ImageMagick Image converter and editor

START HERE

magick *<in>* *<out>*
Convert by extension

magick *<in>* **-resize 800x** *<out>*
Resize to width 800

magick *<in>* **-crop 400x300+10+20 +repage** *<out>*
Cut out a region

magick *<in>* **-rotate 90** *<out>*
Rotate clockwise

magick *<in>* **-strip -quality 85** *<out>*
Shrink a JPEG

magick identify *<file>*
Show size and format

magick mogrify -resize 50% *.jpg
Batch, overwrites originals

magick montage *.jpg -geometry +4+4 *<out>*
Contact sheet

Read input files → **Settings** - background, -gravity → **Operators** -resize, -crop... → **Image list** ( ) stacks, -append → **Write** output name sets format

CONCEPTS

Order matters: settings (-background, -gravity, -quality) must come before the operator that uses them, and options apply to the images read so far.

ImageMagick 7 has one entry point, magick. IM6 used convert, mogrify, identify and montage directly; in IM7 those are subcommands (magick mogrify). Plain convert still works as a legacy alias but is deprecated.

Quote geometry with < > ^ ! and filenames with [ ] so the shell leaves them alone. On Linux, escape stack parentheses as \(and \).

CONVERT & INSPECT

magick *<in>* *<out>*
Convert; format follows the extension

magick identify *<file>*
One-line size, format, depth

magick identify -verbose *<file>*
Full metadata and statistics

magick identify -format "%wx%h\n" *<files>*
Print just the dimensions
Escapes: %w width, %h height, %m format, %b size, %f name, %[exif:] EXIF*

magick *<fmt>*:*<in>* *<out>*
Force input or output format

magick '*<in>***[0]'** *<out>*
Read only the first frame or page

magick *<in>* **png:-**
Write to stdout

magick -version
Version and delegates

RESIZE & CROP

-resize *<WxH>*
Fit inside the box, keep aspect

-resize *<W>***x**
Set width, height follows

-resize *<N>***%**
Scale by percentage

-resize 800x600!
Force exact size, ignore aspect

-resize 800x600>
Shrink only if larger

RESIZE & CROP (cont.)

-resize 800x600^
Fill the box (minimum size)

-thumbnail *<WxH>*
Resize and drop metadata, fast

-crop *<WxH>*+*<x>*+*<y>*
Cut out a region

-crop *<WxH>* **+repage**
Tile into pieces, reset canvas
Without +repage the saved page offset can leave the output with a larger canvas.

-gravity center -crop *<WxH>***+0+0**
Crop around a gravity point

-trim +repage
Remove uniform border

-extent *<WxH>*
Pad or crop to a canvas size

-resize *<WxH>* **-gravity center -extent** *<WxH>*
Letterbox into a fixed size

ROTATE & ORIENT

-rotate *<deg>*
Rotate clockwise, fills with background

-auto-orient
Apply the EXIF orientation

-flip / -flop
Mirror vertically / horizontally

-background *<color>* **-rotate** *<deg>*
Choose the fill for new corners

-gravity *<dir>*
Anchor for crop, extent, annotate, composite
Directions: NorthWest, North, NorthEast, West, Center, East, SouthWest, South, SouthEast

QUALITY & COLOUR

-quality *<N>*
JPEG/WebP quality 1-100 (PNG: compression)

-strip
Remove EXIF, profiles and comments

-colorspace Gray
Convert to grayscale

-colorspace sRGB
Convert to sRGB

-interlace Plane
Progressive JPEG
Also makes interlaced PNG and GIF; -interlace None gives a baseline JPEG.

QUALITY & COLOUR (cont.)

-density *<dpi>*
Set resolution metadata or PDF render DPI
Put -density before the input to rasterise a PDF or SVG at that resolution.

-normalize
Stretch contrast to the full range

-brightness-contrast *<b>***x***<c>*
Adjust brightness and contrast

-modulate *<b>*,*<s>*,*<h>*
Brightness, saturation, hue (100 = no change)

-blur *<r>***x***<sigma>*
Gaussian blur

-sharpen *<r>***x***<sigma>*
Sharpen

-unsharp *<r>***x***<s>*+*<gain>*+*<thr>*
Unsharp mask, good after downsizing

TRANSPARENCY & COMPOSE

-alpha set / -alpha off
Add or drop the alpha channel

-background *<color>* **-alpha remove**
Flatten transparency onto a colour

-background *<color>* **-flatten**
Merge layers onto a background

-transparent *<color>*
Make one colour transparent

magick *<base>* *<over>* **-composite** *<out>*
Overlay one image on another

magick *<base>* *<over>* **-gravity** *<dir>* **-geometry +***<x>*+*<y>* **-composite** *<out>*
Place an overlay at an anchor

-append / +append
Stack vertically / side by side

\(*<in>* **-resize** *<WxH>* **\)**
Group operations on a sub-list

TEXT & DRAWING

-gravity South -annotate +0+10 "*<text>***"**
Draw text at an anchor

-font *<name or file>*
Set the font

-pointsize *<N>*
Set the text size

TEXT & DRAWING (cont.)

-fill *<color>*
Fill colour for text and shapes

-draw "rectangle x1,y1 x2,y2"
Draw a rectangle

-size *<WxH>* **xc:***<color>* *<out>*
Create a plain canvas

-size *<W>***x label:"***<text>***"**
Render text as an image

BATCH & MONTAGE

magick mogrify -resize *<WxH>* *<files>*
Edit files in place (overwrites)
Test on copies first; mogrify replaces the originals unless -format or -path is used.

magick mogrify -format jpg *.png
Convert to new files, keep originals

magick mogrify -path *<dir>* **-resize** *<WxH>* *<files>*
Write results to another folder

magick montage *<files>* **-geometry +4+4** *<out>*
Tile images into a contact sheet

magick montage -tile *<C>***x***<R>* **...**
Grid of columns by rows

magick montage -label %f ...
Caption tiles with the file name

magick *<in.pdf>* **page-%d.png**
One image per PDF page

magick *<files>* *<out.pdf>*
Combine images into a PDF

RECIPES

Web thumbnails, safe and small

```
# originals stay untouched
mkdir -p out
magick mogrify -path out -auto-orient \
  -thumbnail '400x400>' -strip
-quality 82 *.jpg
```

Watermark in the corner

```
magick <in> \( <logo.png> -resize 20% \) \
  -gravity SouthEast -geometry +16+16 \
  -composite <out>
```

Square avatar from any photo

```
magick <in> -auto-orient -resize 256x256^ \
  -gravity center -extent 256x256 <out>
```