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SVBONY SV172 & SV241

SVBONY SV172 Lens Warmer & SV241 Power Adapter Instruction Manual

INTRODUCTION

This manual provides detailed instructions for the SVBONY SV172 Lens Warmer and the SV241 Astronomy Telescope Power Adapter. These devices are designed to enhance your astrophotography and observation experiences by preventing lens condensation and providing efficient power distribution for your astronomical equipment.

PRODUCT OVERVIEW: SV241 ASTRONOMY TELESCOPE POWER ADAPTER

The SV241 Astronomy Power Adapter is a versatile hub for managing power and data connections for your astrophotography setup. It features multiple output ports and robust protection mechanisms.

Key Features:

- **Multi-port Design:** Equipped with 6 DC 5.5*2.1 outputs, each supporting up to 10A, 2 USB 3.1 ports for high-speed camera readout, 1 USB 2.0 port, and 1 Type-C port for various devices like equatorial mounts and guide cameras. Two USB ports share 5V 8A power, ideal for dew heaters.
- **Safe and Secure:** Features built-in ESD protection, reverse polarity prevention, and efficient filtering to prevent short circuits, safeguarding your connected devices.
- **Portable Design:** Weighing just 125g and measuring 96x61x25mm, this compact adapter is designed for easy transport. It includes M4 and UNC 1/4 screw holes on the bottom for flexible installation.

Visual Guide: SV241 Power Adapter

SV241

An Efficient Power Solution for Your Astronomical Equipment



(Note: The package contains only 1 piece of SV241 Telescope Power Adapter.)

Image: Overview of the SV241 Astronomy Telescope Power Adapter, highlighting its various connection points and compact design.

Interface Name



Image: Detailed view of the top interface of the SV241, showing USB Type-C, USB 3.1 Type-A, and USB 2.0 Type-A ports.

Interface Name



Image: Detailed view of the bottom interface of the SV241, illustrating the DC 5.5*2.1 power outputs and USB Type-B PC Data Interface.

Comprehensive Protection



ESD
Protection



Reverse Polarity
Protection



Filter
Protection



Short-circuit
Protection

Image: Diagram showing the comprehensive protection features of the SV241, including ESD, reverse polarity, filter, and short-circuit protection.

Compact and Portable

Delicate and compact, Lightweight and portable
Ready to use out of the box
It fits easily into the equipment bag without taking up much space.

Weight: 125g



Image: Illustration of the compact dimensions (96x61x25mm) and light weight (125g) of the SV241, emphasizing its portability.

SV241 Instructional Videos:

Video: This video demonstrates how to simplify your power cord setup using the SV241 HUB BOX, showcasing its various ports and cable management for astronomical equipment.

Video: This video provides an overview of the SV241's multi-interface and connectivity options, illustrating how it integrates into a heavenly backyard astronomy setup.

PRODUCT OVERVIEW: SV172 LENS WARMER

The SV172 Dew Heater Strip is essential for preventing condensation and frost on your camera lenses and telescope optics during cold or humid conditions.

Key Features:

- **Effective Dew Prevention:** Warms lenses to prevent fogging, condensation, frost, dew, or mold growth, ensuring clear optics for photography and observation.
- **USB Powered:** Connects to a power bank or any USB port with a 1.8m cable, requiring 1.9A to 2.0A input current at 5V.

- **Universal Fit:** The 320mm long and 50mm wide band has a 240mm heated portion, suitable for lenses below 76mm in diameter. It can also be used to warm water bottles or as a wrist/knee strap.

Visual Guide: SV172 Lens Warmer

Compatible with Lens Below 76mm

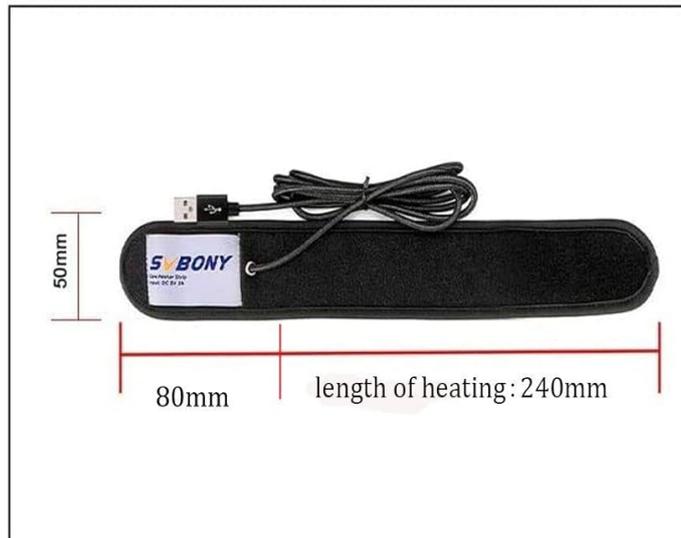


Image: The SV172 Lens Warmer shown wrapped around a camera lens, demonstrating its compatibility with lenses up to 76mm in diameter.



Image: The USB cable of the SV172 Lens Warmer connected to a power bank, illustrating its portable power solution.



Hook-and-Loop Fastener



Unique design for safe heating

Image: Close-up of the hook-and-loop fastener on the SV172 Lens Warmer, showing its secure attachment mechanism and unique design for safe heating.



Image: Diagram showing the three temperature modes (Low: 100-113°F, Middle: 114-131°F, High: 132-145°F) adjustable via the power button on the SV172 Lens Warmer's controller.



Image: Visual comparison of a lens without a heater (blurry image) and with a heater (clear image), demonstrating the SV172's effectiveness in preventing condensation.

