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# CHAPTER 2

## USING THE KEYBOARD AND THE SCREEN

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## A TOUR OF THE KEYBOARD



Most of the keys on the Plus/4 keyboard are identical to the keys on a typewriter, but each key can do more than a typewriter key. In this section, you'll learn how to use special keys like the  key and the cursor arrow keys. This section will show you the extra features of every key, including how to use the graphic symbols pictured on the fronts of many of the keys.

While we guide you on the tour of the Plus/4 keyboard, you should find the keys and practice using them.

## SPECIAL KEYS

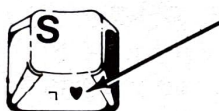
### ENTER

You have to press the **ENTER** key at the end of each line of instructions you enter on your Commodore Plus/4 keyboard. You might think of this key as an ENTER key because **ENTER** actually enters information and instructions into the computer.

### SHIFT

This key works like the shift key on a regular typewriter. Your Plus/4 has two **SHIFT** keys and a **SHIFT LOCK**, which works like the shift lock on a typewriter.

By pressing the **SHIFT** key, you can get the graphic symbol on the right side on each graphics key when you are in upper-case/graphics mode.



Your Plus/4 is automatically in upper-case/graphics mode when you turn it on. In upper-case/graphics mode, all the letters appear upper-case without the **SHIFT** key.

The **SHIFT** key pressed with a letter key gets upper-case (capital) letters when you are in upper/lower-case text mode (the same as the **SHIFT** key on a typewriter). When in this mode, the letters you type are in lower-case except when you use the **SHIFT** key.

NOTE: You can go back and forth between upper-case/graphics and upper/lower-case text modes by pressing the **SHIFT** and **C** key at the same time.

### RUN/STOP

Press this key to break into a running program to STOP what your Plus/4 is doing. When the Plus/4 is running a program, pressing this key returns control back to you and the keyboard.

When you hold down the **SHIFT** and **RUN/STOP** keys simultaneously, the Plus/4 loads and runs the first program on a disk in the disk drive.



## The Cursor Keys



It's easy to move the cursor quickly around the screen in any direction. Just press the cursor arrow key that points in the direction you want to go. Like all keys on the Plus/4 keyboard, each cursor key can repeat indefinitely while the key is held down. This automatic repeat function keeps the cursor moving until you release the key.

**NOTE:** You can move the cursor over letters and numbers on the screen without affecting those characters.

### **INST/DEL**

You can INSERT and DELETE letters and numbers from the line you are typing by pressing this key. When you press this key by itself, that character immediately to the left of the cursor disappears, and the cursor moves over to where the missing character was. You can use the cursor keys to go back to the middle of a line and then use **DEL** to DELETE a letter. When you do this, the letter to the left is deleted, and the rest of the letters on the line move over one space to the left to close the gap.

You can open up space to insert letters and numbers by using the **SHIFT** and **INST** keys. Space opens to the right of the cursor; the cursor itself does not move. When you insert space in the middle of a line of letters, the rest of the line moves to the right.

The **INST/DEL** key saves a lot of time when you want to edit or change what you've typed.

### **CLR/HOME**

This key serves three functions: HOME, CLEAR, and CLEAR WINDOWS. When you press this key, the cursor immediately moves to the top left corner of the screen. This is called the HOME position. The rest of your screen stays the same. If you hold down the **SHIFT** key and press **CLR/HOME**, not only does the cursor move to HOME, but the screen clears. All that remains on the screen is the blinking cursor at the top left corner of the screen. If you press this key twice, any screen windows that you have set up are erased. Screen windows are work areas that you designate on part of the screen; there'll be more about them later.

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## CONTROL

This key always works with another key. The **CONTROL** key works like the **SHIFT** key: you must hold it down while you press the other key.

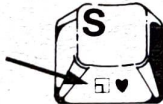
1. As the COLOR KEYS section explains, pressing **CONTROL** and a color key allows you to choose the color of the text printed on the screen.
2. You can pause a program that is PRINTing or LISTing on the screen by pressing **CONTROL** and the S key (press any key to resume program output).
3. **CONTROL** is also used with the **REVERSE ON/OFF** and **FLASH ON/OFF** keys.

