The

Write Stuff

Reference Manual

BB Writer 128

° 100% ML (40K). 63K text, 16K buffer
° Priced to sell. Not copy protected
° includes both 40 & 80-column versions
° Menu and command driven:
  (Help, Edit, Print, Load Menus)
° 90K of on-disk documentation:
  68 Help files (view any time)
  2-16 Help screens in RAM
  30+ Tutorials and sample files
° Includes printer customizer, menu
  maker, and other utilities
° 80-column preview shows underlining
  and other special features
° 250 Column page preview—scroll about
  entire page (80-column version)
° Quick preview to check part of text
° 60 user-definable keyboard macros
° Built-in outline generator
° Auto numbering of lists
° Delete, transfer, copy text
° 1 Pass double column output
  (All or part of text—as you see)
° Unique on-line macro feature: define
  100's of macros—reduce typing 25%
° Multi-text areas—have 1-10 documents
  in memory at the same time.
° Supports 17XX RAM Expanders
° Supports Super Graphix interface
° Interface with Superbase 128, et.al.
° Hunt/Search & Replace
° Batch Search & Replace
° Mail merge for form letters, etc.
° Split screen option (80-column)
° Sort on 1-10 columns (A-Z, Z-A)
° Capitals, Autocaps & Insert modes
° Dvorak⟷QWERTY keyboard toggle
° Hyphenator—easily add soft hyphens
° Memorize/recall position in text
° File encryption/decryption
° 21 Function calculator-insert answer
° Tabs (0-250). Decimal tabs
° Word/Paragraph count. Alarm clock
° Bytes used & bytes free
° All colors user-definable
° Key click, wide screen, Word-wrap
° All, some, or no keys repeat
° User-definable screen font
° All DOS commands supported

° 1581 Sub-directory support
° Disk directory. Selective DIRs
° Load/Verify/Save to disk or tape
° Load/Save to/from buffer
° Load/Create printer drivers
° Load/merge from directory
° Merge & Append files
° View files anytime
° Limit lines/strip RETURN marks
° Load/merge directories into text
° Supports double and dual drives
° Change drive device # (8 to 9)
° Auto scratch & SAVE feature
° Linked file capacity
° Built-in file converter:
  Read/Write SEQ/PRG/USR files
  ASCII⟷Screen Code⟷True ASCII
° Built-in file translation for:
  Speedscript, EasyScript, PaperClip
  and 11 other word processors.
° MACH128, et.al. compatible
° Special autoboot option:
  Autoboots custom format file, or
  user's current "ROUGH DRAFT" file.
° Dot matrix, LQ, & laser printers
° Justification & Right alignment
° Micro justification/line spacing
° Screen dump (print help screens)
° Multi-line headers and footers
° Odd/even-page header/footer/offset
° Odd/even page printing. Form feed
° Auto-page numbering—Arabic/Roman
° Alternate left/right pagination
° Auto-centering (even double-width)
° Multi-copy printing—print labels
° Print a given page—Skip to page X
° Margin release & auto-indent
° Relative margins & offset printing
° Soft hyphens. Active secondary addr
° Auto-linefeed, true ASCII options
° Forced page & wait options
° 32 User-definable printer macros:
  1 character = 1-32 character codes.
° Single character support for:
  Underlining   *Italics*
  Boldface print   Condensed print
  Reverse field   Double-width
  Emphasized   LQ/DQ toggle
  Subscripts   Superscripts

  Plus 6 user definable toggles

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The proofs for this manual were prepared and printed
using **BB Writer**, a **C-128**, and **Okidata Laserline 6**
LASER PRINTER.

Overview

The *Write Stuff 128* is a collection of word processing software. The main program, *BB Writer*, is a high productivity, feature-laden word processor for the Commodore 128. Although designed to meet the needs of advanced users, *BB Writer*, when used in "menu mode," is equally suitable for use by children and occasional users. *BB Writer* allows all essential edit-print-load-save features to be selected from menus. No special keyboard or embedded commands need to be learned. However, as the user gains experience, over 100 advanced features can be selected using keyboard and embedded commands.

BB Talker, a talking version of *BB Writer*, is available as an option. It works with *S.A.M.*, the *Software Automatic Mouth* and is therefore useable only in C-64 mode. Although not for the power user, *BB Talker* is a great word processor for childern (of any age). Complete documentation is on the disk.

If you don't have an RGB monitor (or even if you do) you may actually prefer the 40-column to the 80-column version for its easier to read text and 16 help screens. The 80-column version, on the other hand, offers more menu choices and a few additional features such as a "split screen" option and the ability to print text to memory where each page can be viewed by scrolling the screen about the page.

What's on the disk

There are three programs on *The Write Stuff 128* diskette that can be LOADed from BASIC:

1. LOAD"**BB**",8

The boot program, **BB**, is the first program on the disk, and is written in BASIC to allow users to customize it (see page 43). It will autoboot on power up or after a reset.

2. LOAD"**BB MENU MAKER**",8

BB Menu Maker allows you to create your own custom disk menus. Only main programs or loader programs are displayed. Program names may be edited or extended beyond the usual 16 characters, and comments may be added. When you finish creating the menu, the menu program will try to save itself as the first program on the disk. Even without knowing the load syntax of a program, (BASIC, ML, or Autoboot), you can cursor select and load it.

You must run this program in 64 mode. The menus created, however, will work in either 64 or 128 mode (both 40 and 80-column modes).

3. LOAD"**BB MANUAL MAKER**",8

BB Manual Maker prints a hard copy of all the help files. See page 39.

Basic Features

There are over two dozen tutorials and sample files on the program disk--more than could fit on one side, so check both sides of the disk to view all the sample files. From within *BB Writer*, select "Load" from the main menu and a list of tutorial files, beginning with "Getting Started," will appear. Plan on spending some time reading through the tutorials. This is only a reference manual--the tutorial section is on the disk. Some features, such as the position indicator, are best explained while the reader is looking at the screen and so are discussed only in the tutorials.

The following is a brief summary of basic operations with references to other parts of the manual. The rest of the manual covers specific features divided into four sections: Menu Options, Edit Mode Options, Keyboard Command Options, and Embedded Format Command Options.

Help (p. 7, 9)

1. Press SHIFT and Commodore keys at the same time and the first of 2-16 help screens (16 in the 40-column version--2 in the 80-column version) will appear.

2. Press either SHIFT or C to move from one screen to the next.

3. Press ↑ and select "Help," then select and call up one of the help menus. Point to one of the help files listed and press RETURN.

4. Use *BB Manual Maker* to print all the help files if you want to read through all of them.

5. Do not use the help files for primary information. Beginners should select "Load," not "Help," from the main menu and read the tutorials first.

6. Hold down the HELP key to view the current help screen.

Entering text (p. 6)

1. As soon as *BB Writer* loads, a flashing cursor will appear and you may begin typing. Press RETURN only at the end of paragraphs or to create a blank line.

2. If you make a mistake, use the INST or DEL keys, which work normally, to make minor corrections.

Cursor movement (p. 6)

1. The cursor keys work normally only within paragraphs. Use the F keys to move the cursor by word, sentence, paragraph, or screen.

2. Press the HOME key to move the cursor to the upper left corner of the screen. If the cursor is already in the "home position," pressing HOME will move the cursor to the beginning of your text.

3. Press CLR (SHIFT-HOME key) to move the cursor to the bottom of the screen (or end of text if visible). Press CLR again to go clear to the end of your text.

4. Press LINE FEED to move the cursor down one line.

5. You may also move the cursor using a joystick in port 2.

Inserting (p. 21)

1. Press INST (SHIFT-DEL key) to insert spaces.

2. Tap CTRL,INST (CTRL,SHIFT-DEL) to insert a line of spaces.

3. Press SHIFT,RUN/STOP key to insert several blank lines.

4. Tap CTRL,i to toggle insert mode on and off. In insert mode, a

space will be inserted automatically so that text will not be overtyped.

Deleting text (p. 16)
1. Press DEL key to delete the character to the left of the cursor.
2. Tap CTRL,DEL to delete the remainder of a line of text or select "Delete Lines" from the Edit Menu (80-column version).
3. To delete extra spaces: Tap CTRL, press the SPACE BAR, and all spaces to the right of the cursor will be removed.
4. Press the BACKARROW key to rub out text to the left of the cursor.

Erasing text (p. 10, 16)
1. Press ↑ and select "Edit" then "Clear Text" (or tap CTRL,CLR/HOME).
2. Select "Above" or "Below" to erase all text above or below the cursor, or "Erase all text" (80-column version) to do just that. Text erased can *not* be restored.

Eating text (p. 10, 18)
1. Press ↑ and select "Edit" then "Eat Text" (or tap CTRL,e). Text eaten can be restored.
2. Select "Paragraph" or press "p" to eat the paragraph the cursor is on. Likewise for sentence and word. Press "c" to eat characters.
3. Tap CTRL,SHIFT-E to eat text and add it to any text previously eaten.

Restoring text (p. 10, 25)
1. Press ↑ and select "Edit" then "Restore Text" (or tap CTRL,r) to restore any text previously eaten.
2. Move the cursor and repeat step 1 to make a copy of any text previously eaten.

How to delete/transfer/copy text (p. 10)
1. Eat text and forget about it to delete sections of text.
2. Eat text, move the cursor, and restore text to transfer it elsewhere.
3. Eat text, restore it, move the cursor, and restore again to copy text.
4. Eat text, load a file, and "Restore Text" to transfer text between files.

Saving text (p. 13, 26)
1. Press the ↑ key, select "Save," and enter a file name. *The Write Stuff* disk is nearly FULL and should not be used to store text files.
2. In command mode: Tab CTRL, then "s" and enter a file name.
3. After entering a file name, press RETURN to save it as-is, or SHIFT-RETURN for the Save Menu which will allow you to save it as a SEQ, PRG, or USR file containing PET ASCII, true ASCII, or screen code.

Loading text files (p. 13, 23)
1. Press ↑ and select "Load" for the Load Menu. Point to a file name and press RETURN to load it, "s" to scratch it, "r" to rename it, or "v" to view it. Press BACKARROW or ESC to ESCape.

2. If the cursor is at the beginning of your text, you can also tap CTRL, then "1" (letter 1, not 1) and enter a file name.
3. Note: Any text in memory will be erased before a file is loaded.

Merging text files (p. 23)
Position the cursor where you want the text to merge and tap CTRL,1.

Appending text files (p. 23)
Just move the cursor to the end of your text and tap CTRL,1.

File Translation (p. 17)
1. To load a non-BB file: HOME the cursor, tap CTRL,1 (el) and enter the file name, then press SHIFT RETURN instead of RETURN.
2. Select the appropriate word processor from the menu, or press "g" to load a generic file which could be a SEQ, PRG, or USR file containing PET ASCII, true ASCII, or screen code.

Disk Directory (p. 17)
1. Tap CTRL,4 or CTRL,$ for a disk directory
2. Press SHIFT to pause, or ESC to abort.
3. While holding the SHIFT key down, you may use the cursor keys to point to a file and then press "v" to view it, or RETURN to load/merge/append it depending on the current cursor location.

Previewing your text (p. 10, 25)
1. Press ↑ and select "Print" from the main menu (or just press "p"). In command mode, tap CTRL,SHIFT-P.
2. Print to Screen to see an 80-column preview.
3. Hold the SHIFT key down to pause printing or ESC to abort.
4. While pausing, press "b," "£," or Commodore "B" to change the default colors.
5. Print to Memory if your text width is greater than 80 columns. A page will be displayed and you may scroll the screen vertically and horizontally to view it. Press "n" to view the next page.

Printing your text (p. 10, 24)
1. Press ↑ and select "Print" from the main menu or tap CTRL,p.
2. Select "Printer" and text will be sent to the printer.
3. If strange things happen, see page 44 for help with setting up your printer.
4. Hold the SHIFT key down to pause printing or ESC to abort.

Formatting your text (p. 30)
1. Press ↑ and select "Print" to call up the Print Menu. Use CRSR UP and CRSR DOWN keys to point to and change any of the defaults. (See page 11.)
2. Format commands or directives may also be embedded in your text. (See page 26, 30-38 and the tutorial file "Format Commands" on disk, as well as the "Printer Test" and "Printer Macros" sample files.)

Screen colors and format
You can easily change the appearance of the screen. Tap CTRL and press:

.w to toggle word-wrap on and off.
f to toggle between character sets in 40-column mode,
   or show SHIFTED-SPACEs in 80-column mode.
b to change background color.
£ to change letter color.
* to toggle the "edge effect."
SHIFT * for the special wide screen (40-columns).
SHIFT B to change the menu color.
SHIFT £ to change the menu letter color.
C £ to change position color.
C c to change the clock color.
C b to change border color (40-column version).
ALT to allow for horizontal scrolling.

   While viewing the Print Menu, press b to change the box color.
When viewing the help screens, press b (* in 40-column version) and
£ to change screen and letter colors. The colors of the 80-column
preview screen can also be similarly changed. To save the changes
you make, tap CTRL,x and select "SAVE Defaults."

Word/phrase macros (p. 23)
1. Tap CTRL,m to turn on the macro feature.
2. Press SPACE or RETURN, then any of the one or two character abre-
viations shown on page 48.
3. Press SPACE and the word or phrase the abreviation has been
defined to equal will appear.
4. Tap CTRL, then SHIFT-M and the existing word macro definitions
will appear. You may then edit or add to them. Tap CTRL,Sh-M again
when you finish. If you plan to save any new definitions, erase all
the text before calling up the word macros.

Exit to BASIC/BB Customizer & Saving Defaults (p. 19, 27)
1. Tap CTRL,x to exit to BASIC, exit to BB Customizer, or SAVE
current defaults.
2. If you accidently reset your computer, POKE 787,234 and SYS 7250
to re-enter without loss of text (if reset occurred while in text
area 1).

Using BB Writer

When the cursor is flashing on the screen you are in edit mode and BB Writer is waiting for you to press a key. Most keys work normally, but a few keys serve some special function. One is the uparrow key. Pressing "↑" allows you to select from five main menu options ("Help Edit Print Save Load"). In the 80-column version, nine additional options are available.

Another special key is the control key. The CTRL key toggles you in and out of command mode where over 100 options are available for doing advanced word processing. Beginners should not be alarmed by the large number of keyboard and embedded command options; basic word processing can be done using only the menus and the following edit mode options.

Edit Mode Options

Help Screens

In edit mode, the help screens can be called up instantly at any time by pressing SHIFT and the Commodore logo (C) key at the same time. To flip from one page to the next, press either SHIFT or C key alone. In the 40-column version, press 0-9 and a-f to go directly to one of the 16 help screens. Press the HELP key to view the current screen.

The Keyboard

With only two exceptions, pressing any letter, number, punctuation, or Commodore graphic key will cause that character to appear on the screen, and later be sent to the printer. One exception is the uparrow key; to print an "↑" character, hold down the Commodore logo key and press the uparrow key. The other exception is the BACKARROW which is used to represent a RETURN mark. Since BB Writer can send any control code (0-255) to a printer, printing a BACKARROW is a matter of defining a special print key to send a 95--the CBM character code for a BACKARROW--to the printer. (See page 38.)

The following ten non-printing keys serve special functions.

1. CRSR keys.
The cursor keys behave normally within a paragraph, moving up, down, right, and left. The cursor cannot move to areas of the screen outside a paragraph. If you move the cursor down and push against the bottom of the screen, the screen will scroll up by one sentence. Pushing against the top of the screen will scroll the screen down by one sentence.

2. BACKARROW key.

In edit mode the BACKARROW key is used as a backspace key. The backspace works like the space bar only in reverse. It turns the character to the left of the cursor into a space. When not in edit mode, the BACKARROW key can usually be used instead of the ESC key to return you to edit mode.

