

PENTAX PENTAX PENTAX PENTAX PENTAX
K-3_{III} KP K-1 K-1_{II} 645Z



User MANUAL

*Pentax
KP/K1/K1 Mark II/645Z/K3 Mark III
ASCOM/NINA Driver*

Richard Romano

July 20, 2025

Revision Sheet

Release No.	Date	Revision Description
Rev. 1.0	7/20/2025	Initial Release

USER'S MANUAL

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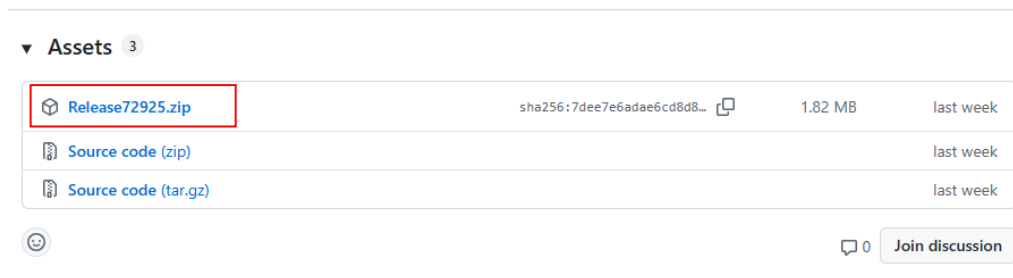
A. GETTING STARTED WITH SHARPCAP

1.1 Driver Installation

Download and install ASCOM. You should get this version if possible:
ASCOMPlatform702.4675.exe

From:
<https://github.com/ASCOMInitiative/ASCOMPlatform/releases/download/v7.0.2/AscomPlatform702.4675.exe>

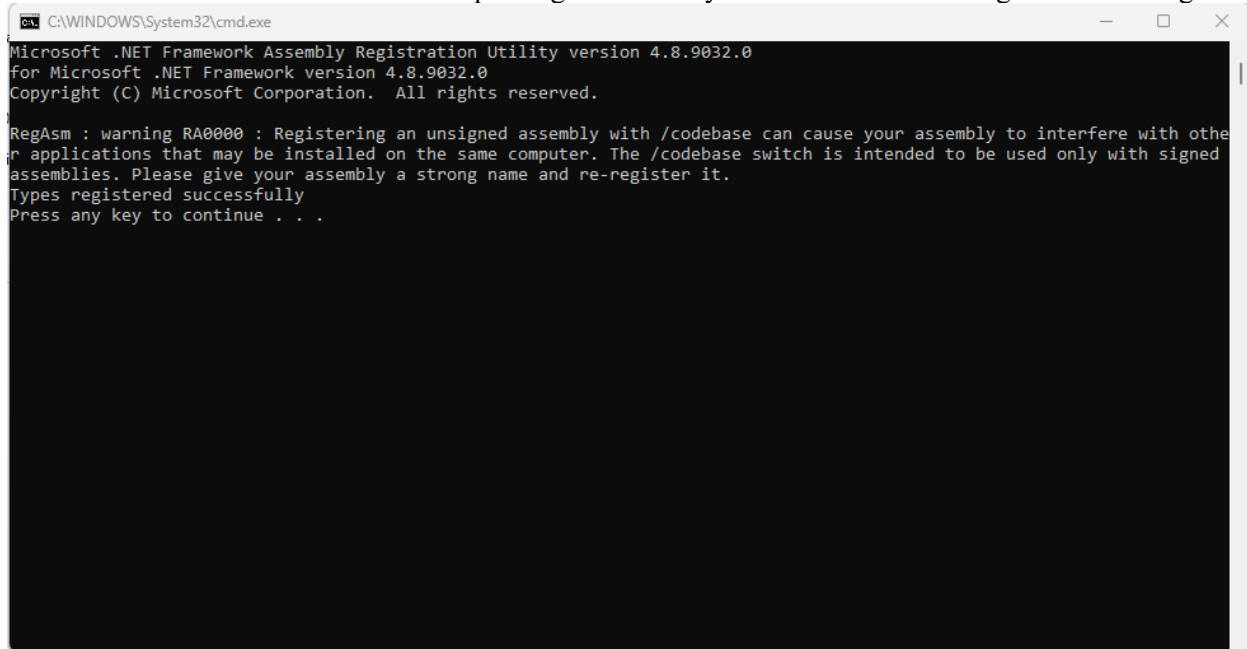
Next, download and unzip the Pentax KP ASCOM Driver:
[Releases · richromano/ASCOMPentaxCameraDriver](#)



Place the latest release to a long term location. This is the location the software will run from. Run install.bat by double clicking on it.

