
Subject: Re: cgArrow Solid keyword with a cgWindow
Posted by [David Fanning](#) on Thu, 18 Apr 2013 13:54:46 GMT
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Sean Elvidge writes:

> I've found that calling cgArrow with the /SOLID and /AddCmd keyword doesn't work in adding a (solid) arrow to a resizable window. I think this is because the call to cgColorFill in cgArrow (lines 233 and 234) does not allow the parameter to be passed. I tried to fix it by adding '_Extra=extra' to the cgColorFill call, but that also doesn't work because /AddCmd is not allowed in the call to cgColorFill.

Well, something is screwy, for sure. The solid arrowhead is being drawn, but not in the right window.

I do notice that this works correctly, if you use the WINDOW keyword, as the documentation specifies, rather than the ADDCMD keyword, which is not defined for this routine. :-)

I presume this has something to do with the ADDCMD keyword being passed along with _EXTRA. It looks to me like Coyote wrote this routine. I'll see if I can get it sorted out.

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: cgArrow Solid keyword with a cgWindow
Posted by [David Fanning](#) on Thu, 18 Apr 2013 14:50:27 GMT
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David Fanning writes:

>> I've found that calling cgArrow with the /SOLID and /AddCmd keyword doesn't work in adding a (solid) arrow to a resizable window. I think this is because the call to cgColorFill in cgArrow (lines 233 and 234) does not allow the parameter to be passed. I tried to fix it by adding '_Extra=extra' to the cgColorFill call, but that also doesn't work because /AddCmd is not allowed in the call to cgColorFill.
>

> Well, something is screwy, for sure. The solid arrowhead is being drawn,
> but not in the right window.
>
> I do notice that this works correctly, if you use the WINDOW keyword, as
> the documentation specifies, rather than the ADDCMD keyword, which is
> not defined for this routine. :-)
>
> I presume this has something to do with the ADDCMD keyword being passed
> along with _EXTRA. It looks to me like Coyote wrote this routine. I'll
> see if I can get it sorted out.

The simplest solution seemed to be to just define an ADDCMD keyword to this routine to make the interface more consistent with the rest of the Coyote Graphics library. You can find the updated routine here:

<http://www.idlcoyote.com/programs/cgarrow.pro>

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: cgArrow Solid keyword with a cgWindow

Posted by [Fabzi](#) on Thu, 18 Apr 2013 15:08:05 GMT

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On 04/18/2013 04:50 PM, David Fanning wrote:

> The simplest solution seemed to be to just define an ADDCMD keyword to
> this routine to make the interface more consistent with the rest of the
> Coyote Graphics library.

By the way, what are the rules for this? Do all routines have an /ADDCMD but not all routines have a /WINDOW? Could one of the two be suppressed?

Thanks!

Fab

Subject: Re: cgArrow Solid keyword with a cgWindow

Posted by [Phillip Bitzer](#) on Thu, 18 Apr 2013 15:24:47 GMT

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I remember being confused by these keywords as well. After working with them for a bit, I found:

- 1) the CG routines that (could) set up a plot space (e.g., `cgplot`, `cgcontour`, etc) uses `/ADDCMD`.
- 2) the ones that needed a plot space (`cgplotS`, `cgColorFill`) used `/WINDOW`.

Was that serendipitous?

Subject: Re: `cgArrow` Solid keyword with a `cgWindow`

Posted by [David Fanning](#) on Thu, 18 Apr 2013 15:34:51 GMT

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Fabien writes:

- > By the way, what are the rules for this? Do all routines have an `/ADDCMD`
- > but not all routines have a `/WINDOW`? Could one of the two be suppressed?

The rational for having two keywords that do the same thing is that when you get so excited about a great new idea, you sometimes start coding before you really understand what the hell it is you are doing. This is the unfortunate, messy result.

Originally, I thought a single `WINDOW` keyword would work great. You set the `WINDOW` keyword, the command gets added to the resizable graphics window. What could be simpler?

But, then I realized I wanted the graphics commands to act like "normal" graphics commands. If I do a line plot, I see a line plot. If I then do a contour plot, the contour plot shows up in the same window as the previous line plot, and so on. So, I changed the meaning of `WINDOW` to mean "get rid of all the other commands in this window and add this command to the window". That required the `ADDCMD` keyword for things I wanted to "add" to commands that were already in the window.

Then, of course, you could replace commands, etc. I saw the keyword list rapidly getting completely out of control. So I decided only two keywords, `WINDOW` and `ADDCMD`. "`WINDOW`" more or less means "start over with this command as the first command in the window". `ADDCMD` more or less means "add this command to the list of commands that already exist in the window". But, life is complicated, and it is not always so easy to sort out the details.

Consider something like `cgArrow`. Has anyone anywhere ever drawn an arrow in a graphics window without anything else around? Probably not. So, in

this case WINDOW probably should mean ADDCMD 99% of the time. But, as soon as I make a decision like that, somebody sends me an e-mail complaining that they just want a damn arrow in a graphics window! Sigh.

So, I'm just saying it's complicated. I do my best. ;-)

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: cgArrow Solid keyword with a cgWindow
Posted by [David Fanning](#) on Thu, 18 Apr 2013 15:47:17 GMT
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David Fanning writes:

> So, I'm just saying it's complicated. I do my best. ;-)

By the way, I do recommend people read the documentation. It's often enlightening. ;-)

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: cgArrow Solid keyword with a cgWindow
Posted by [seanelvidge](#) on Fri, 19 Apr 2013 10:01:21 GMT
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On Thursday, 18 April 2013 14:54:46 UTC+1, David Fanning wrote:

> I do notice that this works correctly, if you use the WINDOW keyword, as

> the documentation specifies, rather than the ADDCMD keyword, which is
> not defined for this routine. :-)
>

I tried to use the /WINDOW keyword, (as the documentation specifies ;)) first, but I found that the plotted arrow appears in a new cgWindow rather than the current one. That is (using Revision 1200 of the SVN repo, before your latest update):

```
cgWindow, 'cgPlot', INDGEN(10), /NoData  
cgArrow, 2, 2, 5, 5, /Data, /WINDOW
```

Which isn't what I was after, but since you say this works correctly perhaps I am doing something wrong.

David Fanning wrote:

> David Fanning writes:
> By the way, I do recommend people read the documentation. It's often
> enlightening. ;-)

It's always enlightening :)

I just tried the new cgArrow (Revision 1201), but now I can't get any of the arrow to plot in the cgWindow, using /AddCmd or /WINDOW. Perhaps it is what I am doing, since I couldn't get it to work in either revision? Here is an example:

```
cgWindow, 'cgPlot', INDGEN(10), /NoData  
cgArrow, 2, 2, 5, 5, /Data, /AddCmd  
cgArrow, 2, 2, 5, 5, /Data, /Window
```

Both those cgArrow commands plot an arrow in a new Window rather than in the existing cgWindow.

Any suggestions?

Thanks,

Sean.

Subject: Re: cgArrow Solid keyword with a cgWindow
Posted by [David Fanning](#) on Fri, 19 Apr 2013 12:22:19 GMT
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Sean Elvidge writes:

> I tried to use the /WINDOW keyword, (as the documentation
> specifies ;)) first, but I found that the plotted arrow appears in a
> new cgWindow rather than the current one. That is (using Revision 1200
> of the SVN repo, before your latest update):
>
> cgWindow,'cgPlot',INDGEN(10),/NoData
> cgArrow, 2, 2, 5, 5, /Data, /WINDOW
>
> Which isn't what I was after, but since you say this works correctly
> perhaps I am doing something wrong.
>
> David Fanning wrote:
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>> enlightening. ;-)
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> It's always enlightening :)
>
> I just tried the new cgArrow (Revision 1201), but now I can't get any
> of the arrow to plot in the cgWindow, using /AddCmd or /WINDOW.
> Perhaps it is what I am doing, since I couldn't get it to work in
> either revision? Here is an example:
>
> cgWindow, 'cgPlot', INDGEN(10), /NoData
> cgArrow, 2, 2, 5, 5, /Data, /AddCmd
> cgArrow, 2, 2, 5, 5, /Data, /Window
>
> Both those cgArrow commands plot an arrow in a new Window rather than
> in the existing cgWindow.
>
> Any suggestions?

Oh, duh! Maybe adding ADDCMD=1 to the cgWindow command in the program
code would help. :-(

<http://www.idlcoyote.com/programs/cgarrow.pro>

Cheers,

David

P.S. I've fired Coyote. Again!

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Subject: Re: cgArrow Solid keyword with a cgWindow
Posted by [seanelvidge](#) on Fri, 19 Apr 2013 19:54:22 GMT
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On Friday, 19 April 2013 13:22:19 UTC+1, David Fanning wrote:

>
> Oh, duh! Maybe adding ADDCMD=1 to the cgWindow command in the program
> code would help. :-(

Everything works perfectly now! Many thanks David.

Sean.
