . .
EXAMINE	* X

NOTE:

In version QED 3.9 or older, the parenthesis () must be substituted with brackets [] except for the LIST command where angle brackets < > must be used.

APPENDIX B

EDIT CHARACTERS

(CTRL) A	Backspace one character (types ↑).
(CTRL) C	Copy one character from old line.
(CTRL) D	Copy rest of old line and terminate edit.
(CTRL) E	Insert string from terminal (types <or>).
(CTRL) F	Copy rest of old line (without typing) and terminate edit.
(CTRL) G	Skip next "word" (types % for each character skipped).
(CTRL) H	Copy rest of old line without terminating edit.
(CTRL) I	Insert spaces to next tabulation stop in new line.
(CTRL) K	Erase page on display.
(CTRL) L	Terminate edit at all times except after V ^C .
(CTRL) M	Terminate edit (CR).
(CTRL) N	Copy next "word".
(CTRL) Ox	Copy old line up to but not including character x.
(CTRL) Px	Skip characters in old line up to but not including character x (% is typed for each character skipped).
(CTRL) Q	Restart the edit from the beginning (types ←).
(CTRL) R	Retype old line and new line fast.
(CTRL) S	Skip one character in old line (types %).
(CTRL) T	Type the rest of the old line and the new line aligned, then await more edit characters.
(CTRL) U	Copy up to next tabulation stop.
(CTRL) Vx	Allows any edit character or control character to be accepted as normal characters.*
(CTRL) W	Backspace one "word" (types \).
(CTRL) Xx	Skip characters in old line up to and including the character x (% is typed for each character skipped).
(CTRL) Y	Append rest of old line to new line and edit the result.
(CTRL) Zx	Copy old line up to and including character x.

* When listing lines on the terminal, QED will mark control characters in the line by preceding them with a & -symbol.

APPENDIX C

ADDITIONAL INFORMATION FOR QED UNDER
STAND ALONE SYSTEMS

1, FILE NAME/NUMBER IN READ AND WRITE COMMANDS

a *device number* as in NORD Standard I/O-assignment, according to the following table:

NO.	DEVICE	READ	WRITE
0	Dummy		
1	Teletype	X	X
2	Paper tape reader	X	
3	Paper tape punch		X
4	Card reader	X	
5	Line printer		X
6	Dummy		
7	Teletype - 2	X	X

X = default device number

In the stand alone systems you may freely interchange between file numbers and file names, i.e., *W5 or WLINE-PRINTER are equivalent.

2, FORMAT OF READ COMMAND

* R FILE {, LINE } {, AMOUNT } {, R }

where:

FILE a file name or device number

LINE as described under the READ command

AMOUNT a number indicating how may lines or pages to be read. No operand means the entire file or until an end-of-file character (ASCII 27 octal, (CTRL) + W) is recognized. Reading a specified number of lines or pages is indicated by a L or P preceded by a positive number, i.e.:

5 L means 5 lines
10 P means 10 lines.

R an R to indicate that the file should be rewound before the reading starts. No operand means no rewind.

EXAMPLE:

* R 2, , 100 L read 100 lines from unit 2 paper tape reader appending to the last line.

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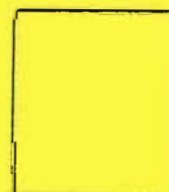


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