3. HOME key.

Pressing the HOME key moves the cursor to the top left corner of the screen--which is exactly what it normally does. If you press the HOME key again, however, the cursor will move to the beginning of your text (if it was not already there).

4. CLR key.

Pressing the CLR key will not clear the screen. Instead it moves the cursor CLeaR to the bottom of the screen (or end of text if visible). Pressing it again will move the cursor CLeaR to the end of your text (if it was not already there).

5. STOP key.

Same as TAB key. If the cursor is near the beginning of a paragraph, pressing STOP or TAB will cause the cursor to RUN to and STOP at the next tab stop. If the position indicator displays the paragraph number the cursor is on, pressing STOP will have no effect.

6. RUN key.

If you press SHIFT and the RUN/STOP key, several blank lines will be inserted at the current cursor position. This feature is useful for creating a space to add a sentence or two to a paragraph.

7. ALT key.

If the current text width (current page width minus left & right margins) is wider than the screen, pressing the ALT key will allow you to view text up to 250 columns wide by using the cursor keys to scroll the screen horizontally or vertically. Reverse video characters are not shown so this feature allows you to quickly view a section of text to see where word-wrap occurs and hyphenate words as needed without previewing the entire file. Tables of data could also be viewed to check for proper alignment.

8. HELP key.

Press and hold down the HELP key to view the currently selected help screen. This is quicker than pressing SHIFT/Commodore key but only the current screen can be viewed.

9. LINEFEED key.

Press LINEFEED to move the cursor down to the beginning of the next line.

10. NO SCROLL.

When printing or listing a directory, you can use the NO SCROLL key instead of the SHIFT key to pause.

Function Keys

The special function keys (F1-F8) may be used to move the cursor quickly about your text. F1 moves the cursor to the next word (any text preceded by a space). F2 (SHIFT-F1) moves the cursor to the previous word. F3 and F4 moves the cursor foward or back by sentence (any text ending in a period, exclamation, or question mark). F5 and F6 moves the cursor forward or back by paragraph (any text ending in a RETURN MARK). Pressing F7 displays the next screen--very useful in proofreading your document. F8 displays the previous screen (actually the previous 760 characters). Use F7 and F8 to move rapidly through your text.

F1 CURSOR TO NEXT WORD
F2 CURSOR TO PREVIOUS WORD
F3 CURSOR TO NEXT SENTENCE
F4 CURSOR BACK TO PREVIOUS SENTENCE
F5 CURSOR FWD ONE PARAGRAPH
F6 CURSOR BKWD ONE PARAGRAPH
F7 DISPLAYS NEXT SCREEN
F8 DISPLAYS PREVIOUS SCREEN

Menu Options

(handwritten annotation: Key callouts ... ? Page ?)

Help Menu

Pressing the ↑ key and selecting "Help" calls up another bar menu from the program disk that displays the names of three help menus. Each help menu, in turn, displays a list of help files. Just use the cursor keys to point to the help file name you want and press RETURN.

The help files summarize the on-disk tutorials, so you should read the tutorials first and use the help files (or this manual) for ready reference.

The help menu system was designed for future expansion or user customizing. Instead of providing help on the use of *BB Writer*, selecting "Help" could provide help with grammar, punctuation, or usage. A student trying to decide whether or not to use a semicolon at a certain point could select "Help," then "Punctuation," and finally "Semicolon" for help on the uses of a semicolon.

To create your own custom help menu system, start with a blank formatted disk. Load the file "help.w" (or "help.8" for for the 80-column version) from the **BB** program disk. The file name does not start with a hyphen, so tap CTRL, then "l" and delete the hyphen. Now enter "help.w" as the file name. Use this file as a model; it contains the initial menu choices. Note that the first and last character must be a SHIFTed SPACE. A SHIFTed SPACE may also be used to link words together. The number of menu options is limited only by the number you can fit on a line. After you have created your own help options file, save it under both the file names "help.w" (or "help.8") on your work disk.

Now load the first help menu, the file "help0," (or "help80) from the program disk. Note the "j,p" <RETURN MARK> at the beginning of the file. The screen code value for "j" is 10, which tells **BB Writer** that the first help file name starts on line 10 (counting 0,1,2...). The screen code value for "p" is 16, which is the last line plus one. Note that all help file names must end with a SHIFTed space, and that the actual file name begins with the menu number (0,1,2...). If the second help menu ("help1") lists "Semicolon," the actual file name would be "1Semicolon." After you have finished the first help menu, save it as "help0," and do the next. Study the existing help system until you're clear about how it all works.

The last step is to write all the help files whose names are listed by the menus. Load some of the existing help files and use them as models. Turn off word-wrap when writing the files and end each line with a RETURN mark if necessary. Even though the *BB Writer* help files are less than one screen in length, files may be longer--after the screen is filled, the user will have to press a key to read the rest of the file.

Edit Menu

The INST and DEL keys can be used for changing a few characters, but selecting "Edit" from the main menu allows you to make changes in a big way. The Edit Menu allows you to "Eat Text," "Restore Text," "Clear Text," and, in the 80-column version, to "Delete Lines" and activate the special "Hyphenator" feature.

The first two options allow you to delete, copy, or transfer text by word, sentence, or paragraph. In short, you can gobble up text and forget about it (delete it); spit it back out wherever you want (transfer it); or you can eat it and immediately regurgitate it, then move the cursor and up-chuck it again somewhere else (copy it). The imagery is crude, but is easy for children (and others) to understand. It is always easier to understand something in terms of what you already know.

Children can be told to think of the cursor as a little mouth (or a square straw) that can suck up words, sentences, and paragraphs. When you eat something it doesn't just disappear, does it? No, it goes into your stomach. Well, the computer has a stomach too, and when you eat text it goes into this stomach. If the computer has just eaten a bunch of text, you can make it barf it back up. Just select "Restore Text" and the computer will (at this point stick out your tongue, insert finger, and make a retching noise) and all the text it ate will come out the little mouth.

The contents of the stomach are preserved during a load or save. One way to transfer text between documents is to eat text from one, load the other file, and restore text.

Select "Clear Text" and you will be asked if you want to erase all text (in 80-column version) or only text above or below the cursor. When text is erased in this way, it cannot be restored.

Print Menu

Selecting "Print" calls up the "Print Menu." Do you want to print to an 80-column screen to preview your document, or output your text to a printer? Use CRSR right/left to choose, then press RETURN. If you choose "Printer" but have no printer, or have a Commodore printer that's not turned on, then output will go to the screen instead. If you have a non-Commodore printer that's not turned on, the message "Printing" may appear but nothing will happen. Press the ESC key to return to edit mode.

In the 80-column version you can print to memory, then scroll the screen about to examine a page. Press "n" to go to the next page. Use the four cursor keys at the top of the keyboard to scroll the screen, and the two lower CRSR key to move the cursor. Press unshifted "<" and ">" to move the cursor left and right one character.

You can also **print** (send) your text **to disk.** Few users would ever want to, however if you press "d" you will be asked for a file name and all output will go to that file.

From the Print Menu you can press CRSR up/down to point to any of the following 17 defaults and then press the "+" or "-" keys to change the default.

1. Right Margin.

In *BB Writer* the right margin is the number of characters between the right edge of the text and the right edge of the paper. A right margin of 10 equals about an inch of white space. (Note: some word processors would require you to set a so-called right margin of 70 to produce a true right margin of 10, assuming a text width of 80.)

2. Left Margin.

For a one-inch left margin, set the left margin to 10 (assuming 10 characters per inch), or 15 for a one and a half inch margin.

3. Top Margin.

If the top margin is set to zero, printing will begin at the very top of the page. A top margin of 10 will cause 10 blank lines to be printed before any text (except a header) is printed (on the 11th line).

4. Bottom Margin.

The bottom margin is the number of blank lines to be printed at the bottom of a page.

5. Column Margin.

To print text in double columns, just set a column margin greater than zero. A column margin of four leaves a space of four characters between columns. When printing columns, the right margin setting is ignored, since the second column is a mirror image of the first. If there is not enough text to fill the second column, it will, naturally, be blank. To columnize short documents, shorten the page length.

6. Line Spacing.

Single spacing? Double spacing? Triple spacing? Take your pick.

7. Device Number.

A printer device number can be set at any number between two and seven. Most printers use a device number of four.

8. Secondary Address.

A secondary address of seven causes text to print in upper/lower case on Commodore printers. A secondary address of zero causes lower case text to print in upper case, and upper case text to print as graphic characters. Some interfaces recognize other secondary addresses (0-255 can be used).

9. Page Length.

Most printers print 66 lines on an 11 inch page. Set the page length to 84 if you're using legal size (14 inch) paper.

10. Page Width.

Most printers print 80 characters on an eight and one half inch page. If you are printing elite characters (96 per page) set the page width to 96. The width is measured in characters, so for condensed print the page width would be set to 132. The maximum page width is 254 characters.

11. Auto Linefeed.

Most printers feed the paper up one line when a carriage return [CHR$(13)] is received; others don't. If your printer doesn't, then all text will be printed on the same line. To avoid this, turn auto linefeed on.

12. True ASCII.

Text is normally sent to the printer as Commodore (PET) ASCII in which the letters a-z are represented by the numbers 65-90. If you have a non-Commodore printer and your interface doesn't handle the conversion (or is in transparent mode), then turn true ASCII on, and **BB Writer** will do the converting. If lower case text prints in capitals, then you need to turn on true ASCII.

13. LQ Printer?

If you are using a daisy-wheel printer, you need to indicate that fact. The reason is that daisy-wheel printers do underlining and boldface printing (if they do it at all) differently than a dot matrix printer. Underlining is done by the backspace method, and boldface by backspacing and printing the character again, almost but not quite at the same place.

14. Wait between pages?

If you are using single sheet paper, you will want *BB Writer* to pause between pages so that you can insert another piece of paper. During preview, printing to the screen will also pause; you must press a key to continue.

15. Number of Copies?

Just select the number of copies (1-254) you want. But please note that printing stops when the end of the text is reached. The last page is not ejected (which is sometimes desired), so the second copy would not print at the beginning of the next page. To avoid this you can either have *BB Writer* wait between pages and manually advance the last page, or you can define a footer or use a forced page command at the end of your document.

16. Justification.

Justification makes both right and left margins vertically straight. Normally the right margin is ragged, but with justification on, spaces are added between words so that the right margin is even.

17. Start at Page Number?

Printing normally starts at page one, but let's say you just printed out a 16-page document and noticed that on page 12 there was a gross misspelling. You'll need to print page 12 again. To do so, enter a 12 to start printing at page 12. Press the ESC key to abort printing after page 12 has printed. You may want to "Wait between Pages," especially if your interface has a large buffer.

Save

Select "Save" and you will be asked to enter a file name. **BB** text file names should begin with a hyphen, so one is provided automatically; you can always delete the hyphen if you want. Press RETURN without entering a name to abort and return to edit mode. To save your document as a sequential file (**BB** files are normally program files), press SHIFT-RETURN instead of RETURN after entering the file name.

Load Menu

Select "Load" and a menu of **BB** files (any files beginning with a hyphen) will be displayed. Use the cursor keys or a joystick in port 2 to point to the file you want to load and press RETURN or the fire button. You can also point to a file name and press "v" to VIEW it, "s" to SCRATCH the file, or "r" to RENAME the file. Command mode provides other load options (see page 23). See page 17 for information on how to load files from other word processors.

The number of files the Load Menu can display is limited. If it fills up, start a new data disk.

The 80-column version offers the following addtional menu options.

Find

Select "Find" to "Search & Replace" an occurence of one word or phrase with another, or to "Hunt for:" a given word/phrase which you can then "Replace with?" another word/phrase. Once a hunt and replace phrase has been defined, you can select "Hunt" to locate the phrase and "Replace" to optionally replace it.

Define

Select "Define" to create extra text areas, toggle the split screen feature on and off, define a keyboard macro, set the alarm clock, or define the type of drives you are using.

X - i t

Select "X-it" to exit to BASIC, call up *BB Customizer*, or save current defaults (be sure the program disk is in the drive).

$ X ? = @ *
Select "$" for a disk directory, "#" for the calculator, "?" to encrypt/decrypt a file, "=" for a word count and memory check, "@" to send a disk command, and "*" to toggle the edge effect on/off.

Command Mode Options

Keyboard commands allow you to bypass the menus and usually save a few key strokes. They also allow you to access dozens of features not available from the menus.

To send a keyboard command, you must first be in command mode. To enter command mode tap the CTRL key once--DO NOT hold the CTRL key down. To exit back to edit mode, tap CTRL again or press the BACKARROW, ESC, or RETURN key.

When you enter command mode, the cursor stops flashing and appears as a reverse video character. Although you cannot enter any new text, the cursor can still be moved using the cursor keys. CRSR right and left keys move the cursor by word; CRSR up and down moves the cursor by sentence.

BB Writer recognizes over 60 keyboard commands, each of which is explained below. Instructions assume the user is in edit mode, so if you are in command mode already, don't tap the CTRL key.

Alarm Clock CTRL,j
1. Tap CTRL,j to set the alarm function.
2. Periods of 10-90 minutes may be selected. At the selected time, a bell will ring and the timer will be reset.

ASCII Toggle CTRL,a
1. Tap CTRL,a (don't hold the key down) to convert the text in memory from normal screen code to PET ASCII. Repeat to convert back to screen code.
2. Tap CTRL, then press and hold the "a" key down to convert from screen code to true ASCII. Repeat to convert back to screen code (this removes all RVS characters, which may sometimes be desired).

BB files are normally program (PRG) files containing screen code characters. PET or Commodore ASCII and screen code are just two different ways of coding characters. For example, in PET (CBM) ASCII the letters a-z are represented by the numbers 65-90, whereas in screen code, a-z are assigned the numbers 1-26. In true ASCII, a-z are represented by the numbers 97-122.

This feature is a carry over from the 64 version. The 128 version allows you to load and save non-BB files by menu. After typing in a file name, just press SHIFT-RETURN instead of RETURN to call up a file conversion menu (see page 17).

Autobooting of files CTRL,SHIFT-A
1. Tap CTRL,Sh-A to toggle the autoboot feature on and off.
2. Tap CTRL,x and select "SAVE Defaults" to save current defaults. The next time you boot up *BB Writer*, the file "bb format" will be automatically loaded for you. The "bb format" file can contain all the embedded RVS format commands and default values that you care to use, including printer macro definitions. If you mainly write letters, you could even include your name, address, and salutation.
3. Before using the autoboot feature, load the "bb format" file, customize it to your own preferences, and then resave it. Since you can make as many copies of *BB Writer* as you personally feel a need for, you could make one copy with a format file for letters and another for reports. If you have more than one printer, create more

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than one custom copy.

4. If you don't finish a document, you will not want to autoboot the format file, but the rough draft you had already started. Well, if you called the file "-rough draft," you're in luck. You merely have to hold down the SHIFT key (or use the SHIFT LOCK) just before *BB Writer* finishes loading and the file "-rough draft" will be loaded instead of "bb format." So, until you finish a document, call it "-rough draft." Then, if you don't finish it in one sitting, it can be autobooted the next time. When the document is finished, give it an appropriate name and SAVE it on a data disk for safekeeping. In this way the **BB** program disk will only have to accommodate your current rough draft file.

Multiple format files

1. Hold any alpha-numeric key down just before *BB Writer* finishes booting up and the file "-file x" will load where "x" is the key being pressed.
2. The file could be any text file, so you could put a couple of dozen form letters on the disk and call them up as needed.

Autocaps Toggle CTRL,SHIFT-↑

1. Tap CTRL, then press SHIFT-↑ to toggle autocaps on.
2. Type any letter a-z and if it is preceded by a RETURN MARK or by two spaces, it will be capitalized. The convention is to separate sentences with double spaces, so this feature automatically capitalizes the first letter of sentences for you.

