



Setting up

1. Look through the eyepiece towards the horizon mirror.
2. Rotate the horizon mirror on its pivot so you can see as much of the index mirror as possible.
3. Use the horizon mirror adjustment screws to improve the view of the index mirror.
4. Move the pointer so that the scale reads zero.
5. Look through the clear side of the horizon mirror towards a distant object (eg a tree or better still, the actual horizon).
6. Rotate the index mirror on the pointer, so you can see the same distant object reflected in the mirrors.
7. Keeping the pointer on zero, adjust the index mirror screws so the identical images are vertically aligned.

How to take measurements

IMPORTANT! If you are measuring the Sun, you must make sure that the solar filter is in position and covers the whole of the reflection you can see of the index mirror. Make sure the Sun is also well above the horizon.

1. Look towards the horizon through the eyepiece and clear side of the horizon mirror, in the direction of the Sun.
2. Move the pointer so that the mirror version of the filtered Sun you can see is brought level with the true horizon.
3. Read off the altitude on the scale.

Using with no horizon: method 1

You can add a thin tape marker to your index mirror and attach a pointer to the front of your sextant. We made our

front pointer from pieces of dowel with a paperclip. The height of both markers should be on the centre line of your eyepiece. If you line both markers up through the eyepiece in use, they can be used as a fairly accurate artificial horizon.

Using with no horizon: method 2

Place on a level surface and aim towards a distant line (a mark on a fence, for example) and use this as a horizon.

Using with no horizon: method 3

Aim at a reflection of the Sun in a plate of cold black coffee or similar reflective liquid. Move the pointer as before to align this with the view of the Sun created by the mirrors. Divide the reading on the scale by 2.