

**2D**

<b>COLLABORATORS</b>
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# Chapter 1

## 2D

### 1.1 2D Drawing library

Pure Basic - 2D Drawing library V1.00

The 2D drawing is all the 2D rendering operations you can do on a visual area. Tracing a line, a box, a circle or even a text is condering as a 2D rendering operation. You just have to specify the output (screen, window, bitmap..) and draw...

Commands summary:

- BackColor
- BoxFill
- Circle
- Cls
- CopyBitmap
- CursX
- CursY
- DrawingFont
- DrawingMode
- DrawingOutput
- DrawingRastPort
- Ellipse
- FrontColour
- Locate
- Line
- ObtainBestPen
- Plot
- Point
- PrintText
- ReleasePen
- TextLength
- TextStyle

Example

2D Drawing demo

## 1.2 plot

SYNTAX

`Plot(x,y)`

STATEMENT

Draw a plot in the active color (set by `FrontColour()`) in the current window.

## 1.3 boxfill

SYNTAX

`BoxFill(x1, y1, x2, y2)`

STATEMENT

Draw a filled box in the active color (set by `FrontColour()`) in the current output.

## 1.4 backcolour

SYNTAX

`BackColour(Colour)`

STATEMENT

Set the default background colour for graphic functions and text display.

## 1.5 cursx

SYNTAX

`Result.w = CursX`

FUNCTION

Returns the text cursor X position in the current output.

## 1.6 cursy

SYNTAX

`Result.w = CursY`

FUNCTION

Returns the text cursor Y position in the current output.

## 1.7 frontcolour

## SYNTAX

```
FrontColour(Colour)
```

## STATEMENT

Sets the default foreground colour for graphic functions and text display.

## 1.8 locate

## SYNTAX

```
Locate(x,y)
```

## FUNCTION

Sets the text cursor to given position (for `PrintText()`).

## 1.9 printtext

## SYNTAX

```
PrintText(String$)
```

## STATEMENT

Display the given string on the used output at position set by `Locate()` and with the colours set by `FrontColour()`. You can use `TextStyle()` to change the output style (bold, italic, underline) and `DrawingMode()` to change the way the text is rendered.

## 1.10 textstyle

## SYNTAX

```
TextStyle(Style)
```

## STATEMENT

Set the style for future text output.

The legal Style values are:

```
0 = Nothing
1 = Underline
2 = Bold
4 = Italic
```

You can mix these values if needed (Bold+Italic will be  $2+4 = 6$ )

## 1.11 drawingfont

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**SYNTAX**

DrawingFont (FontID)

**STATEMENT**

Sets the current font to given FontID. All new text rendered will be done with the new specified font.

FontID MUST be a legal IntuiFont Pointer. You can use the NFont library to load any font and pass the FontID() pointer to this function.

## 1.12 circle

**SYNTAX**

Circle(x, y, Radius)

**STATEMENT**

Draw an outlined circle at the position x,y with the size of Radius.

## 1.13 cls

**SYNTAX**

Cls(Colour)

**STATEMENT**

Set the entire output to the given colour.

## 1.14 copybitmap

**SYNTAX**

CopyBitMap(BitMapID, SourceX, SourceY, DestX, DestY, Width, Height)

**STATEMENT**

Copy the specified area situated in the given BitMapID, and determined by SourceX, SourceY (x,y position in the bitmap to start the copy) and Width, Height which give the size of the copied data. DestX and DestY allow you to copy the data at this position in the current output.

This function is 100% OS Friendly and clipped.

## 1.15 drawingoutput

**SYNTAX**

DrawingOutput (RastPort)

**STATEMENT**

Set the drawing output to the specified rastport. After setting this, all the Drawing commands are rendered on this rasport. You must specify a

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valid rastport pointer.

You can use the following functions to easily get rastports from objects:

```
+ WindowRastPort()  
+ ScreenRastPort()  
+ BitmapRastPort()
```

Example:

```
DrawingRastPort WindowRastPort() ; All drawing will be done on the window.
```

## 1.16 drawingmode

SYNTAX

DrawingMode(Mode)

STATEMENT

Change the drawing mode for graphics output:

Here is a quick list of valid modes:

```
#JAM1      = 0 : For text output, leave the background transparent.  
#JAM2      = 1 : For text output, print text with background colour  
#COMPLEMENT = 2 : XORred graphics  
#INVERSVID  = 4 : Use in conjunction with JAM2, it inverts background  
                  and foreground colours when printing text.
```

Note: These constants are found in the AmigaOS resident file.

## 1.17 ellipse

SYNTAX

Ellipse(x, y, RadiusX, RadiusY)

STATEMENT

Draw an outlined ellipse at the position x,y with size of RadiusX and RadiusY.

## 1.18 line

SYNTAX

Line(x1, y1, x2, y2)

STATEMENT

Draw a line in the active color (set by FrontColour()) on the current output.

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## 1.19 point

### SYNTAX

`Colour.w = Point(x, y)`

### STATEMENT

Return the colour number at the coordinates (x,y) in the current output.

## 1.20 textlength

### SYNTAX

`Length.w = TextLength(x, y)`

### STATEMENT

Return the pixel length of the given string in the current output. The main advantage of this function is so you can get the real length of any strings used with any fonts (even non-proportional ones).

## 1.21 obtainbestpen

### SYNTAX

`Result.w = ObtainBestPen(r, g, b, precision)`

### STATEMENT

Return the colour number with the best match to the given parameter. On a public screen with free colours, it will allocate a new colour with the (r,g,b) value. The precision parameter tells the command how it should be detected:

Valid values of 'precision' (follow by system constante):

```
Exact = -1 (#PRECISION_EXACT)
Image = 0 (#PRECISION_IMAGE)
Icon  = 16 (#PRECISION_ICON)
Gui   = 32 (#PRECISION_GUI)
```

Note: You MUST use the `ReleasePen(Result)` for any colours you have allocated before quitting your program, else the colours will never be released to the free colour bank of the screen (very bad).

## 1.22 releasepen

### SYNTAX

`ReleasePen(Pen)`

### STATEMENT

Tell the system than this pen isn't used (locked) by your program, so that other programs can use it. You must call this function if you have allocated any pens with `ObtainBestPen()`.

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## 1.23 drawingrastport

### SYNTAX

```
*RastPort = DrawingRastPort()
```

### STATEMENT

Return the value of the currently used RastPort for output (for advanced programmers).

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