

#### 4. EDITING COMMANDS

To begin editing the text in memory, enter E from the file screen menu. The first 21 lines of the text will appear on the screen. At the top of the screen the name of the file is given, along with an indication of the line and column number for the cursor. At the bottom of the screen is a brief reminder of the operation of the function keys. Hitting function key F1 (labeled "HELP") while in the editor, produces a complete on-screen menu of editing features. Hitting Esc will then return you to your previous location in the text. The sections which follow describe the editing commands in somewhat greater detail than is available from the help screen. Until you want to do something fancy, the help screen may be all you need. To exit the editor and return to the file screen menu, hit function key F10 (labeled "FILES").

The maximum number of characters allowed on each line is one of the most important editing parameters. However, this parameter affects the margins and thus can only be altered by going to the file screen menu and using the M - Margin Settings command. See section 5.1 for details on setting this parameter.

##### 4.1 Cursor Keys

The primary advantage of a computer text processor over conventional typing is the ability to move freely throughout your document, making changes wherever desired. RGB^TechWriter is particularly good at this aspect of text processing, thanks to its ability to update the screen very quickly. You can move about the text using a number of cursor-location commands, all of which are conveniently accessed using the cursor keys on the numeric keypad. All of these commands are summarized in the help screen accessible from the editing mode by hitting function key F1.

To move right or left by a single character position, use the left and right cursor arrows. Similarly, you can move up or down one line at a time using the up and down arrows. After each movement of the cursor, the screen is adjusted to make sure your location is always "on-screen."

One way to move quickly from place to place is by holding down the cursor key. After a short delay, it will send out a series of pulses at the rate of 10 per second. If you want to travel long distances, however, other cursor commands are provided. The PgDn and PgUp keys allow you to jump forward or backward in your document by one screen page (20 lines) at a time. Holding down the Ctrl key while hitting PgDn or PgUp takes you to the end or start of your file, respectively.



The home and end keys will move you to the start or end of the current line. If you hold down the Ctrl key while hitting these keys, you will move to the top or the bottom of the screen.

Finally, if you hold down the Ctrl key while hitting the left or right cursor keys, the cursor position is moved one word at a time, coming to rest on the first letter of a word. This is a quick way to move out into the middle of a long line.

## 4.2 Entering Text

As characters are typed from the keyboard they are inserted into the text in memory. Each character is displayed on the screen immediately and the line it lies within is adjusted accordingly. The rest of the screen, however, is not updated to reflect your input until you pause in your typing. This is done because it takes too long to update the entire screen after every keystroke. Although the screen is not updated each time, the paragraph you are working on is reformatted in memory after every keystroke. This means that words within the paragraph are shifted between lines as needed so that as many words as possible are placed on each line without any line extending beyond the allowed line width. You should not hit the carriage return at the end of a line if you are continuing with the same paragraph. The carriage return indicates the end of a paragraph, and is represented on the screen by a special carriage-return marker: a yellow dot.

The paragraph reformatting can produce some unexpected results until you are familiar with its operation. When the formatter is trying to split words between lines, it will do so at either a space or a hyphen. You can add a hyphen to a long word to split it if you wish, but the hyphen will remain even if the word gets moved to a new location. If you do not want a hyphenated word to be split between lines, you can "disguise" the hyphen by making it bold, or by defining an alternate character which translates into a hyphen when printed (see section 5.5).

Spaces are permitted to lie beyond the allowed line width, because they don't get printed anyway. An interesting implication of this is that if you try to enter spaces at the beginning of a line which is not the start of a paragraph, they will all get shuffled back to the end of the previous line. To indent a line which is not the start of a paragraph, you need to put a carriage return at the end of the preceding line. This can be done by hitting the carriage return while in the first column of the line to be indented, because the carriage return marker will also be shuffled back to the end of the preceding line. The TAB key does all of this automatically, and is the recommended way of indenting a section of text. Simply hit the TAB key at the start of each line to be indented and add or subtract individual spaces as needed for the desired alignment. If you need to significantly alter the indented section, it is best to



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remove the added carriage returns and extra spaces before making the changes. Function key ^F5 concatenates the line the cursor is on with the following line, removing any extra spaces. Use this key on each line of the indented section to undo the indenting. After altering the text, repeat the indentation process using the TAB key.

