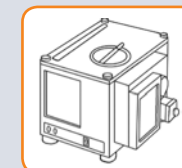


# Shamrock 193i Quick Start Guide



## 2 Unpacking the Boxes

### Shamrock 193i



Shamrock 193i Spectrograph

### Accessories\*



Grating(s)



Accessory Slits and Coupling Interfaces



Output Port Adaptor(s)



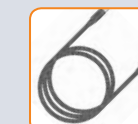
Camera



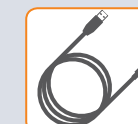
Allen Key Set



Power Supply with Country Specific Power Cord



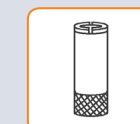
I2C Cable



USB 2.0 Cable



Software or Driver CD and User Manual on CD



Filter Insertion/removal tool

\* The Shamrock 193i may be supplied with a range of standard and optional accessories as specified at the time of ordering.

## 1 Preparing Your Facility



Handle the Shamrock and accessories with care. The SR193i weighs 7.5 kg [16 lb 5 oz].



Observe anti-static precautions when installing the spectrograph, camera and accessories.



Ensure sufficient clearance around cameras and power supply vents (Do **not** block vents when operating on benchtop).



Operation of the Spectrograph and camera close to intense pulsed sources (e.g. plasma and X-ray sources) may compromise performance.



Keep dry, <70% humidity non-condensing.



Use correct power supply and cables.



Operate at a constant temperature between 0°C and 30°C (temperature fluctuation during operation may result in calibration drift). Store between -25°C and 50°C.

Refer to the user manual for further information.

## 3 Installing Software (Solis or SDK)

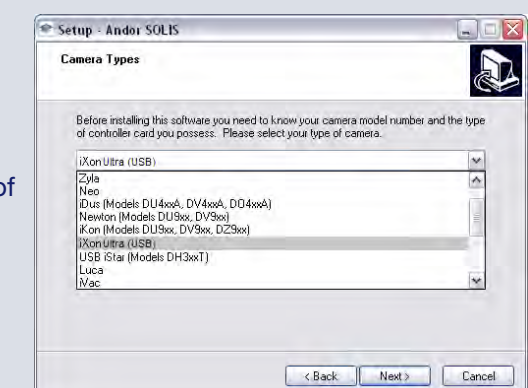
**You must have administrator access on your PC to perform this installation.**

The same instructions cover the installation procedure for Andor's Solis or SDK software, which is used in conjunction with third party software. If you are planning to run your camera through a third party interface you will require the Andor Drivers, called SDK.

Switch on the PC, insert CD and run the "setup.exe" file on the CD or download location.

- Confirm the version of software (and 32 or 64-bit as required).
- Follow the on screen prompts.
- Select the installation directory when prompted.
- When prompted for camera type select the required camera.
- On the final window click on "Install". During the installation a number of other windows will appear as various drivers are installed.
- To complete the installation:
  - **USB cameras**, click the **Finish** button
  - For **non-USB cameras**, when prompted select "Yes, restart the computer now" and then click on the **Finish** button.

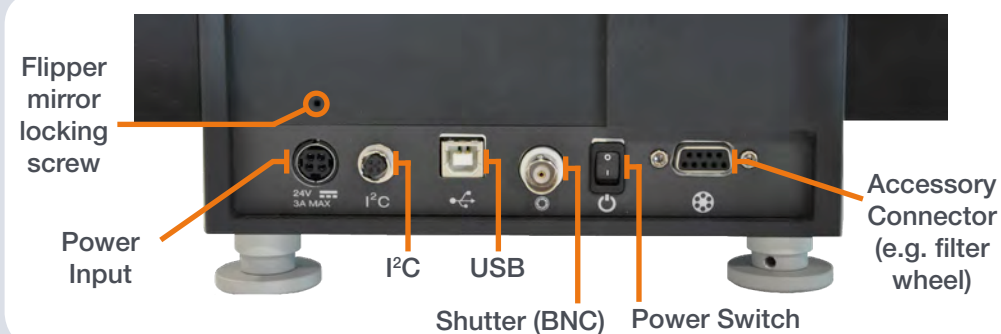
For more information visit: [andor.com/software/software\\_support/](http://andor.com/software/software_support/)



## 4 Connecting your Camera and Accessories

### Refer also to your camera and shamrock 193i user manuals

1. The SR193i should be either connected to the camera by either:
  - **I<sup>2</sup>C cable** (supplied, if applicable), or
  - **USB cable** (provided).
2. If your Spectrograph has a shutter, then this is controlled through the I<sup>2</sup>C cable (if used for the connection), or through the BNC connection via a cable from the camera (supplied), or for simple open/close operation no connection is required.
3. The SR193i accessories - motorised slits, filter wheel, shutter - are all 'plug and play' and do not require any setup.



