ExifTool Metadata reader/writer

START HERE

`exiftool <file>`
Show all metadata

`exiftool -r -ext jpg <dir>`
Recurse, only .jpg

`exiftool -csv <dir> > out.csv`
Export to CSV

`exiftool -<Tag> <file>`
Show one tag

`exiftool -<Tag>=<value> <file>`
Write a tag

`exiftool -G1 -a -s <file>`
Group names, duplicates, tag names

`exiftool -all= <file>`
Strip all metadata

`exiftool -overwrite_original ...`
Skip the _original backup

CONCEPTS

Writing changes the file and leaves a backup named <file>_original next to it. Add -overwrite_original once you trust the command. Tag names ignore case and can be prefixed with a group, e.g. -XMP:Title.

File jpg, tiff, mp4, pdf ...
↓ contains
Groups EXIF, IPTC, XMP, GPS ...
↓ hold
Tags DateTimeOriginal, Make ...

Metadata lives in the file, in several groups

READING

`exiftool <file>`
Show every tag with its value

`exiftool -<Tag> <file>`
Show only the named tag

`exiftool -s <file>`
Use tag names instead of descriptions

`exiftool -S <file>`
Very short output: Tag: value

`exiftool -G1 -a <file>`
Show group names and duplicate tags

`exiftool -n <file>`
Raw values, no print conversion

Gives GPS as signed decimals and exposure as numbers.

`exiftool -T -<Tag1> -<Tag2> <files>`
Tab-separated table of chosen tags

`exiftool -b -<Tag> <file>`
Output binary data, e.g. -ThumbnailImage

`exiftool -u -U <file>`
Also show unknown tags

`exiftool -ee <file>`
Extract embedded data, e.g. video GPS tracks

`exiftool -list`
List supported tags (see also -listx)

`exiftool -ver`
Print the ExifTool version

SELECTING FILES

`exiftool -r <dir>`
Recurse into subdirectories

`exiftool -ext <ext> <dir>`
Only process files with this extension

`exiftool --ext <ext> <dir>`
Exclude an extension

SELECTING FILES (cont.)

`exiftool -if '<expr>' <files>`
Only files where the expression is true

Tags are written $Make; example: -if '$Make eq "Canon"'.

`exiftool -@ <argfile>`
Read arguments from a file

WRITING

`exiftool -<Tag>=<value> <file>`
Set a tag

`exiftool -<Tag>= <file>`
Delete a tag

`exiftool -all= <file>`
Delete all metadata

`exiftool -<Tag>+=<value> <file>`
Add to a list tag, e.g. -Keywords

`exiftool -<Tag>-=<value> <file>`
Remove a value from a list tag

`exiftool -overwrite_original <file>`
Edit in place, no _original backup

`exiftool -overwrite_original_in_place <file>`
Same, but keep inode and file attributes

`exiftool -o <outfile> <file>`
Write the result to a new file

`exiftool -P <file>`
Keep the file modification date

`exiftool -delete_original <dir>`
Delete all _original backups

`exiftool -restore_original <dir>`
Restore files from their _original backups

`exiftool -m <file>`
Ignore minor errors and warnings

DATES AND RENAMING

`exiftool -AllDates="<YYYY:MM:DD HH:MM:SS>" <file>`
Set all three EXIF dates

`exiftool -AllDates+=<h:mm> <file>`
Shift all dates forward

Use -= to go backward; format is [Y:M:D]h:m[:s].

DATES AND RENAMING (cont.)

`exiftool '-FileName<DateTimeOriginal' -d '%Y%m%d_%H%M%S%%-c.%%e' <dir>`
Rename by capture date

%%-c adds -1, -2 on name clashes; %%e keeps the extension.

`exiftool '-Directory<DateTimeOriginal' -d '%Y/%m/%d' <dir>`
Move into date folders

`exiftool -o . '-Directory<DateTimeOriginal' -d '%Y/%m' <dir>`
Copy into date folders, keep originals

`exiftool '-FileModifyDate<DateTimeOriginal' <dir>`
Set file mtime from the capture date

`exiftool -d '<fmt>' -<Tag> <file>`
Print dates in a strftime-style format

COPYING TAGS

`exiftool -tagsFromFile <src> <dst>`
Copy the writable tags from src to dst

`exiftool -tagsFromFile <src> -<Tag> <dst>`
Copy only the named tag

`exiftool -tagsFromFile <src> -all:all <dst>`
Copy all tags, keeping their groups

`exiftool -all= -tagsFromFile @ -<Tag> <file>`
Strip everything except one tag

@ means the file being processed.

`exiftool -tagsFromFile <src> '-xmp:all<all' <dst>`
Copy all tags into XMP

`exiftool '-<DstTag><SrcTag>' <file>`
Copy one tag into another

Quote it so the shell does not treat < as a redirect.

`exiftool -tagsFromFile %d%f.CR2 -r -ext jpg <dir>`
Copy from a same-named file

GPS

`exiftool -gps:all -n <file>`
Show GPS tags as decimal numbers

GPS (cont.)

`exiftool -GPSLatitude=<n> -GPSLatitudeRef=<N|S> -GPSLongitude=<n> -GPSLongitudeRef=<E|W> <file>`
Set coordinates

Latitude and longitude values are positive; the Ref tags carry the sign.

`exiftool -gps:all= <file>`
Remove GPS data

`exiftool -geotag <track.gpx> <dir>`
Tag photos from a GPS track log

`exiftool -geotag <log> -geosync=<+-seconds> <dir>`
Correct a clock offset

`exiftool -geotag <log> '-geotime<DateTimeOriginal' <dir>`
Match track points by capture time

`exiftool -geotag= <file>`
Remove geotag data

EXPORT AND IMPORT

`exiftool -csv <dir> > out.csv`
Export tags to CSV

`exiftool -csv -<Tag1> -<Tag2> <dir>`
CSV with chosen tags only

`exiftool -csv=in.csv <dir>`
Import tags from CSV

The SourceFile column selects the file.

`exiftool -json <files>`
Output as JSON

`exiftool -p '<fmt>' <files>`
Custom output format with $Tag

RECIPES

Strip location before sharing

```
exiftool -gps:all= -overwrite_original -r -ext jpg <dir>
```

Shift camera clock error of 1h 30m

```
exiftool -AllDates+=1:30 -overwrite_original \
  -if '$Make eq "<Canon>"' -r <dir>
```

Sort photos into year/month folders

```
exiftool -r '-Directory<DateTimeOriginal' \
  -d '<out>/%Y/%m' <dir>
```

Edit tags in a spreadsheet

```
exiftool -csv -Title -Artist <dir> > tags.csv
# edit tags.csv, keep the SourceFile column
exiftool -csv=tags.csv <dir>
```