iOptron's CEM60 mount tested

by Phil Harrington

Accurate tracking, lack of backlash, and the ability to handle large loads make the CEM60 mount a serious contender to carry your scope.

The CEM60 is intended for medium-sized instruments, with a rated weight limit of 60 pounds (27 kilograms). Online reports testify that the CEM60 supports instruments as large as 11-inch catadioptrics without a problem.

The test mount came shipped in three boxes, one for the mount itself, one for the 25-pound (9.5kg) counterweight, and a third for the optional tripod. The mount and all its accessories, save for the counterweight, come in a custom-fit aluminum carrying case.

Let’s look at the optional tripod first. Like many others sold on the astronomy market today, iOptron’s tripod (#021LLCu) features 2-inch stainless steel tubular legs. You can adjust the tripod’s height from 30 to 52 inches (76 to 132 centimeters), allowing seated or standing viewing. A central shelf press outwards against the legs for better stability while also offering a convenient place for eyepieces.

Moving onto the mount, the CEM60’s design takes a little getting used to. On startup, the axis locks are quite different from what most observers would expect to find. Each is “engaged” and “disengaged,” while the other is rotated in the opposite direction by a small knob secured near the axis.

They take some hunting to find at first because the Quick Start Guide doesn’t label them as such. It is critical that both locks be engaged (locked) before putting the mount on the tripod, or it could swing out of position.

Phil Harrington is an Astronomy contributing editor and author of Cosmic Challenge (Cambridge University Press, 2010).

When the view through the included polar alignment scope matches the one “Quick Polar Alignment” shows you, the driver is aligned to our planet’s rotational axis.

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out of today’s amateurs are familiar with fork and German equatorial mounts. Both have their pros and cons, but a common problem with each is that the mounted telescope’s position is offset from the center of the tripod or pier it sits on. As a result, torque can cause stability issues that adversely affect both visual and photographic use.

iOptron, an innovative company in Woburn, Massachusetts, has devised a new approach to this old problem by introducing a center-balanced equatorial mount (CEM). A hybrid design mating the German equatorial with the old-style cross-axis mount, the Z-shaped CEM puts the mount’s balance point directly over the tripod. The result is a mount that features greater stability.

Initial impressions

The first mount to use the CEM design was the company’s ZEQ25, designed for relatively small instruments. Building on the success of that mount, iOptron now offers the CEM60.

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PRODUCT INFORMATION

iOptron CEM60

Type: Equatorial mount

Mounting plate: Spring-loaded Vixen or Losmandy types

Payload: 60 pounds (27 kilograms)

Slew speeds: 1x, 2x, 8x, 16x, 64x, 128x, 256x, 512x; max: 3.75° per second

Power requirement: 12-volt DC, 2 amps

Weight: 27 pounds (12kg); counterweight weighs 21 pounds (9.5kg)

Included: Pole scope, aluminum hard carrying case

Price: $2,499

Contact: iOptron

6F Glir Street
Woburn, MA 01801

(0) 866.399.4587

(www.ioptron.com)