

## NEP-5000-USB HAND HELD

The Analite NEP5000 Turbidity sensor known for extreme accuracy and flexibility now comes with a new hand held display device. Through a USB interface the most cost effective turbidity sensor becomes the worlds most cost effective hand held. Simply team it up with a tablet, Laptop, or Phone.



# NEP5000USB HAND HELD

## Comes in two versions



**NEP-5000-USB**  
5 metre glanded cable. USB interface built into probe. Made for single purpose hand held display system.



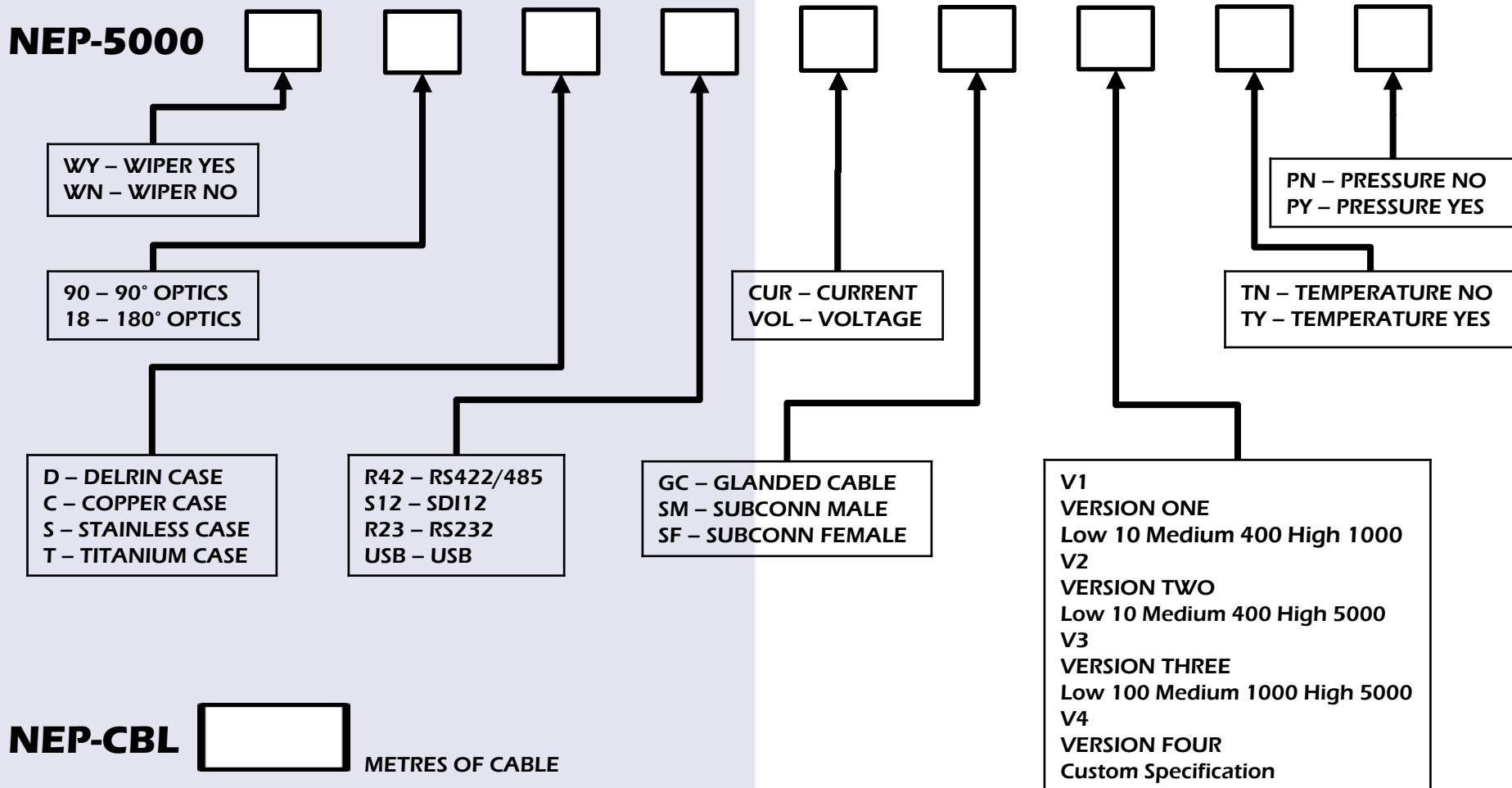
USB in cable with SubConn marine connector

USB cable connected



**NEP-USB-CONN**  
5 metre Marine Connector cable. USB interface built into cable. Allows for sensor swapping and frees sensor for other purposes.

