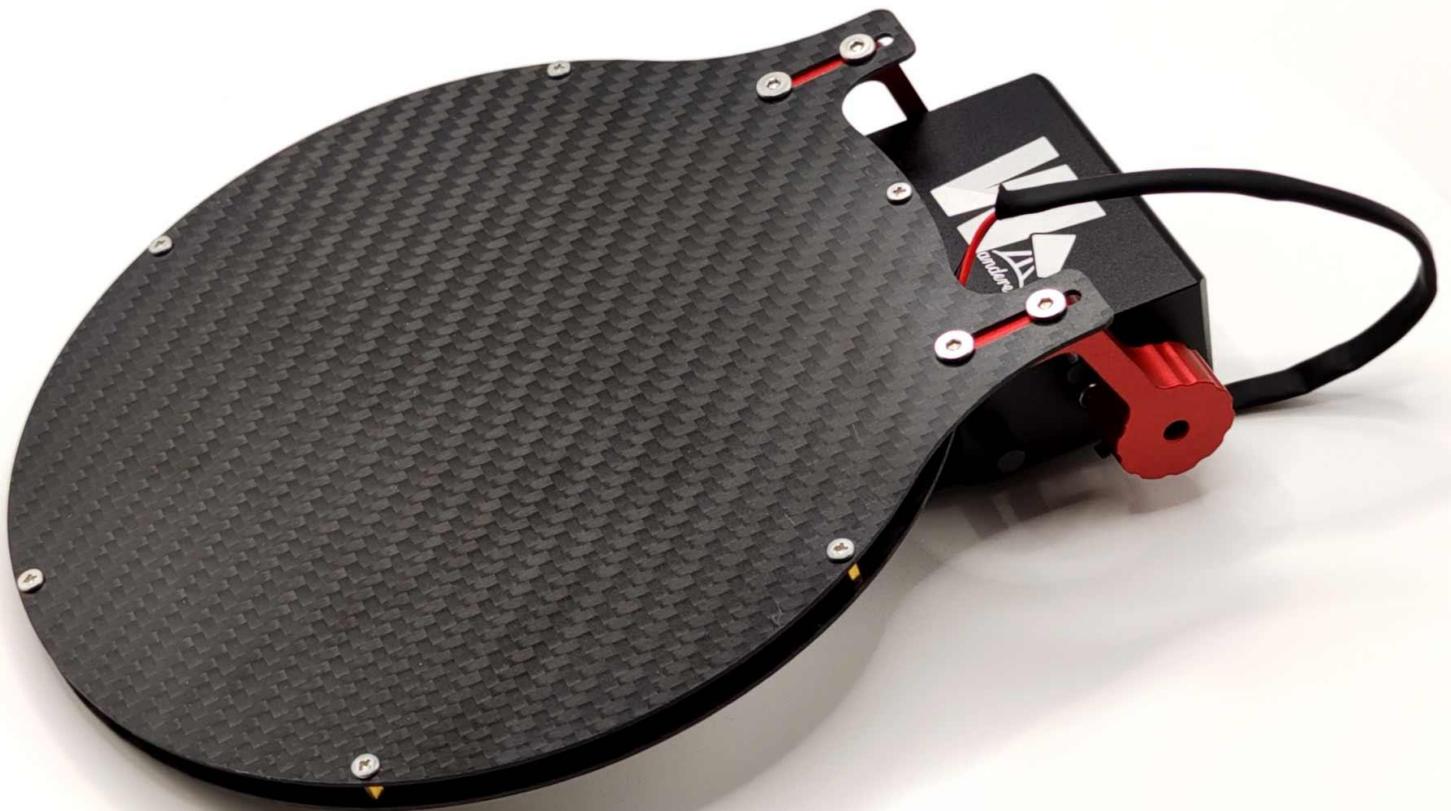


# WandererCover

## V3

**Motorized Flat Panel**

**Manual**



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## 1.Introduction

WandererCover V3 is a motorized flat panel specially designed for remote and backyard astrophotography. It can help to shoot flats as well as open and close the cover. The WandererCover V3 provides six models : 80mm, 100mm, 125mm, 150mm, 190mm and 225mm in luminous diameter, they can meet the needs of telescopes of different diameters.

