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Subject: Looking for symbols library (psym=8)  
Posted by [schieb](#) on Thu, 22 Jan 1998 08:00:00 GMT  
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Does anyone know where I could get a pre-made set of IDL symbol  
defns to extend the sym= keyword for plots? Basically I'm looking  
for a predefined set of symbols for the psym=8 (USERSYM) option in PLOT.

Thanks in advance,

--Brian

| Brian D. Schieber / NASA/Goddard Space Flight Center  
| SeaWiFS Project / Code 970.2, Greenbelt, MD 20771  
| [schieb@seabass.gsfc.nasa.gov](mailto:schieb@seabass.gsfc.nasa.gov) / (301) 286-1440  
| [http://seabass.gsfc.nasa.gov/~schieb/home\\_page.html](http://seabass.gsfc.nasa.gov/~schieb/home_page.html)

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Subject: Re: Looking for symbols library (psym=8)  
Posted by [Brian Jackel](#) on Thu, 22 Jan 1998 08:00:00 GMT  
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Brian D. Schieber wrote:

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> PLOT

Here's something called USERSYMBOL.PRO which you might find  
useful. It has about a dozen symbols, and allows for changing  
size and orientation. Let me know if the attachment doesn't  
work (new newsreader) and I'll mail it to you directly.

--  
Brian Jackel  
[bjackel@space.phys.ucalgary.ca](mailto:bjackel@space.phys.ucalgary.ca)

```
; Brian Jackel University of Western Ontario  
; Bug reports cheerfully accepted  
; jackel@canlon.physics.uwo.ca  
;+  
; NAME: UserSymbol  
;  
; PURPOSE: Make neat little user defined symbols  
;  
; CATEGORY: Plotting/Graphics
```

```

;
; CALLING SEQUENCE:  UserSymbol,symbol_name
;
; INPUTS:
;   Symbol_name  a string containing the name of the desired symbol.
;               Some possible options are Square, Triangle, Circle,
;               Hexagon, BigX, Clover, Spiral, Star...
;
; KEYWORD PARAMETERS:
;   SIZE  Symbol size  (default=1)
;   LIST  if set, puts the list of available symbol names
;         in the input parameter Symbol_Name
;   HELP  if set, returns this documentation header
;
; and also the keywords which apply to USERSYM
;   THICK Line thickness (default=1)
;   FILL  Fill symbol?  (default=0=no)
;   COLOR Symbol color
;
; SIDE EFFECTS:      Calls USERSYM to load the new symbol
;
; MODIFICATION HISTORY:  Brian Jackel  August 10 1992
;                        University of Western Ontario
;
; Bjj June 2 1994      Fixed up the handling of no clear match.
;-
pro USERSYMBOL,symbol_name,SIZE_OF_SYMBOL=size_of_symbol, $
    ORIENTATION=orientation,    $
    LIST=list,HELP=help,_EXTRA=_extra

ON_ERROR,2

IF KEYWORD_SET(HELP) THEN BEGIN
    DOC_LIBRARY,'USERSYMBOL'
    RETURN
ENDIF

symbol_list= ['DIAMOND','PENTAGON','CLOVER','PACMAN','SPIRAL','BIGX']
symbol_list= [symbol_list,'CIRCLE','SQUARE','TRIANGLE','STAR','HEXAGON']

IF KEYWORD_SET(LIST) THEN BEGIN
    symbol_name= symbol_list
    return      ;return a list of the available symbols
ENDIF

IF not KEYWORD_SET(SIZE_OF_SYMBOL) THEN symsize=!p.symsize ELSE symsize=
(size_of_symbol > 0.01) < 100.0

```

IF (symsize EQ 0) THEN symsize= 1.0 ;because !p.symsize is sometimes zero

symbol= STRUPCASE( STRCOMPRESS(symbol\_name,/REMOVE\_ALL) )

CASE symbol OF

'DIAMOND': BEGIN

x= [0.0,0.8,0.0,-0.8,0.0]

y= [1.2,0.0,-1.2,0.0,1.2]

END

'PENTAGON':BEGIN

theta= findgen(6)/5 \* 360.0 \* !dior

x= sin(theta)

y= cos(theta)

END

'CLOVER': BEGIN

theta= findgen(41)/40.0 \* 360.0 \* !dior

r= ABS(1.0 \*symsize\* sin(2.0\*theta))

x= r \* sin(theta)

y= r \* cos(theta)

