# FIRST LIGHT

See an interactive 360° model of this scope at **www.skyatnightmagazine.com/celestcgxl**

## Celestron CGX-L EQ 1100 EdgeHD
# Schmidt-Cassegrain

An 11-inch telescope and mount package that delivers a rich experience

WORDS: PETE LAWRENCE

### VITAL STATS

- **Price** £5,650
- **Optics** Schmidt-Cassegrain aplanatic
- **Aperture** 279.4mm (11 inches)
- **Focal length** 2,800mm (f/10; f/7 with optional focal reducer; f/2 with third-party Fastar accessories)
- **Mount** Celestron CGX-L German equatorial (load capacity 34kg)
- **Weight** Tube 13kg, tripod 21kg, mount head 24kg
- **Included** 23mm wide-angle 2-inch eyepiece, 9x50 finder
- **Supplier** David Hinds
- **www.**celestron.uk.com
- **Tel:** 01525 852696

**SKY SAYS...**
This is a serious system ideally suited to both Solar System and deep-sky observing and imaging

The Schmidt-Cassegrain design is popular amongst amateur astronomers because it offers large aperture and long focal length but remains manageable and relatively affordable. Celestron's CGX-L EQ 1100 EdgeHD is an 11-inch, aplanatic Schmidt-Cassegrain mounted on its latest equatorial mount, the CGX-L. The term 'aplanatic' refers to the additional internal EdgeHD optics, used to correct spherical aberrations inherent in this telescope design. The result is an instrument that delivers a sharp, flat field across a large area which should be good for both Solar System and deep-sky targets.

The full frame sensor of our test camera, a Canon EOS DSLR, was fully illuminated by this scope. Once we had collimated the optics, stars did indeed appear sharp right into the extremities of our images. Collimation is performed by adjusting three crosshead screws on the secondary support.

Lifting the 13kg optical tube onto the CGX-L mount was a straightforward task for one person, helped by the provision of a carry handle on the tube's base. The whole package, including tripod, mount head and optical tube, offers reasonably good portability considering the instrument's size. The RA and dec. axes have excellent free-running bearings making it easy to achieve excellent balance.

## Floating in space

A 23mm wide-angle, 2-inch eyepiece is included. We found this complemented the scope perfectly with a magnification of 122x and a field of view of 89°. Our view of the yellow and blue stars of Albireo in Cygnus was glorious, with intense colours. We felt we were floating in space having been given a ring-side seat to view this exquisite system.

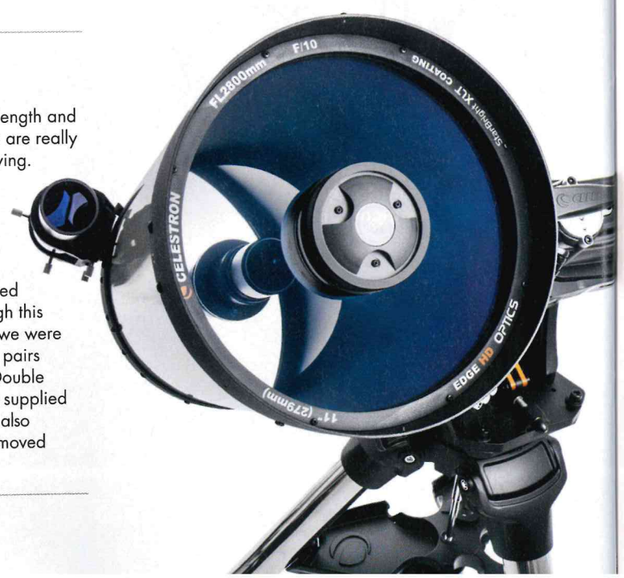
Observing the Dumbbell Nebula, M27 in Vulpecula, we were impressed with the tiny, pinprick stars that appeared across the nebula's glowing, hourglass-shaped disc, and despite some sky haze we did manage to see the mag. +13.5 central star convincingly using averted vision. Celestron's specifications indicate that the scope allows you to see visually down to mag. +14.7. The 11-inch aperture resolves features to better than 0.5 arcseconds if conditions allow. A view of the Wild Duck Cluster, M11 in Scutum, showed a myriad of individual stars neatly ▸

## OPTICAL CLARITY

The optical characteristics of the 1100 EdgeHD produce crisp, aberration-free views spread across a large area. Celestron's StarBright XLT coatings help to produce high-contrast visuals and images. The quality of the field of view appears excellent and produces acceptably sharp stars from corner to corner, even when using the image sensor on a full frame DSLR.