Background Color CTRL,b

Tap CTRL, then "b" to cycle through all possible background colors.

Background Menu Color CTRL,SHIFT-B

Tap CTRL, then SHIFT-B to cycle through all menu line background colors on 40-column version, or the tab indicator line on the 80-column version.

Border Color CTRL,Ȼ B

1. Tap CTRL, hold the Commodore key down and press "b" to cycle through all possible border colors on the 40-column version.
2. In the 80-column version, the spaces that are not part of your text will be colored IF the edge effect is on (see page 19).

Calculator CTRL,3

1. Tap CTRL,3 to enter the calculator.
2. Enter any calculation that BASIC could do in immediate mode. Examples: 2+2, 3*8, 8-(5/2), 2*SIN(.89).
3. Press RETURN and the answer will appear.
4. Press RETURN to exit from the calculator, ↑ to do another calculation, or "@" to insert the answer into your text.

Change Case CTRL,c or CTRL,SHIFT-C

Tap CTRL, then "c" and the character under the cursor will change case. If it was a capital, it will be changed to lower case; lower case letters become capitals. The cursor will also advance one character, so if you hold the "c" key down, you can change the case of entire words, sentences, or paragraphs. This feature is used to

change the case of text you have already typed in.

Clear Text CTRL,HOME
Instead of selecting "Clear Text" from the Edit Menu, you can tap CTRL and press the CLR/HOME key. You may then choose to erase all text or only text above or below the cursor. Text erased in this manner cannot be restored.

Clock Color CTRL,Ͼ C
Tap CTRL, hold the Commodore logo (Ͼ) key down, press "C" and the timer's character color will change.

Decimal Tabs CTRL,d
1. Tap CTRL,d to toggle decimal tabs on. (Turn off when not using to avoid unintended, accidental re-alignment of numbers.).
2. Use the TAB key or RUN/STOP key to tab to a tab stop and type a number. The cursor will remain in the same position until a decimal (period or other non-numeric character) is typed. This feature allows columns of numbers to be entered with the decimals lined up vertically.
3. The following illustrates what happens after each character of the number "426.78" is entered:

<div align="center">

4
42
426
426.
426.7
426.78
↑
Decimal tab

</div>

Delete a Line CTRL,DEL
The remainder of a line can be deleted by tapping CTRL and pressing the DEL key, so to delete the entire line, put the cursor at the start of the line. More than one line can be deleted by repeatedly pressing DEL. Text deleted in this way cannot be restored, whereas text that is eaten can be. However, it is sometimes more convenient to delete text by line. Lines containing SHIFTED SPACES will be deleted only up to the SHIFTED SPACE.

Deleting blocks of text CTRL,- & CTRL,SH -
1. To delete a range of text, embed an RVS "*" at the beginning and end of the section (block) of text you want to delete
2. Tap CTRL,- (hyphen) to do the deletion. Text deleted in this way is irretrievably lost.
3. If you tap CTRL,SH -, the range of text, if less than 16K, will be deleted and stored in the buffer from which it may be recalled. For large blocks of text, this method is faster than eatting by paragraph.

Disk Commands CTRL,↑
1. Tap CTRL,↑ then RETURN to read the error channel (if drive light is flashing red).
2. Tap CTRL,↑, then enter any of the following DOS commands.

i0	Initialize drive 0
v0	Validate disk in drive 0
s0:name	Scratch "name"
n0:diskname,id	Format a blank diskette
n0:diskname	Clear disk directory
r0:new=0:old	Rename a file
c0:new=0:old	Copy a file
/0:partition	Open sub-directory on 1581 drive

The "0" may be omitted if you are not using dual drives (e.g. r:new=old). Be sure the first character is a lower case character.

Selective Directories CTRL,↑
1. A selective directory can be viewed by tapping CTRL,↑ and entering "$0:x*" where "x" is the first character in the file name.
2. A "$0:-*" would list only BB text files.
3. A "$$" would list the number of blocks free.

Disk Directory CTRL,4
1. Tap CTRL,4 or CTRL,$ for a disk directory
2. Press SHIFT to pause, or ESC to abort.

Loading a disk directory CTRL,1,$
1. Postition cursor where you want the directory to load.
2. Tap CTRL,1 (el as in l-oad) and enter "-$" or "$" as the file name (no quotes).
3. The directory will be loaded, merged, or appended depending on the cursor position, so position the cursor before loading the directory.
4. A selective directory can be loaded (e.g. "$0:-*" to read only BB files beginning with a hyphen).
5. To specify drive 8 or 9, enter "$8:*" or "$9:*" as the file name.

Loading a file from the directory CTRL,4 or $
1. IMPORTANT: To LOAD a file, position the cursor at the very start of your text. Otherwise the file will be merged or appended to the current text. If you use this feature, expect to make this mistake.
2. Tap CTRL,4 to call up a disk directory.
3. Press SHIFT to pause the listing and a pointer will appear.
4. While holding the SHIFT key down, use the cursor keys to point to the file you want to load and press RETURN (or "V" to view).
5. If the file is not a **BB** file (PRG file with a file name beginning with a hyphen) then the file translator is called up.

File conversion
1. Non-BB files are easiest to load from the directory (HOME cursor, call up the directory, point and press RETURN). If the file is not a **BB** file, the file translator is automatically called.
2. If the file you want to load was not created using one of the 14 word processors listed, try each anyway--one may work.
3. If the file contains no embedded format commands, select "g" for

generic file.
4. You will be asked to identify the file as PET ASCII, true ASCII, or screen code.
   a. If the text looks OK as-is, then it is screen code.
   b. If lower case characters appear as graphic characters, select "True ASCII."
   c. If lower case characters appear as capital letters, select "PET ASCII."
5. If the file contains extra RETURN marks to limit lines to a maximum length, you can have them stripped away. The stripping process is not perfect and may take several minutes on long files.
6. If the file contains unwanted characters, you can use the batch search and replace feature to delete or replace them.

Drive Type? CTRL,SHIFT-D
1. Tap CTRL,SHIFT-D to change the default from one drive to double or dual drives.
2. Tap CTRL,4 for a directory of drive 9 or 1, and CTRL,$ (SHIFT-4) for a directory of drive 8 or 0.
3. If you select "Devices 8,9" you will be given an opportunity to change the device number of one drive from 8 to 9. Leave the **BB** program disk in drive 8 or 0; drive 9 or 1 will become your work drive. Help files will load from drive 8 or 0, while load, save, directory, and disk commands will default to drive 9 or 1.
4. Dual drive users must specify drive number when naming files or executing disk commands (e.g. "s1:scratch file").

Eat Spaces CTRL,SPACE BAR
   This is a very useful command. After inserting a bunch of blank lines by pressing SHIFT-RUN/STOP and adding some new text, tap CTRL and then the SPACE BAR to eat up the remaining spaces. This technique of adding text is faster that using insert mode.

Eat Text CTRL,e
1. As an alternative to pressing "↑" and selecting "Edit," then "Eat Text," you can tap CTRL and press "e" instead. You may then eat text by word, sentence, or paragraph in one of two ways: by selecting from the menu, or by pressing "w" or F1 for word, "s" or F3 for sentence, or "p" or F5 for paragraph. Try out the various alternatives to find the one that best suits you. You may find that pressing ↑, RETURN, RETURN (the defaults are "Edit" and "Eat Text"), then one of the function keys will prove the fastest method.
2. Although not a menu choice in the 40-column version, you can press "c" to eat characters. This feature can be used as a forward delete.
3. The order in which text is eaten is important. Eat text first by paragraph, then by sentence, and finally by word. If you were to eat a few words from the middle of a paragraph, then ate the paragraph, and finally you restored the text, it would no longer be in the order you wrote it. The words from the middle of the paragraph would appear first, followed by the rest of the paragraph.

Eat More Text CTRL,SHIFT-E
1. Tap CTRL, "e" to eat text, the message "Buffer Emptied" appears at the bottom of the screen.
2. To preserve the contents of the buffer and add more text to it, tap CTRL and press SHIFT-E instead of "e". In this way you can gather text from different parts of your document into one block before restoring it.

Edge Effect CTRL,*
   Tap CTRL and press "*" to toggle the "edge effect" on and off. When word-wrap occurs or when you enter a RETURN MARK, the remainder of the screen line is filled with SHIFTed spaces. With the edge effect on, the SHIFTed spaces appear as reverse video spaces having the same color as the current border color. This allows you to see the number of true spaces that will actually print at the end of each line.

Encryption CTRL,?
1. Tap CTRL, then "?" and indicate that "Yes" you do want to encrypt your text (make it so no one can read it).
2. Enter a secret code word or phrase and press RETURN. Your entire text is made unreadable. You may now save the file and no one will ever know what you wrote.
3. Repeat steps 1 and 2 using the *exact* same code word or phrase to decrypt (make readable) a previously encrypted file.
4. For safety's sake, you might record your secret code somewhere-- just in case.

Exit to BASIC CTRL,x
1. Tap CTRL,x to exit to BASIC.
2. If you accidently reset your computer, POKE 787,234 and SYS 7250 to re-enter without loss of text.

Exit to BB Printer Customizer CTRL,x
1. Tap CTRL,x to exit to *BB Customizer*.
2. From within *BB Customizer*, select "Exit to BBW" to return to *BB Writer*. Current text is unaffected.

Saving Defaults CTRL,x
1. Make sure the *TWS* program disk is in the program drive.
2. Tap CTRL,x and select "Save Defaults"

Extra Text Areas CTRL,Sh +
1. To divide text memory into multiple areas, tap CTRL, then SHIFT-PLUS. A line numbered 1-9 represents the main 63K text area. Press 1-9 to toggle any or all of the 9 partitions on or off. Each partition represents a little over 6K of text area, so if you pressed 5, two text areas of about 30K each (5*6) would be created. You should setup the text areas before you begin writing/loading.
2. To move between the areas, tap CTRL,q for the next area or CTRL,SHIFT-Q for the previous area.
3. You can easily eat text from one area, switch to the other, and restore the text there.
4. You can print or save a part of your text by simply moving it to another text area (assuming it's empty) and then print or save it.
5. The Kernal LOAD routine is used to allow for fast-loading of

files. A disadvantage is that no error checking is done to avoid loading a file that is too large. Error checking is done during APPEND, so when in doubt, append to a single character. Loading a file that is too large will result in loss of text in the next text area.

Font Toggle CTRL,f
1. Tap CTRL, then "f" to toggle between the standard CBM character set and a user-definable one (40-column version only). With "Ultrafont" (*Compute!'s Gazette*, September 1986), you can load "bb font" and change the shape of the characters to suit yourself.
2. In the 80-column version, CTRL,f toggles only one character--the SHIFTED SPACE, thus making it either visable or invisable. The 80-column character set was created using "Excelfont 80" (*Compute!'s Gazette*, June 1988).

Hortizontal scrolling mode SHIFT,CTRL or ALT
1. Press and hold the ALT key down or press SHIFT then the CONTROL key to view your text in up to 250 columns.
2. Use the CRSR keys below the RETURN key to scroll up and down, and right and left in short increments.
3. Use the cursor right and left keys at the top of the keyboard to scroll right and left in larger increments.
4. The text or column width will be calculated from the current page width and margin settings.
5. RVS characters are not displayed so you can see where word-wrap will occur during printing and add soft hyphens as needed.
6. Relative margins, margin release, and auto-indenting are not shown, so word-wrap may not occur exactly as shown. Still, this form of previewing is much faster than previewing the entire file and is normally accurate.

Hunt Text CTRL,h & CTRL,SHIFT-H
1. To manually hunt for and, optionally, replace all occurences of a word or phrase with another word or phrase, tap CTRL, then SHIFT-H. The hunt begins at the current cursor location, so to search your entire text, move the cursor to the start of your text first.
2. Enter the word/phrase you want to hunt for. Tap CTRL to toggle reverse video characters on/off. For a caseless search (both upper and lower case occurences of a word), enter the phrase in lower case and press SHIFT-RETURN instead of RETURN. Including a space at the beginning or end of the phrase may help to narrow the search. For example, "the" will find "the, then, them, either" and so on, but " the " will find only the word "the." You may also use a wild card character ("?") as part of the hunt phrase. For example, "de?r" will find all occurrences of "deer" and "dear" in your text.
3. Optionally, press SHIFT-@ in command mode to define a replace word/phrase.
4. In command mode, press "h" to hunt for the next occurence of the hunt word/phrase.
5. When the word/phrase is found, you may press "h" again, press RETURN to return to edit mode, or you may press "@" to replace the hunt word/phrase with whatever replace word/phrase, if any, has been defined.

Hyphenator CTRL,Ⅽ H
1. Tap CTRL,Commodore-H to activate the hyphenator feature.
2. The longest word in your text will be found and displayed with a soft hyphen in it.
3. Use the cursor keys to position the soft hyphen correctly.
4. Press RETURN to have all occurences of the word replaced with the soft hyphen added, or press SHIFT-RETURN to set the hyphen and add another one.
5. If you position a hyphen incorrectly, press the BACKARROW to redo the word.
6. To skip a word without adding any soft hyphens, position the hyphen at the beginning or end of the word and press RETURN.

Insert a Line CTRL,INST   ᴐⁱᴴⁱ ᶠᵀ
You can insert a line of spaces by tapping CTRL and pressing the INST key. Hold the INST key down to insert as many lines as you need.

Insert Mode Toggle CTRL,i
Tapping CTRL, then "i" toggles insert mode on and off. When insert mode is on, a space is inserted before each new character is printed to the screen; in this way text is not overtyped. Insert mode is a feature found on most word processors, and some users would be frustrated without it. However, *BB Writer* provides an easier and faster way of adding new text: press SHIFT-RUN/STOP and several blank lines will be inserted; add the new text, then tap CTRL and hit the SPACE BAR to eat up any extra spaces.

Key Click Toggle CTRL,k
If you want to hear a clicking sound each time you press a key, tap CTRL, then "k". Tap CTRL,k again to turn it off.

Keyboard Type CTRL,SHIFT-K
1. Tap CTRL, then SHIFT-K to turn on the Dvorak keyboard option. The layout of the Dvorak keyboard (see page 47) is more efficient than the usual QWERTY keyboard.
2. Tap CTRL, then SHIFT-V (Dvorak K) to restore the QWERTY keyboard.

Keyboard Macros CTRL,Ⅽ K
1. Tap CTRL, press the Commodore key and "k" to toggle this feature ON and OFF (the default is OFF). See page 49 for default definitions.
2. If ON, then press the Commodore key and any key that normally works in 64 mode to execute a keyboard macro.
3. Tap CTRL, press the Commodore key and "d" to define a new keyboard macro.
4. You will be asked to press the key to be defined, then enter the keys to be executed.
Keyboard macros allow you execute keyboard commands or enter embedded format commands in the fewest possible key strokes. When off, you can enter all the Commodore graphic characters. When turned on, pressing the Commodore key and any of 60 keys (except for non-printing keys like SHIFT, Ⅽ, RESTORE, CTRL) will execute a user-definable keyboard command.
Tap CTRL, hold the Commodore key down, and press "D" to define a new macro. You will be asked to press the key you want to define.

The key may be any unshifted key such as the a/A key, the CLR/HOME key, or the F1/F2 key.

After pressing the key to be defined as a macro, you are asked to enter up to four characters you want the macro key to stand for. These are the keys you would press after entering command mode. Most commands require fewer than four key strokes to execute, so after entering one or two keys you will have to press ESC to exit.

Main menu selections can also be accessed by entering an ↑ as the first character in the macro. An ↑,l (el) would, therefore, call up the Load Menu.

