

## Exiv2 - Bug #867

### Lens not detected on Olympus E-1

10 Nov 2012 03:46 - Sergi Pons

<b>Status:</b>	Assigned	<b>Start date:</b>	10 Nov 2012
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Robin Mills	<b>% Done:</b>	0%
<b>Category:</b>	metadata	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	0.28		
<b>Description</b>			
<p>Lenses are not detected on the Olympus E-1 camera raw files using exiv2 0.23. On the other hand exiftool 9.03 is able to detect them. Tested with an Olympus Zuiko Digital 14-54mm F2.8-3.5, Olympus Zuiko Digital ED 50-200mm 1:2.8-3.5 SWD and Olympus Zuiko Digital 11-22mm 1:2.8-3.5.</p> <p>Sample output of exiv2:  \$ exiv2 -pt _A200528.ORF</p> <pre> Exif.Image.ImageWidth           Long      1 2624 Exif.Image.ImageLength          Long      1 1966 Exif.Image.BitsPerSample        Short     1 16 Exif.Image.Compression          Short     1 Uncompressed Exif.Image.PhotometricInterpretation Short     1 Black Is Zero Exif.Image.ImageDescription     Ascii    32 OLYMPUS DIGITAL CAMERA Exif.Image.Make                 Ascii    24 OLYMPUS CORPORATION Exif.Image.Model               Ascii    17 E-1 Exif.Image.StripOffsets         Long     16 344064 1026304 1708544 2390784 3073024 3755264 4437504 5119744 5801984 6484224 7166464 7848704 8530944 9213184 9895424 10577664 Exif.Image.Orientation          Short     1 top, left Exif.Image.SamplesPerPixel      Short     1 1 Exif.Image.RowsPerStrip         Long      1 130 Exif.Image.StripByteCounts      Long     16 682240 682240 682240 682240 682240 682240 682240 682240 682240 682240 682240 682240 682240 682240 682240 83968 Exif.Image.XResolution          Rational  1 314 Exif.Image.YResolution          Rational  1 314 Exif.Image.PlanarConfiguration Short     1 1 Exif.Image.ResolutionUnit       Short     1 inch Exif.Image.Software            Ascii    32 Version 1.5 Exif.Image.DateTime            Ascii    20 2012:10:20 16:22:00 Exif.Image.ExifTag             Long      1 290 Exif.Photo.ExposureTime         Rational  1 1/15 s Exif.Photo.FNumber             Rational  1 F3.2 Exif.Photo.ExposureProgram      Short     1 Aperture priority Exif.Photo.ISOSpeedRatings      Short     1 400 Exif.Photo.ExifVersion          Undefined 4 2.21 Exif.Photo.DateTimeOriginal     Ascii    20 2012:10:20 16:22:00 Exif.Photo.DateTimeDigitized   Ascii    20 2012:10:20 16:22:00 Exif.Photo.ExposureBiasValue    SRational 1 0 EV Exif.Photo.MaxApertureValue     Rational  1 F2.8 Exif.Photo.MeteringMode         Short     1 Multi-segment Exif.Photo.LightSource          Short     1 Unknown Exif.Photo.Flash                Short     1 No flash Exif.Photo.FocalLength          Rational  1 28.0 mm Exif.Photo.MakerNote            Undefined 3038 (Binary value suppressed) Exif.MakerNote.Offset          Long      1 788 