

# GPS Tags

These GPS tags are part of the EXIF standard, and are stored in a separate IFD within the EXIF information.

ExifTool is very flexible about the input format when writing lat/long coordinates, and will accept from 1 to 3 floating point numbers (for decimal degrees, degrees and minutes, or degrees, minutes and seconds) separated by just about anything, and will format them properly according to the EXIF specification.

Some GPS tags have values which are fixed-length strings. For these, the indicated string lengths include a null terminator which is added automatically by ExifTool. Remember that the descriptive values are used when writing (ie. 'Above Sea Level', not '0') unless the print conversion is disabled (with '-n' on the command line or the PrintConv option in the API, or by suffixing the tag name with a # character).

When adding GPS information to an image, it is important to set all of the following tags: GPSTimeStamp, GPSTimeStamp, GPSTimeStamp, GPSTimeStamp, and GPSTimeStamp and GPSTimeStamp if the altitude is known. ExifTool will write the required GPSTimeStamp tag automatically if new a GPS IFD is added to an image.

Tag ID	Tag Name	Writable	Values / Notes
0x0000	GPSTimeStamp	int8u[4]:	
0x0001	GPSTimeStampRef	string[2]	(tags 0x0001-0x0006 used for camera location according to MWG 2.0) 'N' = North 'S' = South
0x0002	GPSTimeStamp	rational64u[3]	
0x0003	GPSTimeStampRef	string[2]	'E' = East 'W' = West
0x0004	GPSTimeStamp	rational64u[3]	
0x0005	GPSTimeStampRef	int8u	0 = Above Sea Level 1 = Below Sea Level
0x0006	GPSTimeStamp	rational64u	
0x0007	GPSTimeStamp	rational64u[3]	(when writing, date is stripped off if present, and time is adjusted to UTC if it includes a timezone)
0x0008	GPSTimeStamp	string	
0x0009	GPSTimeStamp	string[2]	'A' = Measurement Active 'V' = Measurement Void
0x000a	GPSTimeStamp	string[2]	2 = 2-Dimensional Measurement 3 = 3-Dimensional Measurement
0x000b	GPSTimeStamp	rational64u	
0x000c	GPSTimeStampRef	string[2]	'K' = km/h 'M' = mph 'N' = knots
0x000d	GPSTimeStamp	rational64u	
0x000e	GPSTimeStampRef	string[2]	'M' = Magnetic North 'T' = True North
0x000f	GPSTimeStamp	rational64u	
0x0010	GPSTimeStampRef	string[2]	'M' = Magnetic North 'T' = True North
0x0011	GPSTimeStamp	rational64u	
0x0012	GPSTimeStamp	string	
0x0013	GPSTimeStampRef	string[2]	(tags 0x0013-0x001a used for subject location

according to MWG 2.0)

'N' = North

'S' = South

0x0014	GPSTDestLatitude	rational64u[3]	
0x0015	GPSTDestLongitudeRef	string[2]	'E' = East 'W' = West
0x0016	GPSTDestLongitude	rational64u[3]	
0x0017	GPSTDestBearingRef	string[2]	'M' = Magnetic North 'T' = True North
0x0018	GPSTDestBearing	rational64u	
0x0019	GPSTDestDistanceRef	string[2]	'K' = Kilometers 'M' = Miles 'N' = Nautical Miles
0x001a	GPSTDestDistance	rational64u	
0x001b	GPSTProcessingMethod	undef	(values of "GPS", "CELLID", "WLAN" or "MANUAL" by the EXIF spec.)
0x001c	GPSTAreaInformation	undef	
0x001d	GPSTDateStamp	string[11]	(when writing, time is stripped off if present, after adjusting date/time to UTC if time includes a timezone. Format is YYYY:mm:dd)
0x001e	GPSTDifferential	int16u	0 = No Correction 1 = Differential Corrected
0x001f	GPSTHPositioningError	rational64u	

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(This document generated automatically by Image::ExifTool::BuildTagLookup)

*Last revised Jul 22, 2013*

[<-- ExifTool Tag Names](#)