For RGB^TechWriter files, tabs are initially set in column 6, at the right edge of the line, and at the midpoint of the line. To move to the next tab, use the TAB key, or use Shift-TAB to move backwards to the previous tab position. When tabbing forward, spaces are inserted into the text until the first character of the line lies in the next tab column. Thus, if you hit TAB at the beginning of a paragraph which initially has only 3 spaces at its start, 2 more are added so that the paragraph starts in column 6. To set a new tab, hit ^T in the desired column. This notation means to hold down the Ctrl key while hitting the T key. To remove a tab, hit ^T while in that column. To remove all tabs and start over, hit ^T while the cursor is located in column 1.

When you hit the carriage return, several things happen. First the current paragraph is terminated at the current cursor position and a carriage-return marker is inserted. If there are characters after the cursor in this paragraph, these are moved to the next line and become the start of the next paragraph. The cursor is moved to the start of this new line. If there are any blank spaces on this new line, they are deleted. Finally, spaces are added to the start of the new line until the cursor lines up with the start of the line just above it. This last feature is rarely encountered in normal text, but it is very helpful when programming in a structured language like Pascal, or when creating an indented list.

If you type an incorrect character you can use the BACKSPACE (large left arrow key) to erase the previous character. If you want to instead erase the character where the cursor is currently located, use the Del (delete) key. To erase an entire word starting with the cursor location and continuing up to the start of the next word, use ^W. The easiest way to replace one word with another is to move to the start of the offending word using the cursor keys, type in the new word and any spaces or punctuation which follow it, then hit ^W to erase the old word. Another control command, ^D, deletes everything on the current line, starting with the cursor location. If there is a carriage return at the end of the line, it is only deleted if the ^D command is issued while the cursor is in column 1.

This section (4.2) has thus far assumed that you are in INSERT mode, rather than OVERWRITE mode. The current mode is shown on the top line of the editor screen. To change back and forth between modes, use the Ins key. When in OVERWRITE mode, characters which are typed replace the current text. This mode is particularly useful for tables where you don't want to move



other characters around each time you make an entry. One consequence of the OVERWRITE mode is that it prevents you from altering the length of paragraphs. If you reach the end of a paragraph while in OVERWRITE mode, you will get no response to typed characters. You may need to switch into OVERWRITE mode for a short period when this mode is more convenient, but it is recommended that you switch back to INSERT mode as soon as the task is completed. In fact, several of the editing commands, such as ^W, automatically switch you back into INSERT mode when they are executed. In OVERWRITE mode, the Del key replaces the character at the cursor position with a space, and the BACKSPACE key replaces the previous character with a space.

A line can be centered by moving the cursor onto the line and hitting function key F5. Lines which are part of a multiple-line paragraph cannot be centered. The inverse of this function is left justification, obtained by hitting Shift-F5. In this case, spaces are removed from the current line until the text starts in the current cursor position.

The text memory can store a maximum of 62768 characters, depending on how much memory you have in your computer. If your document is too long to fit in the available space, split it into separate files and use the dot command NUMBER to set the page numbering at the beginning of each separate file (See section 5.5). The block operations described in Section 4.5 are very useful for shifting text between separate files. Other limitations you are unlikely to encounter are a maximum of 2047 lines in the text, and no more than 2760 characters in any one paragraph. RGB^TechWriter checks with each keystroke to insure that none of these limits are exceeded. You will notice a markedly slower response when the file exceeds about 95% of the allowed capacity.

### 4.3 Special Character Attributes

The real beauty of RGB^TechWriter lies in its use of character color to convey special information. The special options available are listed below. All of these features are summarized in the help menu available in the editing mode by hitting function key F1.

