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# TSC3 to CEEPULSE configuration via Bluetooth.

The TSC3 is able to connect to a CEEPULSE via Bluetooth while maintaining connection to the GNSS Antenna (R6, R8, R10 etc.). Follow the steps below to configure a connection a CEEPULSE to the TSC3 for hydro data collection.

**Note:** This work instruction is based on using Trimble Access software.

**Note:** The connection process should also apply to using RS232 serial connection in place of Bluetooth.

## CEEPULSE Configuration

Use real time output format NMEA DBT option only (other options available not accepted by Trimble Access software as at Jan 2015). This is setup in the CEEPULSE connect software supplied with the equipment. The data is common across serial and Bluetooth. The Baud rate for RS232 does not alter the Bluetooth connection settings.

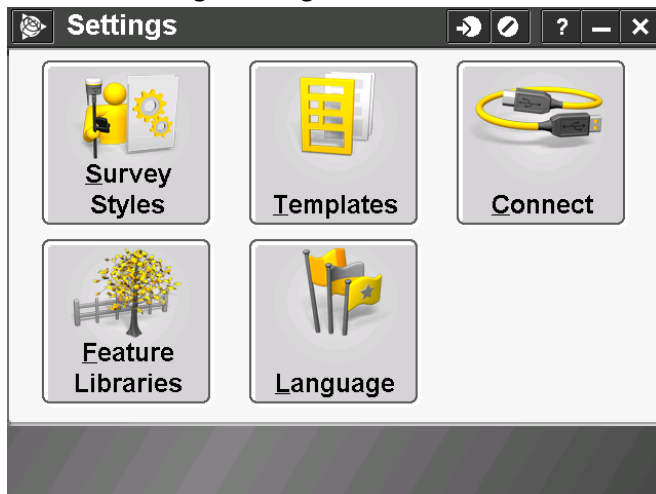
**NOTE:** The DBT string supplied to TSC3 will not include a draft correction even if entered in CEEPULSE configuration below. Ensure draft is accounted for in your configuration as required.

The screenshot shows the 'CEE CEEPULSE Setup' window. It includes a 'MODE' section with 'STANDBY' and 'ACTIVE' indicators, and a 'System Temperature' button. The 'CEEPULSE CONTROL' section has 'E/S MODE' with radio buttons for 'Shallow', 'Auto' (selected), and 'Manual'. Below this are 'Velocity' (1500), 'Ping Per Second' (10), and 'Max Depth (m)' (20) with a slider. The 'Output Format' is set to 'NMEA DBT'. A 'Draft' section includes 'Draft (cm)', 'Index (cm)', 'Blanking (cm)', and 'Frequency (kHz)' with spinners. The 'TVG' section has radio buttons for 'OFF' (selected), 'log10', and 'log20'. The 'Set Baud Rate' section shows 'RS232' selected and '19200' in the dropdown. At the bottom, it displays 'Depth: 0.00 m' and a 'Save' button. A 'Setting Applied' message is visible at the very bottom.

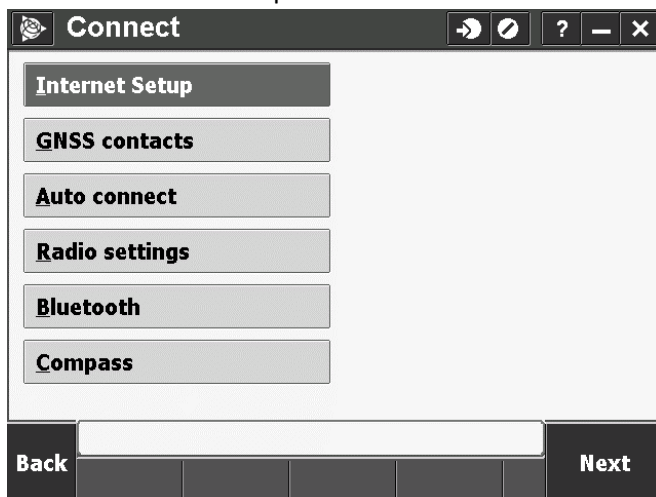
# In TSC3 with Trimble Access to make connection