ASCOM.PentaxKP.Camera.tlb	7/30/2025 8:26 PM	TLB File	43 KB
ASCOM.PentaxKP.Camera.dll	7/30/2025 8:25 PM	Application extens...	420 KB
ASCOM.PentaxKP.Camera.pdb	7/30/2025 8:25 PM	Program Debug D...	116 KB
RicohCameraSDK.dll	7/28/2025 5:32 PM	Application extens...	203 KB
uninstall	7/13/2025 5:12 PM	Windows Batch File	1 KB
install	7/13/2025 5:11 PM	Windows Batch File	1 KB
ASCOM.PentaxKP.Camera.dll.config	6/15/2025 10:22 AM	VisualStudio.conf...	1 KB
libraw.dll	6/4/2025 12:05 AM	Application extens...	1,005 KB
ASCOM.Exceptions.dll	11/28/2024 5:47 AM	Application extens...	27 KB
ASCOM.Utilities.dll	11/28/2024 5:46 AM	Application extens...	1,184 KB
ASCOM.Internal.Extensions.dll	11/28/2024 5:46 AM	Application extens...	20 KB
ASCOM.SettingsProvider.dll	11/28/2024 5:46 AM	Application extens...	147 KB
ASCOM.DeviceInterfaces.dll	11/28/2024 5:46 AM	Application extens...	57 KB
ASCOM.Controls.dll	11/28/2024 5:46 AM	Application extens...	40 KB
ASCOM.Attributes.dll	11/28/2024 5:46 AM	Application extens...	18 KB
ASCOM.Astrometry.dll	11/28/2024 5:46 AM	Application extens...	484 KB
ASCOM.Utilities.Video.dll	11/28/2024 5:46 AM	Application extens...	31 KB
ASCOM.DeviceInterfaces	11/28/2024 5:14 AM	Microsoft Edge H...	1,674 KB
ASCOM.Astrometry	11/28/2024 5:14 AM	Microsoft Edge H...	907 KB
ASCOM.Exceptions	11/28/2024 5:14 AM	Microsoft Edge H...	45 KB
ASCOM.Utilities	11/28/2024 5:14 AM	Microsoft Edge H...	325 KB
ASCOM.Attributes	11/28/2024 5:12 AM	Microsoft Edge H...	5 KB
ASCOM.Controls	11/28/2024 5:12 AM	Microsoft Edge H...	28 KB
ASCOM.SettingsProvider	11/28/2024 5:12 AM	Microsoft Edge H...	10 KB
ASCOM.Internal.Extensions	11/28/2024 5:12 AM	Microsoft Edge H...	7 KB

The installer will ask for Administrator privileges and then you will see the following installation log:



```
C:\WINDOWS\System32\cmd.exe
Microsoft .NET Framework Assembly Registration Utility version 4.8.9032.0
for Microsoft .NET Framework version 4.8.9032.0
Copyright (C) Microsoft Corporation. All rights reserved.

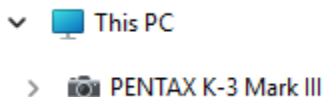
RegAsm : warning RA0000 : Registering an unsigned assembly with /codebase can cause your assembly to interfere with other
applications that may be installed on the same computer. The /codebase switch is intended to be used only with signed
assemblies. Please give your assembly a strong name and re-register it.
Types registered successfully
Press any key to continue . . .
```

1.2 SharpCap Installation and First Steps

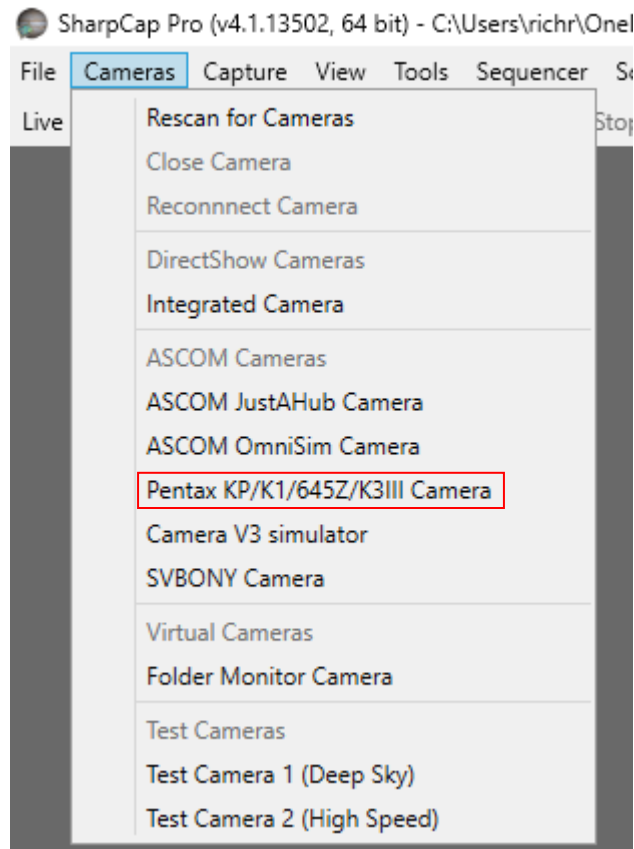
Download and install Sharpcap 64bit:

<https://d.sharpcap.co.uk/download.html?version=4.1.13484.0&arch=x64>

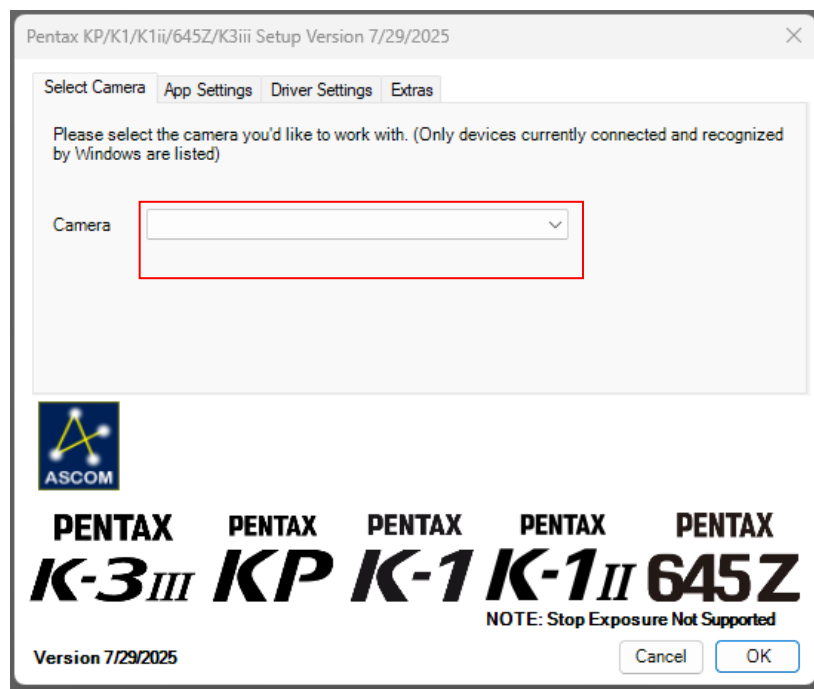
Turn on your camera and make sure the USB mode is set to MTP/PTP mode. Set the Camera to M mode. You can set the shutter to Electronic Shutter if desired. Connect your camera to the computer and make sure it is recognized as a camera.

