

following format:

HPOS integerexpression,integerexpression

The first integerexpression determines the player or missile number (Table 14-1). The second integerexpression sets the horizontal position of the player or missile. The left and right boundaries of most displays are approximately 40 and 216.

PDISPLAY

Use the PDISPLAY command to place a figure in a player or missile. The format is

PDISPLAY integerexpression,ADR(linenum),integerexpression

The first integerexpression specifies the player-missile number. The second integerexpression specifies the vertical location of the top of the figure. 128 is the center of the screen, zero is the top, and 255 the bottom. The linenum is where the data defining the figure is located.

Suppose you are defining a figure for a player. Remember that players are 8 display points wide and they may be from 1 to 253 vertical lines long. Actually, on an average TV monitor, the top and bottom will be cut off. The first piece of data must be the number of vertical lines your figure will occupy. Then you need to give data for each line, starting with the top line. You have to specify which points are on and which are off. To do this for each line, you can use a & symbol followed by 8 characters, each a 0 or 1. (Since missiles are only 2 display points wide, they require only 2 characters after the & symbol). Each '1' means that the corresponding point in the player is on (its color is that of the player's color register). Each '0' means that the point is transparent. The CODE command is used to enter the data. The following line is an example of how this works; it has the data for a box, 4 lines high.

```
CODE"4,&11111111,&10000001,&10000001,&11111111"
```

The '4' tells how many lines and is followed by the data for each line. Note that commas are used to separate data items. The first and fourth data items have all ones, thus representing solid horizontal lines. The second and third data items have the end points on and the other points off, thus forming part of the left and right edges. Here is the data statement used in a complete program:

```
10 PSETCOLOR 1%,3%,8%
20 PSIZE 1%,0%
30 GRAPHICS 67%
35 DFILL 1%,0%
40 PDISPLAY 1%,ADR(100),128%
50 HPOS 1%,128%
60 WAIT 160%: GOTO 200
100 CODE"4,&11111111,&10000001,&10000001,&11111111"
200 END
```

This program sets player 1 to red orange at normal size. Line 30 sets GRAPHICS mode 3+64 which activates the player-missiles. Line 35 clears the player and then line 40 puts the data on line 100 into the player. The