



**4D Systems**

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**Application Note: 4D-AN-1004**

## **4DGL Colour CONSTANTS**

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## Description

This Application Note is dedicated to providing an easy reference to various Colour CONSTANTS available within the 4DGL language. In order to utilise this Application Note, the following items are needed;

- Any 4D GFX Screen Module
- 4D Programming Cable
- 4DWorkshop3 IDE

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## Application Overview

Throughout 4D documentation, there are listings of various specialised internal functions for given processors. This application note is designed to assist the user, by presenting them with the various Colour Constant values possible. This will allow the user to get the most out of their module when creating graphics requiring a vibrant display of colours.



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## Setup Procedure

Firstly, you will need to download the 4DWorkshop3 IDE environment. This is where the end user application is developed and can be found from the 4D Systems website below:

<http://www.4dsystems.com.au/prod.php?id=111>

## Simulation Procedure

### Locating Colour Constant Values

In addition to using this reference Manual Application Note, it should be noted where these Colour CONSTANTS are sourced from. In any given 4DGL program, there may be one or more include files that are inherited into the code. This is because these files contain critical values and functions needed to successfully run certain applications. The Colour CONSTANTS are sourced from the following include file and is inherited at the beginning of the application;

```
#inherit "4DGL_16bitColours.fnc"
```

When 4DWorkshop3 IDE is installed, this include file is installed as an fnc file into the same directory as the application program. Thus, the first way of accessing this list, is simply by opening it using a word processor. The alternative way is to right click on the fnc file as seen above, from within 4DWorkshop3 IDE. A dropdown list will appear. Select the first option; 'Open file at Cursor'. The following snapshots illustrate this point.

The screenshot shows the 4DWorkshop3 IDE interface. The main window displays a 4DGL program file named '4DGL\_16bitColours.fnc'. The code is as follows:

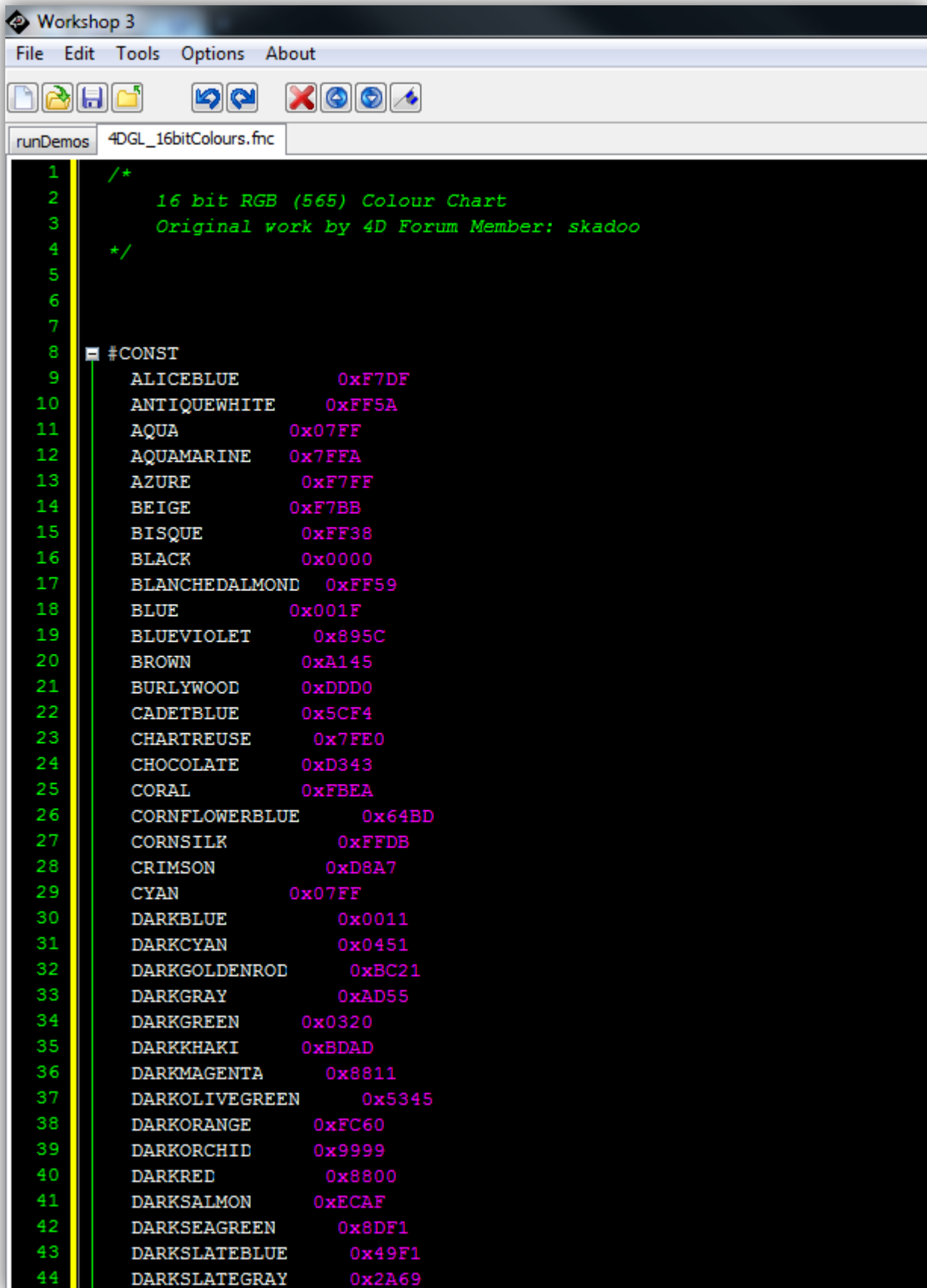
```

1 #platform "uLCD-32PT_GFX2"
2
3 /*****
4 * Filename: FAT16runprog.4dg
5 * Created: 2008/11/06
6 * Author: 4D
7 * Description: test program for file_Run()
8 *
9
10 * NB:- This program must be written to flash so
11 * it becomes the top down program.
12 *
13 *****/
14
15 #inherit "4DGL_16bitColours.fnc"
16 // #inherit "FONT4.fnc"
17
18 #MODE RUNFLASH
19
20 #STACK 800
21
22
23
24 // colour scheme
25 #CONST
26 WINDOW_COLOR
27 TITLEBAR_COLOR
28 TITLETXT_COLOR
29 STATUSBAR_COLOR GRAY
30 STATUSTXT_COLOR YELLOW
31 #END
32
33 //-----
34 // local global variables
35 //-----
36
37
38 var D; // pointer to disk struct
39
40
41 // (we keep 2 copies so we can test for a state -
42 var tempstr[20]; // general purpose string, 40 bytes
43