Feature 1: WandererCover V3 is 100% made of aluminum alloy + carbon fiber, which ensures rigidity and minimizes weight. The total weight of the 80mm luminous diameter model is only 183g, and the total weight of the 225mm luminous diameter model is only 440g. With such a lightweight design, the motorized flat panel does not burden the dew shield or equatorial mount.

Feature 2: WandererCover V3 only needs a USB cable to connect to the PC, no additional DC power cable is required (the USB port needs to be able to provide 1A current, it is recommended to use the WandererBox series or other powered USB hub). This makes cable management easier.

Feature 3: WandererCover V3 can set the opening and closing positions to adapt to the installation of different telescopes.

Feature 4: WandererCover V3 provides 255 levels of brightness with no banding. The maximum brightness is close to 1000 nits so it only takes a fraction of a second to a few seconds to shoot a 3nm narrow-band flat, and the minimum brightness is also dim enough. The flat panel uses two layers of diffuser to ensure the uniformity of flats.

## 2.Installation

Pass the included nylon cable ties through the two slots of the WandererCover V3 and tighten them, and fix the WandererCover V3 on the telescope tube or dew shield. If the length of the cable tie is not enough, connect two cable ties together. If the current angle of the flat panel is not suitable for installation, please follow the steps below to install the WandererConsole and temporarily open the flat panel to the middle position before installing. Connect WandererCover V3 to the computer with the included USB2.0 cable (the USB port needs to be able to provide about 1A current), and everything is ready.

### 2.1 Control via WandererConsole

Visit the [www.wandererastro.com](http://www.wandererastro.com) to download the latest version of the WandererConsole compressed file, and double-click setup.exe to install it after extraction.

After the installation is complete, start WandererConsole and find the Flat Panel interface. Find and select the COM port of WandererCover V3 in the drop-down bar on the left, check "V3" below, and then click Connect. (figure1)

