

right by one, as will any other display lines set up for horizontal shifts.

To set up a group of display lines for limited vertical scrolling, enter the graphics mode number, a space, a V, and RETURN. When asked for the number of display lines, give the number of lines you want to be visible. Then specify one more line of the mode, but this time don't include the V. Only the top screen line of this last line will be visible. For example, suppose you want six mode 1 lines in the display and you want to be able to shift them vertically. When asked which graphics mode, type 1, a space, a V, and RETURN. When asked the number of lines, type 6. When asked again for the mode, type 1 and RETURN and then type 1 for the number of lines.

You can set up a group of lines so that they can be shifted both horizontally and vertically. When asked which graphics mode, type the mode, a space, HV, and RETURN.

Special note: In a scroll window, part of the top and/or bottom display lines are not visible. If you are in a text mode and you move the cursor to one of these lines, it might not be visible. Either move the cursor off this line or use the S command to change the amount you have scrolled.

SCROLL@ command

The format is

SCROLL@ integerexpression,integerexpression

This command is used to scroll the display for both the full and limited scrolling modes. Before you can use this command you must append SCROLL.APP. This is one of the special subroutines and is on the disks which came with this manual. Like PUSING.APP, it will not be shown when you list the program it is appended to.

In the limited scrolling mode, the first integerexpression gives the amount to shift the display right. Its maximum value is 15 and its minimum is 0. The second integerexpression gives the amount to shift the display up. For modes 0, 1, 3, 12, and 13 the maximum is 7. For modes 2 and 3 it is 16. For modes 4 and 5 it is 3. For modes 6 and 7 it is 1. For all other modes limited vertical scrolling is not possible.

For the full scrolling mode, the first integerexpression gives the amount to shift the display left. The second integerexpression gives the amount to shift the display up. The maximums depend on the number of scroll lines and the number of bytes per line. If you go to the help list (press H while working on the main display), the current and maximum values for horizontal and vertical scrolling are listed in the lower right corner.

SPLIT@ command

The format is

SPLIT@ integerexpression,integerexpression

SPLIT@ is used to plot data to any point in the scroll data area. CPLIT@ and CPRINT@ can be used only to plot data to the part of the scroll data which is being displayed (i.e., in the window). The first integerexpression gives the horizontal position, and the second integerexpression gives the