

TRIED & tested

We review well-established equipment that's stood the test of time

VITAL STATS

- **Price** £829
- **Optics** Maksutov-Cassegrain
- **Aperture** 180mm (7.1 inches)
- **Focal length** 2,700mm (f/15)
- **Weight:** 7.8kgs
- **Focuser** Movable primary mirror via rear knob
- **Extras** 9x50 finderscope, 2-inch fit star diagonal, 2-inch to 1.25-inch adaptor, 2-inch, 28mm long eye relief eyepiece, Vixen-style mounting bar
- **Supplier** Optical Vision
- **www**.opticalvision.co.uk
- **Tel** 01359 244 200

SKY SAYS...
This instrument is not just good for visual observing, but also capable of deep-sky astro imaging

Sky-Watcher SkyMax 180 Pro Maksutov-Cassegrain

The portable 'planet killer' that offers decent deep-sky views too

WORDS: PAUL MONEY

Maksutov-Cassegrain telescopes employ mirrors and a front corrector lens to produce a compact, quite portable optical tube. This form of optical arrangement makes this a catadioptric or compound telescope. The SkyMax 180 Pro is the largest in the Sky-Watcher range, yet despite its seemingly modest 7-inch mirror it punches above its weight.

Early models were painted gold and white, and were supplied with two 1.25-inch eyepieces and a straight-through finder. For the SkyMax 180 Pro, Sky-Watcher has altered the colour scheme to a fetching black on diamond effect, updated the glass in the optics, changed the finder to a 9x50 right-angled variant and now only supplies one eyepiece, a 28mm long eye relief model with twist-up eyecup – however, the review scope was supplied with two 1.25 inch eyepieces (20mm and 9mm). Completing the package is a star diagonal and a Vixen-style mounting bar.

Since 2008, Sky-Watcher has used Schott optical glass in its higher-end Pro series telescopes, and it is used again in the SkyMax 180 Pro. The secondary mirror is integrated into the front corrector plate and produces a smaller secondary obstruction compared with some similar sized telescopes.

The focal length of 2,700mm folds into a tube only 500mm long (though there is a back tube extension of 60mm). Along with a tube width of 216mm, it really is quite compact. At just 7.8kg too, it is also relatively lightweight for its size. Our EQ5 SynScan mount could handle it, but we found the larger NEQ6 mount offered the best performance.

Finding our way

The long focal length is ideal for planetary and lunar viewing, but this instrument also gives good views of many deep-sky objects. The right-angled finderscope gives a 9x magnified view of the sky and many of the brighter deep-sky objects are visible in it, making locating them and finding alignment stars that much easier.

Using the 20mm eyepiece we checked the field of view for quality and were rewarded with a sharp view of the bright star Altair (Alpha Aquilae) across almost 90 per cent of the view, with only the slightest distortion in the star visible at the edges. Turning our sights farther afield, we enjoyed very good views of several popular targets such as the Dumbbell Nebula in Vulpecula, The Ring Nebula in Lyra and open cluster M39 in Cygnus – the latter more than filled the field of view the 20mm eyepiece gave. ▶

OWNER'S OBSERVATIONS

Name Dave Armeson
Location Hull, East Yorkshire
Equipment SkyMax 180 Pro with Moonlite focuser
Owner since April 2013

I have been simply amazed by this scope. It will easily outperform a good quality 5-inch apo refractor when imaging the Moon and planets with its light grasp and resolving power. Even the views of compact deep-sky objects are brilliant, showing loads of detail with superb contrast. On the Moon, minute detail is visible, whilst Saturn is stunning with belts, zones and subtle structure in the rings.

I call the scope my 'planet killer'! The best single upgrade I have made to the telescope was to add a Moonlite focuser. This has made a great telescope into an amazing one, as I take high-resolution lunar images and the focuser makes this a breeze to achieve, critical focus is important.

After 30 years of astronomy I have reached my telescope nirvana after having some excellent scopes over the years. The SkyMax 180 Pro is a very powerful scope, not just in magnification but in its overall performance. Mine has caused such a stir at The York Astronomical Society three people have gone out and bought one.

See an interactive 360° model of this scope at www.skyatnightmagazine.com/SkyMax180



OPTICS

The optical configuration is of a spherical primary mirror at the back with a corrector plate at the front, which also has a secondary silvered 'spot' on the convex side of the corrector. Sky-Watcher uses Schott glass for the optical elements and high-transmission multicoatings on all optical surfaces.

COMPACT BODY

The body weighs 7.8kg, while the optical design folds the light path to deliver a 2,700mm focal length in a tube just 500mm long. It attaches to a mount via a Vixen-style dovetail bar.



EYEPIECE AND STAR DIAGONAL

The SkyMax 180 Pro is supplied with a 2-inch-fit star diagonal with a 2-inch to 1.25-inch adaptor. Though our review scope was supplied with 20mm and 9mm 1.25-inch eyepieces, in the future this instrument will be packaged with a single 28mm 2-inch LET (long-eye relief, twist-up eyecup) eyepiece.



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FINDER

The original finder supplied with gold-coloured SkyMax 180 Pro was a straight-through variant. This has been replaced with a 9x50 right-angled view finderscope, which is far more user friendly and easily adjustable to line up with the main optical axis.

FOCUSER

The focuser takes the form of a rotatable knob located at the back of the telescope. The mechanism was smooth in operation and had plenty of range to accommodate a star diagonal and eyepieces, but there was a little play in the system.



▼ Crater Copernicus, stacked from 3,000 frames captured with the SkyMax 180 and a ZWO ASI120MM camera



▼ The Crab Nebula imaged with the SkyMax 180 and a modded Canon EOS 300D DSLR



SKY SAYS...

Now add these:

1. HEQ5 Pro SynScan mount
2. HyperFlex-7E2 9-27mm 1.25-inch zoom eyepiece
3. Lunar and planetary filter set

► Globular cluster M13 in Hercules was impressive, with multitudes of stars crowding its centre and the famous dark feature known as the Propeller easily visible. The double star Albireo (Beta Cygni) was a treat with its golden yellow primary and pale sky-blue companion in the 20mm eyepiece, while with the 9mm eyepiece we were able to split the tight triple star Iota Cassiopeiae before morning twilight overcame it.

Saturn was lovely, with the Cassini Division, a dusky band on the disc and a polar region all on show. We also saw several of the brighter moons in spite of the planet's low declination by swapping in our own 26mm 1.25-inch eyepiece and boosting magnification with a 3x Barlow lens. In our Owner's Observations, Dave Armeson calls the SkyMax 180 Pro a 'planet killer' – we couldn't agree more considering the price of the system compared with other telescopes of similar apertures.

Attaching our own DSLR, we captured views of the Moon and could take long, tracked exposures of a number of deep-sky objects, revealing this instrument is not just good for visual observing, but also capable of deep-sky astrophotography. We expect this telescope will be around for a good few years yet. **S**

VERDICT

BUILD AND DESIGN	★★★★★
EASE OF USE	★★★★★
FEATURES	★★★★★
IMAGING QUALITY	★★★★★
OPTICS	★★★★★
OVERALL	★★★★★

WWW.THESECRETSTUDIO.NET, PAUL MONEY, DAVE ARMESON