
Subject: 24-bit color on printer device

Posted by [K. Bowman](#) on Wed, 25 Sep 2002 19:39:13 GMT

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I have a short program (posted below) to test 24-bit color. On a 24-bit X-Windows display, it works as intended, blending red and green to get yellow.

The printer device does not produce color output, however. As evidenced by the xprinter.eps file filled with, e.g.

```
...
0.4 setgray
gs np 325.44 176.88 t 325.44 176.88 lo 331.68 176.88 ...
```

(also by opening xprinter.eps in Illustrator and Ghostview).

Any ideas?

Many thanks, Ken Bowman

PRO TEST24, PRINT = print, VERBOSE = verbose

IF KEYWORD_SET(print) THEN BEGIN

entry_device = !D.NAME

SET_PLOT, 'PRINTER'

DEVICE, /TRUE_COLOR

ENDIF

!P.BACKGROUND = 255 + 256*(255 + 256*255) ;White background

n = 1000L

x = RANDOMU(seed, n) ;Random numbers [0, 1]

y = RANDOMU(seed, n) ;Random numbers [0, 1]

r = LONG(255*x) ;Red proportional to x

g = LONG(255*y) ;Green proportional to y

b = REPLICATE(0B, n) ;No blue

PLOT, [0,0], [1,1], /NODATA, COLOR = 0 + 256*(0 + 256*255) ;Blue axes

PLOTS, x, y, PSYM=1, COLOR = r + 256*(g + 256*b) ;Red-green-yellow points

IF KEYWORD_SET(verbose) THEN BEGIN

HELP, /DEVICE

HELP, !D, /STRUCT

ENDIF

IF KEYWORD_SET(print) THEN BEGIN

DEVICE, /CLOSE

SET_PLOT, entry_device

ENDIF

END

Sample session with some trimming of device output:

IDL Version 5.5 (IRIX mipseb). (c) 2001, Research Systems, Inc.

Installation number: 8233-51.

Licensed for use by: DEPARTMENT OF METEOROLOGY, TEXAS A&M UNIV.

% Compiled module: MAKE_PATH.

IDL> test24, /verbose

% Compiled module: TEST24.

Available Graphics Devices: CGM HP LJ NULL PCL PRINTER PS REGIS TEK X Z

Current graphics device: X

Server: X11.0, eXodus 8.0.2b1 (c) 2002 Powerlan USA, Inc., Release 7100

Display Depth, Size: 24 bits, (1600,1002)

Visual Class: TrueColor (4)

Bits Per RGB: 8 (8/8/8)

Physical Color Map Entries (Emulated / Actual): 256 / 256

Colormap: Shared, 16777216 colors. Translation table: Bypassed

Graphics pixels: Decomposed, Dither Method: Ordered

Write Mask: 16777215 (decimal) ffffff (hex)

Graphics Function: 3 (copy)

Current Font: <default>, Current TrueType Font: <default>

Default Backing Store: Req from Server.

Window Status: -----

id typ(x, y, backing store) id typ(x, y, backing store)

0: Win(640, 512, Req from Server)

** Structure !DEVICE, 17 tags, length=84, data length=84:

NAME	STRING	'X'
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N_COLORS	LONG	16777216
----------	------	----------

TABLE_SIZE	LONG	256
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IDL> test24, /verbose, /print

Available Graphics Devices: CGM HP LJ NULL PCL PRINTER PS REGIS TEK X Z

Current graphics device: PRINTER

File : xprinter.eps

Orientation: Portrait

Scale Factor: 1

Resolution: 301 dots per inch

Font: -adobe-courier-medium-r-normal--0-0-300-300-m-0-iso8859-1, TrueType Font: <none>

Size (X,Y): (17.78,12.7) cm., (7,5) in.

Offset (X,Y): (1.905,12.7) cm., (0.75,5) in.

** Structure !DEVICE, 17 tags, length=84, data length=84:

NAME	STRING	'PRINTER'
N_COLORS	LONG	16777216
TABLE_SIZE	LONG	256
