

## 10 GRAPHICS 85%

Since  $85=5+16+64$ , the display will be opened in mode 5 with no text window and with player-missiles activated.

### Special note for users who do not have an XL or XE:

The system will remove the BASIC whenever you use the GRAPHICS command. This frees the memory needed for the graphics. When the program comes to an end, you will receive the message: INSERT BASIC DISK&RETURN. At this point, you can insert the Master disk into drive 1 and press RETURN. It takes about 16 seconds to reload. Or you can format a disk with the BASIC on it and use this as your working disk. In this case, you would not have to switch disks. To format a disk with BASIC use the utility FORMAT1.COD (See Ch.17).

### PLOT and COLOR

Both PLOT and PRINT are used to display information; PLOT is normally used for graphics data and PRINT for text data. If you are using a graphics mode with a text window, PRINT will put characters into the text window and PLOT will send data to the main display. The format for PLOT is

PLOT integerexpression, integerexpression

The first integerexpression specifies the column (horizontal position), and the second specifies the line (vertical position). Remember, column 0 is the left most column, and line 0 is the top line. The following line plots a point at the 6th column and the 3rd line:

```
10 PLOT 5%,2%
```

The color of the point is set by the COLOR command. Here is its format with an example:

COLOR integerexpression

```
10 COLOR 2%
```

In a text mode, the number following the COLOR command specifies the character to be displayed and, in some text modes, also gives some color information. In a graphics mode, the number following COLOR determines the color that the succeeding plot commands will place on the screen. Once the color has been set, it will remain until you give another COLOR command or a PRINT command. So to display a figure with only one color, you normally give a COLOR command and a series of PLOT commands.

### SETCOLOR and PSETCOLOR

The actual colors which appear on the display are determined by what is in a set of registers called color registers (also called play fields). The ATARI operating system sets up these registers for certain colors when the mode is opened. In mode 4 for example, COLOR 1% gives an orange. There are five color registers for the main display and four for players and missiles. SETCOLOR changes the color that is produced by the main display color registers, while PSETCOLOR changes the player-missile registers. Here is the format and an example: