
Subject: Re: How do I use FORMAT as I would SPRINTF?? Please Help!

Posted by [Randall Skelton](#) on Thu, 19 Sep 2002 12:49:07 GMT

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Hi Brian,

When you say 'MATLAB' syntax, you are more or less describing C/C++ syntax. Many IDL's semantics have roots in FORTRAN (shutter) and the format keyword is one of the many ancient artifacts.

A simple example of what you want to do might read:

```
a = 'test'
b = '10.0'
print, a, b, format="('Size (' , A4, ' ', F5.2,')')"
```

Personally, I like C syntax for these sorts of things and usually do something like:

```
a = 'boo'
b = 10S
c = 100.0D

print, format='(("%(Size %s, %i, %d)")', a, b, c
```

Note the inclusion of the '%' sign just after the opening bracket.

If you search the IDL help for the heading 'Format Codes' you will get all the gory details. Towards the end, there is a section on C-style print commands which is what you are interested in.

I will preemptively answer the following 2 question even though you haven't asked (yet). Be forewarned that while MATLAB considers all integers to be type long and non-integers to be type double. IDL does not. Accordingly, when indexing a loop with more than 32000 elements be sure to explicitly cast the index to long with something like:

```
for i=0L, n-1 do begin ... endfor
```

A few standard casts are:

```
a = 0B -> byte
b = 0S -> short
c = 0L -> long
d = 0E0 -> float
e = 0D0 -> double
```

This may seem like a pain in the ass at first but for me it means I can do

much larger calculations in IDL as I often only need float precision so MATLAB's default to double is wasteful.

Another pitfall is the indexing of arrays in IDL compared with MATLAB. If you are using arrays and pretending they are matrices, be forewarned that IDL uses C-style array handling which is (columns,rows) NOT (rows,columns) which is the standard MATLAB matrix and customary linear algebra notation. You will want to again read the online help under the heading, "Arrays and Matrices".

Good luck,
Randall

On Thu, 19 Sep 2002, Brian Huether wrote:

```
> Date: Thu, 19 Sep 2002 12:23:57 +0200
> From: Brian Huether <bhuether@earthlink.net>
> Newsgroups: comp.lang.idl-pvwave
> Subject: How do I use FORMAT as I would SPRINTF?? Please Help!
>
> I am quite perplexed by the IDL FORMAT keyword. I am used to MATLAB where I
> can quite simply use the sprintf command. For instance, in MATLAB, the
> command
>
> s = sprintf('IDL has been driving me crazy for the last %d days', 10)
>
> would result in a string that contains
>
> 'IDL has been driving me crazy for the last 10 days'
>
> What I really need to do is something like this:
>
> s = sprintf('SIZE(%s, /%s)', arrayname, somekeyword)
>
> So if arrayname is A and somekeyword is TYPE, then the resulting string
> would be
>
> 'SIZE(A, /TYPE)'
>
> It is a meaningless example but hopefully you see what I want to do (i.e. I
> need to execute IDL commands in a loop, where each time through, the command
> input parameters are varying and are specified by indexing arrays that
> contain the parameters)
>
>
>
```