Example 1:
To get a disk directory you would normally tap CTRL, then the "4" key. Pressing Commodore,"4" is slightly easier, so tap CTRL,¢ D and press "4" when asked to press the key to be defined, then "4" again when asked to enter up to 4 keys, and then ESC to exit.

Example 2:
To exit to BASIC you could tap CTRL,x and press "e" to exit to BASIC. Or you could create an Exit-to-BASIC command by defining ¢ x to do the same as CTRL,x,e. Do so by tapping CTRL,¢ D then "x" and finally x,e,ESC.

Example 3:
To enter an RVS "u" to toggle underlining on or off you would normally have to tap CTRL,1,u. A ¢ u would be quicker, so tap CTRL,¢ D then "u" and then 1,u,ESC. Notice that ¢ u inserts an RVS "u" into your text. When evoking CTRL,1 keyboard macros, the characters are always inserted.

Example 4:
To enter an RVS "dc" to toggle double-width and centering on or off you would normally have to tap CTRL,2,d,c,BACKARROW. A ¢ d would be much quicker, so tap CTRL,¢ D then "d" and then 2,d,c,BACKARROW.

Letter Color CTRL,£
Tap CTRL and press "£" to change the text letter color. Keep pressing "£" to cycle through all 16 possible colors.

Letter Color of Menu CTRL,SHIFT-£
Tap CTRL and press SHIFT-£ to change the menu line letter color.

Limiting maximum line length CTRL,0
1. To break up paragraphs into lines of a maximum length, tap CTRL,0 (zero).
2. Select "Yes" and enter the maximum line length.
3. RETURN marks will be added to the text in memory, so save a copy before using this feature.

Stripping extra RETURN marks CTRL,SHIFT 0
1. Tap CTRL,SHIFT-0 (zero) to remove extra RETURN marks from a file.
2. RETURN marks bounded by text will be changed to SPACES.
3. The stripping process is not perfect and may take several minutes on large files.

Load/Merge/Append CTRL,l

1. To load a file from command mode, move the cursor to the beginning of your text and tap CTRL, then tap the letter "l".
2. Enter a file name and press RETURN. **BB** text file names should begin with a hyphen and so one is provided automatically. If the hyphen is deleted, that file will not appear in the Load Menu.
3. You can also "load" (actually READ) PRG, SEQ, or USR files by adding a ",p" ",s" or ",u" to the end of the file name. You can also enter a file name and press SHIFT-RETURN instead of RETURN to load non-BB files by making menu choices. READing a PRG file is not the same as LOADing one. When a file is READ, the two byte header or load address is included. This means you could use *BB Writer* as a copy program to READ a machine language program into the editor, then WRITE it to another disk. While the program is in the editor you could even modify the program by overtyping any text data before WRITEing it back to disk.
4. You can **merge** text files into the body of your text by moving the cursor to the point you want the text to load, and tapping CTRL,l.
5. Appending a file is simply a matter of moving the cursor to the very end of your text before tapping CTRL,l. The file will be READ in, so the danger of loading a file that is larger than the remaining text memory is avoided. This is the safe way to append, but it is slow. To fast-append (using the kernal LOAD routine), add a "+" to the end of the file name when you type it in. The "+" will not be considered part of the file name, so "-roug*+" would be an acceptable file name. To be totally safe, SAVE your current text before appending.
6. Put a "t:" in front of the file name to load from tape (e.g. t:-filename).

Loading and saving to and from the buffer

1. When entering a file name, delete the hyphen and enter "b:-filename" (no quotes).
2. Do not try to convert the text by pressing SHIFT-RETURN. Files should be normal **BB** files (PRG files containing screen code).

Loading and saving printer drivers CTRL,l or CTRL,s

1. When entering a file name, delete the hyphen and enter "p:drivername" (no quotes).
2. Press RETURN and the current printer defaults will be saved or a new set loaded from disk.

Loading a screen font (40-column version only)

1. Tap CTRL,l (el) to load a file
2. Delete the hyphen and enter "f:fontname" (no quotes) to load a new font.

Macrotyping CTRL,m

1. Tap CTRL, then "m" to toggle the macrotyping feature on.
2. Press SPACE or RETURN, then any of the one or two character abreviations shown on page 48.
3. Press SPACE and the word or phrase the abreviation has been defined to equal will appear.

The macrotyping feature allows you to designate any one or two characters to stand for any word or phrase up to 250 characters long. For example, you could designate one character to equal your

entire name and address. Hundreds of macros can be defined and used as you type. Just enter the abbreviation, press the SPACE BAR, and out pops the predefined word or phrase. The number of macros you can define is virtually unlimited--the more ma~·~~ you define, the less memory is left for text.

Some 70 to 100 words make up 50% of all the text you type. So, if you could reduce the number of key strokes needed to type those words by half or more, you could increase your productivity by 25% or more. The word "the" makes up about 7% of normal text; by learning a single key abbreviation, you gain a 4% advantage. Less than a dozen words make up 25% of normal text, so learning only a few macros is well worth while.

If you tend to misspell a word, create a macro for it. This way, if you get the macro right, the word will always be spelled right.

Adding new Macros CTRL,SHIFT-M
1. Clear all text from area 1 (not required if you don't plan to save the new macros).
2. Tap CTRL, then SHIFT-M and the macro definitions will appear. They are located in front of the text area in BANK 1, so the start of text pointer is simply moved back. Any text in area 1 will still be seen at the end of the macro definitions.
3. Edit, delete, or add to the existing list of word macros. The default macros are in alphabetical order, but they need not be. BACKARROWS (RETURN marks) can be included in a macro by entering them in reverse video (CTRL,1,BACKARROW). Study the examples.
4. If text area 1 was cleared before exposing the macros, just tap CTRL,s and the auto-save feature will save the macro file (program disk is assumed to be in the drive).

Memorize position within text CTRL,COLON & CTRL,SEMICOLON
Two positions can be memorized and recalled: Tap CTRL,COLON to memorize position 1, and CTRL,SEMICOLON to memorize position 2.

Recall a memorize position CTRL,COMMA & CTRL,PERIOD
1. Tap CTRL,COMMA to recall position 1 and CTRL,PERIOD to recall position 2.
2. This feature works by memorizing the first 30 characters at the top of the screen. The characters are hunted for when you attempt to recall a position. If any of these characters are changed, or are duplicated elsewhere, the position will not be found.

Position Color CTRL,C£
Tap CTRL, hold down the Commodore logo key and press "£" to change the color of the position indicator. This color will also be used for the messages that appear at the bottom of the screen.

Print CTRL,p
1. Press ↑ and select "Print" from the main menu, then "Printer" or tap CTRL,p.
2. The print head should be just below the paper's perforation.
3. If strange things happen, see page 44 for help with setting up your printer.
4. Hold the SHIFT key down to pause printing or ESC to abort.
5. Printing to a non-Commodore printer that's off may cause the "Printing" message to appear, but that's all. Not to worry; just

press the ESC key to abort.
6. To always preview, set the device number to 3 (good idea when children are at play).

Printing to Memory CTRL,C M (80-column version only)
1. Tap CTRL,C M to print text to the 16K buffer (contents of which are lost).
2. Use the four cursor keys at the top of the keyboard to move the screen hortizontally and vertically.
3. Use the two CRSR keys to move the cursor about.
4. Use "," and "." to move the cursor one character right or left.
5. Press "c" to center the cursor, HOME to home the cursor, and CLR to move the cursor to the bottom of the screen.
6. Press "n" to go to the next page.

Printing to Screen CTRL,SHIFT-P
1. Tap CTRL,SHIFT-P to preview your text. Text will be printed to the screen.
2. Hold the SHIFT key down to pause printing or ESC to abort.
3. While pausing, press "b," "£," or Commodore "b" (40-column version) to change the default colors.

Replace CTRL,@
This command works in conjunction with Hunt. After a word or phrase has been found using the hunt command, it can be replaced with another word or phrase that has been previously defined (see below).

Replace Defined CTRL,SHIFT-@
1. Before using the Hunt & Replace feature, tap CTRL and press SHIFT-@ to define the replace word or phrase.
2. If you just press RETURN without entering a word or phrase, a null replace phrase will be defined and will have the effect of causing the word found by the hunt command to be deleted if you press the "@" key.
3. If you are using the macrotyping feature, then the current replace phrase will be redefined every time a macro is used, so always define, or redefine, the replace phrase just before using the replace feature.

Restore Text CTRL,r
As an alternative to selecting "Restore Text" from the Edit Menu, tap CTRL then press "r" and the contents of the buffer, if any, will be regurgitated at the current cursor location.

Restore & Sort CTRL,SHIFT-R
1. You can alphabetically sort, in ascending (A-Z) or descending (Z-A) order, a list or data table by first eating the data and then tapping CTRL and SHIFT-R (instead of "r") to restore and sort the data.
2. Choose between an ascending (A-Z) or descending (Z-A) sort.
3. Menu select the column (1-10) you want to sort on.
4. The list will then be sorted (alphabetized) and restored at the same time.

RVS Commands (single) CTRL,1
To enter a single reverse video format command, tap CTRL, then the number "1" key. The prompt "Press format key" will appear at the bottom of the screen. Pressing any character key will cause that character to appear on the screen as a reverse video (RVS) character. RVS characters are used to send format or printer commands to *BB Writer*'s print routine. A reverse video "u" for example will toggle underlining on or off. After entering an RVS character, you will automatically be returned to edit mode.

RVS Commands (multiple) CTRL,2
You can enter a single RVS format command (see above) by tapping CTRL, then "1," but some reverse video commands are more than one character long, and you may want to put more than one command on a line. To enter multiple or double character commands, tap CTRL, then the number "2" key. The only difference between CTRL,1 and CTRL,2 is that CTRL,2 allows you to type in as many RVS characters as needed, and CTRL,1 automatically returns you to edit mode after pressing a single key. CTRL,2 also automatically turns insert mode on so that text is never overtyped. After you have entered as many RVS characters as needed, press the RETURN, BACKARROW, or SEMICOLON key. NOTE: All double character format commands must be on a separate line, or at the beginning of a line. If text is to follow on the same line, press the SEMICOLON key to exit RVS mode and resume typing in edit mode.

Save CTRL,s
1. Tap CTRL, then "s" to SAVE your current text. The prompt "Save:" will appear; enter a file name, or press RETURN to abort and return to edit mode. **BB** text files should start with a hyphen and one is provided, but it may be deleted.
2. If a file with the name you select already exists, you will be asked if you want to replace it. If "Yes," then the old file will be scratched and the current text SAVEd.
3. Entering a file name such as "@0:-bb file" (entered without quotation marks) would result in the old "-bb file" being scratched and the current text SAVEd. The DOS save and replace routine is never used, even though the syntax is.
4. If an error occurs during a SAVE, the screen will briefly turn red and an error message will appear at the bottom of the screen.
5. To save to tape (Datassette) put a "t:" in front of the file name (e.g. "t:file name").
6. You can WRITE sequential (SEQ) files by adding a ",s" to the end of a file name ("-filename,s"). Add a ",p" to the file name to WRITE a program (PRG) file, or ",u" for a user (USR) file. An easier way is to enter the file name and press SHIFT-RETURN instead of RETURN to call up the Save Menu which will allow you to save your text in any format.
7. If you include a non-printing note (RVS "n") at the very start of your text followed by a "@0:-" and then the file name, you can save the current version of your text by simply tapping CTRL then "s." This is the auto-save feature. See the **BB** file "Printer Test" for an example.

Save Defaults CTRL,x
1. Tap CTRL, then "x", and select "Save Defaults". Be sure the **BB** program disk is in the drive.
2. Saving defaults means that all user-definable variables--colors, menu defaults such as margin settings, special features such as autoboot and autocaps, printer macro definitions, etc.--will be saved. The next time you load *BB Writer*, everything will be as you left it.

Screen Dump CTRL,C P
1. Tap CTRL, hold down the Commodore logo key, and press "p" to print the current screen. The menu and message lines will not be printed.
2. When viewing one of the help screens or help files, just press "p" for a screen dump.

Search & Replace CTRL,SHIFT-S
1. To search for and automatically replace all occurences of a word or phrase with another word or phrase, tap CTRL, then SHIFT-S. The search begins at the current cursor location, so to search your entire text, move the cursor to the start of your text first.
2. Enter the word/phrase you want to search for. Tap CTRL to toggle reverse video characters on/off. For a caseless search, enter the phrase in lower case and press SHIFT-RETURN instead of RETURN ("hello" will match with "Hello" and "HELLO." A "?" may be used as a wild card in the name. For example "de?r" will match with "dear" and "deer."
3. Enter the word/phrase you want the search word/phrase to be replaced with. Entering nothing (just pressing RETURN) will cause the word/phrase being searched for to be deleted.
4. Press ESC during the search to abort.
5. Search and replace automatically goes through the file, whereas hunt & replace performs one hunt and one replace at a time at your direction (see page 20).

Resume Search & Replace CTRL,C S
1. If you abort a normal (not batch) search & replace, you can resume the search from the current cursor location.
2. Tap CTRL,Commodore-S to resume the search & replace.

Batch Search & Replace CTRL,C E
1. You can execute a series of search and replace commands by typing on a separate line: search phrase+@+replace phrase+@+next search phrase+@+next replace phrase+@...
2. Example: Jane@Mary@Jones@Smith@ (search for Jane, replace with Mary, search for Jones, replace with Smith).
3. Eat the search/replace string to move it into the buffer and tap CTRL,Commodore-E to execute the batch search and replace.
4. Unlike normal search & replace, the screen will not scroll to show what is going on (so it is faster). Once begun, batch search & replace will continue until finished.
5. Be sure to save your text before using this feature--it is not fool proof. If you enter the search/replace string incorrectly--get the phrases out of sequence, you could trash your document.
6. You can load and save the buffer, so permanent, de-bugged search/replace strings could be developed to do your own custom file translation.

Split Screen (80-column version only) CTRL,SH =
1. Tap CTRL,SHIFT = to toggle the split screen feature ON and OFF.
2. When ON, tap the NO SCROLL key to toggle between the two screens.
3. The screens can show two parts of the same document, or if two or more documents are in memory, you can view both at the same time.
4. This feature is useful when proofreading. You can edit a copy while referring to the orginal.

Tabs CTRL,t & CTRL,SHIFT-T
1. To set a tab: Position the cursor on a column within the current text width (the position indicator will read "C:" plus a number which indicates the current column number the cursor is on) and tap CTRL,t.
2. To clear all tabs: Tap CTRL, then hold the SHIFT key down and press "T."
3. To clear one tab: Position the cursor on a set tab (the position indicator will read "T:" or "D:" instead of "C:" for column number or "P:" for paragraph number) and tap CTRL,t.
4. Press the TAB key or RUN/STOP key to tab the cursor to the next tab stop (if there is one).
5. In the 80-column version, the lines at the top and bottom of the screen are marked to show current tab setting for columns 1-80
6. Decimal tabs are available, see page 16.

Verify CTRL,v
Tap CTRL, then "v" to verify a save. Unless you are saving to tape you need not verify your saves. When verifying a save to tape, be sure to put a "t:" at the start of the file name.

User definable keyboard commands CTRL,u and CTRL,SH-U
1. Tap CTRL,u or CTRL,SHIFT-U to JuMP to a user created routine.
2. One or two machine language routines must have been loaded during bootup and the vectors defined by the bootup program (which is in BASIC to allow for easy customizing).
3. During initialization, both routines, if present, are called so the routines can also initialize themselves. A memory map is to be found on the disk. Machine language programmers--have fun!

Viewing Files
1. Call up the Load Menu, point to a file, and press "v" to view the file without affecting text in memory.
2. Call up a disk directory, press SHIFT, point to a file, and press "v" to view it.
3. Press SHIFT to pause viewing. If conversion is required, press "t" for true ASCII, "p" for PET ASCII, and "s" for screen code while holding the SHIFT key down. When you releace the SHIFT key, text will be converted to appear normal.

