
Subject: Re: Draw a Histogram Plot
Posted by [Brian Larsen](#) on Tue, 20 Nov 2007 22:24:09 GMT
[View Forum Message](#) <> [Reply to Message](#)

David,

- > I've ticked another item off my life-time TO-DO list by
- > writing a program to give me a decent histogram plot when
- > I want one.

Again we all thank you much for all the fantastic programs and help,
however on this one maybe I have an odd setting or something...

when I run histoplot, randomn(seed, 1000) I get a blank white
screen... not too good for a default behavior. When I specify colors
it works like a champ.

What setting do I have or not have to make this work?

Cheers,

Brian

Brian Larsen
Boston University
Center for Space Physics

Subject: Re: Draw a Histogram Plot
Posted by [David Fanning](#) on Tue, 20 Nov 2007 22:50:35 GMT
[View Forum Message](#) <> [Reply to Message](#)

Brian Larsen writes:

- > Again we all thank you much for all the fantastic programs and help,
- > however on this one maybe I have an odd setting or something...
- >
- > when I run histoplot, randomn(seed, 1000) I get a blank white
- > screen... not too good for a default behavior. When I specify colors
- > it works like a champ.
- >
- > What setting do I have or not have to make this work?

Well, that's weird. :-)

No error messages about not finding FSC_COLOR or

something like that?

Don't know. Too weird.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Seppure ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Draw a Histogram Plot

Posted by [David Fanning](#) on Tue, 20 Nov 2007 23:05:34 GMT

[View Forum Message](#) <> [Reply to Message](#)

Brian Larsen writes:

> What setting do I have or not have to make this work?

Humm. Just don't know. Passes all the tests here.

Code looks solid.

What kind of machine? What version of IDL? What color decomposition state when you run the program? (Shouldn't matter, of course.)

Can I see a HELP, /DEVICE and then the call to the program.

Thanks,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Seppure ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Draw a Histogram Plot

Posted by [Werner](#) on Wed, 21 Nov 2007 08:34:50 GMT

[View Forum Message](#) <> [Reply to Message](#)

On 20 Nov., 21:46, David Fanning <n...@dfanning.com> wrote:

> Folks,
>
> I've ticked another item off my life-time TO-DO list by
> writing a program to give me a decent histogram plot when
> I want one.
>
> I'm already thinking about version 1.2, but I thought I
> would get some feedback before I spent too much more time
> on it.
>
> You can learn about it and see how it works here:
>
> http://www.dfanning.com/graphics_tips/histoplot.html
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

David,

works fine for me!

Thanks a lot for another great contribution!!!

Cheers,
Werner

Subject: Re: Draw a Histogram Plot

Posted by [Brian Larsen](#) on Wed, 21 Nov 2007 14:57:47 GMT

[View Forum Message](#) <> [Reply to Message](#)

David,

here is that output. It feels to me like a white on white plot
issue...

MacBook pro, IDL 6.4.1, Leopard

IDL> help, /device

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

Z

Current graphics device: X
Server: X11.0, The X.Org Foundation, Release 70200000
Display Depth, Size: 24 bits, (1680,1028)
Visual Class: TrueColor (4)
Bits Per RGB: 8 (8/8/8)
Physical Color Map Entries (Emulated / Actual): 256 / 256
Colormap: Private, 16777216 colors. Translation table: Enabled
Graphics pixels: Combined, Dither Method: Ordered
Write Mask: 16777215 (decimal) ffffff (hex)
Graphics Function: 3 (copy)
Current Font: <default>, Current TrueType Font: <default>
Default Backing Store: Pixmap.
IDL> histoplot, randomu(seed, 1000)
% Compiled module: HISTOPLLOT.
% Compiled module: FSC_COLOR.

Cheers,

Brian

Brian Larsen
Boston University
Center for Space Physics

Subject: Re: Draw a Histogram Plot
Posted by [Brian Larsen](#) on Wed, 21 Nov 2007 15:20:58 GMT
[View Forum Message](#) <> [Reply to Message](#)

Maybe another piece of the puzzle.

