

FIRST LIGHT

See an interactive 360° model of this scope at www.skyatnightmagazine.com/sm127azgti



Sky-Watcher SkyMax-127 with AZ-GTi Wi-Fi mount

Find your viewing targets with the help of wireless computer control

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VITAL STATS

- **Price** £529
- **Aperture** 127mm (5 inches)
- **Focal length** 1,500mm (f/11.8)
- **Mount** AZ-GTi Wi-Fi Go-To
- **Ports** Power connector, SynScan AZ hand controller
- **Tracking rates** Sidereal, lunar, solar, alignment free
- **Tripod** Adjustable legs with accessory tray
- **Extras** Red-dot finder, 25mm & 10mm eyepieces (1.25-inch fit), star diagonal
- **Weight** 7.45kg
- **Supplier** Optical Vision
- **www**.opticalvision.co.uk
- **Tel** 01359 244200

Wirelessly controlled telescopes that can be operated using a smartphone are

becoming more popular, and the latest addition to this stable is Sky-Watcher's AZ-GTi-mounted SkyMax-127.

The telescope is a 127mm (5-inch) Maksutov – a compound telescope with a primary mirror and a front corrector plate that includes a silvered secondary mirror. It has a focal length of 1,500mm, giving a focal ratio of f/11.8, so it's considered a 'slow' system – ideal for lunar and planetary observing, but capable of satisfactory deep-sky views too.

The AZ-GTi is a Wi-Fi-controlled Go-To mount of altaz design that's easy to assemble and comes with an adjustable aluminium tripod and an accessory tray. A power supply is required from either eight AA batteries or a power tank – we tried both for this test and had no trouble with either.

The mount is designed to be controlled with a smartphone or tablet. To do so, you need to download the free SynScan app, which is available for iOS and

SKY SAYS... Both of the SkyMax-127's eyepieces can reveal fine lunar detail, such as domes and rilles

Android. It is not a planetarium program, but offers a lot of functionality. When powered up the mount provides its own Wi-Fi network, which you connect to via the SynScan app. Once connected the alignment icon becomes active. The first time you start it up, the app will also ask for permission to access your location, which it uses to determine basic details.

Accuracy and alignment

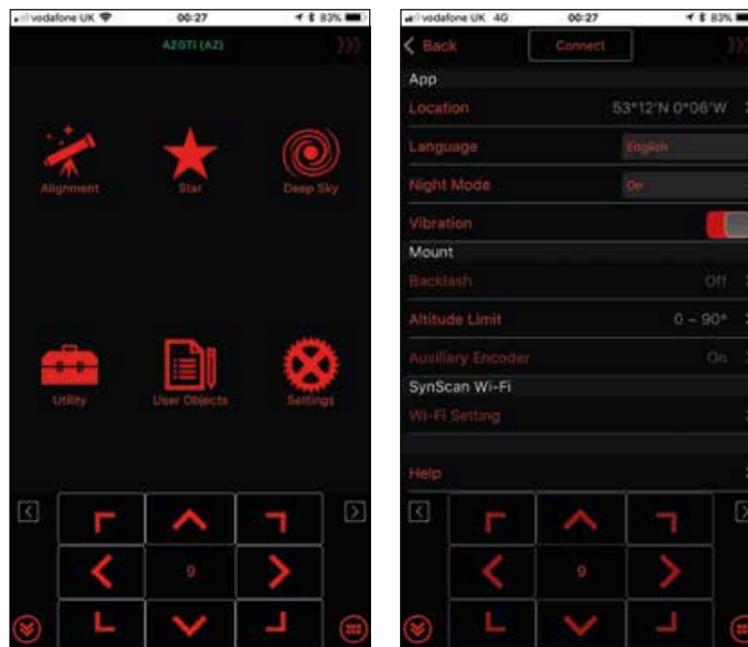
There are two alignment options: two star and north/level alignment, and both gave good results, usually placing our targets in the field of view of the 25mm eyepiece. Using the 10mm eyepiece improved accuracy for better alignment. There's also an option to align on any target once you've slewed to it via the Go-To option, which improves accuracy for other targets nearby.

