

DISTANCE MEASUREMENT

1. Setting of the Atmospheric Correction

When setting the atmospheric correction, obtain the correct value by measuring the temperature and pressure.

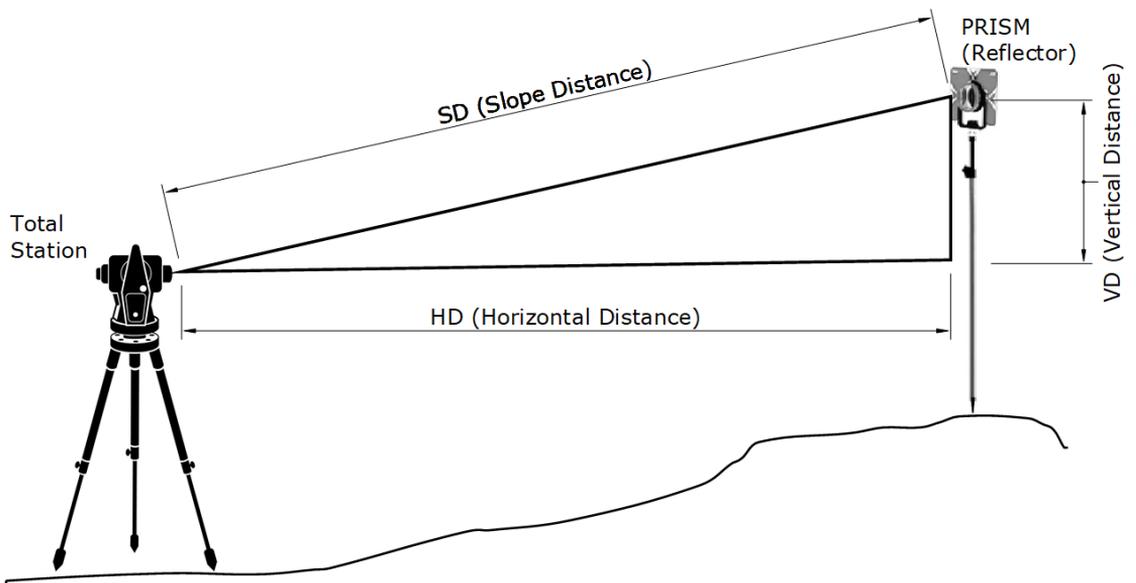
2. Setting of the Correction for Prism Constant

Topcon's prism constant value is 0. Set correction for prism at 0. If the prism is of another manufacture, the appropriate constant shall be set beforehand.

3. Distance Measurement (Continuous Measurement)

Make sure the mode displays angle measurement.

Operating procedure	Operation	Display
<p>1 Collimate the center of prism.</p> <p>2 Press the [] key. Distance measurement starts.</p> <p>The measured distances are shown.</p> <ul style="list-style-type: none"> Pressing the [] key again, the display changes to horizontal (HR) and vertical (V) angle and slope distance (SD.) 	<p>Collimate P</p> <p>[]</p> <p>[]</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>V : 90°10'20" HR: 120°30'40"</p> <p>0SET HOLD HSET P1↓</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>HR: 120°30'40" HD* [r] << m VD: m MEAS MODE S/A P1↓</p> </div> <p style="text-align: center;">↓</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>HR: 120°30'40" HD* 123.456 m VD: 5.678 m MEAS MODE S/A P1↓</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>V : 90°10'20" HR: 120°30'40" SD* 131.678 m MEAS MODE S/A P1↓</p> </div>



Prism Staff and Close view of Prism

NOTE:

- 1) Method of distance measurement might vary across manufacturers.
- 2) Total station can measure small distances without prism/reflector also.
- 3) Measuring the distance between instrument and another point is not particularly useful. Rather measuring distance between two points (other than the instrument station) has much more practical significance. This will be taken up in a different tutorial.
- 4) Angle measurement using total station is similar to that using digital theodolite. So no need to repeat that again.