APPLICATION NOTE NO. 8

USE OF THE 'LOOK' COMMAND.

LOOK is a command used in association with graphics modes. Its
purpose is to return the palette colour of any specified point
on the graphics screen (pixel).

The command takes the form:-

        LOOK AT X,Y:VALUE

X and Y are horizontal and vertical co-ordinates and VALUE is the
variable which will hold the palette colour.

Say, for example, that a point is plotted in palette colour 3 at
position 500,340 on a graphics screen. Typing:

        LOOK AT 500,340:V <ENTER>
        PRINT V   <ENTER>

Will print the number 3.

It should be noted that palette numbers run from 0 to 15. In 256
colours mode, the LOOK function will return the actual INK number
which can be any integer from 0 to 255.

Also note that the screen addressing system which is based on a
matrix of 1280 x 720 points is not the screen resolution. This
means that the LOOK command will generate the same value if the
two pairs of co-ordinates actually point to different places
within the same pixel.

Here is a program to demonstrate the use of the LOOK command for
collision detection. Feel free to experiment with it as you like,
and use it in your own programs.

```
100 PROGRAM "bounce"
110 ! By Gerald Morgan
120 GRAPHICS HIRES 16
130 OPTION ANGLE DEGREES
140 SET PALETTE 0,255,RED
150 PLOT 630,360,
160 SET INK 2
170 PLOT ANGLE 180
180 PLOT FORWARD 200,LEFT 90; FORWARD 200,LEFT 90;
    FORWARD 200,LEFT 90; FORWARD 200,LEFT 90;
    FORWARD 200,LEFT 90
190 SET INK 1
200 X=530:Y=260
210 X=X+5
```

```
220  LOOK AT X+5,Y:HIT
230  IF HIT = 2 THEN CALL RETURN
240  PLOT X,Y
250  SET INK O
260  PLOT X-5,Y
270  SET INK 1
280  GOTO 210
290  DEF RETURN
300  SET INK O
310  PLOT X-5,Y
320  PLOT X,Y
330  DO
340  X=X-5
350  LOOK AT X-10,Y:HIT
360  PLOT X,Y
370  SET INK O
380  PLOT X+5,Y
390  SET INK 1
400  LOOP WHILE HIT = O
410  END DEF
```