

Description

Markers are the ink used to mark where points are on a plot. *markerstyle* defines the symbol, size, and color of a marker. See [G-3] *marker_options* for more information.

markerstyle is specified in the `mstyle()` option,

```
. graph ..., mstyle(markerstyle) ...
```

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

```
. twoway scatter ..., mstyle(markerstylelist) ...
```

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

Syntax

<i>markerstyle</i>	Description
p1–p15	used by first to fifteenth “scatter” plot
p1box–p15box	used by first to fifteenth “box” plot
p1dot–p15dot	used by first to fifteenth “dot” plot

Other *markerstyles* may be available; type

```
. graph query markerstyle
```

to obtain the full list installed on your computer.

Remarks and examples

Remarks are presented under the following headings:

What is a marker?

What is a markerstyle?

You do not have to specify a markerstyle

Specifying a markerstyle can be convenient

What are numbered styles?

What is a marker?

Markers are the ink used to mark where points are on a plot. Some people use the word *point* or *symbol*, but a point is where the marker is placed, and a symbol is merely one characteristic of a marker.

What is a markerstyle?

Markers are defined by five attributes:

1. *symbol*—the shape of the marker; see [G-4] *symbolstyle*
2. *markersize*—the size of the marker; see [G-4] *markersizestyle*
3. overall color and opacity of the marker; see [G-4] *colorstyle*
4. interior (fill) color and opacity of the marker; see [G-4] *colorstyle*
5. the line that outlines the shape of the marker:
 - a. the overall style of the line; see [G-4] *linestyle*
 - b. the thickness of the line; see [G-4] *linewidthstyle*
 - c. the color and opacity of the line; see [G-4] *colorstyle*
 - d. the alignment of the border or outline; see [G-4] *linealignmentstyle*

The *markerstyle* defines all five (seven) of these attributes.

You do not have to specify a markerstyle

The *markerstyle* is specified via the

```
mstyle(markerstyle)
```

option. Correspondingly, you will find eight other options available:

```
msymbol(symbolstyle)
msize(markersizestyle)
mcolor(colorstyle)
mfcolor(colorstyle)
mlstyle(linestyle)
mlwidth(linewidthstyle)
mlcolor(colorstyle)
mlalign(linealignmentstyle)
```

You specify the *markerstyle* when a style exists that is exactly what you want or when another style would allow you to specify fewer changes to obtain what you want.

Specifying a markerstyle can be convenient

Consider the command

```
. scatter y1var y2var xvar
```

Say that you wanted the markers for *y2var* versus *xvar* to be the same as *y1var* versus *xvar*. You might set all the characteristics of the marker for *y1var* versus *xvar* and then set all the characteristics of the marker for *y2var* versus *xvar* to be the same. It would be easier, however, to type

```
. scatter y1var y2var xvar, mstyle(p1 p1)
```

`mstyle()` is the option that specifies the overall style of the marker. When you do not specify the `mstyle()` option, results are the same as if you specified

```
mstyle(p1 p2 p3 p4 p5 p6 p7 p8 p9 p10 p11 p12 p13 p14 p15)
```

where the extra elements are ignored. In any case, `p1` is one set of marker characteristics, `p2` another, and so on.

Say that you wanted `y2var` versus `xvar` to look like `y1var` versus `xvar`, except that you wanted the symbols to be green; you could type

```
. scatter y1var y2var xvar, mstyle(p1 p1) mcolor(. green)
```

There is nothing special about the *markerstyles* `p1`, `p2`, ...; they merely specify sets of marker attributes just like any other named *markerstyle*. Type

```
. graph query markerstyle
```

to find out what other marker styles are available. You may find something pleasing, and if so, that is more easily specified than each of the individual options to modify the shape, color, size, ...elements.

What are numbered styles?

`p1`–`p15` are the default styles for marker labels in *twoway* graphs that support marker labels, for example, *twoway scatter*, *twoway dropline*, and *twoway connected*. `p1` is used for the first plot, `p2` for the second, and so on.

`p1box`–`p15box` are the default styles used for markers showing the outside values on *box charts*. `p1box` is used for the outside values on the first set of boxes, `p2box` for the second set, and so on.

The “look” defined by a numbered style, such as `p1` or `p3dot`—and by “look” we include such things as color, size, or symbol,—is determined by the scheme (see [G-4] *Schemes intro*) selected.

Numbered styles provide default looks that can be controlled by a scheme. They can also be useful when you wish to make, say, the second set of markers on a graph look like the first. See *Specifying a markerstyle can be convenient* above for an example.

Also see

[G-3] *marker_options* — Options for specifying markers

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

[G-4] *linealignmentstyle* — Choices for whether outlines are inside, outside, or centered

[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

[G-4] *stylelists* — Lists of style elements and shorthands

[G-4] *symbolstyle* — Choices for the shape of markers

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