

Portable Paramount Power using EGO Batteries

Revision 1.1

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Portable Paramount Power

The Paramount Robotic Telescope Mount requires a 48-Volt power supply, and newer generation Lithium-ion batteries offer a convenient portable power solution.

EGO Battery Overview

The Home Depot® sells a line of battery-powered outdoor equipment that incorporates the *EGO™ 56-Volt rechargeable battery*. EGO batteries, available in 2.0 Ah (amp hour) and 4.0 Ah models, are readily available, relatively inexpensive, long lasting, durable, and recharge quickly.

These features make EGO batteries a very convenient portable power supply for Software Bisque's Paramount robotic telescope mounts.

The [EGO 56-Volt 4.0 Ah Battery](#) is typically only sold on-line, and can power the Paramount mount for approximately 10 hours of typical observing*. The [EGO 56-Volt Lithium-ion 30 Minute Charger](#) provides fast, reliable recharges.

In order to power the Paramount with an EGO battery, Software Bisque offers the *EGO to Paramount Power Adaptor*. The documentation below describes how to connect the EGO battery to the EGO to Paramount Power Adaptor, and how to mount the adaptor and battery unit to your pier or tripod.

Please carefully read "Appendix A: EGO Battery Disclaimers" on page 9 before using the EGO battery to power your Paramount mount.

* Tests were conducted using a fully charged EGO 56-Volt 4.0 Ah battery on a Paramount MYT mount. The mount tracked at the sidereal rate, and a full speed slew to the other side of the pier performed every 10 minutes, for 10 hours, on a single charge.

Installation Instructions and Use

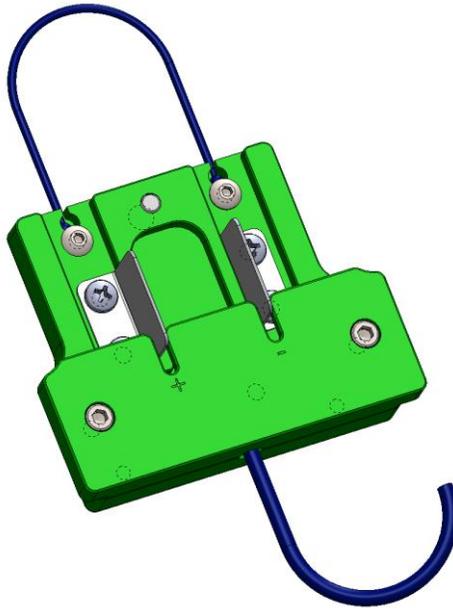


Figure 1: The EGO to Paramount Power Adaptor.

The EGO battery plugs directly into the EGO to Paramount Power Adaptor shown in Figure 1. Connecting the EGO battery to this power adaptor is very similar to connecting it to the battery charger. Following the tracks in battery's outer shell, place the small end in and then push firmly until both snap together.

The metal tabs on the adaptor snap into the battery's slotted positive and negative leads. Once plugged in, the end of cable can be plugged into the Paramount's Power In port and, provided the battery is charged, the mount should be ready to use.

Note that the adaptor's polarity is machined into both the top and bottom pieces of the adaptor. The two ends of the adaptor's power cable are attached to each metal tab (Figure 2). The cable has two color-coordinated terminal rings; red positive and black negative.

- *Do not reverse, alter or modify these cables for any reason!*
- *To avoid draining the battery, do not plug the adaptor into the mount until you are ready to power on the Paramount.*
- *Switching or changing anything out of this adaptor could result in shorting out the battery or Paramount.*

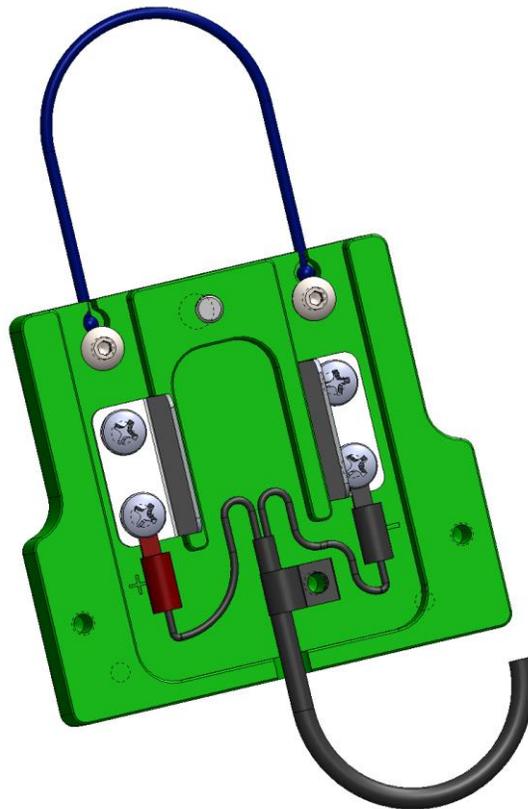


Figure 2: Inside the EGO Adaptor.

