
Subject: Color table question

Posted by [patel](#) on Mon, 10 Aug 1992 22:38:54 GMT

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In PV-WAVW, I need to display a gray scale image(256 grays). I need few colors for graphics. I did the following to accomplish this:

```
loadct,0 ; load a gray scale color table.
```

```
; Load the color table with 7 colors.
```

```
Tvict, 140, 140, 140, 1
```

```
Tvict, 130, 140, 220, 2
```

```
Tvict, 90, 80, 160, 3
```

```
Tvict, 255, 255, 255, 4
```

```
Tvict, 200, 200, 60, 5
```

```
Tvict, 50, 170, 80, 6
```

```
Tvict, 200, 70, 70, 7
```

```
; Byte scale the image in 'im'
```

```
imb=bytsc1(im)
```

```
;to avoid funny colors in the image, set all pixels with value <10 to 10
```

```
imb(where(imb lt 10))=10
```

```
tvsc1,imb
```

```
end
```

with this segment of the program, I donot expect to see any colors in my image. But I do see scattered pixels with different colors.

What am I doing wrong here.

Thanks for your help.

Maqbool Patel

patel@hippy.drad.umn.edu

Subject: Re: Color table question

Posted by [thompson](#) on Mon, 10 Aug 1992 23:59:00 GMT

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In article <1992Aug10.223854.14071@news2.cis.umn.edu>, patel@sparky.drad.umn.edu () writes...

> In PV-WAVW, I need to display a gray scale image(256 grays). I need

> few colors for graphics. I did the following to accomplish this:

>

>

> loadct,0 ; load a gray scale color table.

> ; Load the color table with 7 colors.

```

> Tvlct, 140, 140, 140, 1
> Tvlct, 130, 140, 220, 2
> Tvlct, 90, 80, 160, 3
> Tvlct, 255, 255, 255, 4
> Tvlct, 200, 200, 60, 5
> Tvlct, 50, 170, 80, 6
> Tvlct, 200, 70, 70, 7
>
> ; Byte scale the image in 'im'
> imb=bytsc1(im)
> ;to avoid funny colors in the image, set all pixels with value <10 to 10
> imb(where(imb lt 10))=10
> tvscl,imb
> end
>
>
> with this segment of the program, I donot expect to see any colors
> in my image. But I do see scattered pixels with different colors.
> What am I doing wrong here.

```

First of all, since you've already scaled the image with BYTSC1, you don't need to rescale it with TVSCL. Use TV instead. Also, you don't need to go to all that much trouble to make sure that the scaled image has no values <10; you can simply say

```

imb = bytsc1(im) > 10b
tv, imb

```

Even better would be to scale the image to exactly the number of colors available after reserving the 10 colors you're using elsewhere. At the same time, we can also take care of the fact that your display may have less than 256 colors available:

```

imb = bytsc1(im,top=!d.n_colors-11) + 10b
tv, imb

```

In fact, you simplify this to one line

```

tv, bytsc1(im,top=!d.n_colors-11) + 10b

```

Bill Thompson

Subject: Re: color table question
 Posted by [Rick Towler](#) on Thu, 14 Mar 2002 18:58:13 GMT
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"Rob Dimeo" <robert.dimeo@nist.gov> wrote in message

news:cb539436.0203141014.143e49e@posting.google.com...

- > I suspect that I can replace one of the color
- > table entries with [255,255,255] for instance? I just am not sure how
- > to do this.

Check out tvlct.

tvlct, 255,255,255,100

will insert white into your color table at index 100.

-Rick

Subject: Re: color table question
Posted by [David Fanning](#) on Sat, 16 Mar 2002 01:19:48 GMT
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Rob Dimeo (robert.dimeo@nist.gov) writes:

- > I suspect that this question will have a very simple answer (hoping,
- > anyway).
- >
- > I want to display an image using color table 6 but this color table
- > does not have white in it. Next I want to display a white crosshairs
- > on top of the image. The way that I do this is not ideal because I am
- > loading the black-white color table after displaying the color image
- > in the window but before I draw the crosshairs (see test code below).
- > The reason that this is not ideal is that, in my application, I am
- > really moving this crosshairs around the screen as the cursor moves
- > over the image. Motion events are being generated resulting in many
- > calls to loadct, slowing down the whole works.
- >
- > I guess what I am really asking for is a persistent way to specify the
- > color of something as white (for instance) when a particular color
- > table has been loaded. I suspect that I can replace one of the color
- > table entries with [255,255,255] for instance? I just am not sure how
- > to do this.

