The new Vixen NexS

Ninian Boyle reviews the new NexSXD Upgrade to the classic Vixen mount.

It is always interesting when a product gets 'improved' by a different manufacturer as it can sometimes prove to be a real boon to the user. And so it proved to be when I was asked to test a new GOTO system that can be fitted to the Vixen Sphinx equatorial telescope mount.

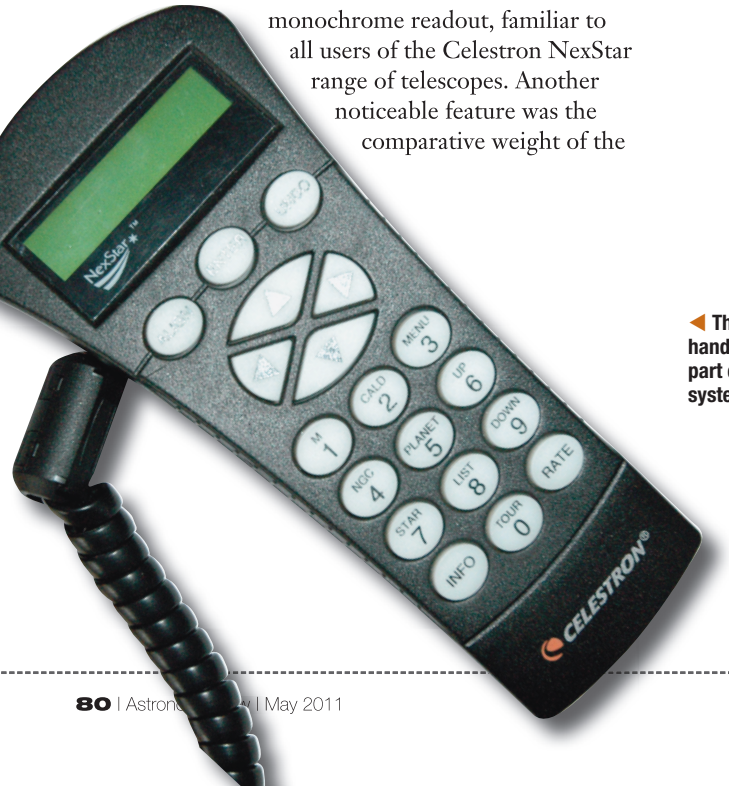
The Sphinx mount has been around for some years and, up until now, has been supplied with the Vixen 'Starbook' computer GOTO system. This system gave the user an attractive and relatively easy graphical interface to aim the telescope at celestial targets. The new NexSXD system, on the other hand, is based on Celestron's popular 'NexStar' handset and software that the manufacturers' claim has significant advantages over the Starbook.

Out of the box

So that I could do a fair test, Opticron – the suppliers and importers of Vixen products into the UK and now also suppliers of the NexSXD – kindly sent me two complete telescope and mount set ups, one with the Starbook and one with the NexSXD fitted, so that I could make a direct comparison of the two systems in the field. The mounts were well packaged and setting everything up was simple and straightforward.

The first thing I noticed was the obvious size difference between the Starbook and the NexSXD handsets. The Starbook is considerably larger. This, of course, is to accommodate the display screen for the graphical interface, although it might be said that this is a little 'clunky' and a tad dated compared to the sleek lines of the NexSXD handset, but then again the NexSXD does not employ a full colour display as does the Starbook. It has a two line monochrome readout, familiar to all users of the Celestron NexStar range of telescopes. Another noticeable feature was the comparative weight of the two handsets, the NexSXD/NexStar being considerably lighter and easier to manage than the Starbook. I would like to have seen a bracket attached to the mount, to park the NexSXD/NexStar handset in when not being used. It was supplied with Velcro tape on the back of the handset to attach to a similar strip on one of the tripod legs. While this does work, it can be a bit hit and miss in the dark. The Starbook was supplied with a similar arrangement. This in particular was too heavy to be a reliable method of holding the handset.

▲ **The original Sphinx/Starbook system (left) next to the new Sphinx/NexSXD combination. All images: Ninian Boyle.**



◀ **The NexStar handset that forms part of the NexSXD system.**

Setting up

I set about roughly polar aligning the mounts. Having re-familiarised myself with the Starbook, I then moved onto the NexSXD system. One of the first things I noticed when setting up the system was that the telescope's 'home' position was in the classic 'counter-weight down' posture, with the telescope pointing to the north. I prefer this, as many other GOTO systems start with the telescope in the 'north' position and it was familiar, unlike the Starbook requirement of having the telescope facing east–west. On start up, the NexSXD goes immediately into its set-up mode that takes only a few moments and then it requires you to move the telescope to its 'RA Switch Position'. This is carried out by simply pressing the 'enter' button on the handset. The telescope may slew a short distance and then the display offers the user a two-star alignment process. On pressing the enter button here, the display immediately suggests

XD GOTO system

a bright star for its initial alignment. I found the whole process easy and unfussy.

What is a significant improvement is the speed, not only of getting to the alignment process in the handset, but also of slewing the telescope. Furthermore, it is remarkably quiet compared to the Starbook. This is a very good feature as telescope motors whining away in the dead of night can seem like the noise of a building site and can irritate neighbours.

Pointing accuracy

Further refining the alignment after you have set the initial two stars is also quite simple as you are given the choice of using further calibration stars, the first of these being on the other side of the meridian from where the telescope is currently facing. This helps to improve the pointing accuracy of the system, allowing the computer to account for inaccuracies in the gear train of the drive. This is useful if you intend to use the telescope for imaging.

I tested the NexSXD's pointing accuracy and found with just the two-star alignment set-up and with the addition of one further 'calibration' star, the telescope would acquire any target across the visible sky to within a few arcminutes; easily as good, if not better, than the Starbook. It certainly placed objects within the field-of-view of a medium-to-low power eyepiece on the Vixen AX103S f/8 refractor that was also kindly supplied by Opticron for the purposes of this test. I'm sure that this could be improved still further using other alignment stars and by employing the 'precise GOTO' function available for accurate placement of faint objects on a CCD camera chip.

One thing I would liked to have seen is an on/off switch on the electronics board, as the system powers up as soon as power is applied. Also, I think a better instruction manual with a quick start guide for impatient astronomers would be very helpful. The NexStar instruction manual supplied with the test set-up contained information that was irrelevant to this particular system and could cause confusion to the novice user.

In conclusion, I was very impressed with the integration of the tried and tested NexStar system into the Vixen Sphinx mount. If you don't need the graphical interface supplied by the Vixen Starbook system, I would suggest that it is a useful upgrade from that, being easier to use, more accurate and considerably quieter. For those who already have the Sphinx mount and Starbook, I'm given to understand that it is relatively straightforward to replace the circuitry with the new NexSXD motherboard, although I wasn't required to do this myself!

You can visit Ninian Boyle's website at: www.AstronomyKnowHow.com.

At a glance

Price:
SXD mount and tripod with NexSXD installed (incl. hand controller): **£1,649**
The Starbook version of the mount and tripod: **£1,998**
NexSXD motherboard and hand controller for user-installation: **£270**
Available from:
Astronomia (01306 640714, www.astronomia.co.uk)
Green Witch (01767 677025, www.green-witch.com)
Opticstar (0161 4298002, www.opticstar.com)
The Widescreen Centre (020 7935 2580, www.widescreen-centre.co.uk)

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■ The Vixen Sphinx mount with the NexSXD/ NexStar hand controller attached by Velcro.