

AF1 Satellite Locator & Site Survey Tool

This is the only tool you need to do a satellite installation site survey. It is a liquid filled precision compass and clinometer in a compact aluminum housing that is easy to use and rugged enough to protect against impact, corrosion, and moisture. This top quality precision instrument combines precision accuracy with fast and easy one-handed operation. The clinometers scale is in degree and percent (0-90°, 0-150%). The compass scale is in azimuth (0-360° with reverse scale). Both the clinometer and compass are graduated in 1° / 1% increments and each is individually calibrated.

ADJUSTING THE OPTICS

The optics of the AF1 can be adjusted by turning the eyepiece with your fingers. Adjust the eyepiece so that both the hairline and the scale are sharp and the eyepiece slot settles in a vertical position in the bearing compass and in a horizontal position in the clinometer.

BEARING COMPASS

Construction: The bearing compass is designed to combine extreme accuracy with ease and speed of operation. A jewel bearing supports the dial and it is immersed in dampening fluid; giving vibration less, smooth movement. The compass has been given permanent antistatic treatment.

Operation: With both eyes open, aim the compass so that the hairline is superimposed on the target, when viewed through the lens. The main scale (large numbers) gives the bearing from your position to the target; the small numbers give a reverse bearing from the target to your position. This feature is of great assistance when calculating a precise position. Use the left or the right eye as preferred. With both eyes open, an optical illusion makes the hairline appear to continue above the instrument frame, superimposed on the target. This improves reading accuracy and speed.

Note: Because of an eye condition called heterophoria, the reading accuracy of some users may be impaired. Check for this as follows: Take a reading with both eyes open and then close the free eye. If the reading does not change appreciably there is no misalignment of the eye axes, and both eyes can be kept open. Should there be a difference in the readings, keep the other eye closed and sight halfway above the instrument body. The hairline now rises above the instrument body and is seen against the target.

CLINOMETER

Construction: A jewel bearing assembly supports the scale dial and all moving parts are immersed in a damping liquid inside a high strength hermetically sealed plastic container. The liquid dampens all undue scale vibrations and permits a smooth shock less movement of the scale dial.

Operation: Left side of the dial reads degrees of elevation while the right side of the dial reads percent of elevation. Readings are usually taken with the right eye. Owing to differences in the keenness of the sight of the eyes and because of personal preference the use of the left eye is sometimes easier. It is of prime importance that both eyes are kept open. The supporting hand must not obstruct the vision of the other eye. The instrument is held in front of the reading eye so that the scale can be read through the eyepiece, and the round side window faces to the left. The instrument is aimed at the object by raising or lowering it until the horizontal hairline is sighted against the point to be measured. The position of the hairline now on the scale is the reading. Owing to an optical illusion the hairline seems to continue outside the housing and is thus easily observed against the sighted object.

SUMMARY

Using the compass, find a reference point matching the azimuth of the satellite position. Using the clinometer, find the azimuth reference point and raise the instrument until you find the elevation of the satellite position. You now are looking along the same path as the satellite signal and you will know if an install is possible.