IDL> histoplot, randomu(seed, 1000), /line_fill
% Compiled module: HISTOPLLOT.
% Compiled module: FSC_COLOR.
works and shows a red on white plot

Cheers,

Brian

Brian Larsen

Subject: Re: Draw a Histogram Plot
Posted by [David Fanning](#) on Wed, 21 Nov 2007 16:12:19 GMT
[View Forum Message](#) <> [Reply to Message](#)

Brian Larsen writes:

> here is that output. It feels to me like a white on white plot
> issue...
>
> MacBook pro, IDL 6.4.1, Leopard

Oh, Macintosh!!! I knew it. :-(

It sounds like a white on white thing to me, too.
This is what FSC_COLOR would do if it couldn't find
the color you specified. It defaults to white. But,
with no error messages.... And a Macintosh....
Quien sabe?

Let's just say it wouldn't be the first time I've had
to add work-arounds for Macs in my code. :-)

Anyone else having trouble on a Mac?

Brian, can you step through the code and see what is
going on? I expect it draws the first PLOT command
correctly (since you get a white background). But I
would be MOST curious to know what happens then.
Please be sure you have the latest version, too.

<http://www.dfanning.com/programs/histoplot.pro>

Thanks,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: Draw a Histogram Plot

Posted by [ben.bighair](#) on Wed, 21 Nov 2007 16:24:17 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Nov 21, 11:12 am, David Fanning <da...@dfanning.com> wrote:

```
> Brian Larsen writes:
>> here is that output. It feels to me like a white on white plot
>> issue...
>
>> MacBook pro, IDL 6.4.1, Leopard
>
> Oh, Macintosh!!! I knew it. :-(
>
> It sounds like a white on white thing to me, too.
> This is what FSC_COLOR would do if it couldn't find
> the color you specified. It defaults to white. But,
> with no error messages.... And a Macintosh....
> Quien sabe?
>
> Let's just say it wouldn't be the first time I've had
> to add work-arounds for Macs in my code. :-)
>
> Anyone else having trouble on a Mac?
```

Hi,

Works right out of the box for me. This is a great routine!

Here's my device info... { ppc darwin unix Mac OS X 6.3 Mar 23
2006 32 64}, so it is might be aversion thing. Note that
Brian's "Translation table" is enabled and mine is bypassed.

```
IDL> help, /device
```

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

```
Current graphics device: X
```

```
Server: X11.0, The XFree86 Project, Inc, Release 40400000  
Display Depth, Size: 24 bits, (1024,768)  
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: Pixmap.  
Window Status: -----  
id typ( x, y, backing store) id typ( x, y,  
backing store)
```

0: Win(512, 373, Pixmap)

Thanks for the great tool!
Ben

Subject: Re: Draw a Histogram Plot

Posted by [Brian Larsen](#) on Wed, 21 Nov 2007 16:38:06 GMT

[View Forum Message](#) <> [Reply to Message](#)

>
> Brian, can you step through the code and see what is
> going on? I expect it draws the first PLOT command
> correctly (since you get a white background). But I
> would be MOST curious to know what happens then.
> Please be sure you have the latest version, too.

Stepped through (after making sure I had the latest) and didn't learn too much...

after this section (lines 208-213):

```
    Plot, binsToPlot, histdataToPlot, $          ; The fudged
histogram and bin data.
    Background=backcolor, $                      ; The background
color of the display.
    NoData=1, $                                  ; Draw the axes
only. No data.
    XStyle=5, $                                  ; Exact axis
scaling. No autoscaled axes.
    YRange=yrange, $                            ; The Y data
range.
    YStyle=5, $                                  ; Exact axis
scaling. No autoscaled axes.
    _Extra=extra, $                             ; Pass any extra
PLOT keywords.
    XTICKFORMAT='(A1)', YTICKFORMAT='(A1)'
the plot window popped up blank white, and didn't change from that at
any step.
```

But I did learn something else...

I think this is certainly an issue with fsc_color.

```
IDL> plot, findgen(10)
; gives a plot white on black
IDL> plot, findgen(10), color=fsc_color('red')
; gives a plot, red on black
IDL> plot, findgen(10), color=fsc_color('red'),
background=fsc_color('white')
; gives a blank white window
```

I have had issues with more than one call to fsc_color in a routine before with legend, maybe its related?

Brian

Brian Larsen
Boston University
Center for Space Physics

Subject: Re: Draw a Histogram Plot
Posted by [David Fanning](#) on Wed, 21 Nov 2007 16:41:10 GMT
[View Forum Message](#) <> [Reply to Message](#)

Ben writes:

> Here's my device info... { ppc darwin unix Mac OS X 6.3 Mar 23
> 2006 32 64}, so it is might be aversion thing. Note that
> Brian's "Translation table" is enabled and mine is bypassed.

