

CHAPTER 9 SUBSCRIPTS, SUPERSCRIPTS, AND COMPOSITE CHARACTERS

With the word processing system you can easily type subscripts, superscripts, and composite characters.

A subscript is a character or characters typed one half-space below the rest of the line. For example, the number 2 in the chemical formula for water is a subscript.



Similarly, a superscript is a character or characters typed one half-space above the rest of the line. For example, the number 2 in the equation for the area of a circle is a superscript.

$$\text{area} = \text{pi} * \text{radius}^2$$

A composite character is a character printed by striking two or more characters on top of one another. You can use a composite character to create a special character that is not found on the main keyboard. For example, you can print ≠ by forming a composite character with the equal sign (=) and slash (/) or ÷ with the colon (:), and minus sign (-).

9.1 SUBSCRIPTS AND SUPERSCRIPTS

There are two ways of producing word processing subscripts and superscripts.

1. **With the gold SUB SCRIPT and SUPER SCRIPT keys.** Use this method with a short subscript or superscript, such as



2. **With half-line ruler spacing.** Use this method with lines that contain complicated subscripts and superscripts, such as the following:

$$\underset{m}{(a_x + b_x)}^{\underset{n}{}} = \underset{m}{a_x}^2 + 2 \underset{m}{a_x} \underset{n}{b_x} + \underset{n}{b_x}^2$$

Subscripts and superscripts can be printed properly only when using a letter quality printer. They will be printed on the same line as the rest of the typing when using a draft printer.

9.1.1 Producing Subscripts and Superscripts With the Gold SUB SCRIPT and SUPER SCRIPT Keys

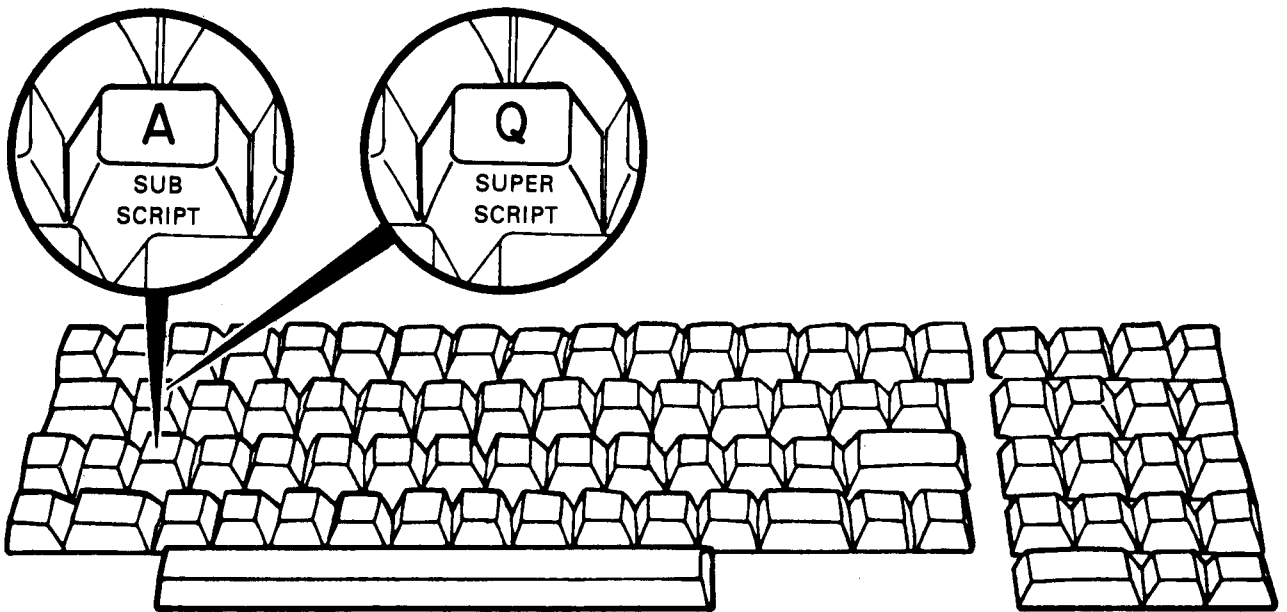
The gold SUB SCRIPT and gold SUPER SCRIPT keys are used for short subscripts and superscripts.

