WinFrog Device Group:	
Device Name/Model:	SIMULATED
Device Manufacturer:	
Device Data String(s) Output to WinFrog:	None
WinFrog Data String(s) Output to Device:	None
WinFrog .raw Data Record Type(s):	Transceiver (LBL TRANCEIVER): Type 420 Transponder (XPONDER); Type 421

DEVICE DESCRIPTION:

Long base line acoustic driver for demonstration and training purposes including LBL calibration. Used to produce simulated positions of underwater or surface vehicles. Uses fixed, relay, responder and sequential transponders described in the working transponder file to compute the appropriate ranges which otherwise would have been observed. This driver will simulate Sonardyne, Benthos and NS-011 LBL devices. The LBL device simulated depends upon the model of the transponders present in the working file. If they are generic the device simulated will be either the Benthos or NS-011, and if the models are Mk III or Mk IV then the device simulated will be the Sonardyne Pan. Refer to the WinFrog User's Guide for more details, specifically chapter 5 for "WORKING TRANSPONDERS (.XPT) FILE", chapter 17 for "LBL ACOUSTICS" and chapter 20 for "ACOUSTIC CALIBRATIONS".

There are two data items created: LBL TRANCEIVER and XPONDER.

WINFROG I/O DEVICES > CONFIG OPTIONS:

There is no configuration for the device.

WINFROG VEHICLE TEXT WINDOW > CONFIGURE VEHICLE DEVICES > DEVICE > EDIT OPTIONS:

Data item: LBL,SIMULATED,LBL TRANCEIVER

Configure LBL Transceiver Select FixedTransponders Calculation Solution Control Primary Convergence Secondary Convergence Use in Calibration Convergence Depth Calculation Mode Transmit Calculated On Use onther source Use entered Depth for CRP from other source Use entered Depth for CRP (0 for ship) On O.Ott Receive (NOTE: A depth below watersurface is entered as a positive value.) Con ROVNAV depth Interrogation Interval Calculated	onfigure LBL Transceiver	
Image: Construction of the construc	Configure LBL Transceiver	Select FixedTransponders Solution Control Accuracy 3.00m Convergence 1.00m Transmit On Off Code
	for CRP (0 for ship) 0.0ft (NOTE: A depth below watersurface is entered as a positive value.) ROVNAV depth Interrogation Interval	Receive On O Off Xducer Number O 1 O 2 O 3 Graphics

See the LBL ACOUSTICS chapter for details on setting these parameters. They are the same across all LBL TRANCEIVERS except for the **Transmit Code**. The "transmit code" must match exactly what was entered as the receive value or code for the fixed transponders. Example: 9.0 is not the same as 9.00.

Data item: LBL, SIMULATED, XPONDER

Configure XPONDER	R data type 🛛 😤 🗙	
TrackingTranspor	nder Select FixedTransponders Xponder Settings	
Calculation Primary C Secondary Xpndr Control On C Off	Solution Control 1.00m Accuracy 0.20m Convergence Tolerance Test for outliers	
Graphics On Off Kalman Filter Control Filter Least Squares Position Filter Ranges		
Offset, from the CR Fore/Aft F 0.00m	RP Height Port/Stbd (+ above CRP) 0.00m 0.00m	
	OK Cancel Apply	

See the LBL ACOUSTICS chapter for details on setting these parameters. They are the same across all transponders (XPONDERS).

Relay Transponder

Currently WinFrog uses an observed range from the transceiver to a fixed transponder to reduce the observed relay transponder's range (which includes the ranges: vessel to relay, relay to fixed transponder and transponder to transceiver, sometimes called singaround time). Be sure to select this relay transponder as well as the fixed transponders on the tab "Select Fixed Transponders". Consequently the LBL TRANCEIVER must be setup to interrogate with a transmit code. For details on the settings see the LBL ACOUSTICS chapter.

Responder Transponder

Responder mode is essentially the same as relay mode however, the responder transponder is triggered by an electrical pulse instead of acoustic pulse. Again the LBL TRANCEIVER must be setup to interrogate. Be sure to select this responder transponder as well as the fixed transponders on the tab "Select Fixed Transponders".

Simultaneous Transponder

This will simulate Sonardyne's simultaneous COMPATT. It is not necessary to add the LBL TRANCEIVER to the main vessel to accomplish positioning of the simultaneous transponder. Be sure to select all the fixed transponders on the tab "Select Fixed Transponders" but note that the simultaneous transponder will not appear here as it is not necessary to select it.