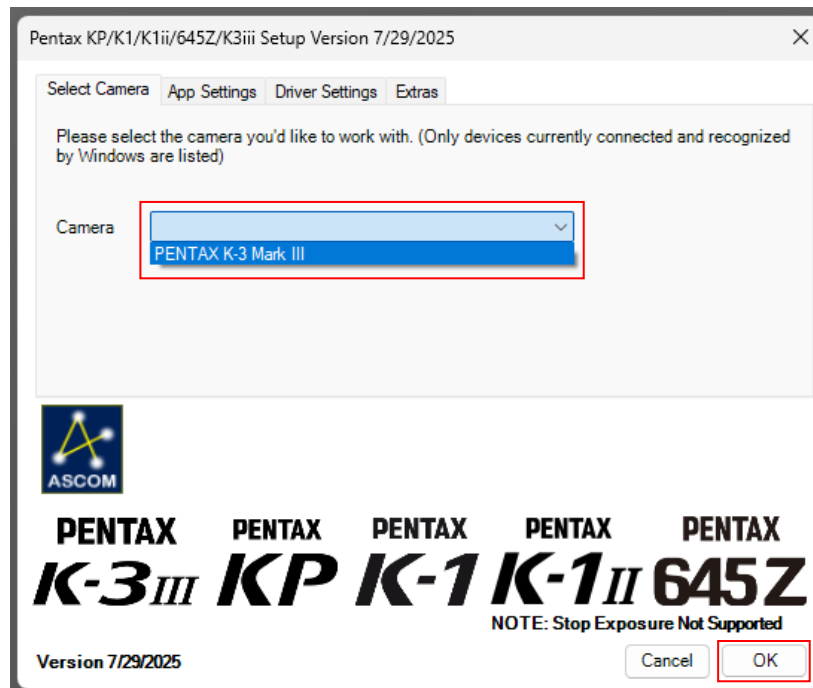


Open Sharpcap. Select the Camera menu and you should see Pentax KP/K1/645Z.

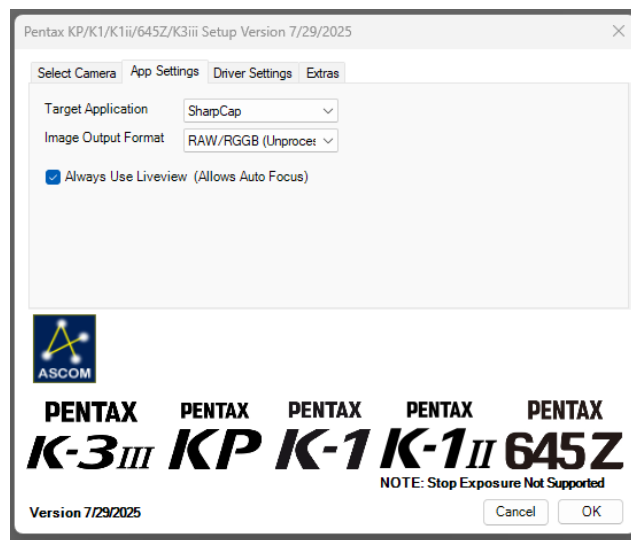


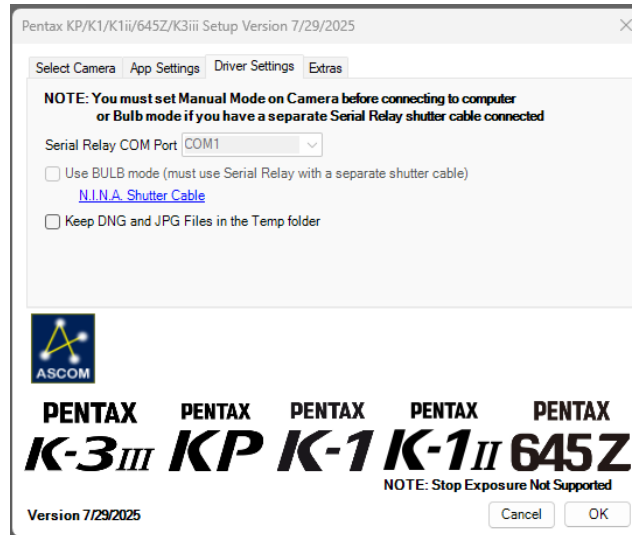
Select Pentax KP/K1/645Z and a dialog box should show up. Inside the dialog you should see a drop down where you can select your Camera.