Exif.MakerNote.ByteOrder        Ascii     3 II Exif.Olympus.ThumbnailImage     Undefined 5864 (Binary value suppressed) Exif.Olympus.SpecialMode        Long      3 Normal Exif.Olympus.Quality            Short     1 (4) Exif.Olympus.Macro              Short     1 Off Exif.Olympus.BWMode            Short     1 Off Exif.Olympus.DigitalZoom        Rational  1 None Exif.Olympus.FocalPlaneDiagonal Rational  1 2160/100 Exif.Olympus.LensDistortionParams SShort    6 0 0 0 0 0 </pre>			

```

Exif.Olympus.CameraType          Ascii    6 D4040
Exif.Olympus.CameraID            Undefined 32 OLYMPUS DIGITAL CAMERA
Exif.Olympus.SharpnessFactor      Short    1 Hard
Exif.Olympus.ColorMatrix          Short    9 238 66 65488 65530 276 65522 8 65434 350
Exif.Olympus.BlackLevel          Short    4 68 68 68 68
Exif.Olympus.RedBalance           Short    2 512 64
Exif.Olympus.BlueBalance         Short    2 236 64
Exif.Olympus.Contrast             Short    1 Normal
Exif.Olympus.SharpnessFactor      Short    1 576
Exif.Olympus.ColorControl         Short    6 96 4096 2944 4096 16 128
Exif.Olympus.ValidBits           Short    2 12 0
Exif.Olympus.CoringFilter         Short    1 1536
Exif.Olympus.ImageWidth           Long     1 2560
Exif.Olympus.ImageHeight          Long     1 1920
Exif.Olympus.Equipment            Undefined 252 (Binary value suppressed)
Exif.Olympus.CameraSettings       Undefined 360 (Binary value suppressed)
Exif.Olympus.RawDevelopment       Undefined 168 (Binary value suppressed)
Exif.Olympus.ImageProcessing      Undefined 1320 (Binary value suppressed)
Exif.Olympus.FocusInfo            Undefined 600 (Binary value suppressed)
Exif.Photo.UserComment            Undefined 125
Exif.Photo.FlashpixVersion        Undefined 4 1.00
Exif.Photo.ColorSpace             Short    1 Uncalibrated
Exif.Photo.FileSource             Undefined 1 Digital still camera
Exif.Photo.CFAPattern             Undefined 8 2 0 2 0 1 0 2 1
Exif.Photo.CustomRendered         Short    1 Normal process
Exif.Photo.ExposureMode           Short    1 Auto
Exif.Photo.WhiteBalance           Short    1 Auto
Exif.Photo.DigitalZoomRatio       Rational 1 0.0
Exif.Photo.SceneCaptureType       Short    1 Standard
Exif.Photo.GainControl            Short    1 High gain up
Exif.Photo.Contrast               Short    1 Normal
Exif.Photo.Saturation             Short    1 Normal
Exif.Photo.Sharpness              Short    1 Hard
Exif.Image.PrintImageMatching     Undefined 244 (Binary value suppressed)
Exif.Thumbnail.Compression         Short    1 JPEG (old-style)
Exif.Thumbnail.XResolution        Rational 1 72
Exif.Thumbnail.YResolution        Rational 1 72
Exif.Thumbnail.ResolutionUnit     Short    1 inch
Exif.Thumbnail.JPEGInterchangeFormat Long     1 11942
Exif.Thumbnail.JPEGInterchangeFormatLength Long    1 5864

