Carlson. ®

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To my knowledge according to the Leica Manual if you have a prism constant and you need to solve for the "Leica Constant" you would take the Leica Constant value of 34.4 and subtract your Prism value from it. For instance if you have a 30mm standard prism you take 34.4 {Leica constant} – 30mm {prism constant} = 4.4mm

In this example a positive 4.4mm is used for the "Add Constant" in the Leica Equipment.

I ran a test using SurvCE Version 2.09 with a Leica 1100 Total Station.   You can check your SurvCE Version by tapping the Equip tab then tapping "About SurvCE".

I'm going to refer to the Leica terminology as it is displayed on a Leica 1100 while I'm set in SurvCE to 4.4 (30mm) as shown in the screenshot below

In SurvCE it is in the format of:
Add Const. (Reflector List)

where "Add Const" is the physical value added to the Slope Distance and "Reflector List" is the proper name of the Prism and the stamped value on the prism itself.
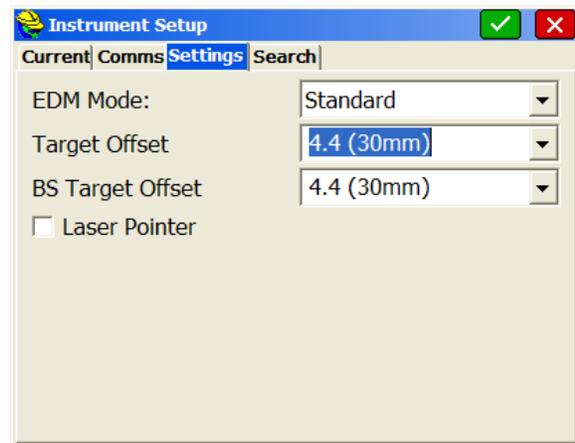
1) First fill out the Equip / Total Station / Settings tab to the correct Target Offset and BS backsight Target Offset

2) Now go into Survey / Store Points and tap "R" to take a Reading and tap "S" to store a test shot.

3) Then go into the Leica Menu on the Instrument by tapping:
Menu / **5** Configuration / **1** Instrument Configuration / **02** Reflector Selection

<u>Inside the Leica Instrument display it shows like this:</u>
Reflector List: 30mm
Add Const: 4.4mm

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If I am using a **28.1mm** prism {**Reflector List**} then I would need to type in a positive **6.3** as shown in the screenshot below {**Add Const.**} and tap the Green Check to save that setting.

If I go into Survey / Store Points and tap "R" to take a Reading and store a test shot.

Then go into the Leica Menu on the Instrument into Config / Inst. Config / Reflector Selection it should display the following:
Reflector List: 28.1mm
Add Const: 6.3mm
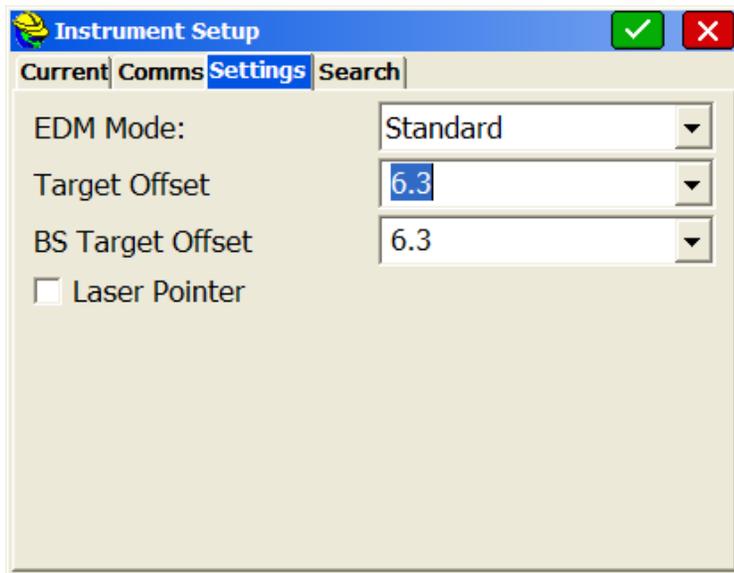
If you take a shot with a 0.0 "Add Const" and then reshoot it again with a "4.4 (30mm)" and shoot it a third time using "6.3" the slope distances would be displayed like the example below if all were shot to the exact same Physical Prism:

0.0mm = 6.562 feet {2.000 m}
4.4mm = 6.577 feet {2.0044 m} – Leica added 4.4mm
6.3mm = 6.584 feet {2.0063 m} – Leica added 6.3mm

Updated 8/25/2009