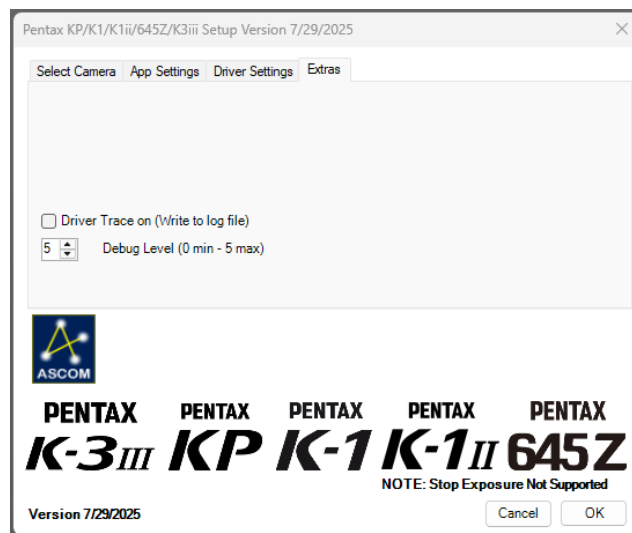


You can review each of the other settings pages as shown here. However, you should just accept the default settings given when you first install (the defaults are shown again here in case you want to reset them). Then press OK.

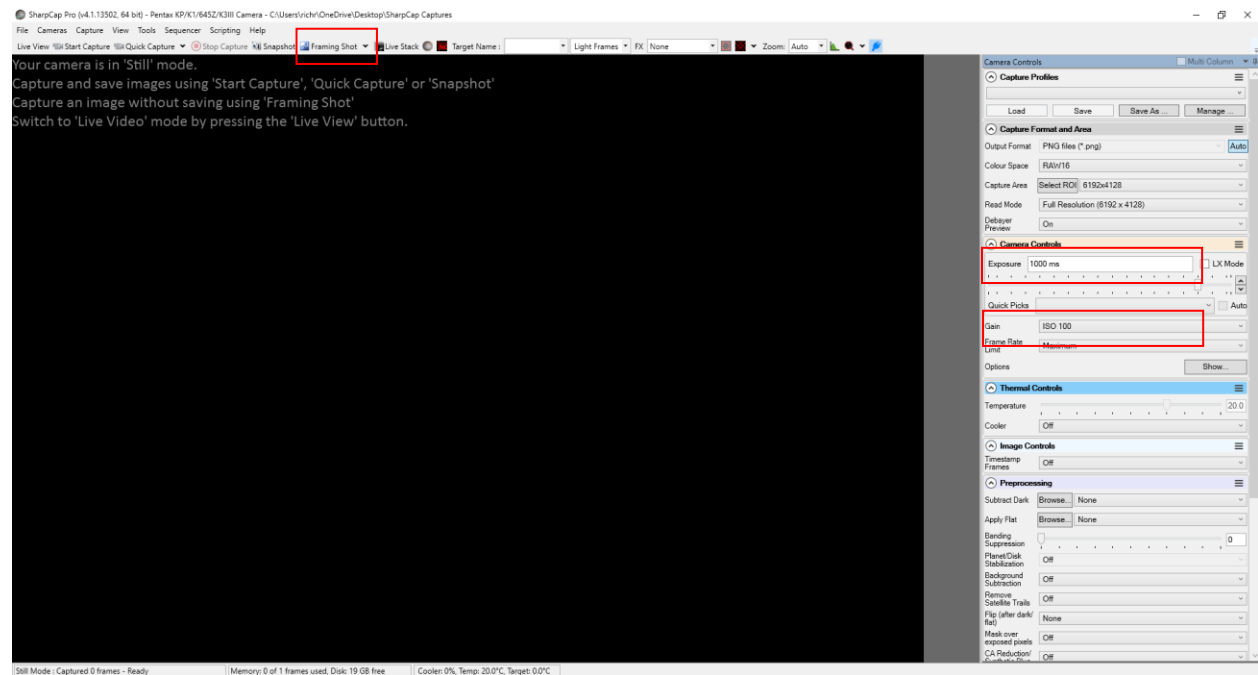




Note that Bulb mode no longer requires a cable and these options are greyed out.



After pressing Okay, you should see the following Window.

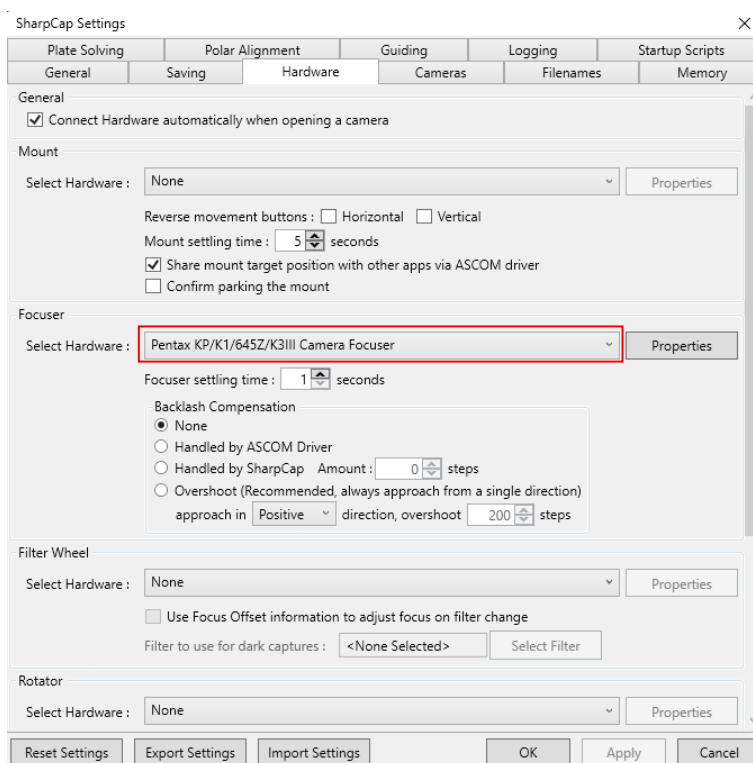


Take a picture by pressing the Framing Shot button. This should show an image. You can adjust the gain and the ISO using the other two buttons. You can then take more framing shots.