Wide Screen CTRL,SHIFT-*
Tap CTRL and press SHIFT-* to toggle the wide screen feature on and off. This feature serves no useful purpose, but some users may prefer the novel screen format. Works only in 40-column version.

Word Count CTRL,=
1. Tap CTRL and press "=" for an approximate word count.
2. The number of bytes (or characters) used and bytes free is also given.   TOTAL-Text=Bytes Free, so "T-3298=59202 Bytes Free" means that there are 3298 characters in your text and that there is room for 59202 (59K) more.   Divide the number of bytes used by 254 and round up to the next whole number for the size of your text in blocks (3298/254= 12.98 or 13 blocks). If there were only 12 blocks free on a disk, knowing the size of your text in blocks could be useful.

Word-Wrap CTRL,w
Tap CTRL, then "w" to toggle word-wrap on and off.   When the cursor reaches the right edge of the screen it always wraps around to the beginning of the next line. With word-wrap on, the word you are typing at the time will also wrap around with the cursor.   Sometimes turning word-wrap off helps when entering data in a table.

1581 Sub-directories CTRL,/
1. Tap CTRL,/ if you are using a 1581 drive and wish to access a sub-directory.
2. You will be asked to supply only the first letter of the sub-directory name, so when setting up sub-directories, name each with a different first letter.

End-of-text Warning
1. When you get near the end of a text area, a bell will ring and the message "Start New File" will appear.
2. Start a new file.

Define SHIFT-RETURN CTRL,SHIFT-RETURN
1. Tap CTRL,SHIFT-RETURN to toggle between two alternative uses of the SHIFT-RETURN key.
2. By default, pressing SHIFT-RETURN (in edit mode) ends one paragraph and indents the next 5 spaces. The alternative is to have SHIFT-RETURN move the cursor to the beginning of the next line much as is done by the normal screen editor. The linefeed will normally work, but only because most lines have a SHIFTed SPACE at the end. If a SHIFTed SPACE is not found, the cursor is just moved down one line.

Text Format Options

Like all high productivity word processors, *BB Writer* is a "post-formatting" word processor. This means you don't have to format your documents as you type them in—creating margins and page breaks, centering lines, and so forth. All of that is done during printing. This approach lets you quickly format and reformat your documents without changing the way they are stored in memory or displayed on the screen. If text where formatted as you typed (WYSISWYG), a lot of extra processing would be required resulting in annoying delays (even on an Amiga).

Basic text formatting (setting margins, line spacing, justification, page length and width) can be done from the Print Menu. Although some users may be happy using only the menu options, most users sooner or later will want to try out some of the embedded format options. Format commands appear as reverse video (RVS) characters on the screen to distinguish them from normal text. Unlike normal text, RVS characters are not sent to the printer, but are interpreted by *BB Writer* as special commands or directives. These special RVS format commands tell *BB Writer* to do things like center a line, change a margin setting, define a header, print the current page number, or turn underlining on or off. Learning to use at least a few of the many format options available to you will be well worth your while.

There are two types of RVS commands: CTRL,1 formats and CTRL,2 formats. CTRL,1 formats are single character commands. Many are toggles—they turn features like centering, boldface print, and underlining on or off. Others will force a page break, cause a line to be right justified, or load a linked file. CTRL,1 formats are entered by tapping CTRL, then the number "1" key, and then the appropriate alphanumeric key.

CTRL,2 formats are two characters long and are always followed by a number. CTRL,2 formats allow you to define margins, headers and footers, set line spacing, and so on. Since the values are embedded in your text, they over-ride the Print Menu settings. When you include all formatting commands as part of a document, then the next time it is printed, the format will be the same. CTRL,2 formats are entered by tapping CTRL, then pressing the number "2" key, and entering the appropriate command (two characters plus number). IMPORTANT: CTRL,2 formats must always be placed on a separate line, or placed at the beginning of a line of text. See page 26 for more information on entering CTRL,1 and CTRL,2 format commands.

Only the first two letters of CTRL,2 format commands are significant. So, "footer3;" is the same as "fo3;". Using this feature adds clarity, but makes the file incompatable with the 64 version.

CTRL,1 RVS Formats

a **Alternate Pagination.**
Use this command if you will be printing on both sides of your paper, and you want the header or footer (usually containing a page number command) to be right-justified (aligned with the right margin)

on odd-numbered pages and left-justified on even-numbered pages. This is the same way pages are numbered in most books. For example, the following line defines a header to right-justify the page number on alternate (odd-numbered) pages only.

he4;a#

b Boldface toggle.
    A reverse video "b" turns boldface or double-strike printing on; the next RVS "b" turns it off.

c Centering toggle.
    A line of text, such as a title, can be automatically centered by putting an RVS "c" at the beginning of the line. Normally a toggle like centering must be turned off, but as a convenience feature, centering is automatically turned off when word-wrap occurs during printing. If a command such as margin release or right alignment follows a centered line, centering must be turned off by a second RVS "c" or the other commands will not work properly. *BB Writer* will correctly center a double-width line *if the double-width command is turned on first* (use dc not cd).

d Double-width text toggle.
    Most dot matrix printers will print double-width text. An RVS "d" toggles double-width on and off. When printing to the 80 column screen or daisy- wheel printer, a space will be printed between each letter. If you wish to center a double-width line, be sure to turn double-width on first.

e Emphasized print.
    If your printer supports emphasized printing, use an RVS "e" to toggle this feature on and off.   ·

f Forced page.
    An RVS "f" immediately forces the next page to be printed. The current page will be ejected (a footer, if any, will be printed), and the text after the RVS "f" becomes the start of the next page. Unlike most CTRL,1 format commands, the forced page directive must be on a separate line. There is also a conditional forced page command (see page 35).

i Italics toggle.
    Some printers have an *italic* character set; an RVS "i" toggles italics on and off.

j Justification toggle.
    Although justification can be turned on from the Print Menu, an RVS "j" allows you to justify all or only part of your text.

l Linked file.
    The linked file command allows you to print a document that is too large to fit into memory. Any number of files can be linked together. Just add an RVS "l" followed by the name of the next file to the end of the current text. Example:

10:nextfile

CTRL 1

To print a series of linked files, load the first file in the series and print to screen or printer. You will be warned that the text in memory will be erased if the linked file is printed, and given the choice of printing or not printing the linked file.
Do not use linked files when printing in double columns.

m   Margin Release.
An RVS "m" at the beginning of a line causes the line to be printed with no left margin. A margin can also be released a given number of spaces (see page 32) using the "mr" command.

n   Non-printing note.
Comments may be included within your text as non-printing notes. Text preceded by a reverse video "n" will not be printed. Notes may be of any length.

r   Right alignment.
A line, such as a header or footer, can be made to print so that the end of the line is even with the right margin by placing an RVS "r" at the beginning of the line. Right alignment is automatically turned off after the line is printed.

R   Reverse field toggle.
Text can be printed in reverse video on some printers by enclosing the text with RVS capital R's.

s   Subscripts.
Characters preceded by an RVS "s" will be subscripted (on some printers). A second RVS "s" turns subscripting off

S   Superscripts.
Characters preceded by an RVS "S" will be superscripted (on some printers). A second RVS "s" turns superscripting off

u   Underlining toggle.
An RVS "u" toggles underlining on and off (on some printers). On dot matrix printers, underlining is done by sending control codes to turn underlining on and off. On daisy-wheel printers underlining is done by backspacing and printing an underline character.

W   Wait...pause printing.
An RVS "w" will cause printing to pause until a key is pressed. If the Print Menu's auto linefeed option is ON, a carriage return [CHR$(13)] will also be sent. This would allow you to change ribbons or daisy-wheels in mid-sentence to print a word in a different color, or italicize a phrase. Before turning auto linefeed ON at the Print Menu, configure your printer or interface so that they are not sending any linefeeds.

X   External file/Mail merge.
An RVS "x" followed by a file name will cause the external file to be opened and data to be read in and then inserted at appropriate fill-form markers. This command should be placed near the beginning of a document.
This feature allows you to place fill-markers (up to 255) anywhere

within your text, and have data (name, address, etc.) read in from an external file to take the place of the fill-markers. If the external file contained a list of names and addresses for 125 people, you could then print a personalized letter to each person on the list.

x0:addresses

The above line placed at the start of a file opens the external file "addresses" and reads in the first line of data. The file in memory is then scanned for "<1>" fill-markers. Any found are replaced by data from the x file. A second line is then read in and inserted at all "<2>" markers, and so on. At the end of the record, the text is printed, the fill data deleted, and the next record read in. Each record may have up to 255 items or lines of data, and each line may be up to 250 characters in length. Each item can be inserted anywhere in the text and used as often as you like. Each line must end in a RETURN mark and each record must be separated by an additional RETURN mark. The data file may be either in PRG/screen code (a BB file) or in SEQ/ASCII format (add ",s" to file name). A database program, such as Superbase, could be used to create the data file (see page 51).
If you had a file containing 100 addresses and you wanted to start at number 58, set the Print Menu's "Start at page number" feature to 58. Instead of page number, the 58 will be understood to mean record number. For an example, see the "Mail Merge" tutorial.

 # Print page #.
Put an RVS "#" in a header or footer and each page will be automatically numbered for you. The first page printed is normally number "1," but can start with any number using the "pn" command (see page 33). 31

Roman page numbering
Enter a single RVS "#" for normal Arabic page numbering. Enter a double RVS "##" for Roman numeral page numbering.

. Condensed print toggle.
A reverse video "." turns condensed print on; another RVS period turns it off.

- Soft hyphen.
An RVS hyphen may be placed between the syllables of long words to enable automatic hyphenation. If the word breaks at the right margin, it will be hyphenated for you; otherwise the RVS hyphen will be ignored. This feature is especially useful when justifying double column text to avoid an excessive number of spaces between words.

- Hard hyphens
Word-wrap may occur at normal hyphens, but not hard hyphens. You would not want word-wrap to occur at "SHIFT-M" or "A-Z" so a hard hyphen could be used. Tap CTRL,1,SHIFT-* to enter a hard hyphen.

E Escape code.
An escape code [CHR$(27)] can be entered by tapping CTRL, then the number "1" key and pressing SHIFT-BACKARROW (or capital "E").

CTRL,2 RVS Formats

ai Auto-indent paragraphs.
If you have a document in which no paragraphs have been indented, the auto-indent feature may be used. In *BB Writer*, a "paragraph" is any text ending in a RETURN MARK. An "ai5" after any titles auto-indents the remaining paragraphs five spaces; an "ai0" turns the feature off. Paragraphs may also be outdented: an "ai-5" outdents paragraphs five spaces.

bl Blank Lines.
The blank line command prints a given number of blank lines regardless of the line spacing used. A "bl15" prints 15 blank lines. This command does not work when printing in double columns; use RETURN MARKs instead.

bm Bottom Margin.
To create a one inch margin at the bottom of each page, enter "bm6" (assuming 6 lines per inch). The value after the "bm" is the number of blank lines to be printed at the bottom of a page.

cm Column Margin.
The column margin is the number of spaces between columns. To print your text in double columns, all you need to do is set the column margin value greater than zero.

```
cm6,4
BB Writer
BB Talker
BB Customizer
BB File Reader
```

The column margin may be set either from the Print Menu, or by using an embedded "cm" format command placed near the beginning of your document. The entire document will print in double columns except for the header or footer. Both columns are printed at the same time in one pass, so double column printing can be done on any printer.

A section of text (usually a list) can also be printed in columns by embedding an RVS "cm#,#" at the beginning of the list. In the following example, the "cm6,4" would be in reverse video (the numbers need not be).

The first number is the column margin, the second is the number of items in the list. The number of items must be even--if not, a RETURN MARK should be added to the end of the list.

When printing in columns, the forced page and blank line directives will be ignored. The last line to print must be known before the first can be printed, so the linked file feature cannot be used. The 16 printer toggles are automatically turned on and off to avoid inadvertant underlining etc. of adjacent text. This is not true for printer macros.

fo Footers.
One or more lines of text totaling up to 160 characters can be printed at the bottom of each page. The value following the "fo" is the footer margin--the number of spaces from the bottom of the page the footer will start printing. Be sure the footer margin is less than the bottom margin. Press the semicolon key before entering the text of the footer. Other format commands, like centering and right alignment can be included. If you wanted the page number to be

centered and printed 5 lines from the bottom of each page you would enter: fo5;c#
   For a multi-lined footer, an RVS backarrow is used to separate each line.
   To define two footers (one to print on odd-numbered pages and one to print on even-numbered pages): enter the odd-page footer followed by an RVS colon, then enter the even-page footer. Example: fo5;odd footer:even footer
   If you create a footer to print only a space, the last page will always be ejected.

fp   **Forced Page (conditional).**
   An RVS "f" always forces the printer to move to the next page (see page 28). An RVS "fp" causes a new page to be started only if there are fewer than a given number of lines remaining before the bottom margin reached. This command is used to prevent a given number of lines from being divided when a new page is created. It could be used before a subheading, for example, to prevent it from being printed by itself at the bottom of the page.

he   **Headers.**
   An RVS "he" followed by a margin value defines one or more lines of text that will be printed at the top of each page. The header margin is the number of blank lines between the header and the top of the paper and must be less than the top margin. If a header is to be printed on the first page, it must be defined before any text is printed. By defining the header after some text has printed, even a carriage return, it will not be printed until the next page. After defining the header margin, press the SEMICOLON key before entering the text of the header. Other format commands, such as centering, right alignment, and page numbering, can be included. If you want a header to be centered and printed 5 lines from the top of each page you enter: he5;cThis is a header.