There could be something to this. I ran into something like this the other day with a Mac user. Something in her startup file was setting this BYPASS_TRANSLATION keyword to the DEVICE command, and she was getting strange colors in COLORBAR.

I suspect the line in her STARTUP file was put there to work around a previous Mac color problem. I don't recall now what value it is suppose to be set to. If you have something like that, though, Brian, I'd try removing it or setting it to the opposite value.

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: Draw a Histogram Plot
Posted by [David Fanning](#) on Wed, 21 Nov 2007 16:43:45 GMT
[View Forum Message](#) <> [Reply to Message](#)

Brian Larsen writes:

- > I have had issues with more than one call to fsc_color in a routine
- > before with legend, maybe its related?

You could possibly have a problem with a VERY old version of FSC_COLOR with more than one call. I doubt it very much with a more recent version:

http://www.dfanning.com/programs/fsc_color.pro

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: Draw a Histogram Plot

Posted by [Brian Larsen](#) on Wed, 21 Nov 2007 16:48:26 GMT

[View Forum Message](#) <> [Reply to Message](#)

-
- > You could possibly have a problem with a VERY old version
 - > of FSC_COLOR with more than one call. I doubt it very much
 - > with a more recent version:

Yep, I have a fanning directory with all of your routines in it but in my larsen directory (ahead in !path) was an ancient version of fsc_color() from before I got organized and that was the issue. I removed the old version and It works like a champ now!!!

Thanks for the help,

Brian

Brian Larsen
Boston University
Center for Space Physics

Subject: Re: Draw a Histogram Plot

Posted by [Brian Larsen](#) on Wed, 21 Nov 2007 16:54:03 GMT

[View Forum Message](#) <> [Reply to Message](#)

This whole thing makes me wonder... what would be involved in implementing a `print_fanning_version()` routine to print the versions of your routines? One could then check that again a list on the website?

This could be useful for analysis code I distribute to colleague as well... interesting

One thought is that there is a procedure that knows the name of all the routines in question, it calls them with a version flag that returns a version number that is then printed... but they may be another or better way.

Cheers,

Brian

Brian Larsen
Boston University
Center for Space Physics

Subject: Re: Draw a Histogram Plot
Posted by [R.G.Stockwell](#) on Wed, 21 Nov 2007 17:44:39 GMT
[View Forum Message](#) <> [Reply to Message](#)

"Brian Larsen" <balarsen@gmail.com> wrote in message
news:e1292802-6a1a-4e93-a74b-86fcdf63c4f0@o6g2000hsd.googlegroups.com...
> This whole thing makes me wonder... what would be involved in
> implementing a `print_fanning_version()` routine to print the versions
> of your routines? One could then check that again a list on the
> website?

even more usefull would be a 'find redundant files' routine
in your path.

...hold on a sec....

Cheers,
bob

Subject: Re: Draw a Histogram Plot

Posted by [Mariolncandenza](#) on Wed, 21 Nov 2007 18:30:15 GMT

[View Forum Message](#) <> [Reply to Message](#)

David,

This is a valuable thing. Like many people I'm sure, I had a kluge I had been using for this, but I look forward to shifting to something more robust.

The rotating fill values and line-fill options are great!

I haven't actually put it through its paces, but looking through the code I see this:

```
    ; Calculate the histogram.
    histdata = Histogram(dataToHistogram, Binsize=binsize,
Max=Max(dataToHistogram),
                        Min=Min(dataToHistogram), _EXTRA=extra)
```

For generating a good histogram, you need to be able to specify the MIN (and sometimes the MAX) values to HISTOGRAM(). Right now, if you feed a MIN value into HISTOLOT, it will choke because there is already a MIN_VALUE keyword.

My "feature request" would be a means to have both PLOT min/max and HIST min/max.

The application is, for example, a floating-point dataset where I need an indication of how many zero values. So, for example, if my data have three significant digits after the decimal, and a range of 0-100, then I want:

```
h=histogram(data,min=-9.999,bin=10)
hist_plot,h,x_range=[0,100],/xstyle
```

--Edward H.

