

A Buyers Guide to Davis Sextants

by James Turner, RYA Yachtmaster (Ocean)

About Davis

Davis has been manufacturing quality marine products for over fifty years. Sextant production started in the 1970s and is still going strong.

Three Sextants to choose from

There are three sextants in the range, each offering its own set of features. Which is best for you? The Meridian Zero catalogue (p120) gives technical information about the sextants, but what are the real, practical differences?

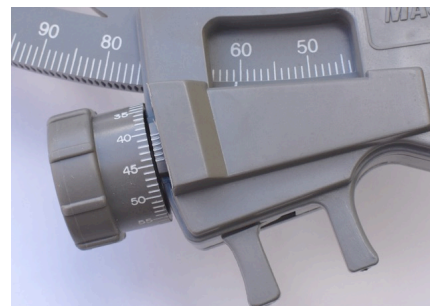
Davis Mk3

This is a student sextant for sun sights. It lacks a micrometer, so the only way of gauging minutes of arc is the vernier scale. It also lacks a clamp, so the arm can be jogged & the reading lost. In practice this is important because it means you can't risk taking the sextant, unread, to the chart table, where you do the stopwatch & chronometer readings before reading the sextant. The absence of a telescope doesn't matter for sun sights, but for star sights you should definitely look to the Mk15 or Mk25.



Davis Mk15

The first of the two 'Master' sextants in the range, the Mk15 has been my instrument of choice on quite a few ocean crossings. There are three horizon shades and four sun shades, which is all you need for any light conditions. This is the 'split-view' model, with glass on the left of the screen and a mirror on the right. Technically, the heavenly body is on the right side and the horizon on the left, but in practice you wiggle the sextant slightly and the heavenly body appears in the centre of your view (see diagram below).

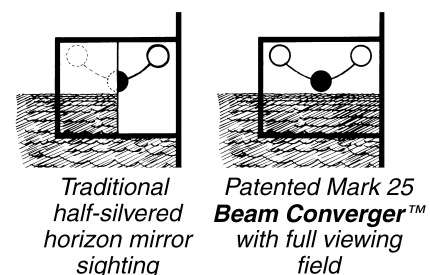


The arm has a locking mechanism that you overcome by squeezing a trigger to give full movement of the arm. Small adjustments are then made on the micrometer/vernier, with no risk of knocking the arm out of position when the boat lurches. The telescope is good, but if you're just taking sun sights you will probably remove it, as it isn't really needed. For star sights you'll need a torch for the first morning sights and last evening sights, when there's just enough light to get a clear horizon but not quite enough to read the scale. I also favour the 'split-view' type of sextant for horizontal sextant angles in coastal navigation.

Combined micrometer and vernier scale on Mk15 and Mk25 is much more accurate than simple vernier on Mk3

Davis Mk25

The flagship of the Davis fleet, the Mk25 is outwardly the same construction as the Mk15, but with the following differences. The 'all-view' mirror (which Davis call the Beam Converger) gives a full-width horizon with the heavenly body superimposed on it, so there's no left & right side. Many people find this easier to use than a 'split-view'.



There's also an LED light to illuminate the scale, making star sights in low light (first shots in the morning and last shots in the evening) much easier to record.

As with the Mk15, the Mk25 is very comfortable to use, with a chunky handle with positive grip. They are both much lighter than metal sextants, but with all the accuracy you need.

If you are serious about taking star sights, this is the model to choose.

Summary

My recommendation is that you choose the Mk3 for learning to take sights for sun only, or as a back-up for occasional use in the event of electronics failure. It'll also do horizontal sextants angles perfectly well.

For a full function sextant to use daily, you need to balance the cost difference between the Mk15 and Mk25 with the split screen vs. Beam Converger, along with the need for illuminating the scale if you're going to get serious about star sights.

Some tips when using a sextant on a yacht

Find the best place to take sights on your boat. If the boat has fore-and-aft lowers, it's generally best to go up there where you can wrap your arms around the rigging & keep your upper body really steady. If the rig is swept and there isn't a pair of wires to wrap your arms around, it's not a benefit. The next best place is probably leaning back against the mast, with your feet well spread.

Sometimes the sun will be behind the headsail. You'll get a better sight by changing course for a few minutes so you can take the sight from the optimum position, rather than balancing precariously in a less secure place.

Get used to swinging your upper body to keep your shoulders lined up with the horizon, moving your legs as the boat rolls and pitches.

Practice as often as possible. In due course you won't need to take three sights every time, as you'll know when you've taken a good one.

If you're taking a single sun sight, go below with the angle still set on the sextant, and work it out before you move the arm and stow the instrument. From time to time your sight won't make sense when you've plotted it, and the first thing to check is whether you wrote down the correct angle in the first place. If you've stowed the sextant and lost the data, you have to go and take another sight. According to Sod's law of the ocean, the sun, by this time, will have gone in, the barometer will be dropping and the ragged coast will be approaching!

Happy Navigating!