lmean

keys:	**[from]**	*<number>*	source picture
	[to]	*<number>*	output picture
	over	*<number>*	width of block/ strip averaged around each pixel
options:	**horizontally**		average horizontal strips around each pixel only
	vertically		average vertical strips around each pixel only

Use **lmean** to calculate the local mean over a square block of neighbouring pixels around each source pixel. In effect, **lmean** tells you the general brightness around each pixel, and the others measure the brightness variation.

Examples

```
lmean display over 50
```

This command smooths picture *display* over 50 point square blocks.

```
lmean 1 to 2 over 8 vertically
```

This command smooths vertically only, over 8 point columns

Description

Note that with **lmean**, execution time is more or less independent of the block size, so you can use very large block sizes if necessary. You use the **over** key for the size of block over which the local average is to be taken (default 5). You can average using 1-D **horizontal** or **vertical** forms as well as square forms. Note the possible clash of the **vertical** option with the general key **verify**.

Edge pixels of the source, where the block averaged overflows the source, are processed as if the boundary values are repeated indefinitely outwards. If you specify an even value for the **over** key, the replaced source pixel is rounded to the bottom right from the block centre.

Notes

multi-layer pictures:	faulted
forms used internally:	fp, complex
see also:	**lsd, lvariance**

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Defaults and Ranges

keys/options	defaults	range
[from]	current picture, held in the variable *select*	valid picture number
[to]	source picture	valid picture number
over	width/strip 5	positive integer