Camera Control Plug-ins

For MSB Astroart 5.0 / 4.0 under Windows™ 7, Vista, XP.

Version 2.81 for older Canon DSLR cameras bundled with "Canon utilities" or "ZoomBrowser / Remote Shooting" (for example, 350D, 400D, 1000D, etc).

License

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If you don't accept these terms don't install the driver in the system.

The library dcphoto.dll about CRW import is based on "dcdraw" by Dave Coffin.

Installation

To install this plug-in copy the files **d_canon_old.dll**, **dcphoto.dll** and **canon-readme.pdf** into the Astroart directory.

Remember to install also the Canon Utilities, from the Canon Solution Disk bundled with your camera, e.g. “EOS utilities” and/or “ZoomBrowserEx” depending your camera model.

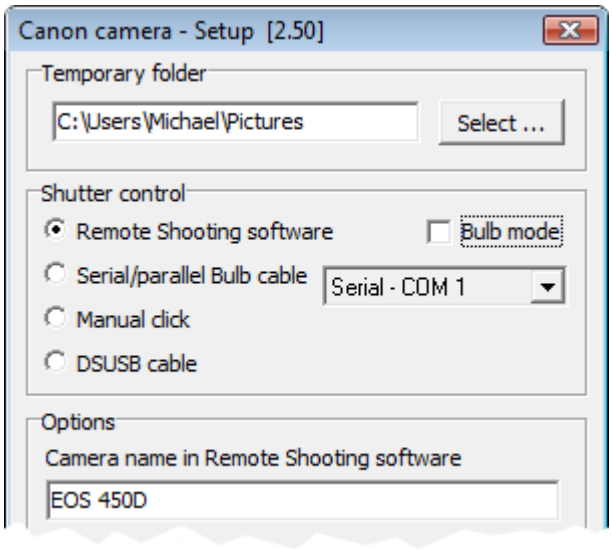
Setup

- Turn on your DSLR camera and connect it to the PC (don’t launch Astroart yet). The following Dialog Window will appear. (If you are using an old DSLR like the 350D the window may be different), then click **Remote Shooting**. If this window does not show up, you may launch Remote Shooting from ZoomBrowserEx or from

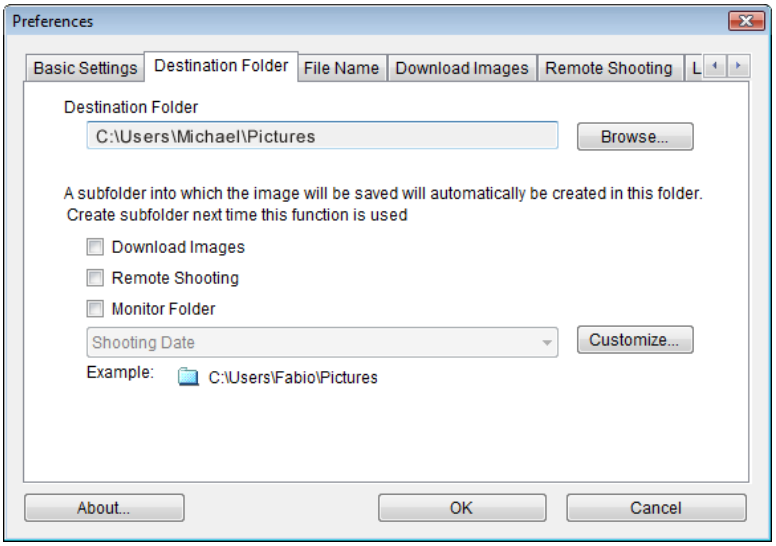
the Windows' Start Menu: Canon Utilities/EOS Utility.

- The **Remote Shooting** program will show up. You may set your camera to **mode "M"** which supports Bulb mode and RAW file format and focus **mode "MF"** (manual focus). Start an exposure clicking the round button and verify that all is OK. (If you are using an older camera the user interface of Remote Shooting may be different).

- Open Astroart, click the Menu "Plugins/CCD camera" select "CANON" and click "Setup" or "Check CCD". The following dialog window will show up:



- If your camera is set in Bulb mode click the checkbox "Bulb mode". This mode is recommended but older cameras (example: EOS 350D) do not support this mode without using an external cable.



