

## 1. Plugin specs

	explanation	input	output	options	
box	Develop a box	equirectangular	plain image	-b x,y,z -e x,y,z	aspect ratio of the box eye position
cone	Develop a cone	equirectangular	plain image	-r 0.3 -e 0.2	radius of the base eye height to cone height
equirectangular	Mercator to equirect	Mercator	equirectangular	No option	
exponential	exponential	complex (plain image)	complex (plain image)	No option	
invert	invert	complex (plain image)	complex (plain image)	No option	
log	log	complex (plain image)	complex (plain image)	No option	
mercator	Equirect to Mercator	equirectangular	Mercator	No option	
power	power	complex (plain image)	complex (plain image)	-n 2	Power of n
prism	Develop a prism	equirectangular	plain image	-e 0.5 -h 0.5 -s 6 -z 2 -n 2	Eye height. Height of the prism. Number of sides. Specify where to attach the zenith cap. Specify where to attach the nadir cap.
ribbon	Convert a long image to a ribbon	plain image	plain image	-a 0.5 or -a 200/500	Aspect ratio of the input image.
rotate	Rotate an image	plain image	plain image	-a 0	Specify angle in degree.
scale	Scale an image	plain image	plain image	-x 1 -y 1 -xy 1 -p	Specify amounts
slide	Slide an image	plain image	plain image	-x 0 -y 0	Specify amounts (in image coordinate)
stereographic	Equirect to stereographic	equirectangular	plain image	-a 90	Field of view.
swap	Swap xyz axes	equirectangular	equirectangular	-n 1	Swap xyz axes multiple times.
tile	Slanted tiling of a long image. (incommensurate)	plain image	plain image (Mercator)	-a 0.5 or -a 200/500 -s 8	Aspect ratio of the input image. Number of stories
tile2	Slanted tiling of a long image. (commensurate)	plain image	plain image (Mercator)	-a 0.5 or -a 200/500	Aspect ratio of the input image.
tilt	Tilt an equirectangular image around the x axis.	equirectangular	equirectangular	-a 0	Specify angle in degree.
tumblerfan	Create your own tumbler	Mercator	plain image	-s wtop,wbot,height Size of the fan. Wtop and wbot specifies the top and bottom width of the developed fan, and height specifies the fan height.	

## 2. Notes

Plugin describes how to project the  $(-1..+1) \times (-1..+1)$  plane onto another  $(-1..+1) \times (-1..+1)$  plane. You can apply these projection plugins to the original image by giving plugin(s) as an argument(s) of the panojector command. For example,

```
% panojector -s 400 original.jpg mercator
```

converts the equirectangular image into mercator projection and output as a 400x400 image named original.jpg\_proj.jpg

```
% panojector -s 600 original.jpg box equirectangular
```

converts an Mercator panorama into equirectangular panorama and then develop as a box.

Each plugin accepts options as its argument.

Note that x coordinate points to the right, while y coordinate directs downwards. For complex coordinate, real points to the right, and imaginary directs downwards.

### 3. Other Examples

This converts the sample rectangular image to a swirl:

```
./panojector -s 600 sample.jpg stereographic equirectangular tile2 -a 706/881
```

The first plugin “tile2” tiles the original image, second plugin “equirectangular” regards the image as Mercator (conformal) panorama and convert into equirectangular panorama image, and the last plugin “stereographic” converts the equirectangular panorama into stereographic (conformal) image.  
<sup>1</sup>

This converts the inverted little planet image back to equirectangular panorama:

```
./panojector -s 1000 sample2.jpg slide -x 1.25 equirectangular rotate -a 90 slide -x  
-0.25 exponential
```

This converts a long train image to 6-story ribbon:

```
./panojector -s 1000 sample3.jpg ribbon -a 826/29999 -s 6
```

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<sup>1</sup> Sample image is provided by Pedro Moura Pinheiro at <http://www.flickr.com/photos/pedromourapinheiro/4929306871> under Creative Commons (CC BY-NC-SA 2.0) License.