The Moon and planets appear bright and very well presented through this instrument, the 11-inch aperture having sufficient resolving power to reveal intricate detail. Despite low altitude, a view of Saturn delivered a planet that had that much sought after wow factor.

The native 2,800mm focal length and supplied wide-angle eyepiece are really comfortable for deep-sky viewing. We loved the subtle variation in brightness across the Dumbbell Nebula, M27 in Vulpecula. The smaller, elongated oval of the Ring Nebula, M57 in Lyra, appeared bright and conspicuous through this scope. With the sharp optics we were able to comfortably split both pairs of nearby Epsilon Lyrae, the Double Double, quite easily using the supplied 122x eyepiece. The resolution also held well when the pairs were moved around the edge of the field.











### EDGEHD OPTICAL TUBE

The optical tube is made from aluminium, feels very well constructed and has a Losmandy/CGE-style dovetail rail for mounting. Two dust-filtered vents at the base of the scope help reduce cooling times. A click-lock dew cap protects the corrector when the scope is not in use.

### CGX-L MOUNT HEAD

The CGX-L mount incorporates a heavy-duty belt drive and 144mm-diameter worm wheels for smooth movement with minimal backlash. Internal optical sensors allow for positional resets and safety slewing cut-offs, ideal for remote operation. It has a 270mm dovetail clamp that fits both Vixen and Losmandy rails, and there are ports for power and external connections.

### FOCUSER

A manual focuser is provided that moves the mirror back and forth inside the optical tube as it is rotated. It is well matched for the scope and feels precise in use. There are two flexible tension clutches that can be tightened to prevent mirror/focus shift as the scope is rotated around the mount.

### TRIPOD & ACCESSORY TRAY

The telescope and mount head are supported by a sturdy tripod with 70mm-diameter steel-tubing legs. A substantial accessory tray keeps the legs in position and provides holes for 1.25-inch and 2-inch accessories, as well as an upright stand for smartphones and tablets. The tripod can be folded shut with the tray still attached for transport.

# FIRST LIGHT

**SKY SAYS...**
Now add these:
1. Lithium power tank
2. Luminos Barlow lens
3. CGX & CGX-L polar finder

▸ separated. The cluster appeared like a 'star crust' in the process of breaking up. Rich globular M15 in Pegasus was as impressive, the stars resolved from the core right out to the extremities. M13 in Hercules was spectacular, appearing as a huge mass of resolved stars.

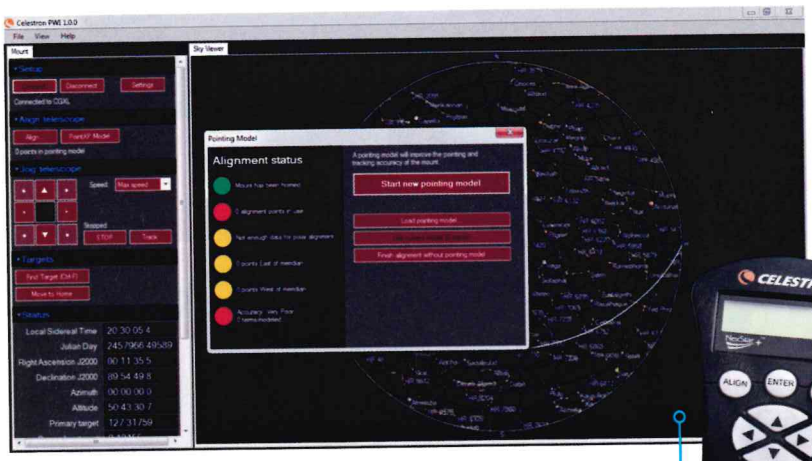
The scope's optical excellence is complemented by the CGX-L, a belt-driven equatorial mount with computerised Go-To functionality. A NexStar+ hand controller provides the interface and after a simple two-star alignment we had our search targets appearing in the central half of our field every time. A simple polar-alignment routine helped to further refine the accuracy. We found that we didn't get perfect tracking every time, despite apparently good alignments.