END

'PACMAN': BEGIN

theta= (- findgen(41)/50.0\*360.0 + 35.0 )!\*dior

x= [0.0, sin(theta), 0.0]

y= [0.0, cos(theta) ,0.0]

END

'SPIRAL': BEGIN

theta= findgen(41)/40.0 \* 720.0 \* !dior

r= theta / MAX(theta)

x= r \* sin(theta)

y= r \* cos(theta)

END

'BIGX': BEGIN

x= 0.34 \* [0,2,3,3,1, 3, 3, 2, 0,-2,-3,-3,-1,-3,-3,-2,0]

y= 0.34 \* [1,3,3,2,0,-2,-3,-3,-1,-3,-3,-2, 0, 2, 3, 3,1]

END

'CIRCLE': BEGIN

n= 17.0

theta= findgen(n)/(n-1.0) \* 360.0 \* !dior

x= sin(theta)

y= cos(theta)

END

'SQUARE': BEGIN

theta= (findgen(5)/4.0 \* 360.0 + 45.0 )!\*dior

x= sin(theta)

y= cos(theta)

END

'TRIANGLE':BEGIN

theta= [0,120,240,360]\*!dior

```

        x= sin(theta)
        y= cos(theta)
    END
'STAR': BEGIN
    theta= [0,36, 72,108, 144,180, 216,252, 288,324,0]*!dtr
    r= [1.0,0.4, 1.0,0.4, 1.0,0.4, 1.0,0.4, 1.0,0.4,1.0]
    x= r *sin(theta)
    y= r *cos(theta)
    END
'HEXAGON': BEGIN
    theta= [0,60,120,180,240,300,360]*!dtr
    x= sin(theta)
    y= cos(theta)
    END
'SPIRAL2': BEGIN
    n=49
    theta= 2.0*pi*FINDGEN(n)/((n-1)/2.0)
    r= FINDGEN(n)/(n-1)
    x= r*SIN(theta)
    y= r*COS(theta)
    END
ELSE: BEGIN
    MESSAGE,'Unrecognized symbol name, searching for match',/INFORMATIONAL
    hits= STRPOS( symbol_list, symbol )
    w= WHERE(hits NE -1)
    IF (w(0) NE -1) THEN BEGIN ;at least one substring match, use
        hit_names= symbol_list(w(0))
        FOR i=1,n_elements(w)-1 DO hit_names= hit_names + $
            ' ' + symbol_list(w(i))
        MESSAGE,'...possible matches: '+hit_names,/INFORMATIONAL
        MESSAGE,'...will use the first (or only) one',/INFORMATIONAL
        symbol_name= symbol_list(w(0)) ;recursion to help us out
        USERSYMBOL,symbol_name,_EXTRA=_extra
    ENDIF ELSE BEGIN
        MESSAGE,'...no quick match. Try USERSYMBOL,list,/LIST',/INFORMATIONAL
    ENDELSE
    return ;either with a guessed symbol, or a list of them
    END
ENDCASE

```

```

;Introduce scaling to the symbol size, if requested
;

```

```

IF (symsize NE 1.0) THEN BEGIN
    x= x * symsize
    y= y * symsize
ENDIF

```

```
;Rotate the symbol, if requested
;
IF KEYWORD_SET(ORIENTATION) THEN BEGIN
  r= SQRT(x^2 + y^2)
  theta= ATAN(y,x)
  theta= theta + orientation*!dtr
  x= r * COS(theta)
  y= r * SIN(theta)
ENDIF

;Use the library routine USERSYM to set up the symbol
;
  USERSYM,x,y,_EXTRA=_extra

RETURN
END
```

### File Attachments

1) [usersymb.pro](#), downloaded 109 times

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Subject: Re: Looking for symbols library (psym=8)  
Posted by [Erard](#) on Mon, 26 Jan 1998 08:00:00 GMT  
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In article <6a7kiv\$25u@post.gsfc.nasa.gov>, [schieb@seabass.gsfc.nasa.gov](mailto:schieb@seabass.gsfc.nasa.gov)  
(Brian D. Schieber) wrote:

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>

There is a Plotsym function in the most useful IDL library, ASTRON.  
Function symbols in the Windt library (distributed with IDL 3.6 and still  
available at RSI) defines 32 symbols.

--  
Stéphane Erard  
Institut d'Astrophysique Spatiale  
Orsay, France

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