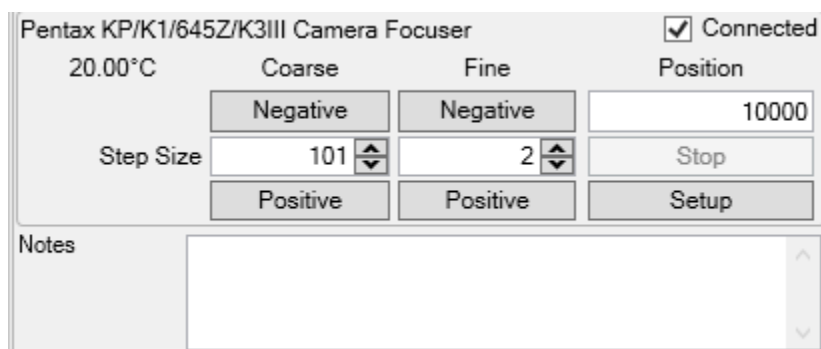
1.3 SharpCap Focuser Installation

There is a Pentax Focuser that is included in the driver installation. **NOTE: This does not work with the KF or K-70.** In SharpCap select the File-> SharpCap Settings. You will see the following:

First select the Hardware pane and then in the drop down menu in the Focuser pick the Pentax Focuser. There are no Properties to set and you can leave the other values at their defaults. SharpCap will automatically connect the focuser when the Camera is opened. (You must close and reopen the camera to connect the first time).

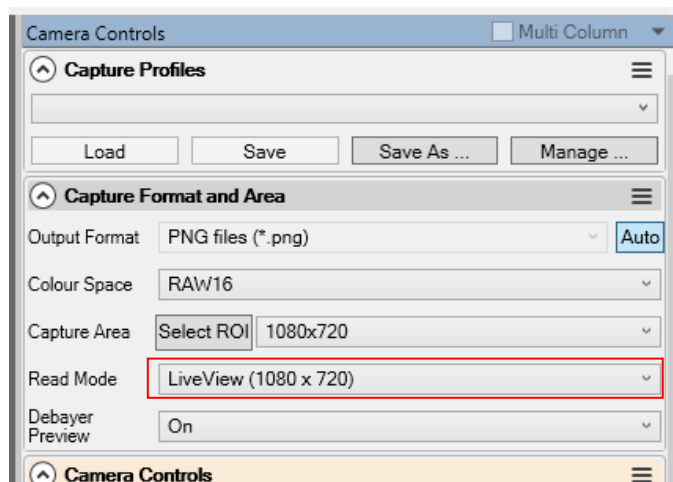


With the Focuser connected you will see an extra window in the lower right corner of SharpCap. You can control the Focuser manual from there. There are also several ways to automatically focus the camera. For the Focuser to work you need to have the camera in AF mode with an autofocus lens.

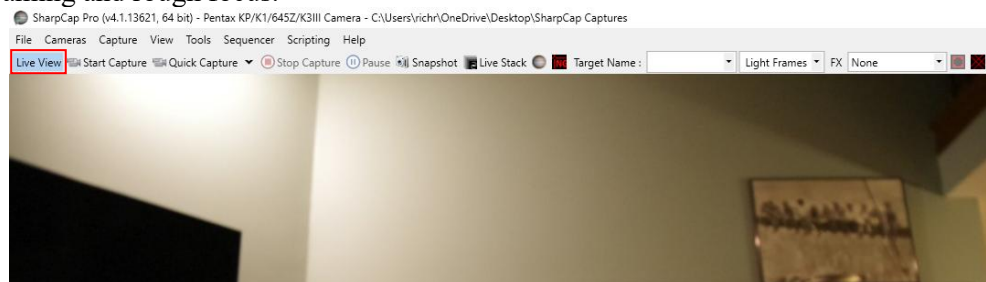


1.4 Live View With SharpCap

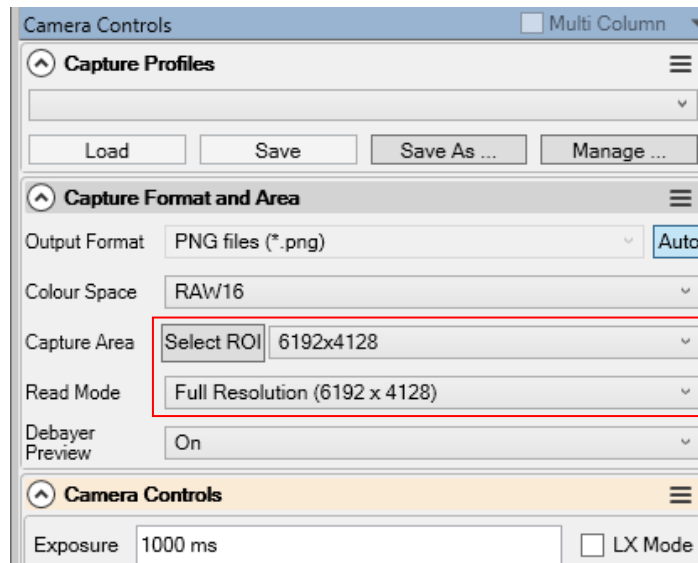
To use Live View in SharpCap first change the ReadMode to Live View. **Note: This does not work with the KF or K-70.**



Then press the Live View button on the upper left. This will start live streaming of the camera that can be used for framing and rough focus.



To turn off Live View first turn off the Live View button in the upper left and then set the Read Mode back to Full Resolution and set the Capture Area to full resolution.