Left: Connection Panel of the Shamrock 193i

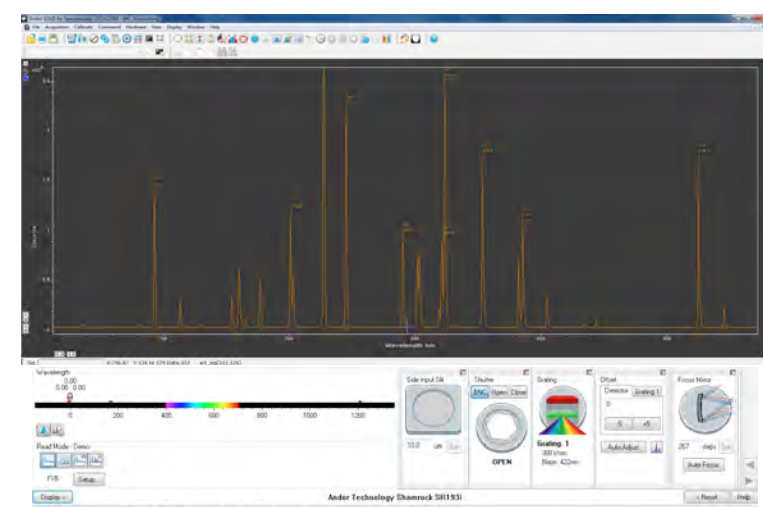
**Note:** If your SR193i is a dual exit system (model SR193i-Bx), then you must loosen fully or remove the locking grub-screw used during shipping to hold the flipper mirror in place.

## 5 Setting up Solis for the Shamrock 193i Spectrograph

### Refer also to your Solis software guide

#### Configuring Solis for the Shamrock 193i

1. Power on the Shamrock 193i and wait until the short start-up tone signals it has finished system checks.
2. Start Solis.



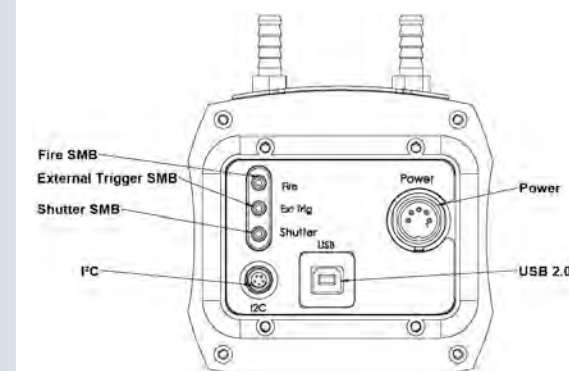
Above Accessories are automatically detected and displayed in the Solis software.

## 6 Connecting your Camera and Switching it on

### Ensure that the camera AND your PC are switched OFF.

1. Insert the power cable from the power supply into the power connector at the rear of the camera. Secure in position using the screwlock (where applicable).
2. Insert the mains cable into the camera power supply unit.
3. Connect the USB cable to the camera and an available USB port on the PC.
4. Switch on power to the camera (Note that the iStar also has a power switch on the rear connections panel).
5. Power up the Shamrock 193i followed by the PC.
6. Start your software e.g. Solis.
7. Start acquiring data.

#### Camera Rear Panel Connections



Above: Rear panel shown for Newton camera. Refer to camera User Guide. Connections may vary with camera model.

## ? Troubleshooting

#### Camera is not recognised by PC

- Check that the camera power and USB cable are connected securely and the mains power cable is inserted.
- Check that the drivers have been installed properly (Control Panel /System/Hardware /Device Manager /Imaging Devices).



#### Spectrograph is not recognised by Solis

- Ensure that the Shamrock 193i has finished its system checks before attempting to connect with it.
- Check the connections between the camera, PC and Spectrograph.

#### Shutter is not opening

- The shutter should always be controllable open/closed in the Solis GUI (when shutter is present). When the I<sup>2</sup>C cable or the BNC input is used, the 'BNC' option should be selected in the software to enable operation of all shutter modes.

#### Turret lid difficult to open

- Rotate the lid lock from the locked  to the unlocked  position.
- The turret lid can then be lifted up using the handle of the turret lid.

#### Communication error when selecting side port

- When shipping, a locking screw is used to secure the flipper mirror in dual exit systems (SR193i-Bx). This needs to be loosened fully/removed before use.

For additional troubleshooting information please refer to the user manual on the CD provided and for technical information about the Shamrock 193i go to: [andor.com/shamrock](http://andor.com/shamrock)