Mounting the Adaptor

Once the battery is attached to the Paramount Power Adaptor, you'll want to mount the unit to the side of the tripod.

- The adaptor includes a lanyard that can be used to hang the unit from a one of the Pyramid Portable Pier's legs (Figure 3), or from any other suitable "hook".

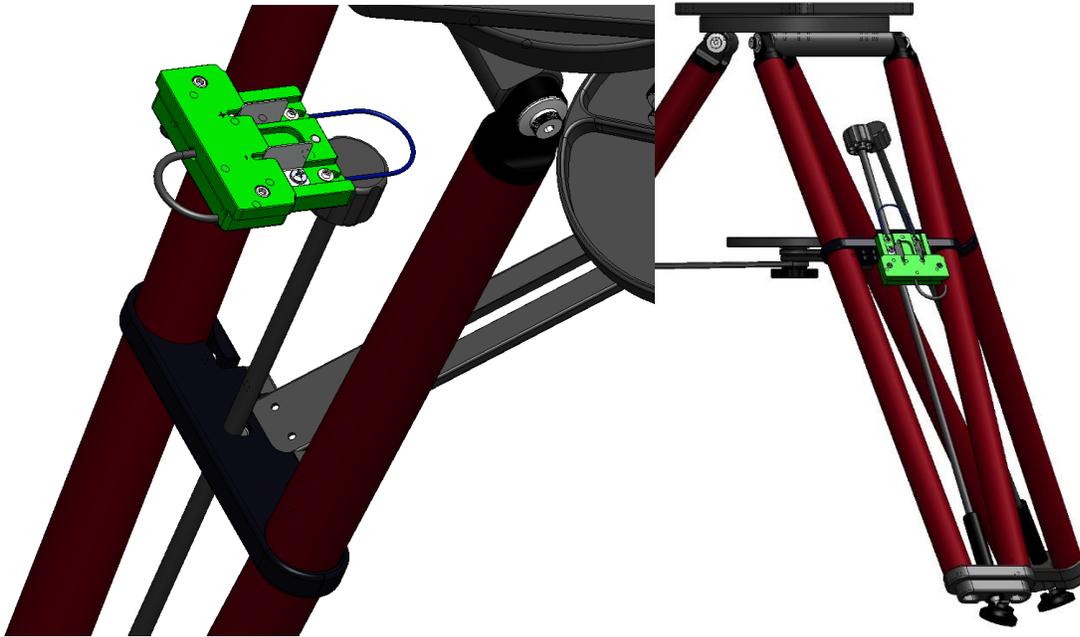


Figure 3: Mounting on Pyramid Portable Pier.

- The Paramount MYT Tripod tube has a machined teardrop indentation (Figure 5) that is designed to hold the plastic shoulder bolt (Figure 4) on the back side of the adaptor. Insert the shoulder bolt to the wide portion of the tear drop then slide it down in to the narrow part. The rubber bumpers will then rest on the tube to keep from scratching it (see Figure 6).



Figure 4: EGO Adaptor with shoulder bolt and rubber spacers.



Figure 5: Paramount MYT Tripod teardrop indentation.