The app has two options for accessing targets, Star and Deep Sky – bizarrely Solar System objects ▶

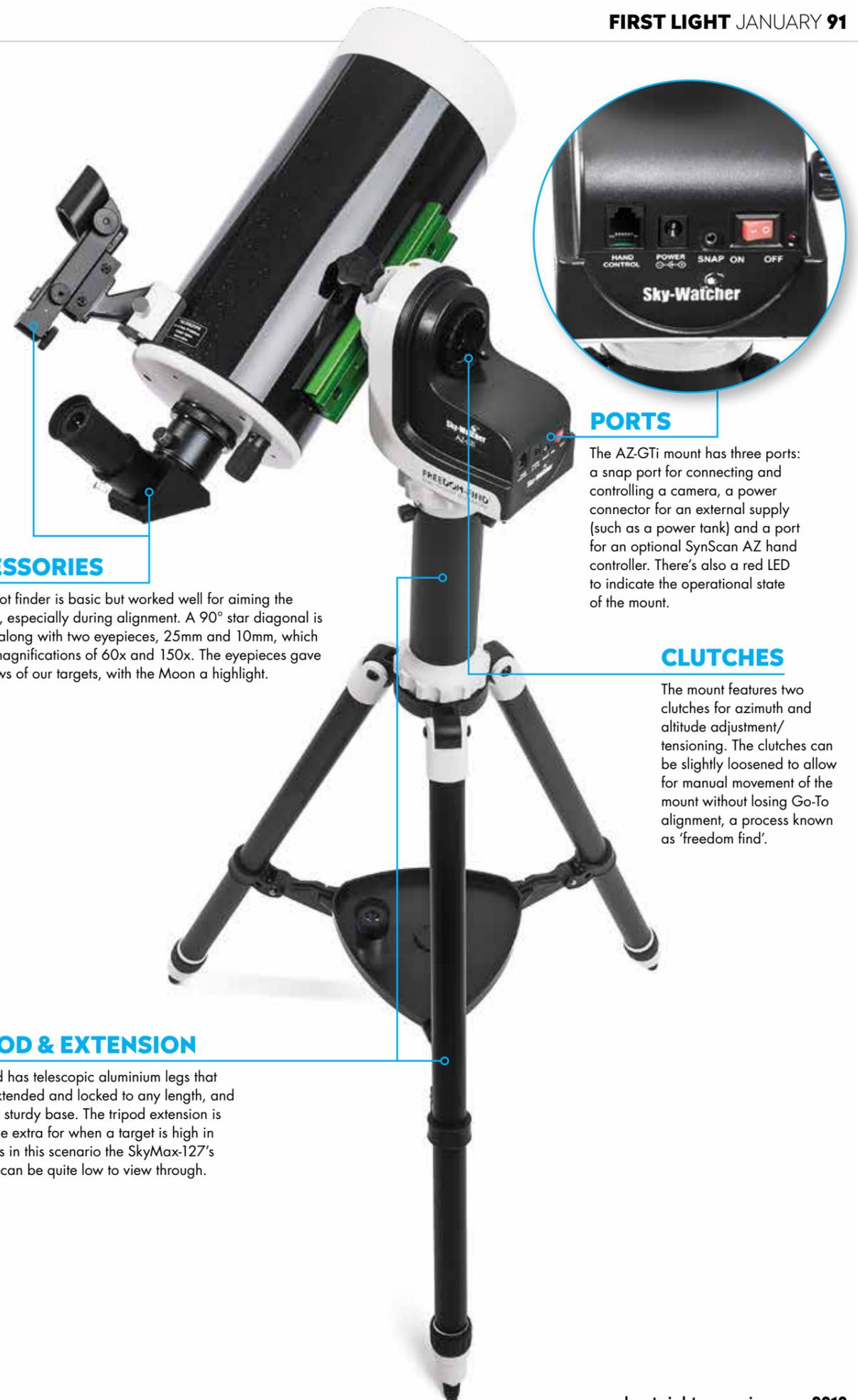
WIRELESS CONTROL

The SynScan app proved easy to navigate and use. The main screen is split, so that you have various options (alignment, target type, utility, user objects and settings) in the top two-thirds of the screen, while the bottom third is given over to a control pad for manual slewing and performing your initial alignment. Slewing speed can be adjusted with the small arrow icons, with the speed change displayed at the centre. It quickly became second nature to select and slew to a target using this control method.