**Boldface** - To enter boldface characters, hit function key F3. The word BOLD on the bottom line of the screen will be highlighted to remind you that you are in Boldface mode. Any characters typed will appear brighter on the screen, and when printed will appear in boldface. To return to normal print, hit F3 again. This mode is cancelled when you return to the file screen menu. Bold characters take longer to print than normal characters, because the printhead must make two passes of the line.





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**Superscripts** - To enter superscripts, hit function key F2. The word SUPER on the bottom line of the screen will be highlighted to remind you that you are in Superscript mode. Any characters typed will appear magenta on the screen, and when printed will appear one-third of a single-spaced line above the normal line of text. To return to normal print, hit F2 again. This mode is cancelled when you return to the file screen menu or switch to Subscript mode. Use of superscripts when the line spacing is less than 1.0 may produce uneven lines. One exception that can be quite useful is to set the spacing to 0 for one line before changing it back to normal. The line which falls between the two SPACE dot commands (see section 5.5) will be printed on top of the following line.

**Subscripts** - To enter subscripts, hit function key F4. The word SUB on the bottom line of the screen will be highlighted to remind you that you are in Subscript mode. Any characters typed will appear cyan on the screen, and when printed will appear one-third of a single-spaced line below the normal line of text. To return to normal print, hit F4 again. This mode is cancelled when you return to the file screen menu or switch to Superscript mode. See Superscripts for the implication of line spacing less than 1.0.

**Underline** - To underline a character, move the cursor to the desired location and press ^\_ (Ctrl - Underscore). The background behind the character will turn from blue to black. To remove an underline from a character, you also move the cursor to the desired location and press ^\_. If you press ^\_ at the end of a paragraph, the paragraph is extended by adding an underlined space. This makes it easy to draw long horizontal lines using the underline feature. Once you underline some text, any subsequent editing of that text will retain the underline unless you specifically remove the underline.

**Alternate Characters** - RGB^TechWriter allows you to enter 95 different alternate characters directly from the keyboard. These characters are entered by holding down the Alt key while typing any letter key, number key, function key, or the underscore. The character typed will appear on the screen in yellow (brown), rather than white. To get capital letters, the symbols above the numbers, and another 10 function-key characters; hold down the Alt key while hitting first the + key and then the desired key. This prefix is necessary because the keyboard does not recognize the Alt and Shift keys together at the same time. To enter an alternate-character "+", hold down the Alt key while hitting the + key twice. When the alternate characters are printed, they activate your printer's alternate character set. This is primarily intended for Greek and other special characters, but you could use it to generate italics or any other non-standard feature. RGB^TechWriter gives you a great deal of flexibility in controlling what happens within your printer when one of these alternate characters is encountered. Complete details are given in section 6.3.



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Esc - If you want to enter a control character directly into your text, hit the Esc key first. The control character can then be entered directly by holding down the Ctrl key while hitting the character key (often written as ^N), or you can enter its ASCII equivalent number (in the range 1 through 31) by holding down the Alt key while you type the number on the numeric keypad. The control character will be represented by a single unique character on the screen. For example, to enter the ESC code, CHR\$(27), hit the Esc key once to invoke direct insertion, then either hit the Esc key again, or enter ALT-27 from the numeric keypad. Either way, this code will appear on the screen as a small arrow pointing to the left. Insert control codes with caution. RGB^TechWriter will treat these codes just like any other character, and cannot account for the effect they may have on your printer.

Extended Character Set - You can enter characters from the extended character set, those with ASCII equivalent numbers in the range 128 through 255. To do so, hold down the ALT key while typing the ASCII equivalent number on the numeric keypad. The character is represented on the screen by a unique character. The way this character will appear in print depends on how your printer interprets these character codes. If your printer is compatible with the IBM extended character set, the character should print just as it appears on the screen.

All of the features listed above can be compounded together. For example, you could have a bold-superscripted-underlined-alternate character! There is a different character color for each combination, as determined from the rules listed below. By the way, it is from these rules that RGB^TechWriter gets its name. Remember that normal characters start out as white (a combination of red, green, and blue) on a blue background.