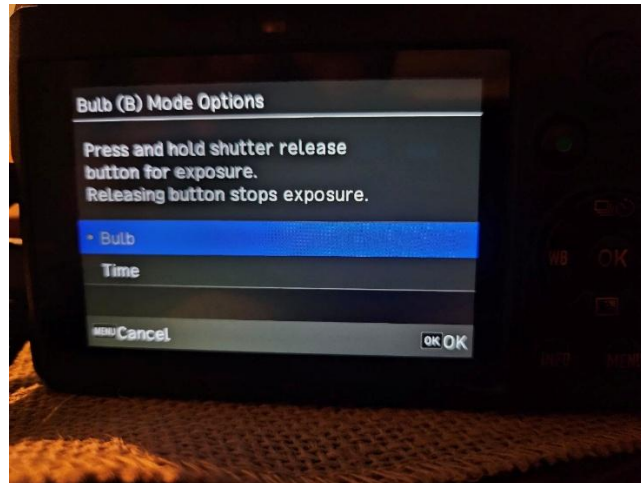
1.5 Bulb Mode With SharpCap

Bulb mode does not require any additional cables. Just set the camera to Bulb mode before connecting. To change back to Manual mode first disconnect and then change the more.

Once you have Bulb mode set be sure to press the Green button to switch from Time to Bulb mode. The camera should look as follows.



If you are using a K3-Mark III also make sure to set the Bulb mode to Bulb in the menu.



B. GETTING STARTED WITH N.I.N.A.

2.1 NINA and Driver Installation

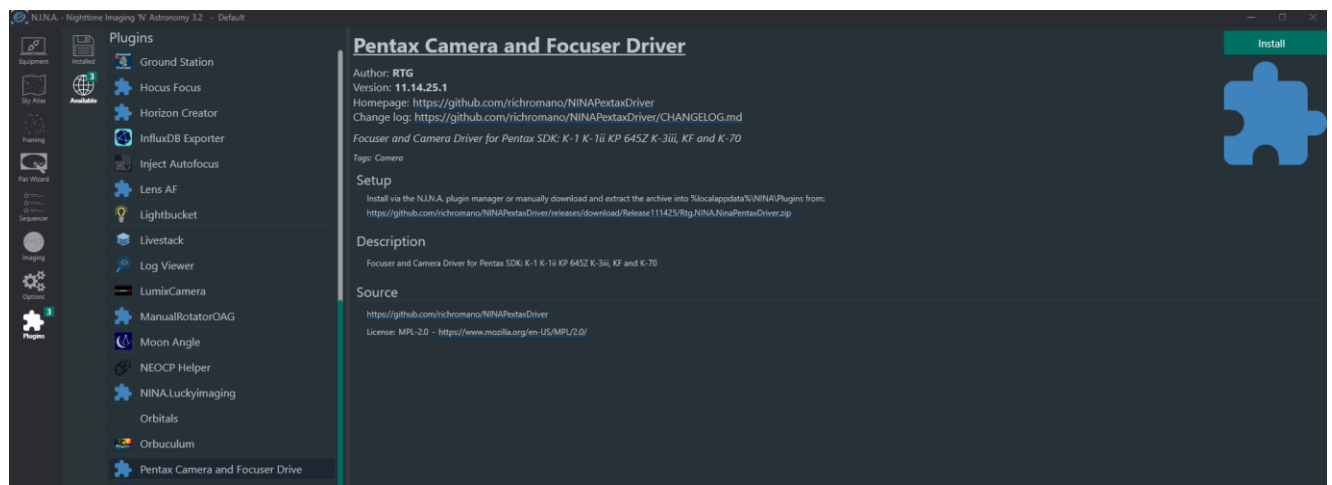
It is best to not use the ASCOM driver. Instead you should use the plugin in NINA.

Install NINA 3.2:

https://f002.backblazeb2.com/file/ninasetup/Releases/3.2.0.9001/NINASetupBundle_3.2.0.9001.zip

Extract and run NINASetupBundle.exe

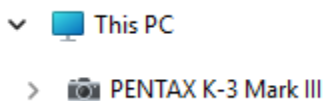
Start NINA and look for the Pentax PlugIn