```

A context menu is open over line 15, showing the following options:

Open file at Cursor	Ctrl+Alt+O
Undo	Ctrl+Z
Redo	Ctrl+Y
Copy	Ctrl+C
Cut	Ctrl+X
Paste	Ctrl+V
Delete	
Select All	Ctrl+A
Find func Definition	F12



```
Workshop 3
File Edit Tools Options About
runDemos 4DGL_16bitColours.fnc
1 /*
2    16 bit RGB (565) Colour Chart
3    Original work by 4D Forum Member: skadoo
4 */
5
6
7
8 #CONST
9 ALICEBLUE           0xF7DF
10 ANTIQUEWHITE        0xFF5A
11 AQUA                0x07FF
12 AQUAMARINE          0x7FFA
13 AZURE               0xF7FF
14 BEIGE               0xF7BB
15 BISQUE              0xFF38
16 BLACK               0x0000
17 BLANCHEDALMOND     0xFF59
18 BLUE                0x001F
19 BLUEVIOLET          0x895C
20 BROWN               0xA145
21 BURLYWOOD           0xDDD0
22 CADETBLUE           0x5CF4
23 CHARTREUSE          0x7FE0
24 CHOCOLATE           0xD343
25 CORAL               0xFBFA
26 CORNFLOWERBLUE     0x64BD
27 CORNSILK            0xFFDB
28 CRIMSON             0xD8A7
29 CYAN                0x07FF
30 DARKBLUE            0x0011
31 DARKCYAN            0x0451
32 DARKGOLDENROD      0xBC21
33 DARKGRAY            0xAD55
34 DARKGREEN           0x0320
35 DARKKHAKI           0xBDAD
36 DARKMAGENTA         0x8811
37 DARKOLIVEGREEN     0x5345
38 DARKORANGE          0xFC60
39 DARKORCHID          0x9999
40 DARKRED             0x8800
41 DARKSALMON          0xECAF
42 DARKSEAGREEN       0x8DF1
43 DARKSLATEBLUE       0x49F1
44 DARKSLATEGRAY       0x2A69
```

## Colour Constants

Listed below is a list of all Colour CONSTANTS available for use within the 4DGL language.

