



Figure 3.10

Data symbols available in R. A particular data symbol is selected by specifying an integer between 0 and 25 or a single character for the pch graphical setting. In the diagram, the relevant integer or character pch value is shown in grey to the left of the relevant symbol.

Integer	Sample line	String
<i>Predefined</i>		
0		"blank"
1	—————	"solid"
2	- - - - -	"dashed"
3	"dotted"
4	.-.-.-.-	"dotdash"
5	- - - - -	"longdash"
6	- . - . - .	"twodash"
<i>Custom</i>		
	"13"
	— — — —	"F8"
	"431313"
	- - - - -	"22848222"

Figure 3.6

Predefined and custom line types. Line type may be specified as a predefined integer, as a predefined string name, or as a string of hexadecimal characters specifying a custom line type.

Table 3.1

High-level traditional graphics state settings. This set of graphics state settings can be queried and set via the `par()` function and can be used as arguments to other graphics functions (e.g., `plot()` or `lines()`). Each setting is described in more detail in the relevant Section.

Setting	Description	Section
<code>adj</code>	justification of text	3.2.3
<code>ann</code>	draw plot labels and titles?	3.2.3
<code>bg</code>	"background" color	3.2.1
<code>bty</code>	type of box drawn by <code>box()</code>	3.2.5
<code>cex</code>	size of text (multiplier)	3.2.3
<code>cex.axis</code>	size of axis tick labels	3.2.3
<code>cex.lab</code>	size of axis labels	3.2.3
<code>cex.main</code>	size of plot title	3.2.3
<code>cex.sub</code>	size of plot sub-title	3.2.3
<code>col</code>	color of lines and data symbols	3.2.1
<code>col.axis</code>	color of axis tick labels	3.2.1
<code>col.lab</code>	color of axis labels	3.2.1
<code>col.main</code>	color of plot title	3.2.1
<code>col.sub</code>	color of plot sub-title	3.2.1
<code>fg</code>	"foreground" color	3.2.1
<code>font</code>	font face (bold, italic) for text	3.2.3
<code>font.axis</code>	font face for axis tick labels	3.2.3
<code>font.lab</code>	font face for axis labels	3.2.3
<code>font.main</code>	font face for plot title	3.2.3
<code>font.sub</code>	font face for plot sub-title	3.2.3
<code>gamma</code>	gamma correction for colors	3.2.1
<code>lab</code>	number of ticks on axes	3.2.5
<code>las</code>	rotation of text in margins	3.2.3
<code>lty</code>	line type (solid, dashed)	3.2.2
<code>lwd</code>	line width	3.2.2
<code>mgp</code>	placement of axis ticks and tick labels	3.2.5
<code>pch</code>	data symbol type	3.2.4
<code>srt</code>	rotation of text in plot region	3.2.3
<code>tck</code>	length of axis ticks (relative to plot size)	3.2.5
<code>tcl</code>	length of axis ticks (relative to text size)	3.2.5
<code>tmag</code>	size of plot title (relative to other labels)	3.2.3
<code>type</code>	type of plot (points, lines, both)	3.2.4
<code>xaxp</code>	number of ticks on x-axis	3.2.5
<code>xaxs</code>	calculation of scale range on x-axis	3.2.5
<code>xaxt</code>	x-axis style (standard, none)	3.2.5
<code>xpd</code>	clipping region	3.2.7
<code>yaxp</code>	number of ticks on y-axis	3.2.5
<code>yaxs</code>	calculation of scale range on y-axis	3.2.5
<code>yaxt</code>	y-axis style (standard, none)	3.2.5

Table 3.2

Low-level traditional graphics state settings. This set of graphics state settings can be queried and set via the `par()` function. Each setting is described in more detail in the relevant Section.

Setting	Description	Section
<code>ask</code>	prompt user before new page?	3.2.8
<code>family</code>	font family for text	3.2.3
<code>fig</code>	location of figure region (normalized)	3.2.6
<code>fin</code>	size of figure region (inches)	3.2.6
<code>lend</code>	line end style	3.2.2
<code>lheight</code>	line spacing (multiplier)	3.2.3
<code>ljoin</code>	line join style	3.2.2
<code>lmitre</code>	line mitre limit	3.2.2
<code>mai</code>	size of figure margins (inches)	3.2.6
<code>mar</code>	size of figure margins (lines of text)	3.2.6
<code>mex</code>	line spacing in margins	3.2.6
<code>mfcoll</code>	number of figures on a page	3.3.1
<code>mfg</code>	which figure is used next	3.3.1
<code>mfrow</code>	number of figures on a page	3.3.1
<code>new</code>	has a new plot been started?	3.2.8
<code>oma</code>	size of outer margins (lines of text)	3.2.6
<code>omd</code>	location of inner region (normalized)	3.2.6
<code>omi</code>	size of outer margins (inches)	3.2.6
<code>pin</code>	size of plot region (inches)	3.2.6
<code>plt</code>	location of plot region (normalized)	3.2.6
<code>ps</code>	size of text (points)	3.2.3
<code>pty</code>	aspect ratio of plot region	3.2.6
<code>usr</code>	range of scales on axes	3.4.7
<code>xlog</code>	logarithmic scale on x-axis?	3.2.5
<code>ylog</code>	logarithmic scale on y-axis?	3.2.5

Table 3.3

Read-only traditional graphics state settings. This set of graphics state settings can only be queried (via the `par()` function). Each setting is described in more detail in the relevant Section.

Setting	Description	Section
<code>cin</code>	size of a character (inches)	3.4.7
<code>cra</code>	size of a character ("pixels")	3.4.7
<code>cxy</code>	size of a character (user coordinates)	3.4.7
<code>din</code>	size of graphics device (inches)	3.4.7