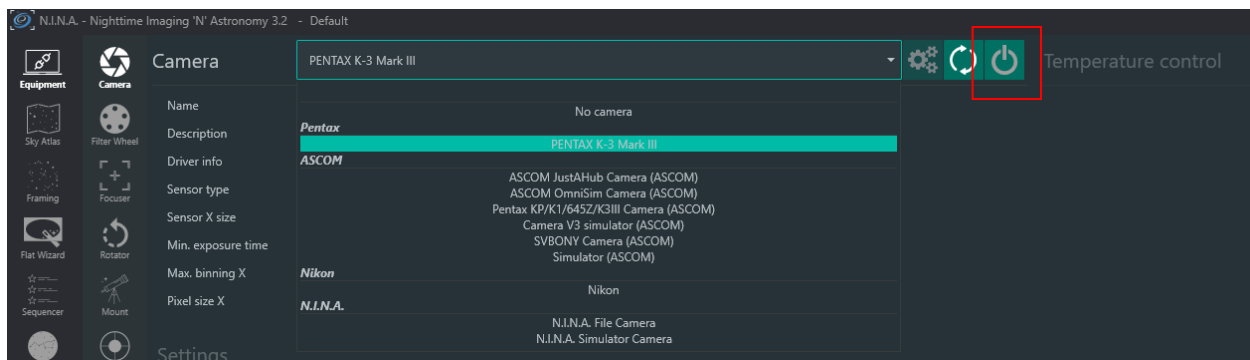
Click on Install on the upper right

2.2 N.I.N.A. First Steps

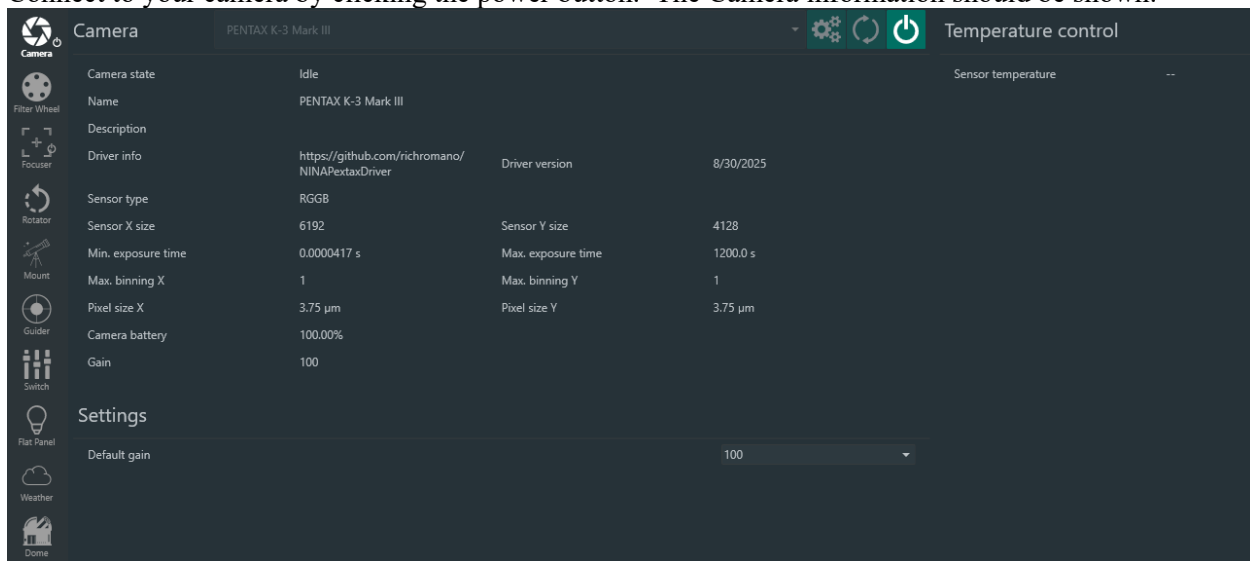
Turn on your camera and make sure the USB mode is set to MTP/PTP mode. Set the Camera to M mode and shutter to Electronic Shutter. Connect your camera to the computer and make sure it is recognized as a camera.



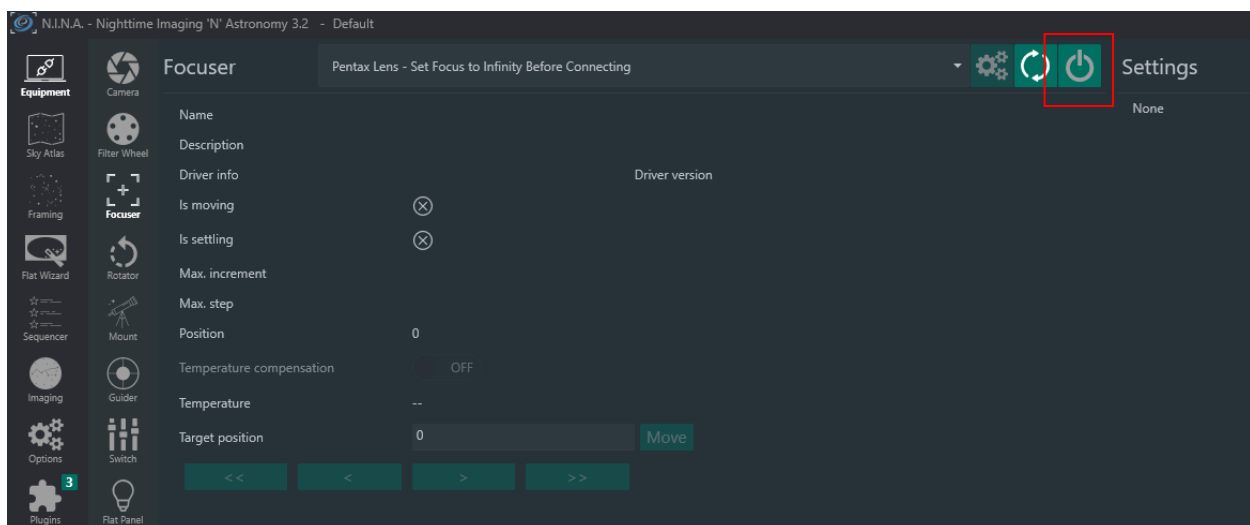
Open NINA and switch to the Equipment pane. In the drop down you should see and select the available Pentax Camera.



Connect to your camera by clicking the power button. The Camera information should be shown.

