

Combined Dip and Index Mirror Adjustment

The index error must be checked and removed before each measurement as it will falsify the result.

In chapter "Adjustment of Horizon and Index Mirror", one will find a detailed description of the nature of this error. It will also be explained how to correct it your own by adjusting the mirror position. Alternatively the error can be eliminated by adding or subtracting its value to the measured sextant altitude.

The position of the mirror in its frame often keeps stable set-points and each time one tries to adjust it by turning the adjusting screws it will return to the former position and the index error appears again. Under these circumstances adjusting of mirror is not recommended. The more frequently one uses the adjusting screws the more probable will be the loosening of the thread. Therefore it is better to correct the index error at the red knob of the drum. To do this move alidade and drum to zero. Observe the horizon. Carry out fine adjustment of the drum watching both pictures of the horizon so that they match each other. Now unscrew the red knob and turn the drum so that the zero mark of the drum is at the index mark of the vernier. With this the sextant is ready to carry out the star altitude measurement, the index error does not need any further consideration.

The dip depends on the height of the navigator's eyes. The higher the navigator stands the lower the visible horizon will be to the true horizon, that is the plane through the eyes of the navigator. The value of dip is tabulated in the nautical yearbook. It is one of several corrections to be applied to the sextant reading before starting the position calculation. To set this correction loosen the screw backside of the scale ring. The desired height of eye value should be positioned at the white marking point of the black knurled knob. Use the mirror adjusting wrench to loosen the fixing screw.

Red knob to loosen the drum

Dip or height of eyes scale.
At rear fixing screw

Index error scale with
marking at drum

