WinFrog Device Group:	RHO/THETA
Device Name/Model:	SokkiaB2
Device Manufacturer:	**Sokkia Corporation** 16900 W. 118th Terrace P.O. Box 726 Olathe, KS U.S.A. 66051-0726 **Tech Support** Tel: 913-492-4900 or 800-257-2552 Fax: 913-492-8233 E-mail: support@sokkia.com
Device Data String(s) Output to WinFrog:	See Telegram Specification section below.
WinFrog Data String(s) Output to Device:	NONE
WinFrog Data Item(s) and their RAW record:	TARGET 530

DEVICE DESCRIPTION:

The Sokkia B2 is a total station that can be configured to output the described data to WinFrog. The ranges output by the Sokkia B2 can be in either feet or meters. There is an identifier in the data telegram that instructs WinFrog as to whether the ranges are in feet or meters.
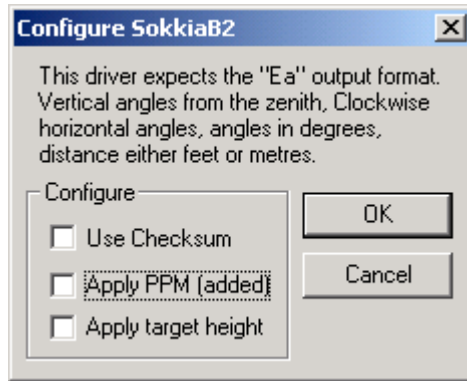
DEVICE CONFIGURATION INSTRUCTIONS

WINFROG I/O DEVICES > EDIT I/O:

Serial
Configurable Parameters

WINFROG I/O DEVICES > CONFIGURE DEVICE:

This device must be configured at the I/O Device window level. In the I/O Devices window, click the device name to select it, then right-click and select Configure Device. The Configure SokkiaB2 dialog box appears, as seen below.

Select the Use Checksum checkbox to instruct WinFrog to read the checksum included in the data telegram from the Sokkia B2.

Select the Apply PPM checkbox to instruct WinFrog to apply the PPM included in the data telegram from the Sokkia B2. The PPM is applied to the real time raw ranges using the following formula; range = range + range*ppm*.000001.

Select the Apply target height checkbox to instruct WinFrog to apply the target height included in the data telegram from the Sokkia B2 to reduce the observed ranges to the horizontal.

WINFROG VEHICLE > CONFIGURE VEHICLE DEVICES > DEVICE DATA ITEM > EDIT:

Adding the SokkiaB2 device creates the TARGET data item. Once the data item has been added to the vehicle, it must be edited to suit the application.

Data item: RHO/THETA, SokkiaB2, TARGET

Highlight the TARGET data item in the vehicle's device list and click the Edit button to open the Configure Rho/Theta dialog box as seen below.
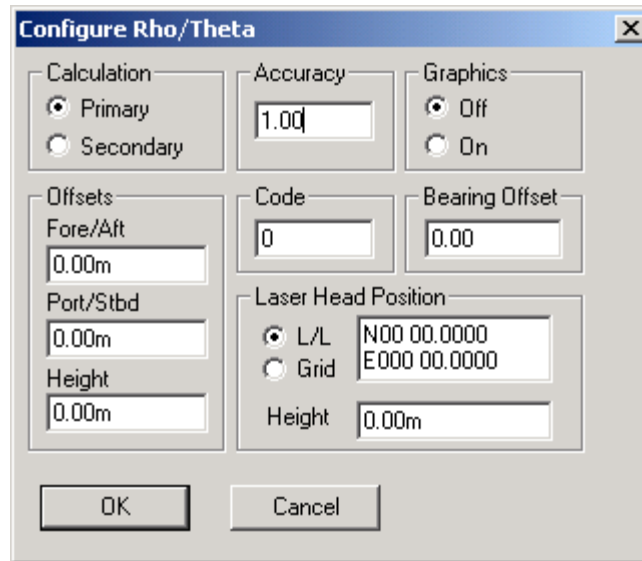
Calculation

The default setting is to Secondary. Select the Primary option if this device is to be used as the main positioning source.

Accuracy

Enter a realistic accuracy for this device, keeping in mind that the accuracy value entered affects the final filtered position calculated by WinFrog. The smaller the number entered the more accurate it is deemed to be and the more weight it will be given if combined with other position sources in a weighted mean solution.

Graphics

The Graphics On option will display a square with the device name, at the device's location, in both the Graphics and Bird's Eye windows.

Offsets

The offsets are entered similar to other devices in WinFrog, i.e. measured from the CRP (if applicable) to the Sokkia B2 location.

Code

The value entered in the Code field is not used in real-time. This value is written to the raw record. If multiple targets are being used, you can enter a code value so as to distinguish between data from different targets.

Bearing Offset

The Bearing Offset entry can be used to rotate the observed bearings. One example that this might be used for is to orient the bearings from the local datum to true north.

Laser Head Position
The Laser Head Position must be entered in order for real-time positions to be calculated for any targets. Note that the Height entries from both the Offsets and Laser Head Position sections are applied.

TELEGRAM SPECIFICATION:

```
//String expected: Ea 0000, 0, 1.500, -199, 99,999, 89.5959, 359.5959 [,SUM]CRLF
//              a b   c d     e      f        g         h
// a) Data identifyinfg code
// b) Status XXXX
//         1234
//  (1)Distance units 0:meters 1:feet
//   (2)Angle units   0:degrees 1:gon
//   (3)
//   (4)
// c) Always 0 can be "?"
// d) Target height
// e) ppm
// f) Slope distance
// g) Vertical angle
// h) Horizontal angle
```