

turn

keys:	[from]	<i><number></i>	source picture
	[to]	<i><number></i>	output picture
options:	anticlockwise		turn 90 degrees anti-clockwise rather than clockwise
	upsidedown		turn 180 degrees
	over		reflect x axis (interchanging left and right sides)

Use **turn** to perform simple picture reflections and rotations. **turn** is much quicker at these tasks than **extract**.

Examples

```
turn 1 to 2 (or turn 1 to 2 anticlockwise)
```

This command rotates picture 1 by 90 degrees clockwise (or anti-clockwise) and places the output in picture 2.

```
turn 50 over
```

This command reflects the x-axis of picture 50 (like turning the page of a book).

```
turn display upsidedown
```

This command rotates the display picture by 180 degrees (turning it upsidedown).

```
turn over upsidedown
```

This command reflects the y axis (turns over top to bottom rather than side to side).

Description

To **turn** a picture by 90 degrees, the picture must be square, and its size must be a power of two. You can of course **cut** a picture, if necessary, to a suitable (larger) size, **turn** and then **cut** again afterwards.

Note that if you use the options **over** and **upsidedown** together, they reflect the y axis rather than the x axis.

Rotations are about the picture centre rather than at the origin, so the source picture origin is not always exactly preserved.

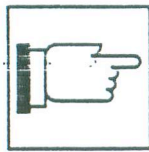
Semper 6 Command Reference

turn

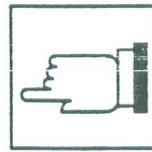
The diagram below illustrates the effect of the **turn** command and the different combinations of options. Note that some combinations have the same effect on the image.



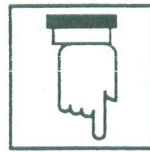
original image



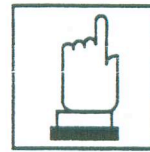
turn (default)



turn anticlockwise



turn upsidedown



turn over



turn over
upsidedown



turn over
anticlockwise



turn
anticlockwise
upsidedown



turn over
anticlockwise
upsidedown

Notes:

restrictions:

multi-layer pictures:

forms used internally:

see also:

image size must be square and a power of two

faulted

fp, complex

cut, extract

Defaults and Ranges

keys/options	defaults	range
[from]	current picture, held in the variable <i>select</i>	valid picture number
[to]	source picture	valid picture number