

Celestron 18774-CGL

Celestron PowerTank 12 Portable 12V Power Supply User Manual

Model: 18774-CGL

1. INTRODUCTION

The Celestron PowerTank 12 is a portable, rechargeable 12V power supply designed to provide power for computerized telescopes, astronomy accessories, and other electronic devices. It features a 7-amp hour sealed lead-acid battery with an 84 Wh capacity, two 12V cigarette lighter ports, two USB ports, and integrated red and white LED flashlights. This manual provides instructions for the safe and effective use, setup, operation, and maintenance of your PowerTank 12.

2. SAFETY INFORMATION

- The PowerTank 12 contains a sealed lead-acid battery. Handle with care and ensure proper recycling at the end of its lifespan.
- Do not expose the unit to extreme temperatures, moisture, or direct sunlight for prolonged periods.
- The unit features a built-in circuit breaker for safety. If the unit stops functioning, check for an overload condition.
- Always ensure proper ventilation during charging.
- This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm (Proposition 65 warning). Wash hands after handling.
- Do not attempt to open or service the battery unit yourself. Refer all servicing to qualified personnel.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Celestron PowerTank 12 Unit
- Cigarette Lighter Adapter Cable
- 110V/220V Switchable Universal AC Adapter
- Shoulder Strap

- Car Battery Jump Start Cables (Positive and Negative Terminals)

4. PRODUCT FEATURES

Portable Power Supply

The PowerTank 12 provides 84 Wh of power from its 7-amp hour sealed lead-acid battery, making it suitable for extended use in remote locations.

Multiple Output Ports

- **Two 12V DC Output Ports:** Compatible with Celestron computerized telescopes and other 12V astronomy gear.
- **Two USB Ports (5V/1.5A):** For charging smartphones, tablets, GPS devices, and other USB-powered electronics.

Integrated Flashlights

- **Red LED Flashlight:** Preserves night vision during astronomical observations.
- **Bright White LED Flashlight:** Illuminates your setup area for packing up or general use.

Battery Status Indicator

LED indicators show the current charge status: Fully Charged, Charging, Needs Charging, and Ready to Use.

Emergency Car Battery Assist

Includes terminals to assist in topping off a weak car battery.



Figure 1: Front view of the Celestron PowerTank 12, showing the main spotlight, red light, USB ports, battery indicator, and 12V output ports.

5. SETUP AND INITIAL CHARGING

1. **Unpacking:** Carefully remove the PowerTank 12 and all accessories from its packaging.
2. **Initial Charge:** Before first use, the PowerTank 12 requires a full charge.
 - Connect the provided AC adapter to the DC 15V INPUT port on the PowerTank.
 - Plug the AC adapter into a standard wall outlet.
 - The "Charging" indicator light will illuminate.
 - Charge the unit for **14-16 hours** for the first charge. Some units may recommend up to 24 hours. Ensure the unit is not overcharged to prevent battery damage.
 - The "Fully Charged" indicator will light up when charging is complete.
3. **Power Switch:** The PowerTank features an ON/OFF/CHG switch. For charging, ensure the switch is in the "CHG" position. For operation, switch to "ON".



Figure 2: Close-up of the USB output ports and the battery indicator lights, showing "Fully Charged," "Charging," "Needs Charging," and "Ready to Use" statuses.

6. OPERATING INSTRUCTIONS

6.1. Using 12V DC Outputs

1. Ensure the PowerTank is adequately charged.
2. Set the ON/OFF/CHG switch to the "ON" position.
3. Connect your 12V device (e.g., computerized telescope, dew heater) to one of the two 12V 15A OUTPUT cigarette lighter ports.
4. Monitor the battery indicator lights to track remaining power.

6.2. Using USB Ports

1. Ensure the PowerTank is adequately charged.
2. Set the ON/OFF/CHG switch to the "ON" position.
3. Connect your USB-powered device (e.g., smartphone, tablet) to one of the two 5V/1.5A USB OUTPUT ports.
4. The device will begin charging.

6.3. Using the Flashlights

- **Red LED Flashlight:** Located on the top of the unit. Press the dedicated button to activate. This light is ideal for maintaining night vision during astronomy sessions.
- **White LED Flashlight (Spotlight):** Located on the front of the unit. Press the dedicated button to activate. This bright light is suitable for general illumination, setting up, or packing away equipment in the dark.

6.4. Car Battery Assist

The PowerTank 12 can provide assistance for a weak car battery. Use the included positive and negative terminals to connect to your car battery. Refer to your vehicle's owner's manual for specific instructions on jump-starting or assisting a car battery. **This feature is intended to top off a weak battery, not to jump-start a completely dead battery.**



Figure 3: The Celestron PowerTank 12 positioned on the ground, connected via a cable to a computerized telescope on a tripod, demonstrating its use as a portable power source.

7. MAINTENANCE

- **Regular Recharging:** To maintain battery health and extend its lifespan, recharge your PowerTank 12 every 3 months, even when not in use. This prevents deep discharge, which can damage sealed lead-acid batteries.
- **Storage:** Store the PowerTank in a cool, dry place away from direct sunlight and extreme temperatures. Ensure it is fully charged before long-term storage.
- **Cleaning:** Wipe the exterior of the unit with a soft, damp cloth. Do not use harsh chemicals or abrasive cleaners.
- **Battery Recycling:** The sealed lead-acid battery must be recycled properly. Do not dispose of it in household waste. Contact your local recycling center for information on battery disposal.



Figure 4: Rear view of the Celestron PowerTank 12, showing the warning label regarding regular recharging and battery recycling.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
PowerTank does not turn on.	Battery is fully discharged.	Connect to AC adapter and charge for 14-16 hours.
Devices not charging from 12V or USB ports.	Power switch is OFF or in CHG position. Battery is low. Device is incompatible or faulty.	Ensure switch is in "ON" position. Recharge the PowerTank. Verify device compatibility and functionality with another power source.
Charging indicator not lighting up.	AC adapter not properly connected. Wall outlet is not active. PowerTank is already fully charged.	Check all connections. Test the wall outlet with another device. Observe "Fully Charged" indicator.
Flashlights not working.	Battery is low. Flashlight button not pressed correctly.	Recharge the PowerTank. Ensure the button is pressed firmly.

9. SPECIFICATIONS

- **Model:** 18774-CGL
- **Battery Type:** Sealed Lead Acid
- **Battery Capacity:** 12V, 7Ah (84 Wh)
- **DC Output:** 2 x 12V, 15A (cigarette lighter ports)
- **USB Output:** 2 x 5V, 1.5A
- **AC Input:** 110V/220V Switchable (via included adapter)
- **Flashlights:** Red LED, White LED Spotlight
- **Dimensions:** 12 x 10 x 6 inches (30.5 x 25.4 x 15.2 cm)
- **Weight:** 8.5 pounds (3.86 kg)
- **Manufacturer:** Celestron

10. WARRANTY AND SUPPORT

The Celestron PowerTank 12 comes with a **2-Year US Warranty**. For warranty claims, technical assistance, or any questions regarding your PowerTank, please contact Celestron's customer support team. Unlimited support from US-based experts is available.

For the latest support information and contact details, please visit the official Celestron website or refer to the contact information provided with your product packaging.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question