Typically, one loads "image" colors in one part of the color table and "drawing" colors in another. I always put drawing colors at the top of the color table, because it is easier to restrict image display to the bottom of the color table (you don't have to add anything to the byte scaled image data). I'd set this color table up like this:

```
topColorIndex = !D.Table_Size - 1
LOADCT, 6, NColors=topColorIndex
TVLCT, 255, 255, 255, topColorIndex
```

Then, I'd display my image like this:

```
TV, BytScl(image, Top=topColorIndex-1)
```

And I would draw the cursor like this:

```
PlotS, x, y, /Device, Color=topColorIndex
```

If you liked this color table you could save it and use it over again. Here, for example, is one way to do that:

```
TVLCT, rr, gg, bb, /Get
Save, rr, gg, bb, File='mycolortable.sav'
```

Then, when you wanted to use it, you could do this:

```
Restore, 'mycolortable.sav'
TVLCT, rr, gg, bb
```

Just remember to scale your image data into the number of colors you are using as "image" colors in the color table. You might even want to save a variable with this information with your color table information.

Cheers,

David

--

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: color table question
Posted by [R.Bauer](#) on Sat, 16 Mar 2002 20:19:52 GMT
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Rob Dimeo wrote:

>
> Hi,
>
> I suspect that this question will have a very simple answer (hoping,
> anyway).
>
> I want to display an image using color table 6 but this color table
> does not have white in it. Next I want to display a white crosshairs
> on top of the image. The way that I do this is not ideal because I am
> loading the black-white color table after displaying the color image
> in the window but before I draw the crosshairs (see test code below).
> The reason that this is not ideal is that, in my application, I am
> really moving this crosshairs around the screen as the cursor moves
> over the image. Motion events are being generated resulting in many
> calls to loadct, slowing down the whole works.
>
> I guess what I am really asking for is a persistent way to specify the
> color of something as white (for instance) when a particular color
> table has been loaded. I suspect that I can replace one of the color
> table entries with [255,255,255] for instance? I just am not sure how
> to do this.
>
> Any help you can give is greatly appreciated!
>
> Best regards,
>
> Rob

Dear Rob,

we have defined some colortabels in the way that the first 20 colors
are always the same e.g. for plot
The colors from 21 to 255 are used by contour.
With c_color you can set up the colors for the levels.

http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_source/idl_html/dbase/download/ct_ncdf.tar.gz
http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_source/idl_html/dbase/download/ct_blue_green_yellow_red.t

ct_ncdf,c
ct_blue_green_yellow_red

The red_green_blue we don't have but you can design it yourself with
this tool

http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_source/idl_html/dbase/download/x_def_colortable.tar.gz

regards

Reimar

```
pro test_color
ct_ncdf,c
ct_blue_green_yellow_red
```

```
;loadct,6,/silent
window,xsize = 225,ysize = 225,/free & winVis = !d.window
window,/free,/pixmap,xsize = 225,ysize = 225 & winPix = !d.window
image = smooth(byte(255*randomn(s,225,225,/uniform)),5,/edge_truncat e)
wset,winPix
tv,image
wset,winVis
device,copy = [0,0,!d.x_size,!d.y_size,0,0,winPix]
```

```
plots,[0,225],[112,112],linestyle = 0,/device,color=c.white
plots,[112,112],[0,255],linestyle = 0,/device,color=c.white
empty
wdelete,winPix
```

end

--

Reimar Bauer

Institut fuer Stratosphaerische Chemie (ICG-I)
Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de

```
-----
a IDL library at ForschungsZentrum Juelich
http://www.fz-juelich.de/icg/icg1/idl\_icglib/idl\_lib\_intro.h tml
```

```
=====
```