

negate

keys:	[from]	<i><number></i>	source picture
	[to]	<i><number></i>	output picture
options:	preset		rescale using existing values of <i>min</i> , <i>max</i>

Use **negate** to reverse the contrast of a picture, interchanging positive and negative forms. (If you just want to view a picture with reversed contrast, without changing its pixels, try the commands **display negated** or **lut invert** instead).

Examples

```
negate display to 20
```

This command places a reversed contrast version of **display** in picture 20.

```
negate 10
```

This command reverses the contrast of picture 10, retaining the same range.

```
negate 10 preset
```

This command rescales picture 10 so as to interchange the current values of *min*, *max*.

Description

negate reverses the contrast of a picture without altering the data range, that is, the minimum and maximum values present in the picture. It replaces source pixels *p* by an output value *p1*, where:

$$p1 = \max + \min - p$$

negate truncates byte values outside the range 0–255 to the nearer limit (like the command **scale**).

Use the **preset** option to rescale the picture using the existing values held in the variables *min* and *max*, rather than the actual minimum and maximum values found in the picture by **negate**.

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Notes

multi-layer pictures: fully supported
 forms used internally: integer (for byte pictures), fp, complex
 variables used: *min, max* (if **preset**, values to be interchanged by scaling)
 variables set: *min, max* (unless **preset**, minimum and maximum pixel values)
 see also: **scale, display, lut**

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