   For multi-lined headers, separate each line with an RVS BACKARROW. Headers may be up to 200 characters long.
   Alternate odd/even-page headers can also be defined by separating each with an RVS colon. For example:

 he4;This line prints on odd pages only:This is an even-page header

hl   **Header/footer Left margin.**
   If no header/footer left margin is set (hl0), then the current left margin is used. Otherwise a different header/footer left margin may be specified.

hr   **Header/footer Right margin.**
   If no header/footer right margin is defined (hr0), then the current right margin is used. Otherwise a different header/footer right margin may be specified. This would allow page numbers, for example, to be printed outside the current right margin.

lm   **Left Margin.**
   The left margin is the number of blank spaces between your text and the left edge of the paper. If there are 10 characters per inch, then "lm10" would create a one inch left margin. An "lm15" would

give you a one and a half inch left margin. A "relative left margin" is also possible. Let's say you have a long quote and you want it to be always indented three spaces relative to the current left margin. An "lm+3" placed just before the quote would add three to the current left margin setting. At the end of the quote, an "lm+0" restores the original left margin. By using relative margins, only the true left margin as defined at the beginning of your text need be changed to reformat the entire document. A given value can also be subtracted from the left margin. An "lm-4" would reduce the current left margin by four.

ls **Line Spacing.**
Line spacing refers to the number of blank lines, if any, between lines of text--not the number of lines per inch. For single line spacing use "ls0" or no blank lines. An "ls1" creates double spaced text (one blank line), and "ls2" creates triple spaced text. Use printer macros for total control of linefeed spacing.

mr **Margin Release.**
An RVS "m" causes no left margin to be printed. An "mr4" placed before a line of text subtracts four from the current left margin before the line is printed. In effect the line is outdented by four. This feature allows you to number paragraphs with the numbers appearing outside the left margin.

oe **Odd/Even Page Printing**
Tap CTRL,2 and enter an RVS "oe1" to print only odd numbered pages. Enter an RVS "oe2" to print only even numbered pages. An "oe0" will print all pages as usual. This feature can be used to print odd pages on one side of continuous paper, turn the paper over, and print the even numbered pages on the backside.

of **Offset.**
An "of40" causes all text to be offset 40 spaces to the right when printed. You could use the offset command to center the printout without moving the paper. It could also be used to print columns by printing the first column, adding an offset, and feeding the paper through a second time to print the next column.
An odd/even-page offset can also be defined by entering "oF" instead of "of". An "oF10" offsets the text to the right by 10 on odd-numbered pages only. This feature is used when you are printing on both sides of a page and want to create a larger margin on odd pages to allow for binding.

ou **Outline generator**
Enter an RVS "ou7" to turn the outliner on. Preceed each line with 1-7 colons to determine the level of indentation. Enter an RVS "ou0" to turn the outliner off. See pages 41-42 and the sample file "BB Outliner" on disk for details.

ou **Auto numbering of lists**
Enter an RVS "ou1" for Roman numbering, "ou2" for A-Z numbering, "ou3" for Arabic numbering, and "ou4" for lower case numbering. Subsequent lines, which should not begin with a colon, will be automatically numbered. See the sample file "Auto Numbering" on disk for details.

pl Page Length.
This command defines the number of lines per page or page length as measured in lines per inch. Most printers normally print six lines per inch. So, if your paper is 11 inches long, there will be 66 lines per page. Some printers can print a variable number of lines per inch. If your printer is printing eight lines per inch, then you must change the page length to 88 ("pl88").

pn Page Number.
Page numbering normally begins at "1," but you can change this to any value you want. If you wanted auto-page numbering to begin at page 342, then "pn342" would set the page number counter to 342.

pp Print Page X.
You've just printed pages 1-14 and noticed a serious spelling error on page 12. The page will have to be reprinted, but instead of printing pages 1-11 first, just set "pp12" to print page 12. After page 12 prints, press STOP or BACKARROW to abort printing (set wait-between-pages if necessary). This command is the same as selecting "Start at page number" from the Print Menu except that by using this command the page number specified may be greater than 254.

pw Page Width.
Most printers print 80 characters per page, so the default page width is 80 ("pw80"). If you are using an elite character set which prints 96 characters per page, redefine the page width to "pw96."

rm Right Margin.
An "rm10" creates a right margin of one inch (assuming 10 characters per inch). Some word processors use the term "right margin" to refer to the column number. In *BB Writer*, the value after the "rm" refers to the distance between the text and the edge of the paper as measured in characters. As with the left margin, relative right margins are possible. An "rm+5" adds five spaces to the current right margin setting; an "rm-5" subtracts five spaces.

sa Secondary Address.
The usual secondary address, seven, should be defined at the Print Menu. The "sa" command allows you to change the secondary address during printing. An "sa0" causes lower case letters to print in upper case, and capital letters to print as graphic characters (on most printers). Thus, over 30 graphic characters, which could not otherwise be printed, are made available. Most interfaces recognize a variety of secondary addresses.

tm Top Margin.
If your printer prints six lines per inch, then a "tm6" creates a top margin of one inch and a "tm9" a margin of one and a half inches.

<1> Fill-marker.
Entering an RVS "<3>" by first tapping CTRL,2 causes the mail merge feature (see page 36) to insert the third item of each record at the fill-marker location.

Printer Commands

y,z & A-D   Send single character commands
An RVS y, z (entered by tapping CTRL,1) and RVS capitals A-D can
be defined to equal any character code (0-255). An RVS capital "E"
has been predefine to equal 27, for example. Enter "z=12" in reverse
video near the beginning of your text, and an RVS "z" placed further
down in your text will send a form feed understood by many printers.
Printer macros work the same way, but allow a single character to
send up to 32 control codes to the printer instead of only one.

UVWXYZ   Special Characters
The RVS characters "UVWXYZ" may be defined to represent foreign
lanquage or other characters. These RVS characters are assumed to
print, so justification and double-column printing will work
properly. An "X=95" placed on a separate line near the beginning of
your text would define "X" to equal a BACKARROW, so you could then
use an RVS capital "X" to cause a BACKARROW to print on a Commodore
printer.

Industrial strength printer macros
RVS 0-9, F-Q, and !"#$%&'()[] can be defined to equal up to 32
decimal or ASCII values. An RVS "1=65,66,67,68,69,70" is the same as
"1=abcdef." An RVS "E" will be interpreted as an escape code (27)
when ASCII strings are being used. The ASCII string will be
converted to either PET or true ASCII depending on whether the Print
Menu says that true ASCII is ON or OFF. See the file "Printer
Macros" for examples.

Special Printer Macros
The six printer macros LMNOPQ differ from the other 26 macros in
that they are assumed to print a character or a graphic the same size
as a character. The six will appear as a "?" when previewing your
text. By using the L-Q macros to print user-definable characters,
justification and double column printing will work correctly. Since
32 values can be used per macro, high-density, letter quality foreign
and technical characters can be created (including 24-pin and laser
printers). If more than six characters are required, define "X=27"
and pair it with a non-printing macro. An "XF" would work since the
"X" is assumed to print something but doesn't, and the "F" does (or
could) print something but is assumed not to. Technical writers
could create over two dozen special characters using macros.

Printer toggles
Printer toggles can be defined using *BB Customizer*, or they may be
defined from within your text the same as printer macros are. An RVS
"u=27,45,1:27,45,0" would toggle underlining on and off on most dot
matrix printers. A colon separates the codes that turn a feature on
(27,45,1), from those that turn it off (27,45,0). A maximum of 12
decimal values can be entered; 6 to turn on, and 6 to turn off a
feature (two features, such as condensed & superscripts, could be
entered).

Using BB Manual Maker

LOAD"BB MANUAL MAKER",8 in 40-column mode and RUN it. This program will print all 68 help files. The odd-numbered pages are printed first, then you will be told to filp the paper over (assumes continuous paper) so that the even-numbered pages will print on the backside (page 2 behind page 1 and so on). This is not a subsitute for a real manual nor an attempt to make pirates happy. Users were observed calling up each help file and doing a screen dump--a painful procedure which this program makes easy.

Using BB Menu Maker

Trying to access programs on a diskette using only a disk directory listing can be frustrating for even the most experienced user; for many beginners, the task can seem hopeless (for example, trying to load ML programs).

The answer to the problem of the unfriendly disk is to write a program that will display only main programs or loader programs, and allow the user to menu-select the program he wants. The ideal disk menu should display only meaningful program names (not necessarily the directory file name), with each one followed by a brief comment or description. The menu should be cursor-driven so that young children and non-typists will not have to hunt and peck. And, of course, the menu program should not require you to know the proper LOAD syntax for each program.

BB Menu Maker allows you to create just such a disk menu. With *BB Menu Maker*, even total non-programmers can add user-friendly menus to their disks.

Making a Menu

Before using *BB Menu Maker*, you should familiarize yourself with the programs on a disk so that you can describe or comment on each. When you RUN *BB Menu Maker*, there will be a few seconds delay while some machine language is POKEd into the cassette buffer. Insert the disk you want to create a menu for into the disk drive and press the SHIFT key. *BB Menu Maker* will then read all PRoGram file names from the directory except for those beginning with a hyphen. The load address for each program will then be determined. Press SHIFT again and a list of programs on the disk will appear.

In the comment field following each program name, the program type (BASIC, autoboot, or ML) and length (in BLocKS) will be displayed. This information will help you decide which programs to select. For example, you would want to select autoboot or other loader programs for the menu, but not the the files they load.

Use the cursor keys to select the program name you want to appear first on your menu. After pressing RETURN, you will be given a chance to edit the file name. For example, if the file name was "BOOT SM", you might want to change the name to something more descriptive like "SCREEN MAGIC." If the name is OK, simply press RETURN.

Next, you will be asked to describe or comment on the program. If

the program is "SCREEN MAGIC," you might want to add that it's "A SUPER SPRITE EDITOR." The dotted line under the input line tells you how long your comment can be.

Continue to select programs in the order you want them to appear on your menu. If you make a mistake, simply reselect and edit the name or comment. When you are finished, select "EXIT" and you will be asked to give your menu an appropriate name or header such as "PROGRAMMING UTILITIES" or "MATH ED."

BB Menu Maker will now check to see if there is enough free space on the disk to copy the first program elsewhere and SAVE"MENU",8 as the first program on the disk. If so, the name, comment and other data will be appended as DATA statements; the code used to create the menu will be deleted, and your menu SAVEd as the first file on the disk. Otherwise your menu will either be SAVEd anywhere to disk under the file name "MENU" or be LISTed to let you know that there is not enough free disk space to save the program. If there is already a file called "MENU" on the disk, you will be asked if you want to replace it.

At this point you should be looking at your finished menu. Move the cursor to the program you want and press RETURN. It's that simple. If you run the cursor to the bottom of the page, it will either go back to the top or display the next page. If the cursor is at the top of a page and you want to go to the next page, the easy way is to press CRSR up (or right) to move the cursor to the bottom of the page, then CRSR down to go to the next page.

Changing the Finished Menu

If you add a new program to the disk or delete one, you'll probably not want to create an entirely new menu. All you have to do is LOAD and LIST the menu, then delete from or add to the existing DATA statements. When you're done, just type RUN 55555 (five fives), and the old menu program will be replaced with the modified one.

Program Notes

The program works only in 64 mode. The menu created, however, will work in either 64 or 128 mode. In 128 mode, both 40 and 80-columns are automatically supported, so the menus work equally well on 64's and 128's.

Some cartridges (MACH 5) must be physically removed from the cartridge slot or *BB Menu Maker* will hang up when the data statements are being added. The Final Cartridge fails to save the completed menu and shoud be killed. The completed menu program, however, does not have any problems working with fastload cartridges.

BB Outliner

The outline feature allows you to generate formal topic or sentence outlines (and also to number lists) without having to do any manual numbering or indenting.

I. According to Perrin's **Writer's Guide and Index to English** there are four types of outlines.
   A. Scratch outlines consist of casual, yet organized notes that only the author will use or read.
   B. Topic outlines are the most common type of formal outline and must be consistently numbered (the outline feature does this for you).
   C. Sentence outlines (this is an example of one) use complete sentences for each heading and subheading.
      1. They are more formal than topic outlines.
      2. They are more difficult to write because each idea must be given a more complete and elaborate form.
      3. They are easier to expand into a finished paper.
   D. Paragraph summaries merely list the topic sentences of each paragraph in a paper.

II. The **ou** command, followed by one or more numbers, is used to turn the outline generator on and off, and define the format of the outline.
   A. The outline generator is turned on by embedding an RVS "ou" on a separate line followed by at least one number.

I CONTROL 2

      1. The first number defines the level of indentation.
         a. An RVS "ou1" would display only the main heading (those preceeded by Roman numerals) when the outline is printed or previewed.
         b. An RVS "ou2" would display main heading and subheading (those preceeded by capital letters).
         c. An RVS "ou3" would display main headings, subheading, and sub-subheadings (marked with numbers).
         d. An RVS "ou4" would display the first four levels of indentation.
         e. An RVS "ou5," "ou6," and "ou7," would display additional levels of indentation (seven is the maximum).
         f. An RVS "ou9" displays all levels but ommits the Roman numerals from lines beginning with one colon allowing main headings to be left unnumbered or manually numbered.
      2. The second number defines how far those lines numbered with Roman numerals are to be indented (the default is 7).
      3. The third number allows the first line to be outdented a given amount.
      4. The forth number is the screen code value for the character to follow the number.
         a. The default value is 46 which prints a period.
         b. Entering the number 41 would print a right parenthesis.
         c. The number 96 would would print a SHIFTED SPACE character.

<ol start="5">
The fifth number determines the number of spaces to print between the number and the following text.
The sixth and subsequent numbers define the tab setting for each of the seven levels of indentation.

B. The outline generator is turned off by embedding an "ou0" on a separate line at the end of the outline.

III. **The level of indentation is determined by the number of colons preceeding a line.**

    A. A single colon causes the line to be numbered with Roman numerals and indented by the number of spaces defined by the second number in the "ou" command.

    B. Two colons cause a capital letter (A-Z) to be added to the start of the sentence.

    C. Three colons result in Arabic numbering.

    D. Additional colons create additional levels of indentation.

IV. **If no colon preceeds a line, the first number in the "ou" command determines the type of numbering used.**

    A. An RVS "ou1" followed by lines not beginning with a colon will be numbered in Roman numerals.

    B. An RVS "ou2" results in numbering by capital letters.

    C. An RVS "ou3" results in Arabic numbering.

    D. An RVS "ou4" results in numbering by lower case letters.

    E. An RVS "ou0" turns the numbering off.

V. **The best way to learn how to use this feature is to play around with the sample files on the disk.**

    A. The file "BB Outliner" shows how a formal outine can be created.

    B. The file "Auto Numbering" shows how to number lines (lists) and paragraphs.

VI. **There are some limitations to bear in mind when using this feature.**

    A. Outlines may be printed in double columns, but they would not look right.

        1. You would not want to print formal outlines in double columns, anyway.

        2. You might want to print numbered lists in double columns, however.

            a. Make sure the column margin is at least 5 or more since numbers will be outdented.

            b. If the column margin is too small, a format error will result.

    B. The auto-indent and relative left margin commands cannot be used when generating an outline or numbering a list.

VII. **There are a few rules to bear in mind when creating an outline.**

    A. The outline should be given a title (centered).

    B. A sentence statement should follow the title and state the subject and scope of the outline.

    C. There are various ways to format and number an outline.

        1. The default settings are correct, so you can just turn the outliner on with "ou7" and off with "ou0."

        2. You can play around with the 11 other parameters to fine-tune your outline.

    D. Take note: a subdivision implies at least two parts.

        1. A "I." must be followed by a "II."

        2. An "A." must be followed by a "B."

Customizing

Every effort has been made to allow *BB Writer* to be customized by users to meet their own needs and preferences. All colors, help screens, macros, the character set, and all printer, disk, keyboard, and speech defaults can be user-defined and SAVEd to disk. The next time you boot up, all parameters will be as you left them.

First, make a backup copy--any copy program can be used. To SAVE your current defaults, tap CTRL, then "x." Select "SAVE Defaults" and press RETURN.

The boot file "BB" is in BASIC, so you can customize it to load other programs. Load and list it.

If you have a character set editor you can load "bb font" and change the character set to suit yourself (p. 20).

Use *BB Customizer* to change the defaults that control any of the special print features your printer may have.

See page 9 for instructions on creating your own help menu system.

TWS 128 is uniquely extensible. Modules, produced by Busy Bee Software or users themselves, which could be anything from a sentence counter to a telecommunications package, may be added to the current version. Modules will work with any future versions that may be developed due to a JMP table similar to the Kernal's that machine language programs can use to locate and use all of *TWS*'s major subroutines. The file "Memory Map" on the disk provides the necessary details for programmers. This extensibility is, in the long run, a feature of major importance. Users with special needs can develop their own routines and, hopefully, make them available to other users. Send routines to Busy Bee Sofware for evaluation. If the routine works, we'll make copies avaliable to user groups worldwide for non-profit distribute. In turn, we'll send you a disk with whatever routines others have developed. The hope is that dozens of utilities can be develped. None are likely to be of interest to all users, but all will be of interest to some. In this way, *TWS* can continuously grow and keep getting better and better.

17XX RAM Expander

If you have a 1700 or 1750 RAM Expander, LOAD and RUN the file "RAMBOOT" which is found on both sides of the disk. By default, RAMBOOT sets up the expander to work as if it were a second drive (drive 9). LIST RAMBOOT to change the default. To use, tap CTRL,Sh-D and select "Devices 8,9."

RAMBOOT automatically loads the boot program "BB," but could load "FC" (file copy utlity) to copy files of your choice into the RAM expander. Change RAMBOOT to load "FC" (see REM statements), then LOAD and LIST "FC" to change the data statements containing the file names you want to have load into the REU.

