

Pixie is a little mouse. I wonder how long she has been living inside my computer for. I know it sounds quite strange actually, but I don't just mean inside the plastic box which holds the chips, I really mean INSIDE. Most probably in some memory location ?! You never know.

I still remember the big piece of cheese I once had been drawing for her on the screen. Then, she suddenly offered to help me drawing anything I would think of, hence...

PIXIE!

## 1. INTRODUCTION

Welcome to PIXIE!

PIXIE! is a Computer-Aided Design program for your Dragon computer. It gives access to every graphic instruction available from Basic, except for DRAW. Design pictures on the high-resolution screen (PMODE 4 only), then save them to disk. You may even load an already existing picture in order to modify it, or just retrieve a part of it, which you will then incorporate into another screen. And the life of your trusty keyboard is not endangered because everything will be achieved under complete JOYSTICK CONTROL.

## 2. GETTING STARTED

Switch your computer off and on, then type as a direct command :

**BOOT <ENTER>**

A title screen will appear, followed by a copyright message. After a while, the display will switch to PMODE 4 and you will then be faced with the main screen, which is in fact your palette.

### 3. THE SCREEN - THE MENU - OPTIONS

There are 5 distinct areas on the SCREEN :

- a) The title box at the top which holds the title of your picture after you have given it a name.
- b) The Alpha zone, containing all the characters which may be used in a disk file name, as well as a "backspace" box (left arrow) and an "OK" box.
- c) A communication window, in which messages will be displayed and parameters asked for.
- d) The working area which will always be referred to as the WINDOW.
- e) The MENU, containing 20 small pictures, called "icons", from which you will choose the functions to be executed.

Although the working area is only half the whole screen in size, your picture will be exactly the same size as a normal PMODE 4 screen since the WINDOW is merely a mirror image of what you should have on the SHEET in the end. When you first enter the program, the window is positioned at the top of the SHEET and you just see the top half of it.

So, when the SCREEN is displayed, you will notice that one of the icons has gone into inverse video. You may now move the joystick to select any particular icon. Should you press the fire button, you will instruct Pixie she can carry on the tasks required to perform the chosen function.

Several functions will be performed as you release the button, but most often, this will only result in OPTIONS appearing in the top left corner as a pile of boxes, the first being a title box to remind you of which function you have entered. You may then move the joystick up and down to select and confirm your choice by pressing the button.

Some functions will even require more than just one parameter, so you will have to enter them as many times as necessary.

Next follows a detailed explanation of all the functions and their options. Pressing the fire button after centering the joystick will always be referred to as FIRE, and Pixie's current position on the WINDOW when a function is called from the MENU will be referred to as POSITION.

The various functions will now be detailed from top to bottom and from left to right.

#### 4. FUNCTIONS AVAILABLE

Please note that Pixie will wait until the fire button has been released to carry on. To exit a function and return to the MENU, always use FIRE unless stated otherwise.



##### 4.1 HOME

No parameter. Clears both SHEET and WINDOW to the current background colour. Also resets the position of the latter to the top of the SHEET and Pixie's position to the middle of the WINDOW, thus restoring the default value of the link point.



##### 4.2 INVERT

Inverts the colour of the pixels on either the SHEET or the WINDOW. Does not affect INK.



##### 4.3 MOVE

Tells Pixie (shown as a dot on the WINDOW) to move, depending upon RANGE. If it is

a) short : Pixie will move by one pixel in one of 8 possible directions each time you press the fire button. The joystick must be pushed fully into the desired direction.

b) long : Pixie will move all over the WINDOW.



#### 4.4 PLOT

Tells Pixie to move, setting the pixels to the current INK colour along her path. If RANGE is

a) short : same as MOVE

b) long : Pixie will move as long as the joystick is pointing toward the desired direction.



#### 4.5 LINE

There are 4 modes.

a) NORMAL - SQUARE - BOX : POSITION is memorized when first called. Draws a line, a square or a box from memorized point to POSITION on next call, and memorizes POSITION as the next point to LINK.

b) LINK : immediately draws a line from the link point to POSITION, which becomes the next point to LINK.



