

QuickStart Guide

Thank you for purchasing an Atik camera. This camera will open the world of astronomical imaging to you, both to lunar/planetary and long exposure, deep-sky objects.

This QuickStart Guide, will help you getting started with imaging, with the least effort possible.

Happy imaging!

Step 1 - Installing camera drivers:

Before connecting the camera to your computer, you must install the camera drivers. The following instructions, apply only to Windows 98/ME/2000 computers. Windows XP users should bypass this step, and go directly to step 2, since Windows XP includes all the necessary drivers.

Insert the supplied CD on your CD-ROM drive, and double click on the "Autorun" icon. Select your language, and click on the "Toucam pro II pcvc840" title. Click "OK" on the box that appears. Click on the "Tools and driver" option (second line on the right side), and click "Start installation". Click "OK" on the two dialogs that appear. Wait a moment, and click "Start" when prompted. When the dialog "Please plug in your ToUcam Camera into the USB port..." appears, connect the USB cable of the camera to the USB port of your computer. The "Found new hardware" message should appear, while the necessary drivers are installed on your system. When finished, you should see a "System OK" message on the Philips VCheck screen. You should be able to see a completely defocused image. Place your hand on the front of the camera, and you should see the image becoming dark. Click the "Ready" button and the "Reboot" button. Congratulations! Your camera is installed.

Step 2 - Installing K3 CCD Tools



K3 CCD Tools, is the software necessary to capture and process your images. While K3 CCD Tools is provided with the camera, for your convenience, any software that can control a modified webcam can be used. If you already have Iris, Astrosnap, Astrovideo, etc. installed, and prefer to work with it, go ahead! The Atik camera works perfectly with them.

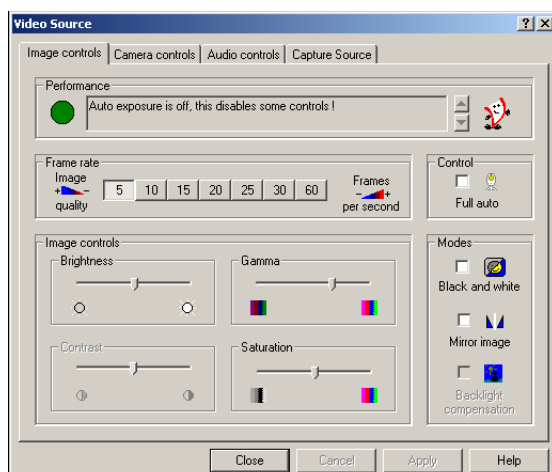
To install K3 CCD Tools:

Open the K3CCDTools folder on the CD. Open the "Disk1" folder, and double click on the "Setup" icon. Follow the prompted screens, until it finishes installation.

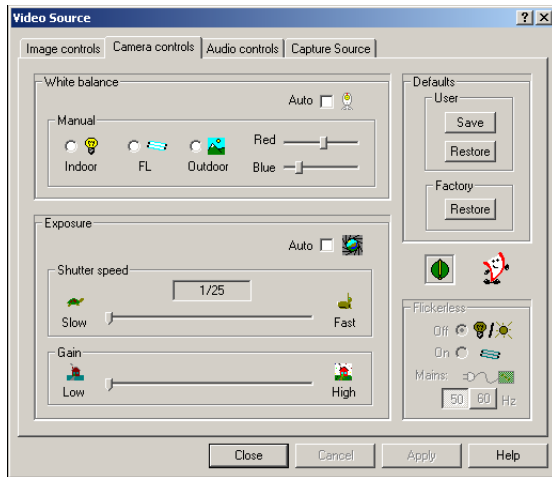
That's it! You're ready to image.

Lunar/Planetary step by step "HowTo":


- Open K3 CCD Tools; Click the "Video Capture" tab.
- Click the "Video Capture" menu, and select "Microsoft WDM image capture..."
- Click the "Video Capture" menu, and select "Video Format". Select 640x480 as the resolution.
- Click the Preview icon ; You should see an image (place your hand in front of the camera).
- Select the Video Source icon ; The Video Source windows opens:



- Deselect the "Full Auto" control
- Place the "Frame Rate" on 5
- **For the HS cameras, select "Black and White"**
- Click on the "Camera Controls" tab



- Deselect both "Auto" options
- Put the Shutter Speed on 1/25 (leftmost position)
- Put the Gain in the Lowest position
- Leave the White balance setting as is.
- Depending on your telescope's aperture and focal length, you may need to adjust Shutter speed and Gain. You may need to experiment with different settings.

Now you're ready to start capturing. Close the Video Source window, and click the Video Capture icon . Video capture starts immediately. To stop capturing, press "ESC" key on your keyboard. Captured files are saved, by default, on the K3 CCD Tools installation directory. You can change this on the "Options" menu.

To process your video sequences, you will find directions on the help file of K3 CCD Tools.


- Deep-sky imaging "HowTo" (Long exposure):


Basically, it is the same as Planetary, but with some differences.

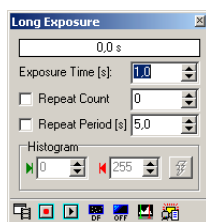
First, White Balance should be left alone. None of the options should be selected. Second, Shutter should be always be on the 1/25 setting.


Third, Gain control is very important. It's setting will be dependant on several factors, like object type or your telescope mount accuracy. As a rule of thumb, you should keep the Gain setting as low as possible, while maintaining a useable signal to noise ratio. For a start, try 20-30% Gain setting.

To capture an image:

First, you need to have the Paralel connector attached to your Parallel port. Click on the Long Exposure icon  :

- Exposure Time, is the exposure duration, in seconds.
- Repeat Count, is the number of exposures desired (ex. 10x30 seconds)
- Repeat Period is used for controlling the interval between captures.
- To start capturing, there are 3 control buttons  :
- The Left button, is the preview button. When pressed, exposure will start, but no image is saved. It is very useful for focusing and centering. this process is a loop, and will only stop when the button is pressed again, or the Repeat count is reached.
- The middle button is the Record button. When pressed, any previewed frames are saved. To capture, you need to press the Record button and then press the preview button. The capture process starts, and it only stops when you press the record button again, or the ESC key.
- The right button is for Single frame capture. You also need to press the Record button before.



- This icon , controls the amplificator of the CCD. When pressed, the amplificator turns to a very low state. This is essential for very long exposures, since it dramatically cuts the glow on the upper left corner. It depends on your gain settings, but this control should be used on exposures above 30 seconds.

Hints:

- Always capture, at least 10 images of the object being captured. If you can, capture several tens of images, because, by summing them, you end with better SN ratio, and better dynamic range. For Planets, you should capture, at least, 100 frames. If you have hard disk space available, capture several hundred frames.
- Do the longest exposures that your mount supports. 30 second exposures is good, but 60 second will get you more signal to work with.
- Always do a dark frame of the same length as the light frames. By subtracting this frame from the light ones, bad pixels are removed, and the residual amp glow is eliminated.