WinFrog Device Group:	**ROV**
Device Name/Model:	**TSS350**
Device Manufacturer:	**TSS (UK) LTD HQ** New Mill New Mill Lane, Witney Oxfordshire, UK OX8 5TF Tel: +44 (0)1993 777700; Fax: +44 (0)1993 777701 Email: tssmail@tssuk.co.uk http:// www.tss-realworld.com **USA Branch** 10801 Hammerly Blvd Suite 206 Houston Texas 77043 Tel: +1 713-461-3030**;** Fax: +1 713-461-3099 Email: tssusa@tssusa.com
Device Data String(s) Output to WinFrog:	Time (computer), vertical distance, altitude, depth, lateral offset, skew angle, Signal Strength on SL Channel, Signal Strength on SV Channel, Signal Strength on PL Channel, Signal Strength on PV Channel, Signal Strength on SF Channel, Signal Strength on PF Channel, data packet type, check code, quality control flag.
WinFrog Data String(s) Output to Device:	Nil
WinFrog .raw Data Record Type(s):	Type 495

DEVICE DESCRIPTION:
The TSS 350 Series Cable Survey System is designed for the detection and survey of tone carrying cables; making it an 'active' type locator. The system is designed to detect the magnetic fields developed by a low frequency AC tone that has been applied to the target cable.

The 350 system consists of a subsea electronic pod, two search coil sensors and an altimeter – normally mounted on a subsea vehicle – and a surface display computer (SDC) mounted on the survey vessel.

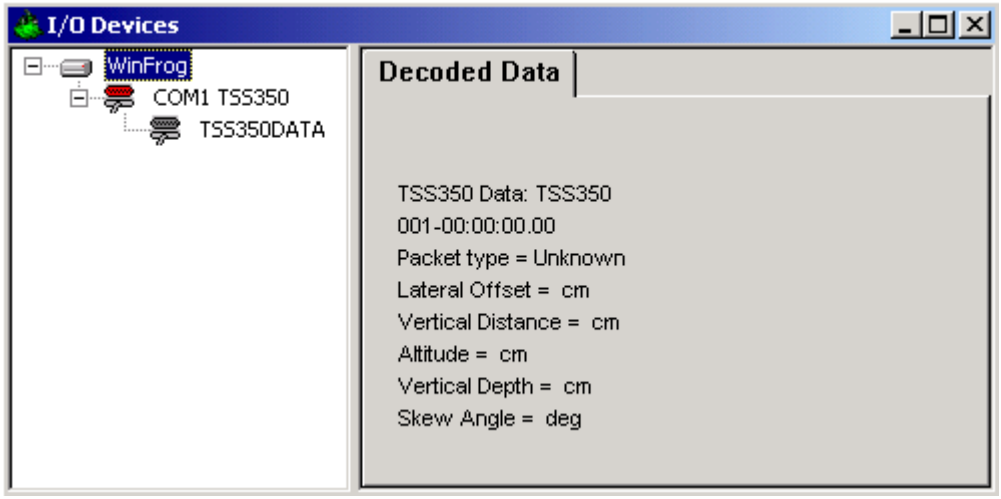
DEVICE CONFIGURATION INSTRUCTIONS:
Between SDC and WinFrog:

Baud Rate:	9600	Stop Bits:	1
Data Bits:	8	Parity :	ODD

Above are RS232 communications. For the 20mA digital current-loop (two-wire twisted pair) communication between the SEP and SDC, refer to the TSS 350 System Manual.

