WinFrog Device Group:	**PLOW**
Device Name/Model:	**PFDepTen**
Device Manufacturer:	
Device Data String(s) Output to WinFrog:	
WinFrog Data String(s) Output to Device:	
WinFrog Data Item(s) and their RAW record:	PLOWDATA 490

DEVICE DESCRIPTION:

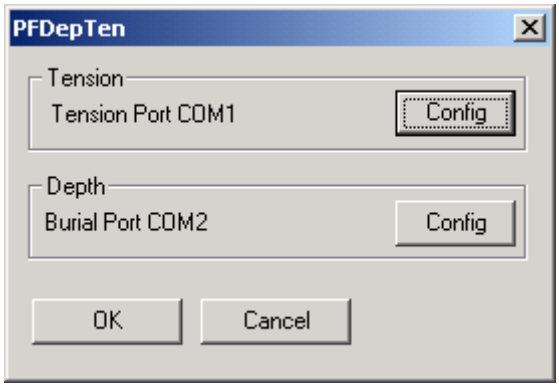
This device is an analog to digital converter that converts voltages from the device's sensors to both Burial Depth and Tension data.

DEVICE CONFIGURATION INSTRUCTIONS

WINFROG I/O DEVICES > EDIT I/O:

Serial
Configurable Parameters

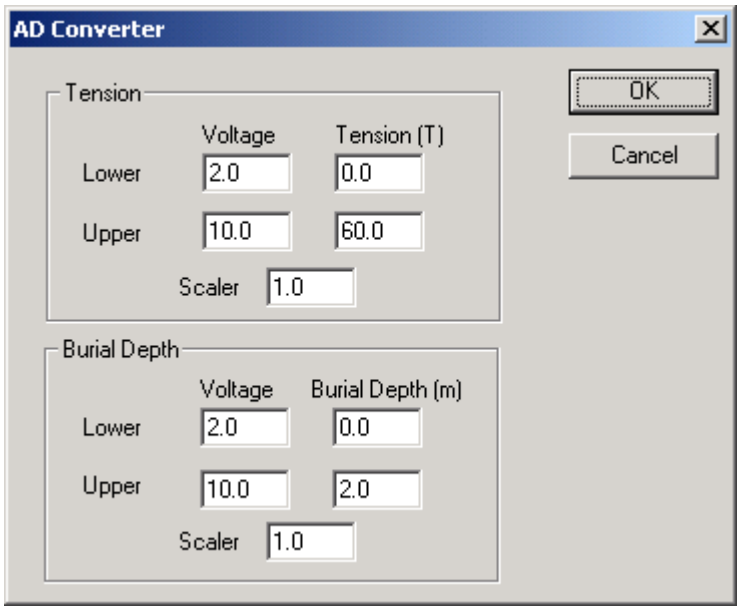
Note that this device requires the configuration of two data ports, one for the Tension data and the other for the Burial Depth data. Upon adding this device to WinFrog the PFDepTen dialog box opens as seen below.



Simply click on the Config button for each COM port and configure the I/O parameters to match those set on the device itself.

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 AD Converter dialog box appears, as seen below.



Enter the Upper and Lower limit values for Voltages, Tension and Burial Depth.

The Limit values for the voltages are determined from other sources (i.e. sensor's documentation). The Scaler is a value that the derived tension or burial depth is multiplied by. Determine the units required to be input into WinFrog, compare that to the units output by the sensors and from that determine the Scaler values.

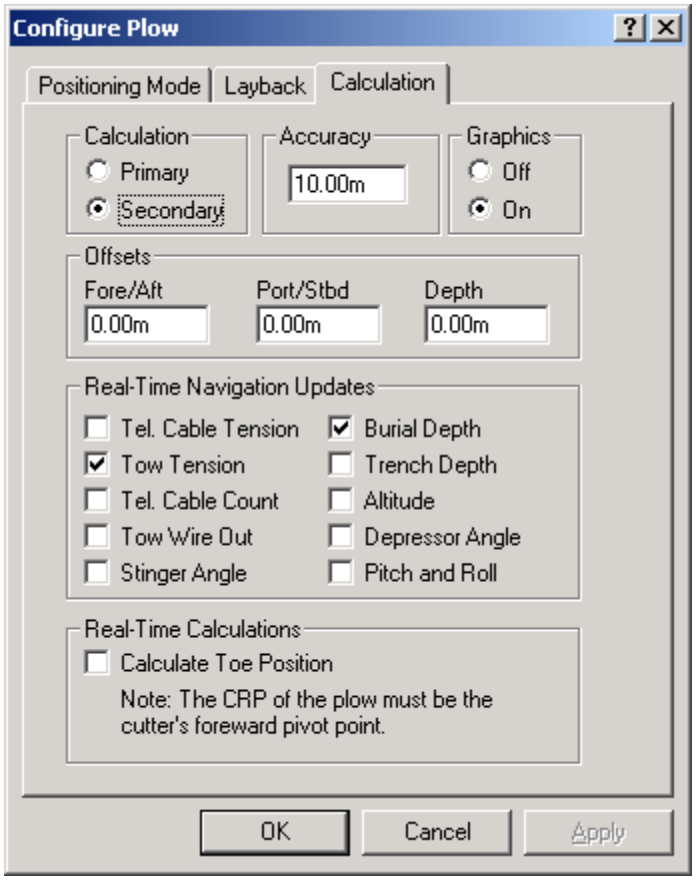
Similarly, you would also have to determine the maximum expected tension and burial depth and enter these values in the appropriate dialog boxes.

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

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

Data item: ROV, PFDepTen, PLOWDATA

This data item would typically be attached to the Plow vehicle in WinFrog. Highlight this data item in the vehicle's device list and click the Edit button to open the Configure Plow dialog box as seen below.



As can be seen above, the Configure Plow dialog consists of three tabs. Since this driver only reads the tension and burial depth data, neither the Positioning Mode nor Layback tabs are used. However, the Calculation tab must be configured for use.

Positioning Mode tab

Not used for this device.

Layback tab

Not used for this device.

Calculation tab

As mentioned above, this device is not used for positioning the plough. The only function of this device is to read and convert relevant voltages to tension and burial depth data. Therefore, the only options that require configuration are the options available in the Real-Time Navigation Updates section of this tab.

Calculation
Primary/Secondary – These options are used for plough positioning and are not used by this device. This data item must be added to the vehicle's device list to read, apply and record the relevant data but this is independent of the Primary/Secondary setting.

Accuracy
Not used for this device.

Graphics
Select the On radio button to display a square in the Graphics and Bird's Eye windows.

Offsets
Not used for this device.

Real-Time Navigation Updates
Most Plow devices have the ability to provide real-time data updates via an umbilical. The Decoded data tab in the I/O Devices window will indicate what data is updated in real-time for each device. You should only select the checkboxes for data output by this device (i.e. tow tension and burial depth), as leaving the other checkboxes selected causes data to be assigned to the vehicle. If the device does not output a particular type of data, 0 will be assigned for each item left selected and this may cause values from other devices to be overwritten.

Real-Time Calculations
Not used for this device.