## Serious instrument

Numerous connectivity options are provided to enable autoguiding, connection to a computer and to attach optional equipment such as Wi-Fi controllers. Celestron's PWI control software can be downloaded from its website; it uses a new pointing model developed in collaboration between Celestron and PlaneWave Instruments, and we found it refreshingly simple to install and use. Even after a basic four-point model had been created the pointing accuracy placed objects centrally in frame each time. The software gives Go-To access to many targets and searching via our laptop's keyboard was far easier than scrolling through lists on the NexStar+ handset.

The CGX-L EQ 1100 EdgeHD represents a serious investment. However, for your money you do get a serious system ideally suited to both Solar System and deep-sky observing and imaging. In respect of deep-sky imaging, it's also worth noting that the secondary on the telescope can be replaced with an optional Fastar compatible unit, converting the scope into an impressively fast, f/2 imaging lightbucket. Imaging aside, the visual experience on offer is rich, rewarding and likely to leave a very positive mark on anyone who looks through it. S

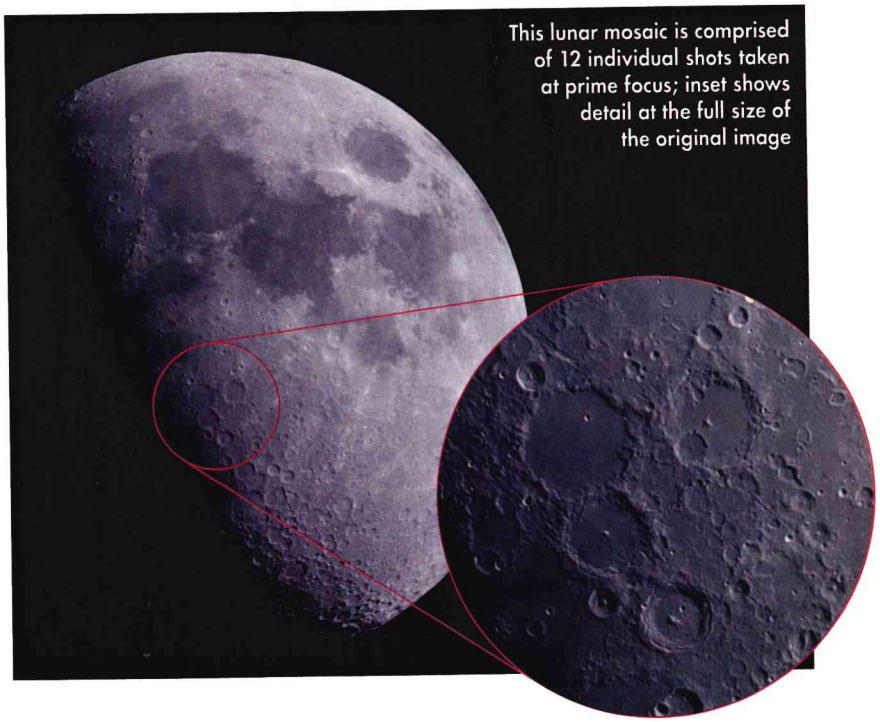
| VERDICT | |
|---|---|
| BUILD & DESIGN | ★★★★½ |
| EASE OF USE | ★★★★½ |
| FEATURES | ★★★★½ |
| GOTO/TRACKING ACCURACY | ★★★★½ |
| OPTICS | ★★★★★ |
| OVERALL | ★★★★½ |




## COMPUTERISED CONTROL

A NexStar+ hand controller interfaces to the CGX-L mount computer. A real-time clock retains date, time and site information even when the mount is powered down. In addition to the Go-To facilities offered from the hand controller, further control can be enabled by using Celestron's new PWI software via an external Windows computer to provide high-accuracy multi-point sky modelling.

There was nothing fuzzy about our view of M13 in Hercules



This lunar mosaic is comprised of 12 individual shots taken at prime focus; inset shows detail at the full size of the original image

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