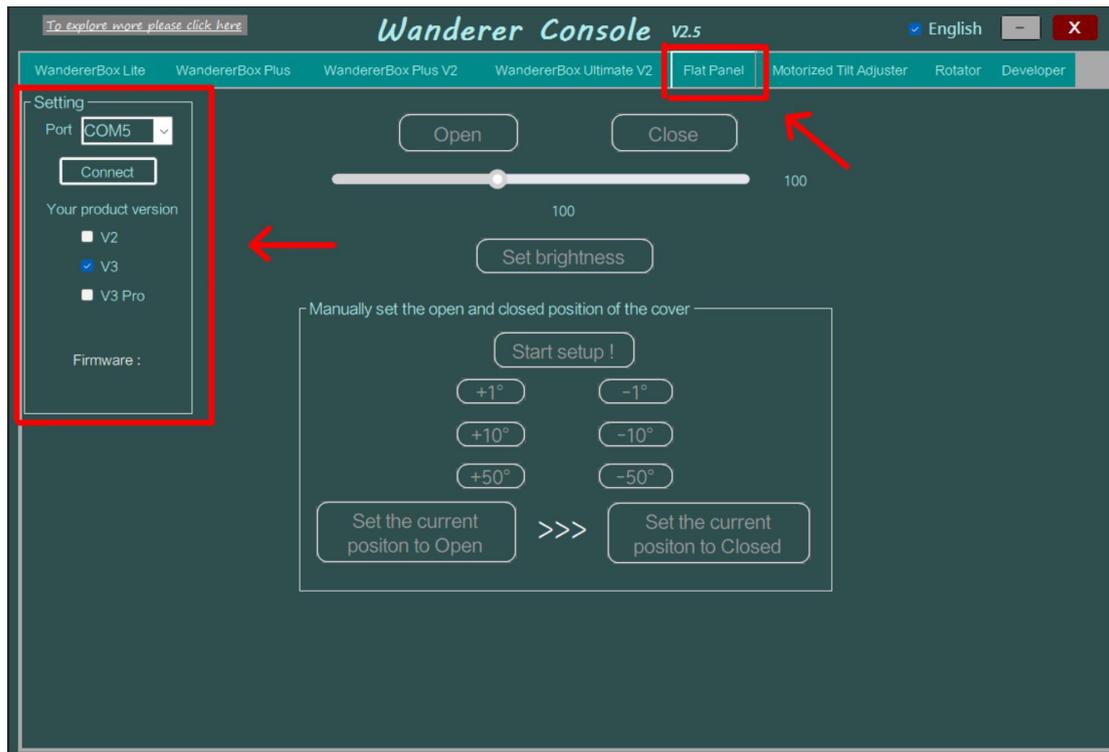


Figure 1

After the connection is successful, (1) Click "Start Setup!" to set the opening position of the cover. (2) Move the cover to desired open position by clicking the "+1°", "+10°" and "+50°" control button. (3) Click "Set current position to open" to confirm. (4) Click the "-1°", "-10°" and "-50°" control button to move the cover to desired closed position. (5) Click "Set current position to off" to confirm. (Figure 2)

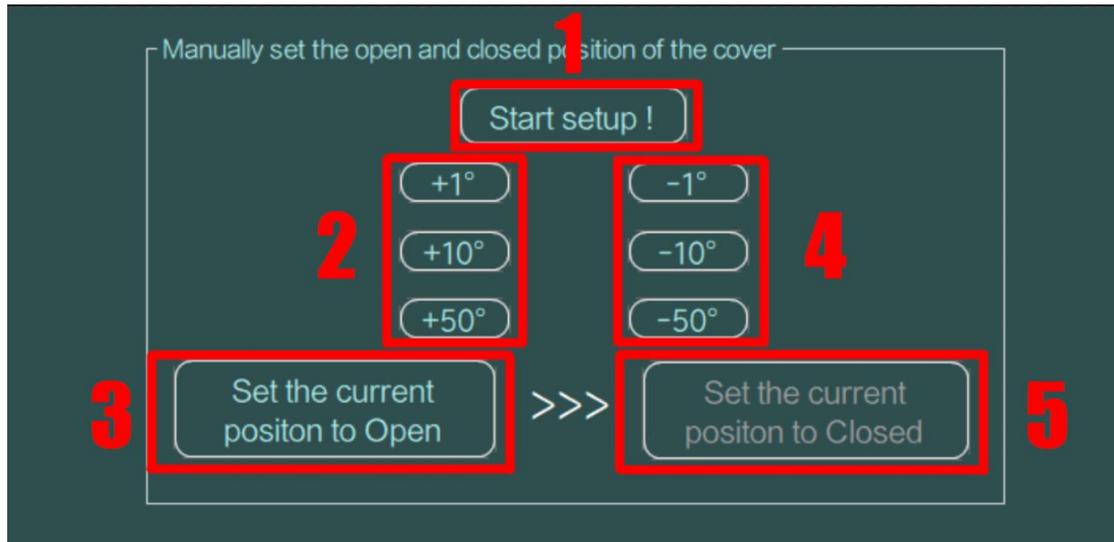


Figure2

After completing the settings, you can click Open and Close to control the cover and set the brightness of the flat panel.

**Pay attention:**

1. Stalling is strictly prohibited. During the setup process, be sure to control the movement of the cover by small amounts. There is a small probability that the motor gearbox will be damaged if the rotor stalls for many times.
2. After installing the WandererCover V3 on a new telescope, be sure to reset the open and closed positions.
3. If WandererCover V3 is powered off accidentally during the movement, the open and closed positions must be reset.

## 2.2 Control via ASCOM

WandererCover V3 is ASCOM compatible and can be controlled by software such as N.I.N.A, S.G.P., etc. Take N.I.N.A as an example below.

First download the ASCOM driver of WandererCoverV3 from [www.wandererastro.com](http://www.wandererastro.com) and install it. (Figure 3)

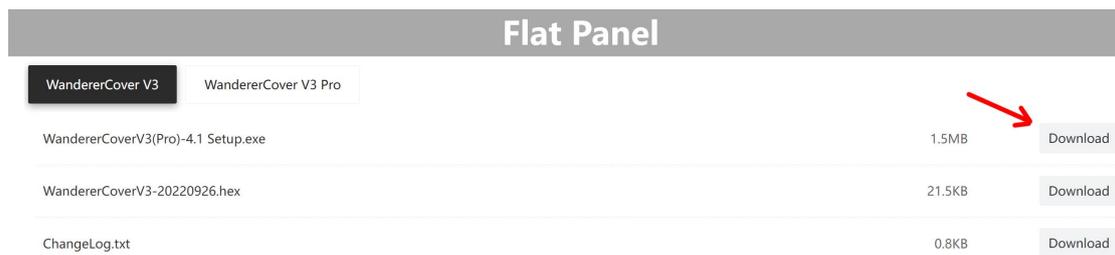


Figure 3

After the installation is complete, open N.I.N.A. then you can see the driver of WandererCover V3. After selecting it, click to connect directly, and the driver will automatically search for the COM port. (Figure 4)



