

## Semper 6 Command Reference

### mark

<b>keys:</b>	<b>[ ]</b>	<b>&lt;number&gt;</b>	mark specified picture/partition/frame
	<b>text</b>	<b>'&lt;text&gt;'</b>	mark specified text at <b>position</b>
	<b>size</b>	<b>&lt;x&gt;, &lt;y&gt;</b>	dimensions of subregion to be marked
	<b>to</b>	<b>&lt;x&gt;, &lt;y&gt;</b>	mark line/arrow from <b>position</b> to given end point
	<b>radius</b>	<b>&lt;number&gt;</b>	mark circle/arc with specified radius and centre at <b>position</b>
	<b>with</b>	<b>&lt;number&gt;</b>	mark positions/curve in specified <i>Plist</i> picture
	<b>position</b>	<b>&lt;x&gt;, &lt;y&gt;</b>	mark position in style determined by <b>mkmode</b> , <b>mksize</b> unless <b>text</b> , <b>size</b> , <b>to</b> , <b>radius</b> or <b>with</b> are set
	<b>angle</b>	<b>&lt;x&gt;, &lt;y&gt;</b>	mark arc with specified start and finish angles
	<b>sampling</b>	<b>&lt;number&gt;</b>	sampling factor for marked subregion
	<b>mkmode</b>	<b>&lt;number&gt;</b>	mark mode
	<b>mksize</b>	<b>&lt;number&gt;</b>	mark size
<b>options:</b>	<b>picture/partition/frame</b>		mark picture/partition/frame
	<b>border</b>		mark picture/partition/frame border
	<b>line</b>		mark a line from <b>position</b> to <b>to</b>
	<b>arrow</b>		mark an arrow rather than a line
	<b>circle</b>		mark a circle with centre at <b>position</b> , radius <b>radius</b>
	<b>arc</b>		mark an arc over angular range <b>angle</b> , in an anti-clockwise direction
	<b>region</b>		mark a subregion defined by subregion keys
	<b>left/right, bottom/top</b>		align specified subregion or text with picture/partition/frame border
	<b>uv</b>		mark subregion with sampling lattice defined by the base vectors $u, u_2$ and $v, v_2$
	<b>list/curve, open/closed</b>		verify type of <i>Plist</i> , if <b>with</b> key used
	<b>l/rj</b>		if <b>text</b> , mark the text left-justified or right-justified at the specified position
	<b>b/tj</b>		if <b>text</b> , mark the text bottom-justified or top-justified at the specified position
	<b>below/above</b>		if <b>text</b> , mark text centrally at top/bottom of picture
	<b>outside/inside</b>		if <b>text</b> and <b>below/above</b> , mark text outside or inside picture border
	<b>view</b>		switch view to make the display region visible

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Use **mark** to mark positions, lines, arcs, etc. outline regions or write text in a display overlay.

#### Examples

```
mark @xy
```

This command marks a small cross on picture *display* at position *x,y*.

```
mark display:2 size 300,200 top left
```

This command outlines the indicated region of picture *display:2*.

```
mark partition display:2 border view
```

This command outlines the partition *display:2*, and shows it on the monitor.

```
mark radius 60 position 10,10 angle 0,pi/2
```

This command marks a quadrant of a circle upwards from 70,10 curving leftwards to 10,70.

```
mark text 'area b' bottom left
```

This command marks the text at the bottom left.

#### Description

With no options set, **mark** simply marks the origin of the current display picture. The type and size of mark is determined by the general keys **mkmode** and **mksize**. Use the general option **view** to ensure that what you mark is visible. For information on the general keys and options, refer to *Appendix C: Semper Keys and Options*.

By default, **mark** marks *display*, in picture coordinate mode. You can also use it in **partition** or **frame** mode. For example, **mark partition dis:7**. You specify positions using the standard subregion keys **position**, **left**, **right**, **top** and **bottom** etc.