SV172 Instructional Videos:

Video: This video demonstrates the SV172 lens warmer in use, showing how it is applied to a lens to prevent dew formation.

Video: This video illustrates the application of the SV172 lens warmer for deep sky photography, emphasizing its role in maintaining clear optics.

SETUP

Setting up the SV241 Power Adapter:

1. **Power Input:** Connect a 12V power source (e.g., a portable power station or a car cigarette lighter adapter) to the DC 5.5*2.5 power input port on the SV241.
2. **Mounting:** Utilize the M4 and UNC 1/4 screw holes on the bottom of the SV241 to securely mount it to your telescope rig or other suitable surface.
3. **Device Connections:** Connect your astronomical devices (cameras, mounts, focusers, etc.) to the appropriate output ports:
 - DC 5.5*2.1 outputs for 12V powered accessories.
 - USB 3.1 ports for high-speed data transfer from cameras.
 - USB 2.0 and Type-C ports for other USB-powered or data-connected devices.
4. **Computer Connection:** Connect the SV241 to your computer using a USB Type-B PC Data Interface cable for data transfer and control.

Setting up the SV172 Lens Warmer:

1. **Wrap Around Lens:** Gently wrap the SV172 Dew Heater Strip around the barrel of your camera lens or telescope. Ensure the heated portion (240mm) covers the area prone to dew.
2. **Secure Attachment:** Use the hook-and-loop fastener to secure the strip firmly but not overly tight around the lens.
3. **Power Connection:** Connect the SV172's USB cable to a 5V USB power source. This can be a power bank, a USB port on your computer, or one of the 5V USB outputs on the SV241 Power Adapter.

OPERATING INSTRUCTIONS

Operating the SV241 Power Adapter:

Once connected to a 12V power source, the SV241 will distribute power to all connected devices. The USB data ports will facilitate communication between your devices and computer.

- Ensure all cables are securely plugged into their respective ports to prevent accidental disconnections during operation.
- Monitor your device's power consumption to stay within the 10A maximum current for DC outputs and 5V 8A shared power for USB ports.

Operating the SV172 Lens Warmer:

After connecting the SV172 to a 5V USB power source, use the inline controller to adjust the heating mode.

- **Power On/Off:** Press the power button on the controller to turn the heater on or off.
- **Adjust Temperature:** Press the power button repeatedly to cycle through the three heating modes:
 - **Low Mode:** 100-113°F (38-45°C)
 - **Middle Mode:** 114-131°F (46-55°C)
 - **High Mode:** 132-145°F (56-63°C)
- The indicator lights on the controller will show the currently selected mode.

MAINTENANCE

General Care:

- Keep both devices clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Avoid exposing the devices to extreme temperatures or direct sunlight for prolonged periods when not in use.
- Ensure all cables are stored neatly to prevent tangling or damage.

Safety Precautions:

- The SV172 Lens Warmer is specifically designed for dew prevention on camera lenses and telescopes.
- Do not allow children to touch the devices unsupervised.
- Keep the SV172 out of direct sunlight to prevent overheating when not in active use on a lens.
- Always ensure correct polarity when connecting power to the SV241 to avoid damage, although it has built-in reverse polarity protection.

TROUBLESHOOTING

- **SV172 not heating:** Check the USB power source. Ensure it provides 5V and sufficient current (1.9A-2.0A). Verify the cable connection and the selected heating mode on the controller.
- **Lens still fogging:** Increase the heating mode on the SV172. Ensure the heated portion of the strip is directly in contact with the lens barrel. In extremely cold or humid conditions, multiple dew heaters might be necessary.
- **SV241 devices not powering on:** Verify the 12V power input to the SV241. Check all device connections for looseness. The SV241 has short-circuit and over-current protection; if a device draws too

much power, it might temporarily shut down that output. Disconnect and reconnect the device.

- **Data transfer issues with SV241:** Ensure the USB Type-B PC Data Interface cable is securely connected to both the SV241 and your computer. Check your computer's device manager for proper recognition of the USB hub.

SPECIFICATIONS

SV241 Astronomy Telescope Power Adapter:

- **Dimensions:** 96mm x 61mm x 25mm
- **Weight:** 125g
- **DC Outputs:** 6 x DC 5.5*2.1 ports, up to 10A each
- **USB Data Ports:** 2 x USB 3.1, 1 x USB 2.0, 1 x Type-C
- **USB Power Output:** 2 x USB ports sharing 5V 8A power (ideal for dew heaters)
- **Mounting:** M4 and UNC 1/4 screw holes
- **Protection:** ESD protection, reverse polarity prevention, efficient filtering, short-circuit protection
- **Hardware Interface:** USB
- **Special Feature:** Portable
- **Compatible Devices:** Camera, Computer, Laptops, various astronomical accessories

SV172 Lens Warmer:

- **Band Length:** 320mm
- **Band Width:** 50mm
- **Heated Portion Length:** Approximately 240mm
- **USB Cable Length:** 1.8m
- **Input Voltage:** 5V
- **Input Current:** 1.9A to 2.0A
- **Temperature Modes:** Low (100-113°F), Middle (114-131°F), High (132-145°F)
- **Application:** Prevents fogging/dew on camera lenses and telescopes, can warm water bottles, used as wrist/knee strap.

WARRANTY AND SUPPORT

SVBONY products are designed for reliability and performance. For any questions, technical assistance, or warranty claims, please refer to the official SVBONY website or contact their customer support directly. Keep your purchase receipt as proof of purchase for warranty purposes.

Return Policy: 30-day refund/replacement policy applies as per purchase terms.