```

Sample output of exiftool for the same file:

```

$ exiftool _A200528.ORF
ExifTool Version Number      : 9.03
File Name                    : _A200528.ORF
Directory                   : .
File Size                    : 10 MB
File Modification Date/Time  : 2012:10:20 17:22:00+02:00
File Access Date/Time       : 2012:11:10 12:18:30+01:00
File Permissions             : rw-r--r--
File Type                    : ORF
MIME Type                    : image/x-olympus-orf
Exif Byte Order              : Little-endian (Intel, II)
Image Width                  : 2624
Image Height                 : 1966
Bits Per Sample              : 16
Compression                  : Uncompressed
Photometric Interpretation   : BlackIsZero
Image Description            : OLYMPUS DIGITAL CAMERA
Make                        : OLYMPUS CORPORATION
Camera Model Name           : E-1
Strip Offsets                : (Binary data 127 bytes, use -b option to extract)
Orientation                  : Horizontal (normal)
Samples Per Pixel            : 4
Rows Per Strip               : 130
Strip Byte Counts            : (Binary data 110 bytes, use -b option to extract)
X Resolution                  : 314

```

Y Resolution : 314  
Planar Configuration : Chunky  
Resolution Unit : inches  
Software : Version 1.5  
Modify Date : 2012:10:20 16:22:00  
Exposure Time : 1/15  
F Number : 3.2  
Exposure Program : Aperture priority AE  
ISO : 400  
Exif Version : 0221  
Date/Time Original : 2012:10:20 16:22:00  
Create Date : 2012:10:20 16:22:00  
Exposure Compensation : 0  
Max Aperture Value : 2.8  
Light Source : Unknown  
Flash : No Flash  
Focal Length : 28.0 mm  
Special Mode : Normal, Sequence: 0, Panorama: (none)  
Quality : RAW  
Macro : Off  
Black And White Mode : Off  
Digital Zoom : 0.0  
Lens Distortion Params : 0 0 0 0 0 0  
Camera Type : E-1  
Camera ID : OLYMPUS DIGITAL CAMERA  
Black Level : 68 68 68 68  
Sharpness Factor : 576  
Color Control : 96 4096 2944 4096 16 128  
Olympus Image Width : 2560  
Olympus Image Height : 1920  
Equipment Version : 010  
Camera Type 2 : E-1  
Serial Number : 500004343  
Internal Serial Number : 4001309000561102  
Focal Plane Diagonal : 21.6 mm  
Body Firmware Version : 1.500  
Lens Type : Olympus Zuiko Digital 14-54mm F2.8-3.5  
Lens Serial Number : 050204343  
Lens Firmware Version : 1.100  
Max Aperture At Max Focal : 3.5  
Min Focal Length : 14  
Max Focal Length : 54  
Max Aperture : 3.0  
Lens Properties : 0xe043  
Extender : None  
Extender Serial Number :  
Extender Firmware Version : 0  
Flash Type : None  
Flash Model : None  
Flash Firmware Version : 0  
Flash Serial Number :  
Camera Settings Version : 010  
Preview Image Valid : Yes  
Preview Image Start : 34156  
Preview Image Length : 294241  
AE Lock : Off  
Metering Mode : ESP  
Macro Mode : Off  
Focus Mode : MF  
Focus Process : AF Not Used  
AF Search : Ready  
AF Areas : Center (121,121)(133,133)  
Flash Mode : Off  
Flash Exposure Comp : 0  
White Balance 2 : Auto  
White Balance Temperature : Auto  
White Balance Bracket : 0