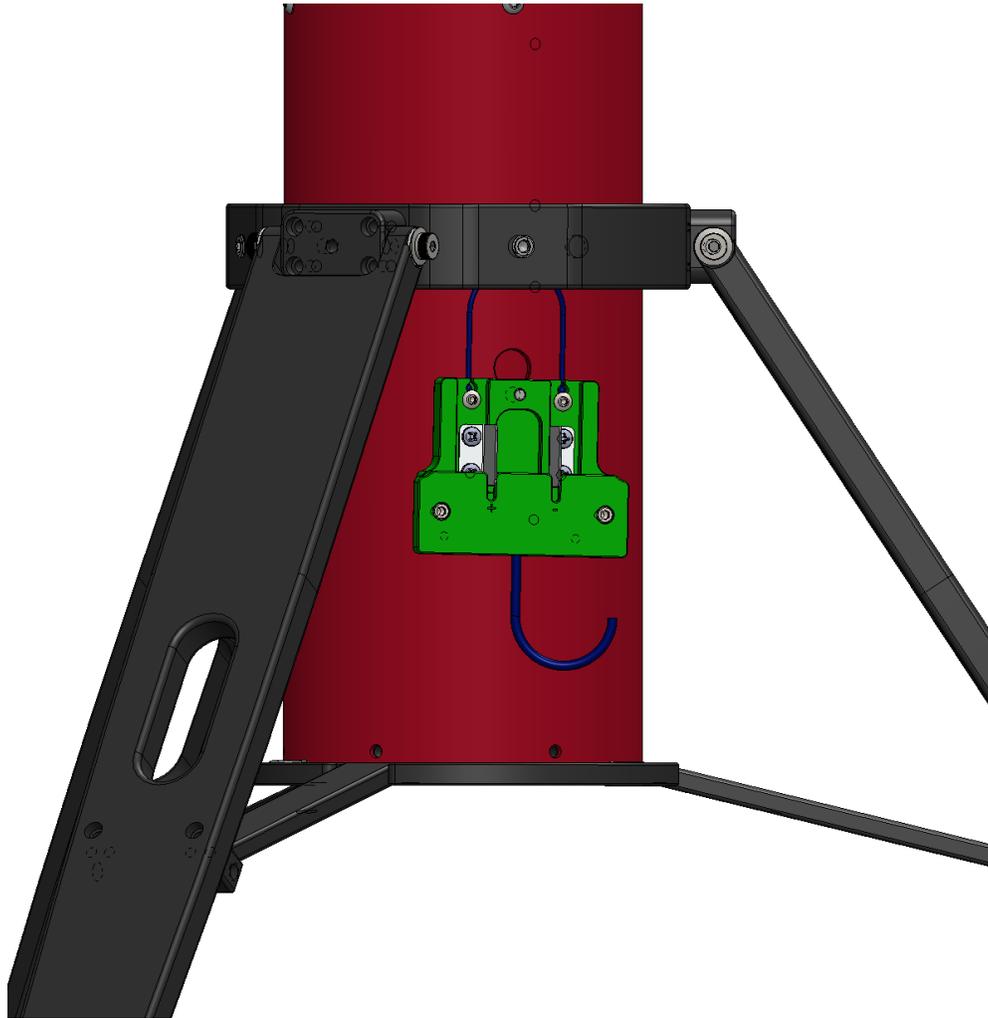


Figure 6: EGO Adaptor mounted on Paramount MYT Tripod.

Appendix A: EGO Battery Disclaimers

EGO batteries and battery chargers are distributed exclusive by The Home Depot. The EGO Battery Adaptor require both an EGO battery and an EGO battery charger. There are several battery options on the [EGO Accessories](#) web page. EGO battery chargers are sold separately.

Software Bisque has tested the 4.0 Ah model and found that it will operate a Paramount MX/Paramount MX+ or a Paramount MYT for over eight hours of tracking plus a long slew (Meridian flip) every ten minutes.

These batteries produce +56V DC, and are compatible with the Paramount MKS 5000 control system, which accepts power sources supplying up to +60V DC.



Please carefully read and adhere to the following EGO battery disclaimers and best practices before using an EGO battery in combination with the EGO to Paramount Power Adaptor to power a Paramount mount.

- **The use of the EGO battery to power the Paramount mount has not been approved by The Home Depot or the battery's manufacturer.**
- **If the battery is overly discharged, the EGO charger may have difficulty recharging, or not be able to recharge the battery at all.**

The [EGO battery charger's "Use and Care Manual"](#) describes ways to recover from a fully drained battery state. EGO batteries have two level indicators of the remaining power: Green indicates over 15% of charge, and Red indicates the battery pack is nearly depleted and needs to be charged immediately. Find more about limitations, specifications, maintenance and care in the [EGO battery "Use and Care Manual"](#).

- **When the Paramount is not in use, the EGO battery should always be unplugged the *EGO Battery to Paramount Power Adaptor* to avoid unwanted battery discharge (EGO batteries have a sophisticated internal self-maintenance features that can be overridden otherwise). Leaving the EGO battery plugged into an unpowered Paramount for long periods of time may prevent the battery from being recharged.**