Complex display pictures have their real and imaginary parts displayed side by side, and **mark** will mark both parts in the same way. You can restrict the marking to one part only using the general options **re** or **im**.

When annotating pictures or partitions, the annotation is output to all of the frames allocated to the partition. This means that annotation is correctly displayed on full colour framestores provided that the partitions have three successive frames allocated to them.

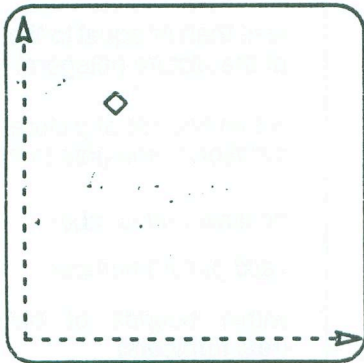
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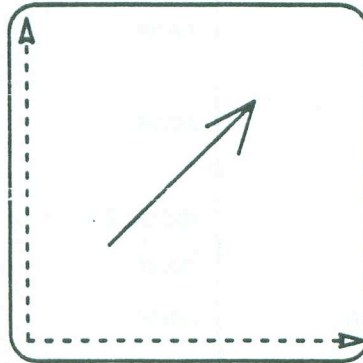
Note that the keys **line**, **circle**, **region** and **arc** are only included to make the command readable and are ignored by Semper. For example, the following commands perform identical functions:

```
mark arc angle 0, pi/4  
mark angle 0, pi/4
```

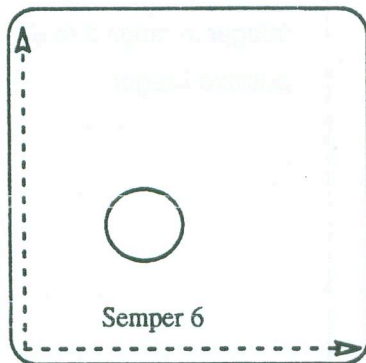
The following diagrams illustrate the effect of the **mark** command.



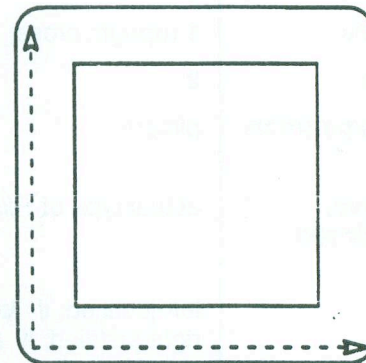
mark position 40,100 mkmode 4 mksize 2



mark position 40,40 to 100,100 arrow



mark position 50,50 radius 25 circle  
mark text 'Semper 6' position 30,10



mark size 100,100 region

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### Defaults and Ranges

keys/options	defaults	range
[ ]	<i>display</i> if picture or partition; current frame if frame, held in variable <i>cframe</i>	valid picture/partition/frame number
<b>text</b>	<i>none</i>	valid text string
<b>size</b>	<i>none</i>	less than or equal to the size of the picture (integers)
<b>to</b>	<i>none</i>	within bounds of picture/ partition/frame (integers)
<b>radius</b>	radius 2	positive real number
<b>with</b>	<i>none</i>	valid picture number
<b>position</b>	<i>none</i>	within bounds of picture (real numbers)
<b>angle</b>	<i>none</i>	real number in range 0 to $2\pi$
<b>sampling</b>	factor of 1	positive real number
<b>mkmode</b>	1 (upright cross)	integer in range 1 to 5
<b>mksize</b>	2	positive integer
<b>picture/partition/ frame</b>	picture	
<b>list/curve, open/closed</b>	actual type of <i>Plist</i>	
<b>lj/rj</b>	left-justified, if <i>left</i> right-justified, if <i>right</i>	
<b>tj/bj</b>	top-justified, if <i>top</i> bottom-justified, if <i>bottom</i>	
<b>outside/inside</b>	text outside border	
<b>view</b>	view unchanged	