Custom Saturation : CS2 (min CS0, max CS4)  
Modified Saturation : Off  
Contrast Setting : 0 (min -2, max 2)  
Sharpness Setting : 1 (min -3, max 5)  
Noise Reduction : (none)  
Distortion Correction : Off  
Shading Compensation : Off  
Drive Mode : Single Shot  
Image Quality 2 : RAW  
Raw Dev Version : 010  
Raw Dev Exposure Bias Value : 0  
Raw Dev White Balance Value : 0  
Raw Dev WB Fine Adjustment : 0  
Raw Dev Gray Point : 0 0 0  
Raw Dev Saturation Emphasis : 0 0 0  
Raw Dev Memory Color Emphasis : 0  
Raw Dev Contrast Value : 0 0 0  
Raw Dev Sharpness Value : 0 0 0  
Raw Dev Color Space : sRGB  
Raw Dev Engine : High Speed  
Raw Dev Noise Reduction : (none)  
Raw Dev Edit Status : Original  
Raw Dev Settings : (none)  
Image Processing Version : 010  
WB RB Levels : 512 236  
WB RB Levels 3000K : 243 511  
WB RB Levels 3300K : 267 464  
WB RB Levels 3600K : 291 426  
WB RB Levels 3900K : 311 397  
WB RB Levels 4000K : 523 438  
WB RB Levels 4300K : 356 350  
WB RB Levels 4500K : 464 346  
WB RB Levels 4800K : 390 320  
WB RB Levels 5300K : 420 296  
WB RB Levels 6000K : 456 272  
WB RB Levels 6600K : 532 282  
WB RB Levels 7500K : 512 236  
WB RB Levels CWB1 : 416 284  
WB RB Levels CWB2 : 416 284  
WB RB Levels CWB3 : 416 284  
WB RB Levels CWB4 : 416 284  
WB G Level 3000K : 256  
WB G Level 3300K : 256  
WB G Level 3600K : 256  
WB G Level 3900K : 256  
WB G Level 4000K : 256  
WB G Level 4300K : 256  
WB G Level 4500K : 256  
WB G Level 4800K : 256  
WB G Level 5300K : 256  
WB G Level 6000K : 256  
WB G Level 6600K : 256  
WB G Level 7500K : 256  
WB G Level : 256  
Color Matrix : 238 66 -48 -6 276 -14 8 -102 350  
Enhancer : 576  
Enhancer Values : 256 352 448 512 576 672 768 1152 1536  
Coring Filter : 1536  
Coring Values : 1536 1536 1536 1536 1536 1536 1536 2304 3072  
Black Level 2 : 68 68 68 68  
Gain Base : 256  
Valid Bits : 12 0  
Crop Left : 38 0  
Crop Top : 16 0  
Crop Width : 2560  
Crop Height : 1920  
Noise Reduction 2 : (none)

Distortion Correction 2 : Off  
Shading Compensation 2 : Off  
Focus Info Version : 010  
Scene Detect : 0  
Zoom Step Count : 8  
Focus Step Count : 133  
Focus Distance : 2.115 m  
AF Point : Center (vertical)  
External Flash : Off  
External Flash Bounce : Bounce or Off  
External Flash Zoom : 0  
Internal Flash : Off  
Sensor Temperature : 31  
User Comment :  
Flashpix Version : 0100  
Color Space : Uncalibrated  
File Source : Digital Camera  
CFA Pattern : [Green,Red][Blue,Green]  
Custom Rendered : Normal  
Exposure Mode : Auto  
White Balance : Auto  
Digital Zoom Ratio : 0  
Scene Capture Type : Standard  
Gain Control : High gain up  
Contrast : Normal  
Saturation : Normal  
Sharpness : Hard  
PrintIM Version : 0250  
Thumbnail Offset : 11942  
Thumbnail Length : 5864  
Aperture : 3.2  
Blue Balance : 0.921875  
Extender Status : Not attached  
Image Size : 2624x1966  
Lens ID : Olympus Zuiko Digital 14-54mm F2.8-3.5  
Preview Image : (Binary data 294241 bytes, use -b option to extract)  
Red Balance : 2  
Scale Factor To 35 mm Equivalent: 2.0  
Shutter Speed : 1/15  
Thumbnail Image : (Binary data 5864 bytes, use -b option to extract)  
Circle Of Confusion : 0.015 mm  
Depth Of Field : 0.55 m (1.88 - 2.42)  
Field Of View : 35.1 deg (1.34 m)  
Focal Length : 28.0 mm (35 mm equivalent: 56.1 mm)  
Hyperfocal Distance : 16.33 m  
Light Value : 5.3

Sample file attached.

**Related issues:**

Related to Exiv2 - Feature #992: Better raw file support and test	<b>Assigned</b>	<b>18 Sep 2014</b>
Related to Exiv2 - Feature #1034: Camera accessory overflow file	<b>Closed</b>	<b>19 Feb 2015</b>

**Associated revisions**

**Revision 4330 - 14 Jun 2016 21:25 - Robin Mills**

#1034 and #867. Adding support for "Camera Overflow File" for olympus cameras.