1. Underlining changes the background to black.
2. Boldface increases the intensity of the character.
3. Superscripting removes the character's green component.
4. Subscripting removes the character's red component.
5. Alternate characters have the blue component removed.

In the extreme example of the bold-superscripted-underlined-alternate character, the character would appear as bright red on black. The compounded combinations you are most likely to encounter are superscripted alternate characters (red) and subscripted alternate characters (green).

#### 4.4 Searching Text

RGB^TechWriter provides a mechanism which allows you to search through the text in memory, looking for a particular string of characters. An option allows you to replace each occurrence of the string with another string of characters. The strings can be up to 63 characters long.



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To begin a search, hit function key F6. You will be prompted to enter the "search string." Indicate your completion of the string by hitting the Enter key. RGB^TechWriter will take this string of characters and search for any similar occurrence in the text, starting at the current cursor position. Thus, to search the entire file, you need to invoke this command when the cursor is at the beginning of the file. In conducting the search, RGB^TechWriter ignores the color of the characters, and doesn't discriminate between small and capital letters. If a match is found, the cursor is moved to the new location. You then have a choice. If you hit the Esc key you are returned to editing mode, with the cursor at the new location. If you hit the space bar, this match is ignored and RGB^TechWriter searches for the next match. You can continue to skip matches until the one you are interested in is found. If no more matches are available you are returned to editing mode with the cursor at its original location.

If you are interested in replacing one string with another, hit function key Shift-F6. You are again prompted to enter the "search string," but then you are also asked for a "replacement string." You can include subscripts, superscripts, bold characters, and alternate characters in the replacement string in the same way that you would enter them in the text directly. RGB^TechWriter searches for a match to the search string as described above. If a match is found, you have three options. If you hit the Esc key you are returned to editing mode, with the cursor at the new location. If you hit the space bar, this match is ignored and RGB^TechWriter searches for the next match. If you hit the letter R (for Replace), the file is altered by first erasing the match to the search string, then inserting the replace string. The replace string is inserted in the text exactly as entered. After replacing the string, RGB^TechWriter searches for the next match to the search string. These three options give you the flexibility to replace some occurrences of the search string and not others. RGB^TechWriter does not support automatic replacement of every occurrence of a string.

It is common to use the Esc key with either of the above functions to stop the search process and make a correction. If, after making the change, you want to continue with the same search you last performed, hit function key ^F6. This will repeat the last search function, starting with the current cursor position.

It is possible to search for and replace the yellow carriage-return markers. This is useful for converting an ASCII file into RGB^TechWriter format, in which case you would replace all carriage return markers except the ones at the end of a paragraph with a single blank space (or with nothing, if there is already a blank space at the end of each line). To search for the carriage returns, use the normal procedure, but for the search string enter a character 249. This is done by holding down the Alt key while typing 249 on the numeric keypad.



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Although a spelling checker can be used to catch spelling errors, it will not catch one of the most common typing mistakes -- repeated words. Function key Shift-F8 can be used to search the text in memory for repeated words. The search begins at the current cursor location, and proceeds until either a repeated word is found or the end of text is reached. A "repeated word" is defined as two consecutive words that are spelled the same (capitalization is ignored) and are separated by one or more spaces and/or carriage-return markers.

#### 4.5 Block Operations

Cutting and pasting is an important part of any document preparation. There are a myriad of reasons why you may want to move entire blocks of text from one part of the text to another. RGB^TechWriter allows you to do this for block sizes up to 8,000 characters. You can even move blocks of text from one file to another. Three block operations are provided to move, copy, or delete a block.