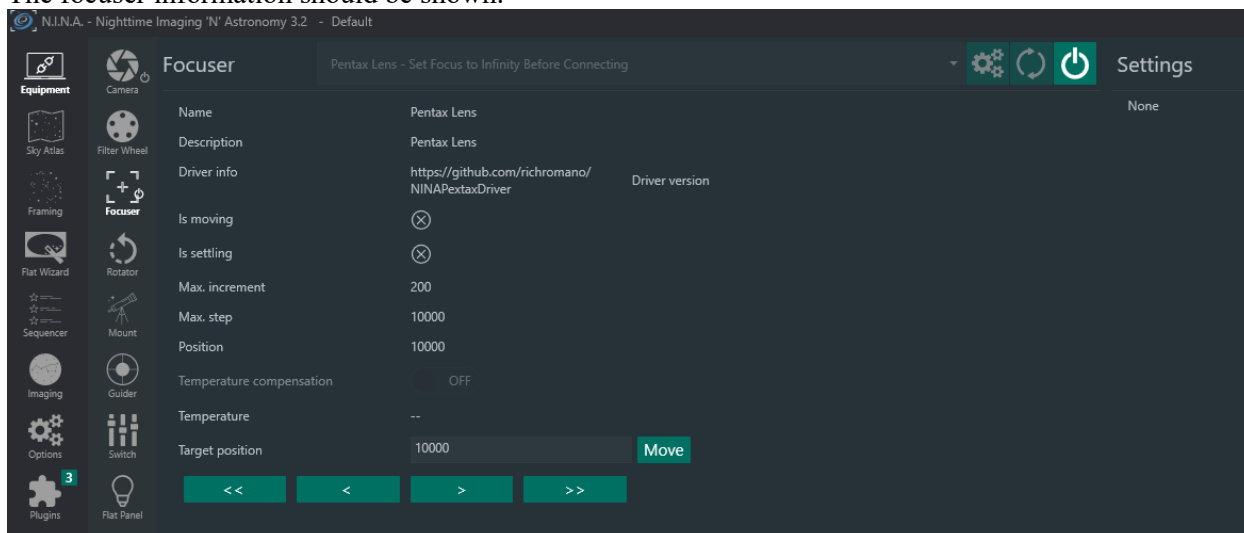


Once you connect the camera you can also connect the focuser. **Note that the KF and K-70 do not support the focuser.**



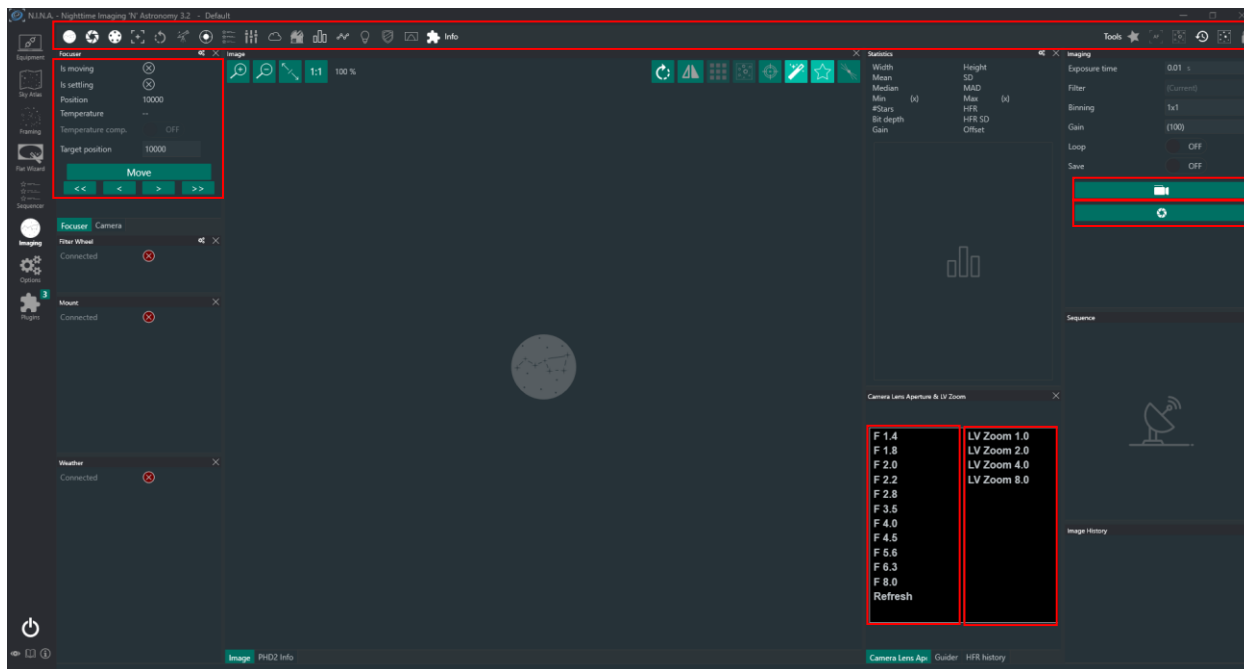
Select the Pentax Lens and turn your lens to infinity focus. Again press the power button to connect.

The focuser information should be shown.



Next move to the Imaging Tab. Always test here before using the Sequencer.

You should see several controls for the Pentax Camera.



Your window arrangement may be different than shown. You can turn on windows using the buttons across the top. You then need to arrange them so you can see all the controls.

Upper left is the focuser control. You can focus in and out with the lens (not support of KF or K-70). Upper right you can press the video camera button which starts the liveview. You can press it again to stop it. Just below the video camera button is the shutter but which takes a single image. In the lower right you can change the aperture values of the lens. Not all values may be available for a lens and they will be greyed out. If you change lens or zoom a lens you should press the Refresh item. Next to the

aperture control is the Live view zoom. When live view is active you can change the zoom to assist with manual focus.

2.2 Bulb Mode With N.I.N.A.

Bulb mode does not require any additional cables. Just set the camera to Bulb mode before connecting. To change back to Manual mode first disconnect and then change the more.

Once you have Bulb mode set be sure to press the Green button to switch from Time to Bulb mode. The camera should look as follows.



If you are using a K3-Mark III also make sure to set the Bulb mode to Bulb in the menu.