**History**

**#1 - 13 Jan 2013 12:42 - Robin Mills**

- Category changed from *exif* to *metadata*
- Status changed from *New* to *Assigned*
- Assignee set to *Robin Mills*
- Target version set to *0.24*

Sergi

Thank you for using exiv2 and bringing this to our attention. Is it possible for you to fix this in the file olympusmn.cpp and send me a patch file. You create a patch file with the commands:

```
$ cd <exiv2dir>
$ svn diff > foo.patch
```

Robin

**#2 - 16 Jan 2013 20:34 - Niels Kristian Bech Jensen**

- *File Comment\_from\_ExifTool added*

The problem seems to be a buggy encoding of some IFD subdirectories in the Olympus E-1 (and E-300). I have attached a comment from ExifTool which describes the problem.

Regards,  
Niels Kristian

**#3 - 16 Jan 2013 21:14 - Robin Mills**

Niels

Thanks for stepping into this one. Much appreciated.

Robin

**#4 - 24 Jul 2013 15:59 - Robin Mills**

- *Target version changed from 0.24 to 0.25*

Deferred to 0.25.

**#5 - 08 Jan 2015 16:14 - Robin Mills**

- *Target version changed from 0.25 to 0.26*

This has been hanging about for a couple of years. I'm going to defer this to 0.26 and associate the bug with '992' which is an umbrella to improve our raw file support (and tests for raw files).

**#6 - 16 Mar 2015 06:12 - Sergi Pons**

Can I do something more to contribute solving this issue?

**#7 - 16 Mar 2015 20:00 - Robin Mills**

Sergi

You can contribute by downloading, building the code and debugging the code. When you have it fixed, post a patch for me to review and submit.

I really can't spend time on this at the moment. You'll understand that contributing to Exiv2 is an unpaid and time consuming hobby. For sure, I'd like to see us with better raw file support, however I don't have time to get involved. The day-to-day on the forum/issues is frequently an hour a day - often more. In the last 24 hours, I've probably spent about 8-10 hours on Exiv2. And there are tasks for v0.25 which remain to be done.

So, if you want to help, I have to ask you to debug and figure things out. I'll help you by answering questions when I can - however I need a volunteer to "own" our raw file support. If that sounds like you - welcome to the team. If you're hoping that I will take ownership, regretfully that's not possible.

Robin

**#8 - 23 May 2015 08:45 - Robin Mills**

- *Assignee deleted (Robin Mills)*

**#9 - 14 Jun 2016 21:18 - Robin Mills**

- *Assignee set to Robin Mills*

- *Target version changed from 0.26 to 0.28*

The test file does not seem to have a lens type tag:

```
591 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiv2 -pv --grep lens/i ~/Downloads/_A200528.ORF
0x0206 Olympus      LensDistortionParams      SShort      6  0  0  0  0  0  0
592 rmills@rmillsmbp:~/gnu/exiv2/trunk $
```

For sure, the lens is identified by exiftool:

```
595 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiftool ~/Downloads/_A200528.ORF | grep -i lens
Lens Distortion Params      : 0 0 0 0 0 0
Lens Type                   : Olympus Zuiko Digital 14-54mm F2.8-3.5
Lens Serial Number         : 050204343
Lens Firmware Version      : 1.100
Lens Properties            : 0xc043
Lens ID                    : Olympus Zuiko Digital 14-54mm F2.8-3.5
596 rmills@rmillsmbp:~/gnu/exiv2/trunk $
```

This will have to be investigated in [#992](#) which is schedule for v0.27.

v0.26 adds a feature **Camera overflow file#1034**. I've added the code to OlympusMakerNote::print0x0201 (the LensType interpreter) to look in the section **[olympus]** for a definition of the lens type. However that code isn't called by \_A200528.ORF because the ORF decoder does not appear to have found the 0x0201 tag in the makernote.

So there's no improvement in v0.26 in our handling of this file, however progress is being made.

## Files

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_A200528.ORF	10.2 MB	10 Nov 2012	Sergi Pons
Comment_from_ExifTool	833 Bytes	16 Jan 2013	Niels Kristian Bech Jensen