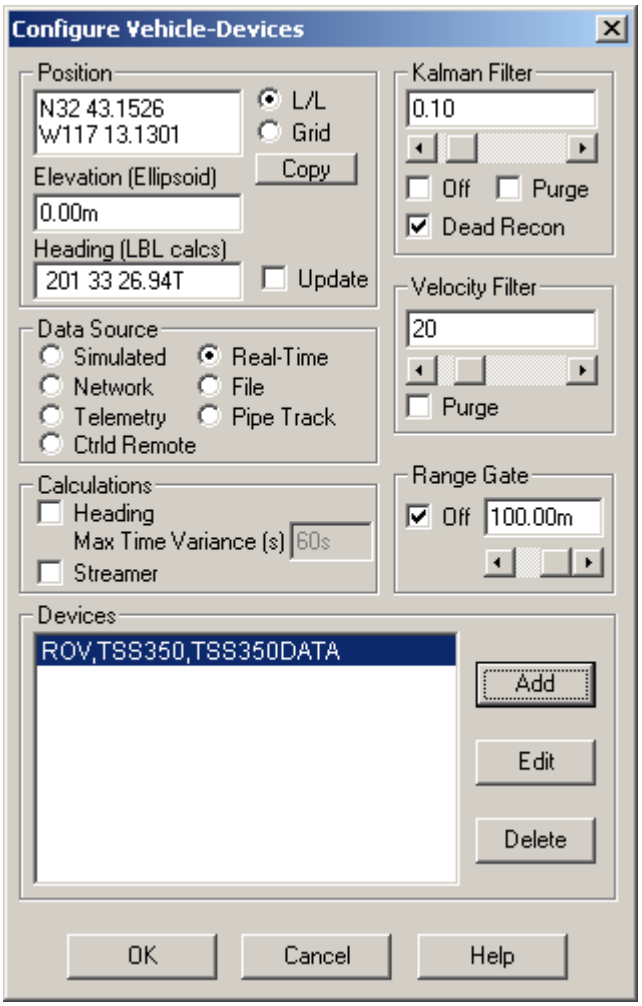
An alternative for distances greater than 1000 meters is to use the 4-wire twisted pair method, which is also described in the System Manual.

WINFROG I/O DEVICES > CONFIG OPTIONS:
The TSS350 is added to WinFrog from the ROV device types. The TSS350 (data) item is added to the system along with the TSS350 device.

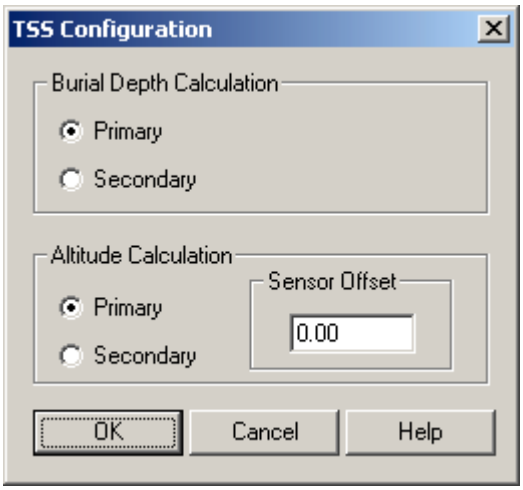


No configuration is required or available at the I/O Device level.

WINFROG VEHICLE > POSITION > DEVICE > EDIT OPTIONS:
The TSS350DATA data item can be added to the vehicle (usually ROV). This will initiate the logging of the type 495 record in the RAW data files.



The **TSS350DATA** data item must be edited once it is added to a vehicle's device list. Highlight the **ROV, TSS350,TSS350DATA** data item in the vehicle's device list, then select the **Edit** button. The TSS Configuration dialog box appears as seen below.



Burial Depth Calculation:

Set the **Calculation** selection to **Primary** or **Secondary.** Devices set to **Primary** calculation are used to provide a burial depth. Note that more than one burial depth device can be added to a vehicle's device list; in this situation only one burial depth device may be set to Primary. If the **Calculation** type is set to **Secondary**, WinFrog will simply monitor the device's data. WinFrog will not associate the burial depth data from the device with the vehicle; the data will only be logged to the raw data files.

Note: In the case of **Primary** device failure, WinFrog will not automatically use the **Secondary** devices for the vehicles burial depth computation. You must manually change a **Secondary** device to **Primary** in order for the data to be utilized.

Altitude Calculation:

Set the **Calculation** selection to **Primary** or **Secondary.** Devices set to **Primary** calculation are used to provide an altitude. Note that more than one altitude device can be added to a vehicle's device list; in this situation only one altitude device may be set to Primary. If the **Calculation** type is set to **Secondary**, WinFrog will simply monitor the device's data. WinFrog will not associate the altitude data from the device with the vehicle; the data will only be logged to the raw data files.

Note: In the case of **Primary** device failure, WinFrog will not automatically use the **Secondary** devices for the vehicles altitude computation. You must manually change a **Secondary** device to **Primary** in order for the data to be utilized.

The **Sensor Offset** is the vertical distance from the CRP to the TSS sensor (up is +ve, down is –ve).

CONFIGURATION DETAILS:

The TSS350 should be mounted as per the instructions in the System Manual.

TSS350 Output Format:

The Data Packet Format output from the TSS350 is similar to the TSS340 with the addition of two Signal Strength fields. The TSS350 also has different designators for signal strengths. Refer to documentation on the TSS340, for similar information on the TSS350 Data Packet.

Note: All distances are logged in units of centimeters.