Title

> **Concept: lines —** Using lines

Description   Syntax   [Remarks and examples](Remarks)   [Also see](Also)

Description

Lines occur in many contexts—in borders, axes, the ticks on axes, the outline around symbols, the connecting of points in a plot, and more. *linestyle*, *linealignmentstyle*, *linepatternstyle*, *linewidthstyle*, and *colorstyle* define the look of the line.

Syntax

The following affects how a line appears:

linestyle	overall style
linealignmentstyle	whether inside, outside, or centered
linepatternstyle	whether solid, dashed, etc.
linewidthstyle	its thickness
colorstyle	its color and opacity

Remarks and examples

Remarks are presented under the following headings:

> linestyle
> linealignmentstyle
> linepatternstyle
> linewidthstyle
> colorstyle

linestyle, *linealignmentstyle*, *linepatternstyle*, *linewidthstyle*, and *colorstyle* are specified inside options that control how the line is to appear. Regardless of the object, these options usually have the same names:

    lstyle(*linestyle*)
    lalign(*linealignmentstyle*)
    lpattern(*linepatternstyle*)
    lwidth(*linewidthstyle*)
    lcolor(*colorstyle*)

Though for a few objects, such as markers, the form of the names is

    ⟨*object*⟩lstyle(*linestyle*)
    ⟨*object*⟩lalign(*linealignmentstyle*)
    ⟨*object*⟩lpattern(*linepatternstyle*)
    ⟨*object*⟩lwidth(*linewidthstyle*)
    ⟨*object*⟩lcolor(*linecolorstyle*)

For instance,

- The options to specify how the lines connecting points in a plot are to appear are specified by the options lstyle(), lalign(), lpattern(), lwidth(), and lcolor(); see [G-3] *connect_options*.

- The options to specify how the outline appears on an area plot are specified by the options lstyle(), lalign(), lpattern(), lwidth(), and lcolor(); see [G-3] *area_options*.

- The suboptions to specify how the border around a textbox, such as a title, are to appear are named lstyle(), lalign(), lpattern(), lwidth(), and lcolor(); see [G-3] *textbox_options*.

- The options to specify how the outline around markers is to appear are specified by the options mlstyle(), mlalign(), mlpattern(), mlwidth(), and mlcolor(); see [G-3] *marker_options*.

Wherever these options arise, they always come as a group, and they have the same meaning.

linestyle

linestyle is specified inside the lstyle() option or sometimes inside the ⟨*object*⟩lstyle() option.

linestyle specifies the overall style of the line: its alignment (inside, outside, centered), pattern (solid, dashed, etc.), thickness, and color.

You need not specify the lstyle() option just because there is something you want to change about the look of the line and, in fact, most of the time you do not. You specify lstyle() when another style exists that is exactly what you desire or when another style would allow you to specify fewer changes to obtain what you want.

See [G-4] *linestyle* for the list of what may be specified inside the lstyle() option.

linealignmentstyle

linealignmentstyle is specified inside the lalign() or ⟨*object*⟩lalign() option.

linealignmentstyle specifies whether the line is drawn inside, is drawn outside, or is centered on the outline of markers, fill areas, bars, and boxes.

See [G-4] *linealignmentstyle* for the list of what may be specified inside the lalign() option.

linepatternstyle

linepatternstyle is specified inside the lpattern() or ⟨*object*⟩lpattern() option.

linepatternstyle specifies whether the line is solid, dashed, etc.

See [G-4] *linepatternstyle* for the list of what may be specified inside the lpattern() option.

linewidthstyle

linewidthstyle is specified inside the lwidth() or ⟨*object*⟩lwidth() option.

linewidthstyle specifies the thickness of the line.

See [G-4] *linewidthstyle* for the list of what may be specified inside the lwidth() option.

colorstyle

colorstyle is specified inside the `lcolor()` or ⟨*object*⟩`lcolor()` option.

colorstyle specifies the color and opacity of the line.

See [G-4] *colorstyle* for the list of what may be specified inside the `lcolor()` option.

Also see

[G-3] *connect_options* — Options for connecting points with lines

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

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

[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