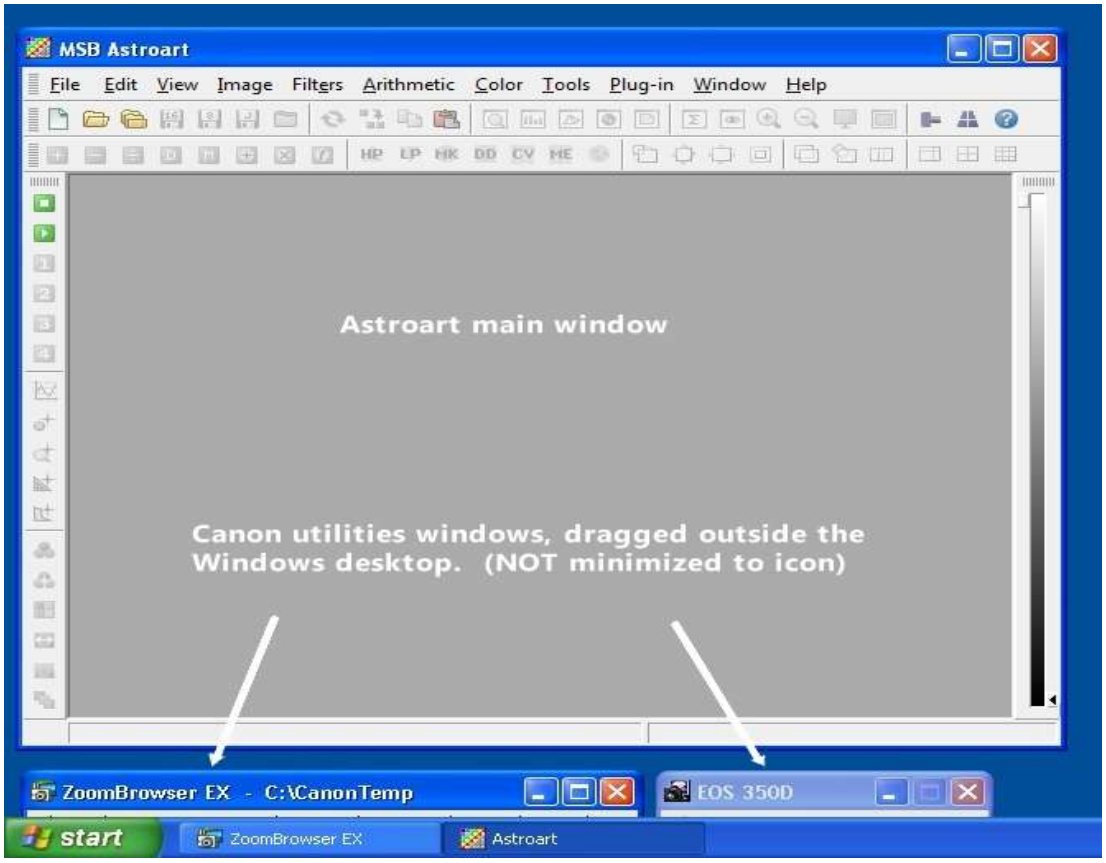
- Temporary folder (Destination folder): write here the same folder set in Remote Shooting. To find out this folder click "Preferences.." then select "Destination folder". Disable all "subfolder options".

- Camera name: write here the camera name as it appears in Remote Shooting (e.g. EOS 400D, EOS 1000D and so on).

- Click "Connect". If Remote Shooting is not recognized then the Camera Name is probably not correct.

- Start an exposure with Astroart and verify that the shutter of the camera is properly controlled. After a few seconds the image will be displayed inside Astroart. If you get an empty image with a green cross then the "destination folder" or "bulb mode" is not correct. Check them in Astroart and Remote Shooting.

- If some other Canon software become visible after the exposure (ZoomBrowser, Digital Photo, Picture Viewer, etc.) You may minimize it to icon or just drag it outside the Windows desktop as shown in the following image:



Options

- **Shutter control**. Select "Remote Shooting" to send the exposure commands via USB. Select "Serial/parallel port" to use a custom cable (bulb mode) driven by the RTS or D0 line . Select "Manual" to operate a bulb cable by hand. Select DSUSB to use the excellent Shoestring DS-USB bulb cable. See: http://www.shoestringastronomy.com/

- **Ambient temperature**. Choose a temperature to be stored in the FITS header.

- **RAW automatic color synthesis** (not recommended). Enables the RAW conversion to RGB. If you don't enable this option you will get a grayscale image with Bayer pattern, which can be later color-synthesized with the command "CCD color synthesis", with many more options to correct hot pixels.

- **RAW antialias in binning 1x1** (not recommended). Enables a further antialiasing for RAW conversion to RGB. The image quality may improve slightly, but the download time increases.

- **RAW white balance**. If enabled (default) the RAW files will be converted with care of the original white balance.

- **Save sequences in Canon format**. This option is supported only by the CCD Interface 4.0 or newer. If enabled, all images taken during sequences are saved in compressed .crw or .cr2 to save disk space.

- **Double click delay for mirror lock**. Enables the mirror lock to reduce vibrations. This command is very useful for planetary and lunar imaging.

Binning

Here you can select an extra binning factor (the main binning of the camera must be set in Remote Capture).

- **Binning (1x1)**. This is the standard mode, which provides the standard resolution of the image.

- **Binning (2x2)**. Four pixels are software summed into one, and the dynamic of every image increases from 12 to 14 bit or 14 to 16 bit.

History

2009/06/03: 2.00, Option for mirror lock.
2010/09/09: 2.50, New cameras supported, USB Bulb mode.
2011/04/30: 2.60, New cameras supported.
2014/07/18: 2.70, New cameras supported.
2015/04/17: 2.80, Compatible with Astroart LAA, minor bug fixes.
2015/08/20. 2.81, Autoconnect via scripts.