In addition, some software programs that you buy make use of the **CONTROL** key for their own special functions.



Like the **CONTROL** key, the Commodore key works with other keys. It has four functions:

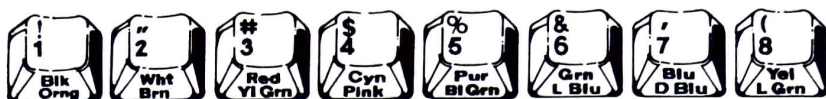
1. When used with the **SHIFT** key, the **C** key lets you switch between upper-case/graphics mode and upper/lower-case text modes.
2. When you're in either mode, the **C** key acts as a shift to let you type the graphics symbol pictured on the LEFT front of each key. Just hold down **C** and press the graphic key you want.



3. When you want to change the color you are typing in to one of the 8 colors listed on the BOTTOM row of the face of the color keys, press **C** and the color key you want.
4. When you want to slow down a scrolling program display, hold down the **C** key. The display scrolling speed slows down considerably. When you release the key, the screen scrolling resumes normal speed. (Hey, it can do something by itself!)



## The Color Keys



You can change the colors of the letters, numbers, and graphics symbols on the screen to any one of the 16 colors available on your Plus/4. It's simple to do:

- If you want one of the 8 colors listed on the TOP row on the front of the color keys (like BLK for black), just hold down the **CONTROL** key and press the key with the color you want at the same time.
- If you want one of the 8 colors listed on the BOTTOM row on the front of the color keys (orange, for example), just hold down the **C** key and then press the color key with the color you want.

Practice changing colors to make sure you understand how to do this. You'll notice that after you change the color, every letter and number typed AFTERWARDS is in the color you last chose.

### REVERSE ON

### REVERSE OFF

Your Plus/4 lets you print the reverse image of letters and numbers. In other words, if you are using black letters on a yellow background, you can use the reverse image keys to print yellow letters on a black background.

Here's all you do to get reversed images: Press the **CONTROL** key and the **RVS ON** key. Now everything you type is displayed in reverse until you press the **CONTROL** and **RVS OFF**, the **RETURN** key, or the **ESCAPE** key and 0. This returns you to typing normal (non-reversed) characters.

### FLASH ON

### FLASH OFF

You can make the characters on your screen flash continuously. Just press **CONTROL** and the **FLASH ON** key to make whatever you type flash. Typing **CONTROL** and **FLASH OFF**, **RETURN**, or **ESCAPE** 0 lets you type normal (non-flashing) characters again.

## GRAPHIC KEYS

As we mentioned before, when you turn on the Plus/4, it is in upper-case/graphics text mode. When you're in this mode, you can type the full set of more than 60 graphics you see on the fronts of many of the keys, as well as all upper-case letters without using the **SHIFT** key. The **SHIFT** key lets you type graphics in this mode, instead of upper-case letters.

There are two graphic symbols on each graphics key:

- To print the graphic symbol on the right, hold down the **SHIFT** key while you press the appropriate key.
- To print the graphic symbol on the left, hold down the **C** key while you press the selected key.

You can create pictures, charts, and designs by printing graphics side-by-side or on top of each other, like building blocks. Try printing some of the graphics keys to see how they work. Chapter 7 explains more about graphics.

You can switch between upper-case/graphics mode and upper/lower-case mode by pressing the **SHIFT** and **C** keys at the same time. In either mode, type BASIC commands without holding down the **SHIFT** key.

In this mode, you can type upper- and lower-case letters, just like a regular typewriter. (You will have to shift for upper-case letters.) You also can use the graphic characters on the left front of the keys, which print as in upper-case/graphics mode; hold down **C** and press the graphic key. The left side graphics are ideal for creating charts, graphs, and business forms.

