

## FIRST LIGHT

See an interactive 360° model of this scope at [www.skyatnightmagazine.com/inspire100az](http://www.skyatnightmagazine.com/inspire100az)

# Celestron Inspire 100AZ refractor

A beginner's scope with an ingenious adaptor for astrophotography

WORDS: STEVE RICHARDS

## VITAL STATS

- **Price** £259
- **Optics** Achromatic lens
- **Aperture** 100mm (4 inches)
- **Focal Length** 660mm, (f/6.5)
- **Focuser** Single-speed rack and pinion with micrometer scale
- **Mount** Manual Altazimuth
- **Extras** Red-dot finder, erect image star diagonal, 10mm and 20mm eyepieces, red light LED torch, printed instruction manual
- **Weight** 6.1kg
- **Supplier** David Hinds
- **www.celestron.uk.com**
- **Tel** 01525 852696

Choosing your first telescope can often be a confusing proposition as there's such a wealth of options available (although Will Gater provides plenty of tips starting on p67). A telescope that's too basic can lead you to become disenchanted with astronomy, while one that's too advanced only begins to be useful after a steep learning curve. Celestron hopes to make the task of finding a suitable starter scope easier with the introduction of its Inspire series, which has been designed specifically for beginners. The range includes 70mm, 80mm, 90mm and 100mm-aperture refractors.

It's the 100mm version we're focusing on here. The Celestron Inspire 100AZ offers a complete observing package with a good-sized aperture, a focal length of 660mm and plenty of features at a reasonable cost. This telescope would appeal to younger astronomers, in particular, as it's not only affordable but also attractively designed.

The 100mm-wide alloy optical tube is finished in a light metallic blue gloss paint with black plastic fittings and an orange, Vixen-style dovetail bar. The tripod has a robust and modern-looking asymmetrical pan and tilt head with 32mm-diameter, stainless-steel adjustable-height legs. As well as the 20mm and 10mm Kellner eyepieces

## SKY SAYS...

The ease with which this scope can be set up is a real bonus for beginners wanting to start observing asap

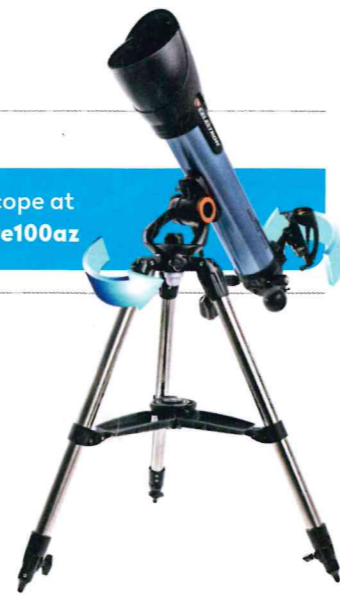
supplied, there's a 90° erect image diagonal included, meaning the telescope is also suitable for terrestrial observations. Completing the package is a useful red light LED torch, accessory tray/leg spreader and a dual-purpose dust cap.

At just 6.1kg the whole assembly is light and easy to carry around even when it's fully assembled, making it ideal for impromptu observing sessions. The ease with which it can be set up is a real bonus for allowing beginners to get on with observing as quickly as possible.

## Focus and colours

The achromatic doublet lens is fully coated. It's only a thin coating, but it's evenly applied with no bad spots. Stars examined through the Inspire 100AZ retained good shapes up to almost 80 per cent of the field of view. As expected, bright stars showed some chromatic aberration but, generally, the correct star colours were observed – orange Aldebaran, the blue-white Pleiades and the lovely contrasting pair of Albireo were all accurately represented.

We enjoyed early evening views of Venus, where the planet's phase was ▶



## DUST CAP CAMERA MOUNT

Although this telescope and its non-motorised mount are not designed with astrophotography in mind, the Inspire 100AZ's dust cap has a novel feature – you can strap a smartphone to it and then attach the pairing to one of the two eyepieces that come with the scope.

Although your smartphone camera already has a lens and therefore can't be used as prime focus, light collected by the telescope can be projected into your phone's camera by an eyepiece in a process known as afocal photography.

For this process to work, it's important that your camera's lens is aligned centrally with the eyepiece

and the adjustable elastic straps on the dust cap make doing that easy. Next, the dust cap is placed over the eyepiece and held in position with two thumbscrews. It's then a simple matter of pointing the Inspire 100AZ at a Solar System object (including the Sun if a suitable front-mounted solar filter is used), adjusting the focus and capturing a short video for processing in AutoStakkert! or RegiStax.



## STARPOINTER PRO RED DOT FINDER

The stylish StarPointer Pro red dot finder projects a reticule onto the view, making it easy to align with Solar System objects or bright stars. The light intensity is adjustable and alignment with the main telescope is easy using two thumbscrews to adjust its mounting platform.

## 10MM & 20MM EYEPIECES

The 10mm and 20mm 1.25-inch Kellner eyepieces supplied are suitable for a wide range of observations, providing magnifications of 66x and 33x respectively. They have basic fold-down rubber eyecups, but there isn't quite enough eye relief for observing the whole field of view with spectacles.

## DOUBLET LENS

The Inspire 100AZ has an achromatic doublet objective lens with a generous aperture of 4 inches, the largest in the Inspire range. Larger apertures increase the light grasp of a telescope making it easier to observe dimmer objects. The fully coated lens surfaces increase light transmission by decreasing reflections.

## EASY-TO-ASSEMBLE TRIPOD

The steel-tube tripod has extendable legs with simple locking handles. There's a built-in folding accessory tray that doubles as a leg spreader to help stabilise the tripod. The spreader is locked in place by folding it out and twisting a locking capstan.