#### 4.6 PAINT

There are 3 modes.

a) INK : paints from POSITION in INK colour until it reaches a border of INK colour.

b) DATA : the following prompt will appear in the communication window :

**"ENTER PAINT PATTERN"**

using the joystick, you may now select figures from the lower part of the Alpha zone. You may set a number in the range 0 - 255. Use the "backspace" box to rub out mistakes. Then move to the "OK" box and press the fire button. The DATA mode generates a pattern of black and white dots and paints until it reaches a border of INK colour. For instance,

0 generates a black paint.

3 generates a white paint.

1 generates vertical black and white lines.

99 generates a white paint with thin vertical black lines.

c) ARTIFACT : paints a rectangular surface with a pattern of black and white dots contained in a 4x4 matrix, thus making an artifacted colour, which is logically ORed with the WINDOW background. You can get meaningful results from using this option when the background is mainly a black one since ORing a given pattern with a white background does nothing to it. The logical OR even allows you to mix these artifacted colours. When first called, POSITION is taken as the top left corner of the surface to be filled. When called second time, POSITION is taken as the bottom right corner. This 2nd point MUST be to the right of the first one - and below it. Both points may however share the same co-ordinates. In either case, the difference between the horizontal co-ordinates as well as the difference between the vertical co-ordinates must be a multiple of 4, but you don't need to actually care about this because the X and Y co-ordinates of the second point will automatically be adjusted (decreased) until the X and Y differences become such numbers. Eventually, both points will be defined, and the communication window will display a set of 13 artifacted colours from which you may then select the one you need by moving the joystick and pressing the button. When the area has been filled with the colour, you will be returned to the MENU.



#### 4.7 CANCEL

Performs a backup of the SHEET contents to the WINDOW, thus restoring the state of the WINDOW as it was after your last SCROLL command.



#### 4.8 TOOLS

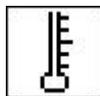
There are 3 tools available.

a) REPEAT : repeats the last LINE - not LINK - or CIRCLE used from POSITION, unless the shape is too large to fit on the WINDOW. Pixie simply remembers the radius and the radius/width ratio of a circle,

so that you may change the START and/or END before calling this function.

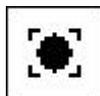
b) MEMORIZE : memorizes POSITION for TARGET mode.

c) TARGET : provided it has been defined, draws a line from POSITION to the MEMORIZED point.



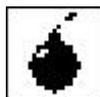
#### 4.9 INK

Reverts INK colour, thus black will become white and vice-versa. The thermometer displays INK status in a permanent way.



#### 4.10 RANGE

Reverts RANGE value, which may be SHORT or LONG. Status is displayed on screen as for INK.



#### 4.11 CLEAR

Clears either the SHEET or the WINDOW, but does not affect INK, nor the next point to LINK.



#### 4.12 SCROLL

When you enter this function, the contents of the WINDOW is saved to the SHEET. It might be a good idea to use this feature each time you finish an important part of your picture. You may now use the up and down motion of the joystick in order to scroll the SHEET through the WINDOW. Just try FIRE if you only wish to update the SHEET.



#### 4.13 REPORT

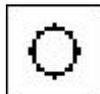
Displays Pixie's position, relative to the SHEET, i.e. if REPORT is your first command, Pixie will be waiting at 128,48 as the WINDOW is showing the top half of the SHEET.



#### 4.14 ZOOM

Using the joystick, you can move the sight all over the WINDOW in steps of 8 pixels to select the part you wish to enlarge. Press the red button to ZOOM the target. To return, the joystick should be positioned at the top left corner and the fire button pressed.

THIS FUNCTION DESTROYS THE CONTENTS OF THE WINDOW IN THE PROCESS, SO DO NOT FORGET TO SAVE IT BEFORE ENTERING THIS MODE IF REQUIRED.



#### 4.15 CIRCLE

POSITION is memorized as the center of the circle on first call, and this point is shown as a dot on the WINDOW.

The radius is defined on 2nd call and must be GREATER than 0. You will then be faced with two OPTIONS to choose from.

a) CIRCLE : it is immediately drawn.

b) ELLIPSE : the next call defines the width, and a radius/width ratio is then computed before Pixie draws the shape and resets the center.