The autoboot sector could be changed to boot "RAMBOOT" instead of "BB."

Printer Setup

BB Writer will work with almost any printer, even a very demanding laser printer. If you have a Commodore 1525 or MPS 801 printer, then read no further--*BB Writer* will work as is. If you have an interface that emulates a 1525 printer, then, except for non-1525 features like underlining, your printer should work perfectly. To find out if your printer/interface will work with *BB Writer*'s default settings, load the **BB** file "Printer Test" from the Load Menu and try printing it. If it doesn't work, don't panic--all default values are user-definable.

Basic printer defaults can be altered from the Print Menu. Select "Print" and move the pointer down to change defaults for printer device number and secondary address if necessary. Try printing a paragraph of straight text. If all text prints on the same line over and over again, turn on the auto linefeed option. If lower case characters are printed in upper case, turn on the true ASCII feature.

If you are using a daisy-wheel printer, indicate that "Yes" you are using a "LQ Printer."

If you still cannot print straight text, check all printer and interface connections. Try putting your interface in "transparent mode" if it has one (in transparent mode, true ASCII will have to be turned on).

Many printers have a host of special features that can be activated by sending a series of control codes to the printer. Using your printer's special features is a matter of making sure that *BB Writer* is sending the correct control codes to your printer. The adage that "computers never do what you want them to, but only what you tell them" is equally true for all software. *BB Writer* offers three ways to send control codes to your printer: an escape code plus a character, single character RVS toggles, and single character printer macros.

An escape code tells the printer to interpret the next character(s) as a command. To send an escape code [CHR$(27)], tap CTRL, then the number "1" key, and then SHIFT-backarrow. An RVS capital "E" will appear. The next character will be interpreted as a control code. For example an RVS "E" followed by a "g" will send the values 27 & 71 [ASC("g")=71] to the printer (on many printers this turns double-strike printing on). This is the crudest way to send control codes and should not normally be used.

BB Writer offers single character support for the most commonly used features (namely: boldface, double-width, emphasized, italics, NLQ, reverse field, subscript, superscript, underlining, condensed print, and six user-definable toggles). For example, a reverse video "u" turns underlining on and a second RVS "u" turns it off. To turn a feature on and off, certain control codes (numbers between 0 and 255) are sent to the printer. These codes differ between printers, and so the default values used by *BB Writer* may not work with your printer. Before trying out these special features, tap CTRL,x to X-it, exit to the printer customizer, *BB Customizer* and compare the values listed with those in your printer manual. Just overtype the default values to enter whatever values are correct for your printer. The printer toggles can also be defined from within your text (see page 38) for greater felxibility and ease of testing.

If you tell *BB Writer* to send the correct control codes for your printer but strange things still occur, the problem is most likely your interface. Put your interface in transparent mode and turn on True ASCII from the Print Menu.

Letter Quality Printers

On daisy-wheel printers, underlining is done by the backspace method, and boldface by printing each character twice--the second time slightly to the right of the first. *BB Customizer* allows you to set the micro-spacing. If 27,31,12 is the normal pitch, then you might want a boldface character to print, have a 27,31,1 sent, print the character again, then send a 27,31,11 to prepare for the next character. Since 1+11=12, boldfaced words will be the same length as all other words (in this example), so justification and double column printing will be done correctly. When boldface is turn off, however, the pitch would be 27,31,11 and not 12, so you must use the zero macro to restore the normal pitch. In this example you would define the zero macro: 0=27,31,12
When using an LQ printer, the zero macro's codes are sent when boldface is turned off as a means of restoring the normal pitch.

RS-232 Printers

If your printer connects to the RS-232 port (some users have both a dot matrix and LQ printer and connect one to the RS-232 port to avoid switching cables), then set the device number from the Print Menu to 2 and select True ASCII output. The baud rate is set by the boot program **BB**--load and list it. The line OPEN2,2,3,CHR$(6):CLOSE2 should do the trick.

Micro Spacing/Justification

Special support for some laser, LQ, and dot matrix printers is provided. See file "Micro Spacing" and "Laser Driver" on disk.

Form Feeds

BB Customizer allows you to have a form feed [CHR$(12)] sent to your printer instead printing blank lines for the bottom margin. If double height characters or a variety of line pitch spacing is used, this will allow the next page to start off at top of form. Not all printers have this feature, so the default is off.

Decoding Printer Manuals

Unfortunately, many printer manuals are not very clear about what decimal values (0-255) are being sent to the printer to control its special features. Often the control codes are given as a mix of symbols, ASCII characters, and decimal values (sometimes the values are even hexadecimal). For example, if an "<ESC> 4" turns italics

on, then it is assumed the user understands that "<ESC>" stands for the decimal value 27, and "4" stands for the ASCII value of the character "4" which is 52. So 27,52 turns italics on (in BASIC you would "PRINT#4,CHR$(27);CHR$(52)"). If "<ESC> p 1" turns proportional print on, then the actual values would be 27, 80 [ASC("p")=80], and 1 (in this case the "1" is not the ASCII value of the character "1" but the decimal value one!). See Appendix A, page 47, for a list of ASCII values.

Unfortunately, not all values (0-255) have ASCII equivalents, so abbreviations are resorted to. If an <ESC> <LF> reverses the paper one line, then you have to look up what the value "<LF>" is supposed to represent. Once you figure out what decimal values need to be sent to control your printer's special features, then you're all set. *BB Writer* makes sending control codes to your printer as easy as possible.

Printer Macros & Toggles

BB Writer's 16 printer toggles and 32 printer macros give you 48 user-definable printer commands. This is more than enough to provide you with complete control of all your printer's special features. If you want to create a command to turn condensed, italic subscripts on, then a single macro will do it if your printer supports those features.

The 32 user-definable single character RVS format commands (or printer macros for short) can be predefined (or defined from within your document) to send up to 32 control codes to the printer. Load the **BB** file "Printer Macros," "Printer Toggles" and "Printer Test" for examples. Also see the tutorial "Format Commands," and page 38 for information on how to define macros and toggles.

Printer macros are extremely powerful and flexible user-definable commands. *BB Writer*, for example, does not have specific, predefined commands for setting pitch and line feed spacing because both can be defined and set using a single character printer macro. For all practical purposes, *BB Writer* supports an unlimited number of printer commands--as many as there are printers and ways to configue them.

Still having problems?

If your printer fails to respond correctly to the control codes you told *BB Writer* to send, you should suspect: 1) The interface. If your interface is *not* in transparent mode, it may be converting the control codes before they reach the printer. Try adding 128 to values between 65 and 90, and subtracting 32 from those between 97 and 122 to compensate. 2) *BB Writer* has mistakenly been told to send the wrong control codes. The macros and toggles do work!

If your printer is not in transparent mode, a single quote followed by a printer command may result in the control codes being printed as numbers instead of being sent to the printer. This is because many interfaces have a "quote mode" that helps make BASIC program listings easier to read, but can cause problems when doing word processing.

Appendices

A- ASCII to Decimal Conversion

The following table gives the decimal values for commonly used ASCII characters.

+ 43	1 49	7 55	= 61	c 67	i 73	o 79	u 85
, 44	2 50	8 56	> 62	d 68	j 74	p 80	v 86
- 45	3 51	9 57	? 63	e 69	k 75	q 81	w 87
. 46	4 52	: 58	@ 64	f 70	l 76	r 82	x 88
/ 47	5 53	; 59	a 65	g 71	■ 77	s 83	y 89
0 48	6 54	< 60	b 66	h 72	n 78	t 84	z 90

The number 27 is used as an escape code (ESC) to tell the printer that the next character is a command. If your printer manual says that an <ESC> w 1 turns double-width print on, then the actual numbers that must be sent to the printer to turn this feature on are 27, 87, and 1. These are the *decimal* numbers you would enter when using *BB Customizer* to set up your printer.

B- Dvorak Keyboard

The Dvorak keyboard is a more efficient arrangement of the keys than the standard QWERTY keyboard. The keys are aranged as follows:

```
'  ,  .  p  y  f  g  c  r  l  /  *
a  o  e  u  i  d  h  t  n  s  -
;  q  j  k  x  b  m  w  v  z
```

C- BASIC Program Conversion

You can include BASIC program listings in your text files by LISTing the BASIC program to a disk file. First LOAD the program (LOAD"FILENAME",8) and then type the following line in direct mode (no line numbers) followed by RETURN to execute the commands.

`OPEN2,8,2,"FILENAME,S,W":CMD2:LIST`

What would normally LIST to the screen will now go to a disk file called "FILENAME." When the cursor resumes flashing, type the following to CLOSE the file:

`CLOSE2`

From within *BB Writer*, tap CTRL,1 to load, merge, or append. Delete the hyphen, enter the file name and press SHIFT RETURN. A menu will appear, press "g" then select "PET ASCII" and *BB Writer* will make the conversion.

D - Default Macro Definitions

Macro definitions are contained in the file "bb macros." Tapping CTRL,Sh-M will reveal the default definitions. You can then edit the definitions (delete, redefine, or define new macros); and tap CTRL,Sh-M again to hide the definitions. Do not Save the new definitions unless the main text area was cleared first.

ab=about	h=have	S=Sincerely yours,
af=after	hb=have been	t=that
ag=against	hh=have had	th=this
.=and	hn=haven't	ti=time
.:=and the	/=has	ts=that's
.t=and that	/b=has been	:=the
b=but	/h=has had	:i=their
ba=be able	/n=hasn't	:e=there
bc=because	i=I	:n=then
bf=before	ia=I am	:m=them
bi=being	im=I'm	:r=they're
bn=been	iv=I've	:s=these
bt=between	iw=I will	:y=they
bu=business	il=I'll	u=under
c=could	,=it	v=very
ca=came	,s=it's	w=with
cb=could be	j=just	wn=wouldn't
ch=could've	k=know	wh=which
cn=couldn't	kn=known	wi=will
co=come	ks=knows	wo=would
d=don't	l=like	wr=we're
dn=doesn't	m=many	@=was
di=didn't	mi=might	@n=wasn't
e=every	n=not	y=you
eb=everybody	ne=necessary	yl=you'll
ei=either	nu=number	yo=your
en=enough	o=other	yr=you're
eo=everyone	;=of the	
et=everything	p=people	
ew=everywhere	q=question	
f=for	r=are	
f:=for the	rn=aren't	
fi=first	s=some	
fr=from	sh=should	B=Busy Bee Software
g=good	sb=somebody	P.O. Box 2959
gr=great	st=something	Lompoc, CA 93438

Default Keyboard Macros

₵ plus...	Same as ...	₵ plus...	Same as...
a	CTRL,a	4	CTRL,4
b	CTRL,1,b	5	CTRL,1,5
c	CTRL,1,c	6	CTRL,1,6
d	CTRL,1,d	7	CTRL,1,7
e	CTRL,1,e	8	CTRL,1,8
f	CTRL,2,f,RETURN	9	CTRL,1,9
g	CTRL,1,g	0	
h	CTRL,h,RETURN	+	CTRL,SHIFT-+
i	CTRL,1,i	-	CTRL,1,-
j	CTRL,1,j	£	
k	CTRL,k	CLR/HOME	CTRL,HOME
l	UPARROW,l	INST/DEL	CTRL,DEL
m	CTRL,C=,M	@	CTRL,SHIFT-@
n	CTRL,1,n	*	CTRL,1,SHIFT-*
o		↑	
p	CTRL,SHIFT-P	RUN/STOP	CTRL,SHIFT-INST
q	CTRL,q	:	CTRL,1,SHIFT-:
r	CTRL,r	;	CTRL,1,SHIFT-;
s	CTRL,SHIFT-S	=	CTRL,=
t	CTRL,t	RETURN	
u	CTRL,1,u	,	
v		.	CTRL,1,.
w	CTRL,w	/	CTRL,SHIFT-?,y
x	CTRL,x,e	CRSR UP	CTRL,CRSR UP
y		CRSR RIGHT	CTRL,CRSR RIGHT
z		SPACE BAR	CTRL,SPACE BAR
BACKARROW		F1	CTRL,SHIFT-E,w
1	CTRL,1,1	F3	CTRL,SHIFT-E,s
2	CTRL,1,2	F5	CTRL,SHIFT-E,p
3	CTRL,3	F7	CTRL,e,RETURN

Note: Use of this feature is optional! Occasional users don't have to learn 60 new commands. Experienced users, however, will find the flexiblity and increased productivity this feature provides to be one of *BB Writer*'s most important (and addictive) features.

Use CTRL,₵ K to toggle this feature on/off.

See page 21-22 for examples.

Glossary

Buffer: An area of memory set aside for temporary text storage.

Byte: A unit of memory; one character of text takes up one byte of memory. 22000 bytes equals 22K (kilobytes) of memory. There are 254 bytes in each block on a disk.

Command mode: Allows keys to stand for commands instead of characters. Entered by tapping the control (CTRL) key.

Control code: A number (0-255) that a printer interprets as a command instead of a character to be printed. Often preceeded by an escape code [CHR$(27)].

CBM ASCII: Also called Pet ASCII; Commodores coding for characters in which upper and lower case letters are reversed as compared to true ASCII.

Directive: A format command that tells *BB Writer* how text is to be printed.

DOS: Disk Operating System.

Edit mode: The normal mode; allows text to be entered and changed.

Escape Code: The number 27 which tells printers that the next character is not to be printed, but interpreted as a command.

Font: A character set--defines the shape of characters.

Format: The way text appears when printed. Defined by reverse video format commands.

Freeware: Copyrighted software that can be given away but not sold.

Justification: Making both right and left margins vertically straight.

Line spacing: The number of blank lines printed between each line of text. Not to be confused with line spacing pitch--the number of lines per inch.

Macrotyping: A system of speed typing based on *BB Writer's* on-line macro capability.

Macro: One or two characters that stand for or call up a longer string of characters.

Margin: The distance, measured in lines or characters, from the edge of the paper to the edge of the text.

RVS commands: Reverse video characters that tell *BB Writer* how to print your text.

Screen code: The code *BB Writer* uses to store text.

Syntax: The exact way a command must be typed if the computer is to understand it.

Toggle: A command that turns a feature on and off.

True ASCII: American Standard Code for Information Interchange. Not the same as Commodore ASCII.

Userware: User promoted and distributed software.

Word-wrap: Moves a word to the next line if it won't fit on the current line.

A Note to Xetec Super Graphix Users

The following program (a copy is included on both sides of the disk)
will load two fonts of your choice into your interface, then boot
"BB" to load *The Write Stuff*. Make a copy of *The Write Stuff* and
scratch enough text files to accommodate the fonts you want to use
(n.bold and s.italic1 in the example). File copy the fonts to the
disk. Using *BB Customizer*, define three toggles to turn the NLQ, and
two user fonts on and off (see page 17 of Xetec Manual).

```
 0 ml=15872:m2=ml+134:rem if you don't have
   xetec version 1.3, try ml=49152:m2=ml+129
 1 on 1f goto4,9
 2 printchr$(147)chr$(5):c$=chr$(13):q$=chr$(34)
 3 1f=1:f$="d128.ml":load f$,8,1
 4 open 15,4,15:print#15,chr$(76):close15
 5 f$="n.bold":f=1:goto7:rem pick file names
 6 f$="s.italic1":f=2:rem user font 2
 7 dz=0:ifleft$(f$,1)="s"thendz=1
 8 poke251,127:poke175,127:1f=2:load f$,8,1
 9 poke174,192:poke175,134
10 poke252,dz:if dz=1 thenpoke174,128:poke175,141
11 poke254,f:pokem2,f+2:sys(ml):iff=1then6
12 printchr$(147)"load"q$"bb"q$",8"c$c$c$c$c$"run"
13 poke842,19:forj=843to845:pokej,13:next:poke208,4
```

A Note to Superbase 128 Users

BB Writer can interface with Superbase, the most powerful database
available for the 128. To output data ·from Superbase, use the
following Superbase command:

output all fill to "datafile" [field1][field2]...[fieldx]

or

output from "hlist" fill to "datafile" [field1][field2]...[fieldx]

Output only the fields you want from each record in the order you
want them. From within *BB Writer* you may then tap CTRL,1, enter
"datafile," and press SHIFT RETURN, then "g" to load "datafile" (a
SEQ ASCII file). You will then see that the data is in the correct
format required by the mail merge feature.