Colour	CONSTANT	Colour	CONSTANT	Colour	CONSTANT
ALICEBLUE	0xF7DF	GHOSTWHITE	0xFFDF	NAVY	0x0010
ANTIQUWHITE	0xFF5A	GOLD	0xFEA0	OLDLACE	0xFFBC
AQUA	0x07FF	GOLDENROD	0xDD24	OLIVE	0x8400
AQUAMARINE	0x7FFA	GRAY	0x8410	OLIVEDRAB	0x6C64
AZURE	0xF7FF	GREEN	0x0400	ORANGE	0xFD20
BEIGE	0xF7BB	GREENYELLOW	0xAFE5	ORANGERED	0xFA20
BISQUE	0xFF38	HONEYDEW	0xF7FE	ORCHID	0xDB9A
BLACK	0x0000	HOTPINK	0xFB56	PALEGOLDENROD	0xEF55
BLANCHEDALMOND	0xFF59	INDIANRED	0xCAEB	PALEGREEN	0x9FD3
BLUE	0x001F	INDIGO	0x4810	PALETURQUOISE	0xAF7D
BLUEVIOLET	0x895C	IVORY	0xFFFF	PALEVIOLETRED	0xDB92
BROWN	0xA145	KHAKI	0xF731	PAPAYAWHIP	0xFF7A
BURLYWOOD	0xDDD0	LAVENDER	0xE73F	PEACHPUFF	0xFED7
CADETBLUE	0x5CF4	LAVENDERBLUSH	0xFF9E	PERU	0xCC27
CHARTREUSE	0x7FE0	LAWNGREEN	0x7FE0	PINK	0xFE19
CHOCOLATE	0xD343	LEMONCHIFFON	0xFFD9	PLUM	0xDD1B
CORAL	0xFBEA	LIGHTBLUE	0xAEDC	POWDERBLUE	0xB17C
CORNFLOWERBLUE	0x64BD	LIGHTCORAL	0xF410	PURPLE	0x8010
CORNSILK	0xFFDB	LIGHTCYAN	0xE7FF	RED	0xF800
CRIMSON	0xD8A7	LIGHTGOLD	0xFFDA	ROSYBROWN	0xBC71
CYAN	0x07FF	LIGHTGREEN	0x9772	ROYALBLUE	0x435C
DARKBLUE	0x0011	LIGHTGREY	0xD69A	SADDLEBROWN	0x8A22
DARKCYAN	0x0451	LIGHTPINK	0xFDB8	SALMON	0xFC0E
DARKGOLDENROD	0xBC21	LIGHTSALMON	0xFD0F	SANDYBROWN	0xF52C
DARKGREY	0xAD55	LIGHTSEAGREEN	0x2595	SEAGREEN	0x2C4A
DARKGREEN	0x0320	LIGHTSKYBLUE	0x867F	SEASHELL	0xFFBD
DARKKHAKI	0xBDAD	LIGHTSLATEGRAY	0x7453	SIENNA	0xA285
DARKMAGENTA	0x8811	LIGHTSTEELBLUE	0xB63B	SILVER	0xC618
DARKLIVEGREEN	0x5345	LIGHTYELLOW	0xFFFF	SKYBLUE	0x867D
DARKORANGE	0xFC60	LIME	0x07E0	SLATEBLUE	0x6AD9
DARKORCHID	0x9999	LIMEGREEN	0x3666	SLATEGRAY	0x7412
DARKRED	0x8800	LINEN	0xFF9C	SNOW	0xFFDF
DARKSALMON	0xECAF	MAGENTA	0xF81F	SPRINGGREEN	0x07EF
DARKSEAGREEN	0x8DF1	MAROON	0x8000	STEELBLUE	0x4416
DARKSLATEBLUE	0x49F1	MEDIUMAQUAMARINE	0x6675	TAN	0xD5B1
DARKSLATEGRAY	0x2A69	MEDIUMBLUE	0x0019	TEAL	0x0410
DARKTURQUOISE	0x067A	MEDIUMORCHID	0xBABA	THISTLE	0xDDFB
DARKVIOLET	0x901A	MEDIUMPURPLE	0x939B	TOMATO	0xFB08
DEEPINK	0xF8B2	MEDIUMSEAGREEN	0x3D8E	TURQUOISE	0x471A
DEEPSKYBLUE	0x05FF	MEDIUMSLATEBLUE	0x7B5D	VIOLET	0xEC1D
DIMGRAY	0x6B4D	MEDIUMSPRINGGREEN	0x07D3	WHEAT	0xF6F6
DODGERBLUE	0x1C9F	MEDIUMTURQUOISE	0x4E99	WHITE	0xFFFF
FIREBRICK	0xB104	MEDIUMVIOLETRED	0xC0B0	WHITESMOKE	0xF7BE
FLORALWHITE	0xFFDE	MIDNIGHTBLUE	0x18CE	YELLOW	0xFFE0
FORESTGREEN	0x2444	MINTCREAM	0xF7FF	YELLOWGREEN	0x9E66
FUCHSIA	0xF81F	MISTYROSE	0xFF3C		
GAINSBORO	0xDEFB	MOCCASIN	0xFF36		

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