Figure4

When using it for the first time, a message box of "Please configure the WandererCover V3 in WandererConsole first!" will pop up, please follow the steps in 2.2 to complete the setup. After the setup is complete, open N.I.N.A. to connect.

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Once connected, you can open , close or adjust the brightness. (Please note that WandererConsole and ASCOM are completely independent, please disconnect in N.I.N.A. when connecting WandererConsole, and vice versa, otherwise it cannot be connected.)

## 3. Firmware update

If the message box "Please upgrade the firmware" appears when connecting, it means that the current firmware is out of date and the latest firmware needs to be upgraded.

First, download the firmware upgrade tool (Figure 5) and the firmware file (Figure 6) with a .hex suffix from [www.wandererastro.com](http://www.wandererastro.com).

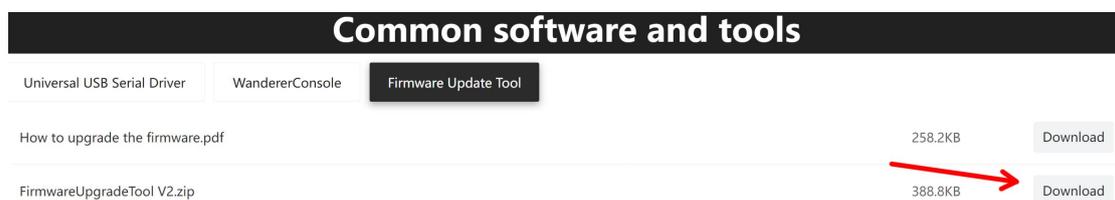


Figure5



Figure6

After extracting the compressed file, click Xloader.exe to open the firmware upgrade tool (Figure 7).

| Name          | Date modified   | Type                  | Size   |
|---------------|-----------------|-----------------------|--------|
| avrdude.conf  | 2021/1/24 15:34 | CONF File             | 496 KB |
| avrdude.exe   | 2021/1/24 15:34 | Application           | 550 KB |
| devices.txt   | 2022/8/28 14:25 | Text Document         | 1 KB   |
| libusb0.dll   | 2021/1/24 15:34 | Application extens... | 43 KB  |
| license.txt   | 2021/1/24 15:34 | Text Document         | 1 KB   |
| X XLoader.exe | 2021/1/24 15:34 | Application           | 271 KB |

Figure7

Select the downloaded firmware file with the suffix .hex, select the product model and the correct COM port, and then click Upload (Figure 8).

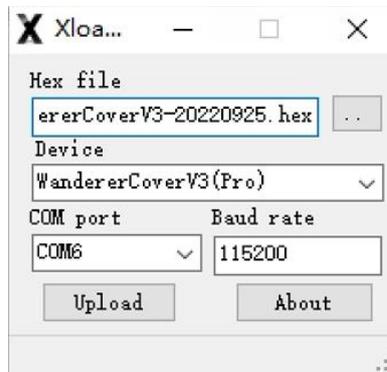


Figure8

When you see "xxxx bytes uploaded", it means the upload was successful. If stuck in the Uploading process, try to upload again after reconnecting the USB.

## 4.FAQs

### 4.1 Why can't the driver be found in Nina after the driver has been installed?

All Wanderer products do not support N.I.N.A 1.0. Please upgrade to the latest version of N.I.N.A. .

### 4.2 Why can't the computer recognize the USB?

This is because the USB serial port driver is not installed, please visit the website and download the serial port driver.

### 4.3 The WandererCover V3 disconnects or does not respond after first operation?

This is due to unstable USB 5V power supply. Make sure your USB port can provide enough power.

### 4.4 What luminous diameter should I choose?

Generally speaking, the luminous diameter should be slightly larger than the dew shield diameter.