To produce a subscript or superscript, follow these steps:

1. Press the SEL key.
2. Type the character(s) to be printed below or above the line level.
3. Press the gold and either the SUB SCRIPT or SUPER SCRIPT key.

Here is what happens:

1. The cursor will be positioned under the character to the immediate right of the subscripted or superscripted ones.
2. The characters will continue to be displayed on the screen like ordinary text, on the same level as the line. However, the system has "marked" them for subscripting or superscripting. To determine whether text is subscripted or superscripted, you must view it by pressing the gold and the VIEW keys (see Appendix D).



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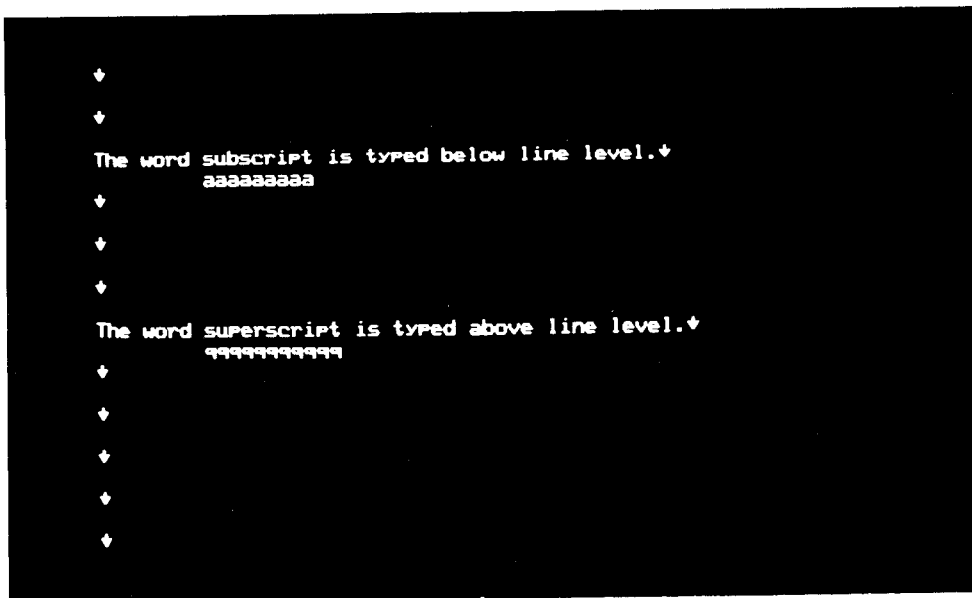
Figure 9-1 Main Keyboard SUB SCRIPT and SUPER SCRIPT Keys

When text is viewed, it appears as follows:

1. **Subscripted.** A lower case letter "a" appears underneath the text (upper case "A" if the subscript was boldfaced).

2. **Superscripted.** A lower case letter "q" appears underneath the text (upper case "Q" if the superscript was boldfaced).

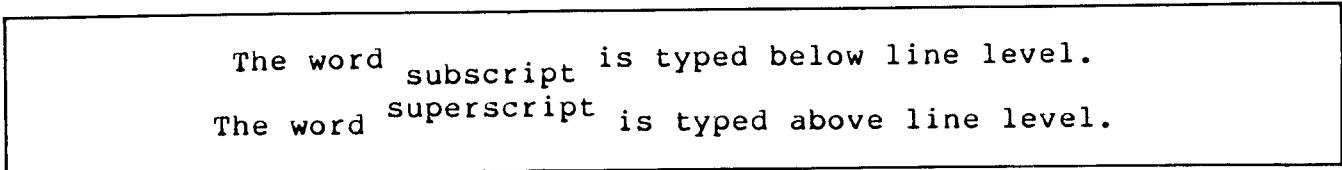
Here is an example of viewing subscripts and superscripts:



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Figure 9-2 Example of Viewing Subscripts and Superscripts

Here is how the example looks when printed:



9.1.1.1 Removing a Subscript or Superscript –

To restore a subscript or superscript to normal line level, do the opposite of what you originally typed.

