

The ArtemisHSC plugin for AstroArt

For the Artemis 11002 High Speed USB 2.0 camera

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Introduction

AstroArt is a powerful astronomical program, from MSB Limited. It is able to control most of the equipment used in astronomical imaging, as well as processing the captured images. In order to allow AstroArt to communicate with a new piece of hardware, a driver is required to be installed in a location known to AstroArt.

Installation

The driver file for the ArtemisHSC camera is called `d_ArtemisHSC.dll` and installation is simply a matter of selecting the relevant option when running the `SetupArtemisUniversal.exe` installer software. You will need to confirm the location of the AstroArt base directory - for example:

`C:\Program Files\MSB\Astroart 3.0`

You can identify the correct directory because it will contain the file named `Astroart.exe`. You also need the file `piccdgui.dll` which provides the generic user interface elements for controlling CCD cameras within AstroArt. This file may be downloaded from:

http://www.msb-astroart.com/ccd_en.htm

It is referred to as the User Interface file, and should be copied to the same directory as above, if it is not already present.

Using the Plugin

Once the driver and user interface files have been installed, you can start up AstroArt and open the CCD Control panel by selecting menu option

Tools | Plugin Commands | CCD Camera

If you do not see this menu option, verify that the `piccdgui.dll` file has been correctly copied.

All being well you will see the camera setup dialog, at the left of which is a drop-down list of supported camera types. Select "ArtemisHSC" in this box, and then click "Check CCD" to connect to the camera. If you see the message 'Connection FAILED' then you need to check that the camera is correctly powered up and connected to the USB, and be certain that you have uploaded the correct firmware onto the camera if required. Otherwise, you should see a dialog in which you can configure some settings of the camera prior to using it:

- **Amp off for exposures longer than (seconds)**

Allows you to set a threshold exposure duration - for exposures longer than this, the driver will switch off the CCD's internal amplifier during the exposure. Leaving the amplifier switched on can cause a slight brightening towards one edge of the image due to a small but detectable amount of infrared radiation ('amp glow') emitted by the circuitry inside the CCD, so it is best to switch off the amplifier for longer exposures. For short exposures the glow is generally insignificant compared to the brightness of the actual subject being imaged. 2.4s is generally a reasonable value to use.

- **Cooling Enabled**

If you check this box then the camera's Peltier cooler will be enabled.

- **Target Temperature**

You can use this box to select the desired temperature of the camera's CCD sensor. The camera will attempt to keep the temperature constant at this level.

Once you have chosen the settings you require, click 'OK' to complete the connection with the Artemis camera and return to the Control Panel. Now you can click on the 'Settings' tab to take a test image - select an exposure time and binning mode, then click the 'START' button. After a while a window will open up containing your Artemis image.

If you need to find out more about how to use AstroArt for imaging there is plenty of information, and some tutorials, available from the AstroArt 'Help' menu.