Both will be drawn so far as their size is such that they will fit on the WINDOW.



#### 4.16 FRAME

There are 2 modes. For both, POSITION will determine the top left corner when first called.

a) GET : when called next time, POSITION is taken as the bottom right corner. The conditions are the same as for ARTIFACTed paint. The whole WINDOW may be memorized with this function.

b) PUT : works only if a frame has been memorized using GET, and if there is sufficient space on the WINDOW from POSITION. In this case, a parameter is asked for. You may choose between 5 OPTIONS

- PSET : frame state unchanged.

- PRESET : frame colour inverted.

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- AND : pixels from the frame remain set only if the corresponding pixels from the WINDOW are also set.

- OR : any pixel which is set on the frame or the WINDOW will remain set.
- NOT : inverts every pixel of the WINDOW.

N.B. the word "WINDOW" as used here means the area on which the frame is to be put.

#### 4.17 WATCH



Displays the whole SHEET (FIRE to return).

#### 4.18 DISK I/O



There are 3 OPTIONS.

- a) NAME : the word "alpha" in the Alpha zone will go into inverse video. You may now enter a name in the title box at the top of the SCREEN, which will be used as a file name when you next enter LOAD or SAVE mode. Move to the 'OK' box and press the fire button to return to the MENU.
- b) LOAD : loads a file from disk. You should have defined a file name before entering this mode. The file searched for is a ".BIN" file.
- c) SAVE : saves the whole SHEET to disk, provided a file name has been defined, as a ".BIN" file.

#### 4.19 SET START/END



There are two needles on the clock, though only one can be seen at the beginning because their position is the same. The small needle shows START status for the next CIRCLE to be drawn. The longer one shows the END parameter. Using FIRE results in the small needle turning clockwise. Press the fire button - from the top left position - to move from START to END mode after a beep. The parameters are ranging from 0 to 1 in steps of .25, thus allowing you to select any circle "shape" from 57 different ones. To return to the MENU, press the fire button from the top left position again.



#### 4.20 QUIT

When you enter this mode, the icon will be flashing on the SCREEN. You have about ten seconds left to change your mind and press the fire button if you wish to be returned to the MENU. After this delay has elapsed, the program will perform a cold start. Should you now wish to use PIXIE! again, it is necessary to turn your computer off and on, and to BOOT the program again.

### 5. ERROR MESSAGES

From time to time, a message may appear in the communication window after an invalid command, and any such message will always start with :

**"PIXIE SAYS : "**

There are 11 different error messages. Use FIRE to return to the MENU after an error report.

#### 5.1 PREVIOUS FUNCTION ABORTED

A new multi-step function has been entered before the previous one was completed. Cancels the first one and returns you the MENU.

#### 5.2 BAD CO-ORDINATES

POSITION is invalid. This may occur when

- a) the bottom right corner of a frame or the area to be filled with ARTIFACTed paint is located left of the top left corner or above it.
- b) the co-ordinates of the top left corner of the area to be filled with ARTIFACTed paint are higher than 252 (X) and 140 (Y - relative to SCREEN).
- c) the radius of a CIRCLE was given the value 0.

### 5.3 WINDOW LIMITS EXCEEDED

May occur when the shape to be repeated or the frame to be put is too large to fit the WINDOW without exceeding its limits. Same for a CIRCLE.

### 5.4 BAD PARAMETER

The paint DATA entered is higher than 255.

### 5.5 I DON'T REMEMBER ANYTHING

A function which requires a memorized data has been called - there is no such data available.

- a) REPEAT before using any LINE or CIRCLE.
- b) PUT before using GET.
- c) TARGET before using MEMORIZE.

### 5.6 YOU MUST NAME THE FILE FIRST

Attempt to LOAD or SAVE a file without any file name being set up.

### 5.7 I CAN'T FIND THAT FILE

The file being searched for does not exist on the disk.

### 5.8 THIS IS A PROTECTED FILE

Attempt to SAVE a SHEET with the same file name as a protected file from the disk.

### 5.9 THIS DISK IS FULL

Attempt to SAVE a SHEET to a full disk.

### 5.10 DISK ERROR REPORTED

Unexpected disk error reported. May result from a faulty disk, a DOS bug, etc...