1. To go from subscript to line level. Superscript the characters.
2. To go from superscript to line level. Subscript the characters.

Of course, you can also delete the characters and retype them.

9.1.1.2 Qualifications – The following qualifications apply to subscripts and superscripts produced with the gold SUB SCRIPT and SUPER SCRIPT keys.

1. You cannot underline with the UNDER LINE key. Instead, make a composite character (see Section 9.2) with the underscore character and the subscript or superscript.
2. It is advisable to use double-spacing (or at least space and a half). If you don't, your printing will be too crowded, as in the following:

H₂O is the chemical equation for
w_at_er. The number 2 is a subscript.

3. You cannot subscript a subscript or superscript a superscript. For example, you cannot have the following:

$$a_{x_m} + 2a_{x_m} b_{x_m} + b_{x_m}$$

Also, you cannot have a subscript and superscript in the same typing position, such as the subscript x and superscript 2 in the following:

$$a_x^2$$

You can, however, produce the above by using either half-line ruler spacing (see Section 9.1.2) or composite characters (see Section 9.2).

9.1.2 Producing Subscripts and Superscripts with Half-line Ruler Spacing

To type complicated subscripts and superscripts, use half-line ruler spacing.

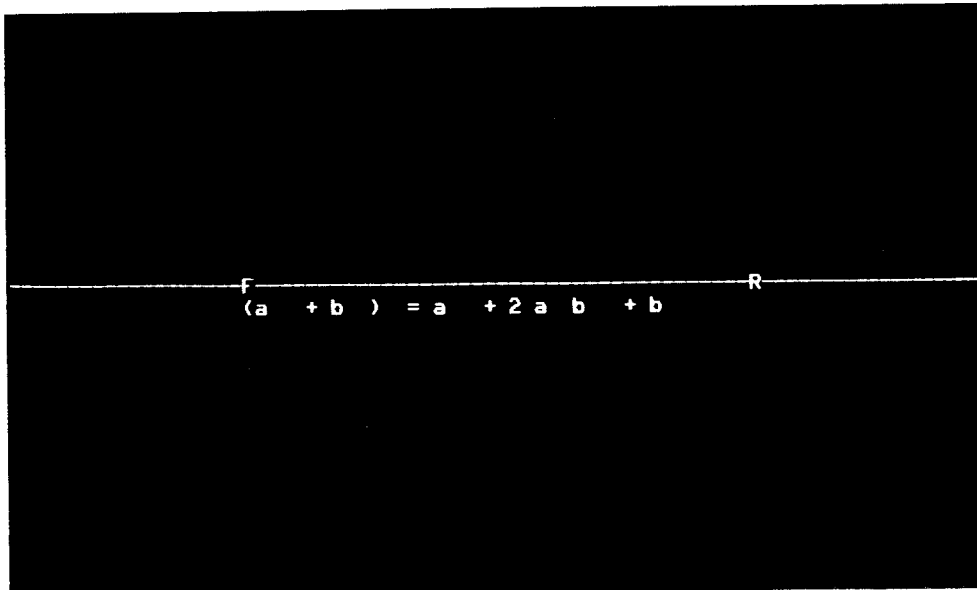
1. Press the gold and the RULER keys to display the ruler.
2. Move the cursor to the location of the left margin and type the letter F.
3. Press the RETURN key to clear the ruler display and embed the ruler back into the document.

Next, type each line of your equation separately while inspecting the spacing on the screen (the lines will be displayed single-spaced but will be printed with space and a half). Type the main line of your equation first, then each level of subscript, and lastly each level of superscript.

For example, to type the following equation:

$$(a_m + b_n)^2 = a_m^2 + 2 a_m b_n + b_n^2$$

1. Type only the main line, leaving enough space for the subscripts and superscripts, and press the RETURN key. For the example you would type the following:



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Figure 9-3 Typing an Example Equation: Step 1