Subject: Re: Draw a Histogram Plot

Posted by [JD Smith](#) on Wed, 21 Nov 2007 18:39:57 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Tue, 20 Nov 2007 13:46:01 -0700, David Fanning wrote:

```
> Folks,
>
> I've ticked another item off my life-time TO-DO list by writing a program
```

> to give me a decent histogram plot when I want one.
>
> I'm already thinking about version 1.2, but I thought I would get some
> feedback before I spent too much more time on it.
>
> You can learn about it and see how it works here:
>
> http://www.dfanning.com/graphics_tips/histoplot.html

Looks very nice, and I haven't tried it, but I'd call this a "bar plot" more than a histogram plot. If it would be possible to avoid all the vertical bar lines, it would be more useful to me. So essentially it would look like PSYM=10, but bins would go in the correct place, and have neatly finished ends. I usually kludge it by shifting a half bin, and adding endpoints on the X axis.

JD

Subject: Re: Draw a Histogram Plot

Posted by [David Fanning](#) on Wed, 21 Nov 2007 18:41:55 GMT

[View Forum Message](#) <> [Reply to Message](#)

Ed Hyer writes:

> This is a valuable thing. Like many people I'm sure, I had a kluge I
> had been using for this, but I look forward to shifting to something
> more robust.
>
> The rotating fill values and line-fill options are great!
>
> I haven't actually put it through its paces, but looking through the
> code I see this:
>
> ; Calculate the histogram.
> histdata = Histogram(dataToHistogram, Binsize=binsize,
> Max=Max(dataToHistogram),
> Min=Min(dataToHistogram), _EXTRA=extra)
>
> For generating a good histogram, you need to be able to specify the
> MIN (and sometimes the MAX) values to HISTOGRAM(). Right now, if you
> feed a MIN value into HISTOLOT, it will choke because there is
> already a MIN_VALUE keyword.

Yes, access to the HISTOGRAM command is bothering me, too.
I was hoping to finesse it, since simple access was all I
required for my application, but I realized I probably

wouldn't be able to get away with this for long.

We really need multiple `_EXTRA` keywords, or targeted keywords, or something. There are three different `COMMANDS` I want access to in this program, and having to resort to one `_EXTRA` is giving me heartburn. :-(

I have some ideas, but I'm working on getting a failed hard drive back in business this morning....

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: Draw a Histogram Plot

Posted by [Trae](#) on Wed, 21 Nov 2007 19:10:20 GMT

[View Forum Message](#) <> [Reply to Message](#)

I bought an online copy of your book, just so that I could give you money. Great little programs like this make me think what a good investment that was.

Thanks! I'll be using this often.

Cheers

-Trae

On Nov 20, 1:46 pm, David Fanning <n...@dfanning.com> wrote:

> Folks,

>

> I've ticked another item off my life-time TO-DO list by

> writing a program to give me a decent histogram plot when

> I want one.

>

> I'm already thinking about version 1.2, but I thought I

> would get some feedback before I spent too much more time

> on it.

>

> You can learn about it and see how it works here:

>

> http://www.dfanning.com/graphics_tips/histoplot.html

>
> Cheers,
>
> David

Subject: Re: Draw a Histogram Plot
Posted by [Vince Hradil](#) on Wed, 21 Nov 2007 22:39:28 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Nov 21, 12:39 pm, JD Smith <jdsm...@as.arizona.edu> wrote:
> On Tue, 20 Nov 2007 13:46:01 -0700, David Fanning wrote:
>> Folks,
>
>> I've ticked another item off my life-time TO-DO list by writing a program
>> to give me a decent histogram plot when I want one.
>
>> I'm already thinking about version 1.2, but I thought I would get some
>> feedback before I spent too much more time on it.
>
>> You can learn about it and see how it works here:
>
>> http://www.dfanning.com/graphics_tips/histoplot.html
>
> Looks very nice, and I haven't tried it, but I'd call this a "bar plot"
> more than a histogram plot. If it would be possible to avoid all the
> vertical bar lines, it would be more useful to me. So essentially it
> would look like PSYM=10, but bins would go in the correct place, and have
> neatly finished ends. I usually kludge it by shifting a half bin, and
> adding endpoints on the X axis.
>
> JD

Just change the lines:

```
FOR j=0L, N_Elements(bins)-1 DO BEGIN
    PlotS, [bins[j], bins[j]], min_value > [!Y.CRange[0],
histDataToPlot[j]] < max_value, $
    Color=dataColor
ENDFOR
```

to only do j=0 and j=n_elements(bins)-1.