For most purposes the database of targets is good, but if you'd prefer to use a planetarium app to control the system your options are limited. At the time of writing only Sky Safari Plus and Pro are supported. Note: Apple users need two devices to connect Sky Safari – an iPhone and an iPad, for example – as iOS on a single device can't run both the SynScan and Sky Safari Plus/Pro apps simultaneously. Android users can connect through a single device.



▲ You can set the SynScan app to display in red light to retain your night vision



ACCESSORIES

The red-dot finder is basic but worked well for aiming the telescope, especially during alignment. A 90° star diagonal is included along with two eyepieces, 25mm and 10mm, which provide magnifications of 60x and 150x. The eyepieces gave good views of our targets, with the Moon a highlight.

PORTS

The AZ-GTi mount has three ports: a snap port for connecting and controlling a camera, a power connector for an external supply (such as a power tank) and a port for an optional SynScan AZ hand controller. There's also a red LED to indicate the operational state of the mount.

CLUTCHES

The mount features two clutches for azimuth and altitude adjustment/tensioning. The clutches can be slightly loosened to allow for manual movement of the mount without losing Go-To alignment, a process known as 'freedom find'.

TRIPOD & EXTENSION

The tripod has telescopic aluminium legs that can be extended and locked to any length, and provide a sturdy base. The tripod extension is a welcome extra for when a target is high in the sky, as in this scenario the SkyMax-127's eyepiece can be quite low to view through.

FIRST LIGHT

SKY SAYS...

Now add these:

1. 7Ah powertank
2. Planetary & lunar filter set
3. Red LED torch

► are included under Star. Choose Star and your targets include the Solar System (planets, Sun and Moon) named stars and double stars. Under the Deep Sky menu you have a named objects icon or can select from the Messier, Caldwell, NGC or IC

catalogues. There's also a point and slew option, which we found to be great fun – the mount slews to the approximate location you're pointing at and then offers you a selection of targets to home in on.

Control options

The app's settings give you the option to have your device display a black background with red text to preserve your night vision but if you wish to enter a number for any of the deep-sky categories then the pop up screen is white – something we hope will be addressed in a future update.

You don't have to use the app, though. The mount can be operated with a SynScan hand controller and you can download an ASCOM driver from the Sky-Watcher website and control the scope with a computer.

We took a tour of various targets, taking in Uranus and Neptune, open cluster M45 in Taurus and the Double Cluster in Perseus, the latter just fitting in the view using the 25mm eyepiece. The Dumbbell Nebula in Vulpecula had a nice glow to it, while the Ring Nebula in Lyra lived up to its name when glimpsed through the 10mm eyepiece. On another night we saw the Moon was replete with cratered detail along the terminator using both eyepieces, and each one is certainly capable of revealing fine detail, such as lunar domes and rilles.

This is a fun system to use. Although there is an option to connect a SynScan hand controller, to get the most of this setup its worth downloading the SynScan app for your smartphone. The SkyMax-127 feels like the future of telescope control, certainly for anyone that likes technology and is just beginning their exploration of the sky. **S**



▲ The Moon taken with a Canon EOS 50D DSLR, single image 1/100th of a second at ISO 100



◀ Albireo, Canon EOS 50D DSLR, five-second exposure at ISO 3200, slight processing with PaintShop Pro X9



OPTICS

The SkyMax-127 is a Maksutov telescope, meaning it contains a primary mirror and a corrector plate, with the secondary mirror forming part of the corrector. It has a long focal length of 1,500mm giving a focal ratio of f/11.8.

VERDICT

ASSEMBLY	★★★★★
BUILD AND DESIGN	★★★★★
EASE OF USE	★★★★★
FEATURES	★★★★★
OPTICS	★★★★★
OVERALL	★★★★★