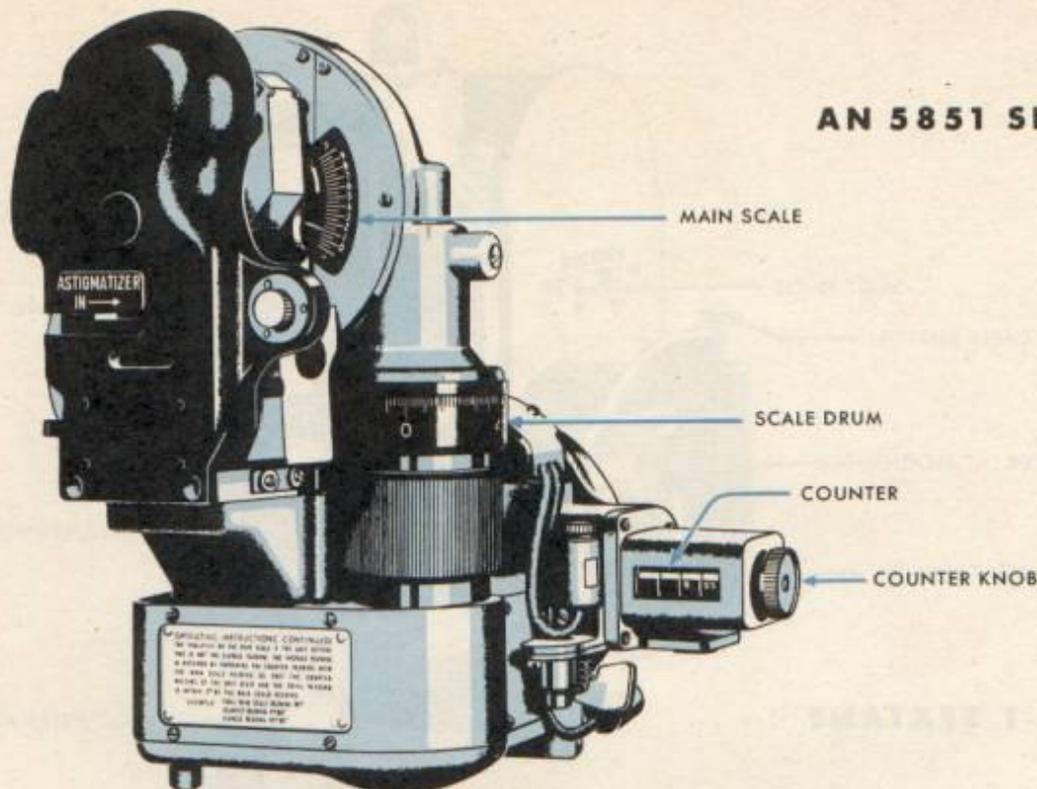


AN 5851 SEXTANT



1. Set the instrument to 0° altitude.
2. Pick up the star by direct sighting.
3. Bring the sextant to operating position slowly, keeping the star in the field of view by rotating the index knob.

See T.O. 05-35-33.

AN 5851 SEXTANT

Use the AN5851 sextant with the appropriate support arm. Like the A-10 and A-10A it is designed for horizontal vision. This sextant incorporates a chronometric, automatic averaging device which, at the end of a two-minute period, gives the average altitude on a counter.

The averaging mechanism picks off the setting of the instrument at two-second intervals and accumulates these values through a 60/1 gear reduction on the counter. Since a gear system does the averaging you must enter a full complement of 60 sights. You must, therefore, maintain collimation for a full two minutes. The reading on the counter is worthless if you stop observing before the two minutes have fully expired.

Operation

1. Set the counter to 0 by turning the counter

knob. It is important that you do this accurately.

2. Wind the averaging device until you reach a solid stop.

3. Push lever 2 and rotate the scale drum to a stop. This operation engages the sextant with the averaging device and the stop indicates that the averager has been brought down to the base line.

4. Push lever 1 to engage lever 2. This operation disengages the averaging device from the sextant.

5. Take a preliminary sight. Push lever 2.

6. Again rotate the drum down to a stop, and if this amount of rotation is more than 2° , rotate the drum up to the sighted angle and collimate the star and the body.

7. If the amount of rotation is less than 2° , disengage the averaging device by pushing lever 1, rotate the drum down approximately one turn, push lever 2, and continue rotating the drum down to a stop. Then proceed with the sight. There is always a 15° spread between stops, which allows at least 2° on either side of the altitude of the body. This gives the drum room in which to rotate while the bubble is moving.

8. Push lever 3 to start the averaging device.

9. To obtain the average time, add 1 minute to starting time or subtract 1 minute from the time you finish your observation.

10. Maintain coincidence between the bubble and the celestial body. At the end of two minutes a