

## *symbolstyle* — Choices for the shape of markers

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## Description

Markers are the ink used to mark where points are on a plot; see [G-3] *marker\_options*. *symbolstyle* specifies the shape of the marker.

You specify the *symbolstyle* inside the `msymbol()` option allowed with many of the `graph` commands:

```
. graph twoway ..., msymbol(symbolstyle) ...
```

Sometimes you will see that a *symbolstylelist* is allowed:

```
. scatter ..., msymbol(symbolstylelist) ...
```

A *symbolstylelist* is a sequence of *symbolstyles* separated by spaces. Shorthands are allowed to make specifying the list easier; see [G-4] *stylelists*.

## Syntax

<i>symbolstyle</i>	Synonym (if any)	Description
<code>circle</code>	<code>O</code>	solid
<code>diamond</code>	<code>D</code>	solid
<code>triangle</code>	<code>T</code>	solid
<code>square</code>	<code>S</code>	solid
<code>plus</code>	<code>+</code>	
<code>X</code>	<code>X</code>	
<code>arrowf</code>	<code>A</code>	filled arrow head
<code>arrow</code>	<code>a</code>	
<code>pipe</code>	<code> </code>	
<code>V</code>	<code>V</code>	
<code>smcircle</code>	<code>o</code>	solid
<code>smdiamond</code>	<code>d</code>	solid
<code>smsquare</code>	<code>s</code>	solid
<code>smtriangle</code>	<code>t</code>	solid
<code>smplus</code>		
<code>smx</code>	<code>x</code>	
<code>smv</code>	<code>v</code>	
<code>circle_hollow</code>	<code>Oh</code>	hollow
<code>diamond_hollow</code>	<code>Dh</code>	hollow
<code>triangle_hollow</code>	<code>Th</code>	hollow
<code>square_hollow</code>	<code>Sh</code>	hollow

<code>smcircle_hollow</code>	<code>oh</code>	hollow
<code>smdiamond_hollow</code>	<code>dh</code>	hollow
<code>smtriangle_hollow</code>	<code>th</code>	hollow
<code>smsquare_hollow</code>	<code>sh</code>	hollow
<code>point</code>	<code>p</code>	a small dot
<code>none</code>	<code>i</code>	a symbol that is invisible

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For a symbol palette displaying each of the above symbols, type

```
palette symbolpalette [ , scheme(schemename) ]
```

Other *symbolstyles* may be available; type

```
. graph query symbolstyle
```

to obtain the complete list of *symbolstyles* installed on your computer.

## Remarks and examples

[stata.com](http://www.stata.com)

Remarks are presented under the following headings:

*Typical use*

*Filled and hollow symbols*

*Size of symbols*

### Typical use

`msymbol(symbolstyle)` is one of the more commonly specified options. For instance, you may not be satisfied with the default rendition of

```
. scatter mpg weight if foreign ||  
   scatter mpg weight if !foreign
```

and prefer

```
. scatter mpg weight if foreign, msymbol(oh) ||  
   scatter mpg weight if !foreign, msymbol(x)
```

When you are graphing multiple *y* variables in the same plot, you can specify a list of *symbolstyles* inside the `msymbol()` option:

```
. scatter mpg1 mpg2 weight, msymbol(oh x)
```

The result is the same as typing

```
. scatter mpg1 weight, msymbol(oh) ||  
   scatter mpg2 weight, msymbol(x)
```

Also, in the above, we specified the symbol-style synonyms. Whether you type

```
. scatter mpg1 weight, msymbol(oh) ||  
   scatter mpg2 weight, msymbol(x)
```

or

```
. scatter mpg1 weight, msymbol(smcircle_hollow) ||  
   scatter mpg2 weight, msymbol(smx)
```

makes no difference.

## Filled and hollow symbols

The *symbolstyle* specifies the *shape* of the symbol, and in that sense, one of the styles `circle` and `hcircle`—and `diamond` and `hdiamond`, etc.—is unnecessary in that each is a different rendition of the same shape. The option `mfcolor(colorstyle)` (see [G-3] *marker\_options*) specifies how the inside of the symbol is to be filled. `hcircle()`, `hdiamond`, etc., are included for convenience and are equivalent to specifying

```
msymbol(Oh): msymbol(0) mfcolor(none)
msymbol(dh): msymbol(d) mfcolor(none)
etc.
```

Using `mfcolor()` to fill the inside of a symbol with different colors sometimes creates what are effectively new symbols. For instance, if you take `msymbol(0)` and fill its interior with a lighter shade of the same color used to outline the shape, you obtain a pleasing result. For instance, you might try

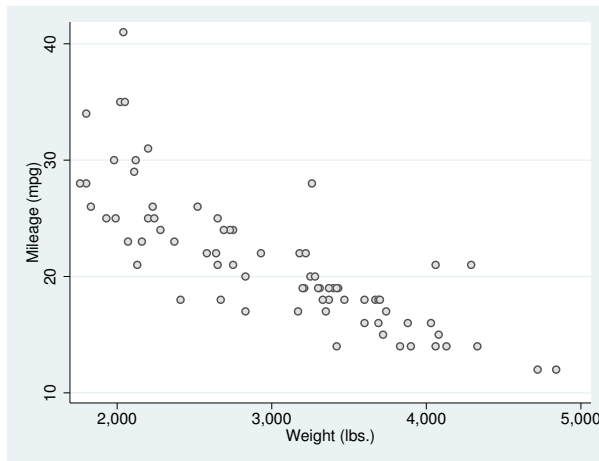
```
msymbol(0) mlcolor(yellow) mfcolor(.5*yellow)
```

or

```
msymbol(0) mlcolor(gs5) mfcolor(gs12)
```

as in

```
. scatter mpg weight, msymbol(0) mlcolor(gs5) mfcolor(gs14)
```



## Size of symbols

Just as `msymbol(0)` and `msymbol(Oh)` differ only in `mfcolor()`, `msymbol(0)` and `msymbol(o)`—symbols `circle` and `smcircle`—differ only in `msize()`. In particular,

```
msymbol(0): msymbol(0) msize(medium)
msymbol(o): msymbol(0) msize(small)
```

and the same is true for all the other large and small symbol pairs.

`msize()` is interpreted as being relative to the size of the graph region (see [G-3] *region\_options*), so the same symbol size will in fact be a little different in

```
. scatter mpg weight
```

and

```
. scatter mpg weight, by(foreign total)
```

### Also see

[G-3] *marker\_options* — Options for specifying markers

[G-4] *colorstyle* — Choices for color

[G-4] *linepatternstyle* — Choices for whether lines are solid, dashed, etc.

[G-4] *linestyle* — Choices for overall look of lines

[G-4] *linewidthstyle* — Choices for thickness of lines

[G-4] *markersizestyle* — Choices for the size of markers

[G-4] *markerstyle* — Choices for overall look of markers