To import data from a **BB** mail merge file back into Superbase, tap
CTRL,s, enter file name, then SHIFT-RETURN and save as a SEQ file
containing PET ASCII. If there are 8 fields per record, you will
need to create (format) a database file with 9 fields--the 9th to
trap the RETURN MARK that separates each record, then use the IMPORT
feature to import the data.

Notes on Desktop Publishing

The aim of the desktop publisher is to create a single, camera-ready copy of a document, such as a newsletter, which can then be taken to a print shop to be off-set printed or xeroxed (the newer Xerox machines produce excellent copies). So, what's the best way to go about creating the camera-ready proofs? Well, since some effort will be involved and more than a few copies made, you'll probably want your publication to *look good*. This means you'll want to have some large titles, use a variety of different type styles and sizes, and perhaps sprinkle a few graphics here and there. There are several programs on the market that will allow you to mix graphics with different type styles. **BUT**, as many users discover the hard way, the end result is only a crude facsimile of what they would like to see. The following was condensed; the orginal looked coarser.

This is what text written using geoWrite and other graphics-based word processors looks like. Each character in this paragraph is at most 8 dots × 8 dots (or squares) in size. This compares to 9 × 9 for most printers (9 × 18 in near-letter quality mode). This sample was printed using a 24-pin dot matrix printer which could print 24 × 34 dots per character—over 12 times or 1200% better than the text in this paragraph.

OK, as you have a greater choice, more styles and **fonts** to play with. The problem is that, with the exception of the larger fonts viewed at a distance or smoothed over after printing, the print quality lacks **definition.** It's like those toy microscopes that offer 1200X zoom optics, but lack any useful resolution. These programs are also **painfully** slow.

Fortunately there is an alternative to such near-draft quality text. Using *BB Writer*, a pair of scissors, and some rubber cement, you can do a wiz-bang job in less time and with less effort than you could trying to get a camera-ready page printed in one pass using any of the graphics-based page processors. And of far greater importance, the time spent may *actually be worth the effort*.

The technique is quite simple. Just print your document (in double columns?) and leave blank spaces where you want oversized titles and graphics to appear. You can then use almost any graphics program to create the titles and graphics. **OR**, since there is no law saying you must use only computer generated art work, you can cut and paste *any* type of graphic (photographs, your own drawings, clip-art from books, etc.). Oversized titles can be created using commercial peel-off lettering, or you can use a graphics program to print the titles and smooth off the rough edges using a fine-point pen. If you want a box around some text, use a ruler and draw one. If a graphic, or whatever, isn't quite the right size, your local print shop may have one of the newer Xerox machines that can reduce or enlarge to any size from 65% to 150%.

On the opposite page is a sample from *The Advisor* (May-June 1988), one the slickist, most professional looking Commodore newsletters around (64/More Commodore User Group, Inc., P.O. Box 26811, San Jose, CA 95159-6811). Obviously, good quality desktop publishing can be done on a 64/128. Users, however, may want to question whether 64/128 desktop publishing software, that prints only in graphics mode, is the best way to go about achieving it.

Geopublish vs. The Write Stuff

Desktop publishing has come to THE ADVISOR! Some of the pages of this issue were formatted with THE WRITE STUFF, and one article started out with GEOPUBLISH. An explanation is probably in order about why you don't see the GP pages.

There are a lot of differences in the way the two programs work. With GP you can format the complete page, including "display type" for headlines, and you can include your own graphics or ones you've converted from other formats. TWS does the double-column formatting, but you have to paste in headlines and graphics you've obtained from other sources. (If you're using a dot matrix printer you can use double width chracters for headlines – and the feature works well.)

Laser printing is available for both GP and TWS users, and it would be a definite plus for any document done in the GEOS environment. TWS, on the other hand, works beautifully with a daisy wheel printer, so laser printing would be superfluous. In fact, if your dot matrix printer can do 12 cpi, you might even want to try it with TWS. The dots are closer together horizontally and the printout doesn't look as "computerish."

I spent about ten hours doing two pages with GP. Each time I made a mistake and couldn't find directions on how to correct it, I started over from scratch. In the end I had two pages that looked as good as anything on my old Gemini 10X doess with GEOS. If only I'd copied the whole works to a second disk, you'd see them here in this ADVISOR. What I did next was attempt to fill a box around the headline with a dot pattern,

and it was so heavy the title wasn't even visible! I can't get rid of the screen pattern and I can't afford any more time to start again from scratch. You'll find the article, "Installing GEOS," in this ADVISOR – complete with the original graphic, but formatted with TWS.

Don't get me wrong. GEOPUBLISH is the best thing I've seen (so far) from Berkeley Softworks. If you have a lot of time, and especially if you have access to laser printing, I'd recommend it. Even the manual is good, except that it would be helpful if you and I didn't have to pencil in what the command boxes are when the manual explains how to use them. My original text was in SPEEDSCRIPT format and the conversion to GEOWRITE was easy enough. So was adding the fonts I wanted. It's only when you come to things that MUST be done from within GEOPUBLISH that the going gets rough, and the manual could be a lot better here.

I hope this will help you understand your possible problems with installing If you have any questions just E-mail me here on Q-Link. My user ID is "Cpt

(Sample GeoPublish Text)

I just like THE WRITE STUFF better. I like the appearance of the printed page, and it took about twenty minutes to prepare the two pages of "Installing GEOS." I'd give GP four stars, but I have to give TWS five for ease of use and versatility. Even the manual is arranged better and the page preview in 80 columns is legible.

Not everyone will agree with me on this, and that's OK. If someone wants to contribute to THE ADVISOR using GEOPUBLISH, there will be both single- and double-column "master pages" on ADVISOR DISK 13. Don't worry if they seem to be the wrong size. We'll reduce them when they're printed.

M. Wendall

U-define Printer Macros

1=_____	(=_____
2=_____	) =_____
3=_____	[=_____
4=_____	] =_____
5=_____	F=_____
6=_____	G=_____
7=_____	H=_____
8=_____	I =_____
9=_____	J=_____
*0=_____	K=_____
! =_____	L=_____
" =_____	M=_____
$=_____	N=_____
%=_____	O=_____
&=_____	P=_____
' =_____	Q=_____

*The zero macro initializes printer; use to set preferred pitch, linefeed spacing, and font style. Set 0=127 to send no code. Can be defined from within a document; if changed, preview first to redefine this macro.

U-define Printer Toggles*

g=_____	o=_____
h=_____	p=_____
k=_____	t=_____

*Use **BB Customizer** to define the above printer toggles.

A Note to Non-English Language Users

If you would like a non-English version of *The Write Stuff*, write and we will put you on a mailing list. (What language?) If you would like to help create a non-English version, please contact Busy Bee Software.

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BB Laser Printing Service

To further support our product, Busy Bee Software is now offering a laser printing service for **BB Writer** users. Mail your **BB** files on a disk, or upload them to the **Busy Bee Bulletin Board**, and they'll be printed and mailed back to you within 24 hours.

The following is a copy of an enlarged copy--the orginal is quite sharp; a variety of fonts are available (actual size shown):

*Helvetica Bold (proportional spaced) 14.4 pt.

*Courier Pica (fixed spaced--10/inch) 12 pt. With **Boldface** and *Italics*.

*Times Roman (proportional) 10 pt. With **Boldface** and *Italics*.
*Times Roman Compressed (proportional) 10 pt. With **Boldface** and *Italics*.
*Times Roman (proportional spaced) 8 pt.
*Times Roman Compressed (proportional spaced) 8 pt.

*Line Printer Condensed (fixed spaced--16.66/inch) 8 pt.

*Line Draw Graphics (elite, fixed spaced) 12 pt.
╟─╢╟╪╟╫─╫─╚╟╫╢┏─╟╥╧╞╢╒╫╪╟┝╙┓╜ ╙╖╡ ╥╥╫╢╛┏┚╖╗

*Prestige Elite (fixed spaced--12/inch) 10 pt. With **Boldface** and *Italics*.

*Prestige Condensed (fixed spaced--16.66 characters/inch) 7 pt.

*Roman Extention (Alternate character set).
ÀÂÈÊËÎÏ`´^¨ÙÛ£¯ °ÇçÑñ¡¿¤£¥§ƒ¢âêôûáéóúàèòùäëöüÅîØÆ
åíøæÄïÖ ÜÉïßÔÁÃãÐdÍÌÒÓÕõŠšÚÝÿÞþ ─¼½ªº«■»±

*Letter Gothic Elite (fixed spaced--12/inch) 12 pt. With **Boldface** and *Italics*.
!"#$%&'()*+,-./0123456789:;<=>?@
ABCDEFGHIJKLMNOPQRSTUVWXYZ
[\]^_'abcdefghijklmnopqrstuvwxyz{|}~ Legal_¢®©°§¶†™

Formatting your document for laser printing can be as easy as entering a single printer macro to select the font you want and making a small adjustment to the page length. There are laser fonts which are equivalent to the pica, elite, and condensed fonts of most dot matrix printers. This means you can format your own document, print, adjust, and reprint it as often as needed to get everything just like you want it. The laser printed copy, then, will have the same overall form, but with good looking laser fonts replacing the crummy looking dot matrix fonts. Notice that when a document is laser printed, justification of fixed-space fonts is achieved by inserting microspaces rather than by inserting whole spaces.

Should you make a mistake--all is not lost; we'll try to catch it, make corrections, and reprint the page.

How to Order

What you do:

Prepare your document for laser printing following instructions in our free how-to booklet and send it to us on disk or upload it to the BBS listed below. If you don't have a disk mailer, place disk between two squares of cardboard, put in 9 X 6" envelope, and mail it (for 65¢). You should receive your copies in 5-9 days. BBS users should establish an account, although MC/VISA and C.O.D. orders accepted. Don't forget to provide instructions.

What we do:

We read and follow your instructions! If any page does not look absolutely perfect, we will adjest your formatting and reprint the page. All reject pages will be returned to you. You will be billed 50¢ for each reject. *If for any reason you feel we were too picky and reprinted pages unnecessarily, don't pay for them.* Otherwise, remit payment with your next order or in 90 days. Our first priority is to provide you with a good looking document.

Rates:

$1.50 setup fee per document plus 50¢ per page.
A document may be in more than one file and need not be linked. We will look for errors before printing, but some reprints (50¢ each) are to be expected.

Return Shipping:

AMOUNT	SERVICE
$0.00	Provide your own SASE
0.25	1-4 pages, pages folded, 1st Class Mail
0.50	5-9 pages, pages folded, 1st Class Mail
0.75	10-15 pages, folded, 1st Class Mail
1.00	16-20 pages, folded, 1st Class Mail
2.75	Deluxe UPS, unfolded, between cardboard
4.50	UPS 2d-day air, unfolded.
9.00	1-30 pages, UPS Next-day Letter
14.00	UPS Next day packet or $12 Express Mail

Ship to:

Busy Bee Software
Laser Printing Dept.
P.O. Box 2959
Lompoc, CA 93438
(805) 736-8184

Upload to:

Busy Bee Bulletin Board (ARB)
300/1200 BAUD, after 5 pm. pst
(805) 736-8184 Mon-Fri

We accept cash, checks, money orders, MC/VISA, (C.O.D. add $2.25)

Embedded (RVS) Commands

CTRL 1 formats

a	Alternate pagination
b	Boldface toggle
c	Centering toggle
d	Double-width
e	Emphasized print
f	Forced page
g	User-defined toggle
h	User-defined toggle
i	Italics toggle
j	Justification toggle
k	User-defined toggle
l	Linked file
m	Margin release
n	Non-printing note
o	User-defined toggle
p	User-defined toggle
q	LQ/Draft toggle
r	Right alignment
R	Reverse field toggle
s	Subscripts toggle
S	Superscripts toggle
t	User-defined toggle
u	Underlining toggle
w	Wait...pause printing
x	External file
.	Condensed print toggle
-	Soft hyphen
=	Hard hyphen (CTRL,SH-*)
E	Escape code CHR$(27)
#	Print page #
##	Print Roman page #

CTRL 2 formats

ai5	Auto-indent
ai-5	Outdent paragraphs
bl4	Blank Lines
bm10	Bottom Margin
cm0	Column Margin
fo5;	Footer
fp5	Forced Page
he5;	Header
hl8	Header/Footer lm
hr8	Header/Footer rm
lm10	Left Margin
lm+5	Left Margin+5
lm-5	Left Margin-5
ls1	Line Spacing
mr4	Margin Release lm-4
oe1	Print odd pages
oe2	Print even pages
oe0	Print odd & even pages
of20	Offset all text
oF10	Offset odd # pages
ou7	Outliner ON
ou0	Outliner OFF
pl66	Paper Length
pn1	Page Number
pp4	Print Page 4
pw80	Paper Width
rm10	Right Margin
rm+5	Right Margin+5
rm-5	Right Margin-5
sa7	Secondary Address
tm10	Top Margin
<1>	Form-fill marker

User-defined Printer Commands

0	Macro to initilize printer
1-9	Printer macros
F-K	Printer macros
L-Q	Character macros
A-D	Non-printing codes
U-Z	Special characters

Keyboard Commands

Tap CTRL for Command mode

a	ASCII toggle
Sh-A	Autoboot on/off
b	Background color
Sh-B	Menu line color
¢ B	Border color
c	Change case
¢ C	Clock color
d	Decimal tabs on/off
Sh-D	Drives: 1, 2, dual?
¢ D	Define keyboard macro
e	Eat text (c,w,s,p)
Sh-E	Eat more text
¢ E	Execute batch S & R
f	Font toggle
h	Hunt text for phrase
Sh-H	Define Hunt phrase
¢ H	Hyphenator
i	Insert mode toggle
j	Set alarm clock
k	Key click toggle
Sh-K	Keyboard--Dvorak?
¢ K	Keyboard macro toggle
l	Load/Merge/Append
m	Macros on/off
Sh-M	Edit macros
¢ M	Print to memory
p	Print (preview)
Sh-P	Preview
¢ P	Screen dump
r	Restore text
Sh-R	Restore & sort text
s	Save
Sh-S	Search & Replace
¢ S	Resume Search & Replace
t	Set or clear a tab
Sh-T	Clear all tabs
u	User routine 1
Sh-U	User routine 2
v	Verify a SAVE
w	Word-wrap toggle
x	Exit/SAVE Defaults
Sh-+	Create text areas
q	Go to next text area
Sh-Q	Go to previous area
?	Encrypt/Decrypt text
/	Open 1581 Sub-directory
=	Word count
Sh =	Split screen (80)
<	Escape key
↑	Send disk command
Sh-↑	Autocaps toggle
:	Memorize position 1
,	Recall position 1
;	Memorize position 2
.	Recall position 2
-	Delete a range of text
Sh -	Delete range and store
0	Limit line length
Sh-0	Strip RETURN marks
1	Enter 1 RVS format
2	Enter format(s)
3	Calculator
4	Disk directory
@	Replace word/phrase
Sh-@	Define replace word
£	Letter color
Sh-£	Menu letter color
¢ £	Position color
*	Edge effect toggle
Sh-*	Wide screen toggle
DEL	Delete a line
INST	Insert a line
HOME	Clear/Erase text
SPACE	Eat spaces
CTRL/RET/<	Exit/Escape
SHIFT-RETURN	Indent/linefeed