Before you can do any of the block operations, you must define your block. This is done by hitting function key F8 when the cursor is at the beginning of the block, moving the cursor to the first character after the block, and hitting F8 again. The block is identified by being displayed in "inverse video." The word BLOCK on the bottom line of the screen is highlighted to indicate the presence of a marked block. The way in which blocks are marked is such that you can mark a paragraph or group of paragraphs without having to move the cursor out of column 1. Just hit F8 at the beginning of the line which starts your block, then hit it again in column 1 of the line immediately after the last line you want to include. You can also mark any part of a paragraph as a small block. If you want to expand your block, just hit F8 again at the new start or end position. You can't shrink a block, however. If you hit F8 while the cursor is either within the block or at the first character position immediately after the block, the block is turned off and the screen is returned to normal. The block is also turned off if you attempt to enter or delete any characters. If you try to define a block which is too big a warning is issued, but the block remains marked. This is because although you can't move or copy an oversized block, you can delete it or count the words in it.

As soon as you define a block and it isn't too big, it is copied into a special block buffer in memory. The contents of this buffer remain intact until you mark another block, although after you have completed the block operation the block is no longer displayed. This even applies if you delete the block. This allows you to mark a block in one file and have it retained in the block buffer while you load a different file into memory.





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The simplest of the three block commands is the block copy, invoked by hitting function key Shift-F9. The contents of the block buffer, which were defined when the last block was marked, are entered into the text at the current cursor location. Note that it is not necessary for the block to be highlighted for this function to operate. You can insert as many copies of the block into your text as you wish without having to mark it again each time.

The block delete function allows you to delete large blocks of text at once. To start the process, hit function key ^F9. Since accidental use of this function could cause a major loss of data, you are required to confirm your choice before the block is deleted. The block must be marked and highlighted for this function to operate. Note that even blocks which are too big for the block buffer can still be deleted in their entirety.

The most common block manipulation is the block move. After marking the block, position the cursor at the location where you would like to move the block. Hit function key F9. The block will be moved provided that the block is marked, highlighted, and not too long. The process involves filling the block buffer when the block is marked, deleting the block from the text, then copying the block buffer to the cursor position.

Function Ctrl-F8 counts the number of words in the current block, even if the block is too long for the block buffer. If no block is currently highlighted, this function will count the total number of words contained in the entire text in memory.

#### 4.6 Equation Lines

As a scientific text processor, RGB^TechWriter recognizes the special requirements which arise in conjunction with equations. RGB^TechWriter allows you to create special lines in your text called equation lines, which behave differently from normal text lines. An equation line is identified by a green marker at the end of the line, just before the carriage-return marker. To create an equation line, hit function key F7. A new blank equation line will be inserted in the text at the cursor position. To convert an existing normal line into an equation line, hit function key Shift-F7. When an equation line is created, it will occupy the full line width. The only ways to delete an equation line are to use the ^D command while in column 1, hit the Del key while the cursor is positioned on the green marker, or through the block delete function, ^F9. Create as many consecutive equation lines as are needed by your equation. The special properties of equation lines are listed below.



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1. Contiguous equation lines are never split between pages. If while printing the file there is insufficient room to fit the entire equation on the current page, the equation is moved to the top of the next page and printing proceeds from there.
2. Text can be inserted without altering the line length. By creating a whole line of blank space at the outset, equation lines allow you to move freely through the region without concern over the length of the lines.
3. Equation numbers remain right-justified. Locate the cursor at the green equation marker either by repeated cursoring or by using the End key. If you then type an equation number, it will be right justified, ending in the last column of the line. Furthermore, any subsequent additions to or deletions from the line will not affect the location of the number.
4. When equation lines are printed, the line spacing is not allowed to exceed single spacing. If the text just before the equation was double-spaced, the spacing would be reduced to single-spacing for the equation, then reset to double spacing for the text after the equation. You may set the spacing to a value less than 1.0 for equations. Setting the spacing to 0.2, for example, gives you five vertical levels for each standard line of print. This makes possible very complex expressions.
5. Function key ^F7 can be used to jump directly to the next equation. This makes it easy to check your equation numbering.
6. ^D while in any column other than the first will delete all of the text on the equation line after the cursor, but will not reduce the length of the line or remove the green equation marker.

Otherwise, equation lines behave as normal lines. INSERT and OVERWRITE modes are both available, plus line centering, search and replace, and block manipulation.