## Settings

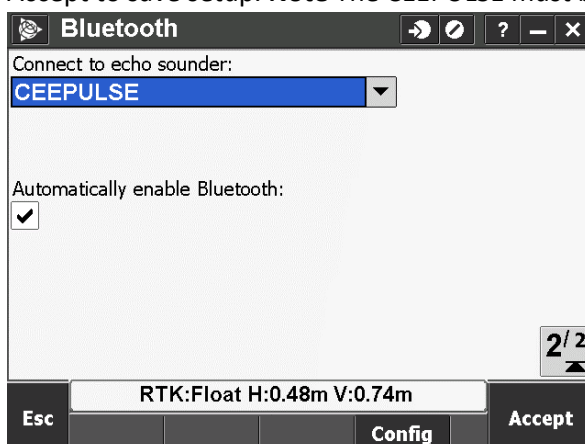
- From the Settings menu go to Connect



- Select the Bluetooth option in the Connect menu

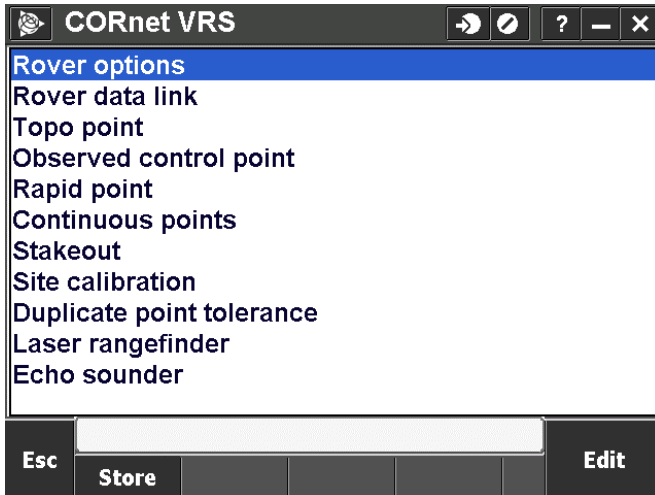


- Go to page 2/2 for Bluetooth. Press "Config" to add a device. The program will browse for available Bluetooth devices and display CEEPULSE when detected. Enter passkey 12345 when prompted and Accept to save setup. **Note** The CEEPULSE must be powered up to be discoverable.

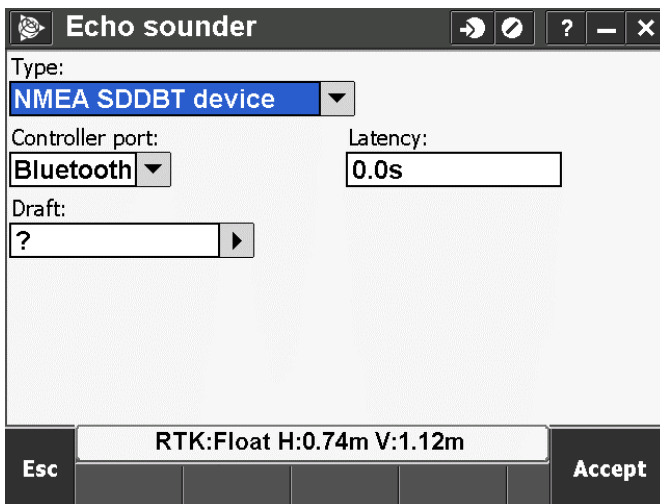


## In TSC3 to receive depth data

- Configure the correct Survey style for your project (required accuracies, correction source etc). Within each Survey Style the menu will list Echo sounder as an option. Highlight Echo sounder Edit to configure the Echo sounder option.



- Select Echo sounder > Edit and set type as DBT (options are CEESTAR HF, CEESTAR LF, NMEA SBDBT, Sonarmite). The controller port is set to Bluetooth. Latency is typically 0.0s. Enter draft to reference transducer face to GNSS offset reference level.



## Data collection

Go to Measure > Continuous topo to set the unit to record points based on time or distance. The most recent depth value will be displayed on the Continuous Topo Screen if the CEEPULSE connection is established correctly.

**NOTE:** The zero depth value (0.00 when the transducer is not connected) will display as a question mark (?). Testing of interface should be done with transducer in the water and active, valid depth being fed.

**Continuous topo**

Method:  
**Fixed time**

Antenna height (Uncorrected):  
**2.000m**

Measured to:  
**Bottom of antenna mount**

Depth:  
**0.256m**

Time interval:  
**0m2s**

Start point name:  
**1044**

Code:  
**?**

90%  
64%  
8  
2.000

Map  
Menu  
Favorites  
Switch to

RTK:Float H:0.37m V:0.66m

Esc Options Start

For data download it is recommended to create the output file with the GNSS height as a separate field to the depth value. This allows easier cross reference of the GNSS derived height and the calculated depth as two separate components.