### ESCAPE

The **ESCAPE** key lets you perform many special screen editing functions, including functions utilizing the windowing capability of the Plus/4. Windows are areas of the screen (defined by you) that may be used as work space without affecting the rest of the screen. The **ESCAPE** key can perform several window editing functions, as well as many other regular uses, such as inserting, deleting, and scrolling.

The **ESCAPE** key is typically used with standard alphabet keys. To activate a function, press the **ESCAPE** key followed by one of the keys listed below:

- A Automatic insert mode
- B Set the bottom right corner of the screen window (at the current cursor location)
- C Cancel automatic insert mode



- D Delete current line
- I Insert a line
- J Move to the beginning of the current line
- K Move to the end of the current line
- L Turn on scrolling
- M Turn off scrolling
- N Return to normal screen display size
- O Cancel insert, quote, reverse, and flash modes
- P Erase everything up to the beginning of the current line
- Q Erase everything up to the end of the current line
- R Reduce screen display
- T Set the top left corner of the screen window
- V Scroll screen up
- W Scroll screen down
- X Cancel the escape function

### Special Symbols

The Plus/4 keyboard also contains special symbols not found on many typewriters, or even on most computers. These special symbols include the English pound sign (£), pi ( $\pi$ ), greater and less than signs (< >), brackets ([ ]), and arrows ( $\leftarrow$   $\rightarrow$ ). These special symbols keys are used in programming your Plus/4.

## PROGRAMMABLE FUNCTION KEYS



The four keys at the top of your keyboard are special function keys that let you save time by performing repetitive tasks with the stroke of just one key.

You can display what each key does by typing **KEY** and pressing **HELP/F7**.

The screen displays:

**KEY**  
**KEY 1**, "GRAPHIC" or built-in software (see p. 34)  
**KEY 2**, "DLOAD" + CHR\$(34)  
**KEY 3**, "DIRECTORY" + CHR\$(13)  
**KEY 4**, "SCNCLR" + CHR\$(13)  
**KEY 5**, "DSAVE" + CHR\$(34)  
**KEY 6**, "RUN" + CHR\$(13)  
**KEY 7**, "LIST" + CHR\$(13)  
**KEY 8**, "HELP" + CHR\$(13)



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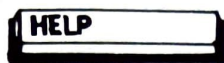
Here's what each key does:

- KEY 1 enters one of the GRAPHICS modes when you supply the number of the graphics area (e.g., GRAPHICS 2, which is split screen, high resolution mode) and a **RETURN**. On computers with built-in software, KEY 1 is redefined so that pressing it activates the software package.
- KEY 2 prints DLOAD " on the screen. All you do is enter the program name to load a program from disk and hit **RETURN** instead of typing out DLOAD yourself.
- KEY 3 lists a DIRECTORY of files on the disk in the disk drive.
- KEY 4 clears the screen (even in one of the graphics modes.)
- KEY 5 prints DSAVE " on the screen. All you do is enter the program name to save the current program on disk and press **RETURN**.
- KEY 6 RUNs the current program.
- KEY 7 displays a LISTing of the current program.
- KEY 8 (the **STOP** key) highlights errors in program statements in flashing print.




To use one of these functions, just press the appropriate function key. You need to use the **SHIFT** key to get FUNCTIONS 4, 5, 6, and 7.

You can redefine any of these keys to perform a function that suits your needs. Redefining is easy, using the KEY command. You can redefine the keys from BASIC programs, or change them at any time in direct mode. (The new definitions are erased when you turn off your Plus/4.) You can redefine as many keys as you want and as many times as you want.

## THE HELP KEY



When you make an error in a program, the Plus/4 displays an error message to tell you what you did wrong. These error messages are further explained in Section 4 of the Plus/4 Encyclopedia in the second half of this manual.

You can get more assistance with errors by using the  key. After an error message, press  to locate your error. When you press , the line with the error is displayed on the screen with the error flashing on and off. For example:

?SYNTAX ERROR IN  
LINE 10

← Plus/4 displays this



← You press HELP

10 PRINT "COMMODORE  
COMPUTERS"

← Plus/4 displays this  
with your error  
flashing