# NEP-5000 Ordering Codes and Descriptions

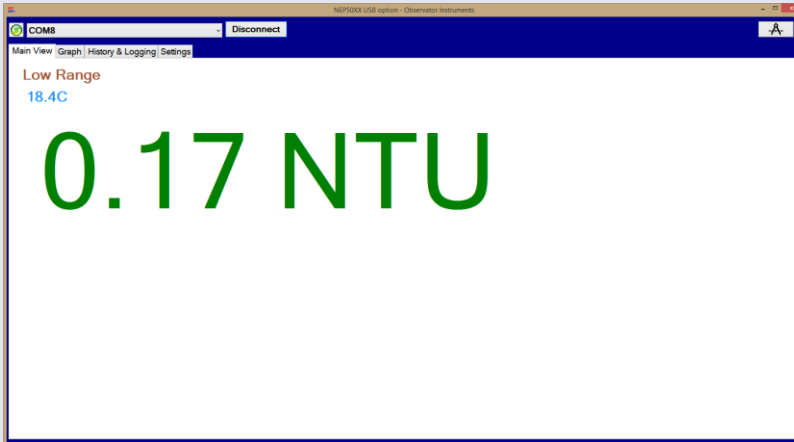




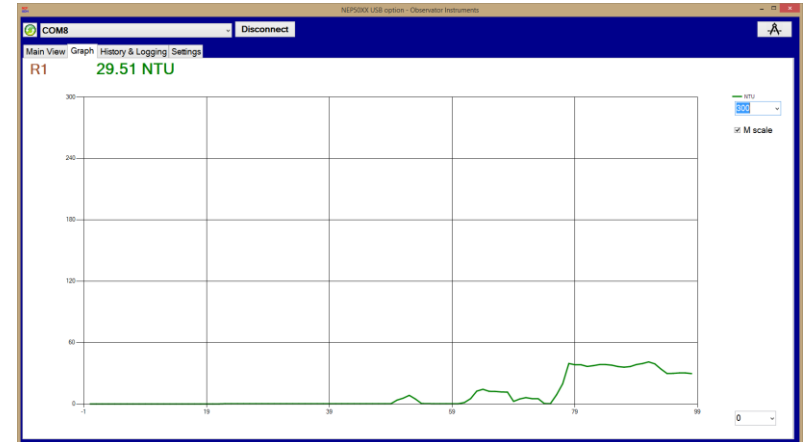
# NEP5000 Ordering Considerations

- Standard product is NEP5000WY/D/R42/GC/V2/TN/PN
- RS232 has a 10 metre cable length limit
- Voltage output has a 10 metre cable length limit
- USB interface has a 5 metre cable length limit
- 4 to 20 milliamp output has a 100 metre cable length limit
- Pressure Sensor is not vented and requires external compensation.
- The NEP-CFG is a USB interface and PC software. NEP-CFG is required for end user Turbidity calibrations and configurations.. It is also a means of calibrating a pressure sensor and loading firmware updates
- NEP5000 Sensor supports three internal ranges.(LOW, MEDIUM, and HIGH)
- Sensors are ordered in three standard Versions or combinations of those ranges They are as follows:
  1. **V1 Low 10 Medium 400 High 1000** Potable, clean water dredging, and fresh water lakes and rivers (near zero stability no negative values and two point resolution)
  2. **V2 Low 10 Medium 400 High 5000** Dredging, estuary fluctuations, sediment studies, sewers, food processing, waste treatment, pulp and peat production (Still near zero stability)
  3. **V3 Low 100 Medium 1000 High 5000** General purpose, dredging, estuary fluctuations, sewers, sediment studies, waste and process controls. (Near zero fluctuations and broad range)
- Custom ranges for LOW, MEDIUM, and HIGH are available, but will incur additional costs. Please ask for a quotation
- Voltage output is a range across 5 volts. Combinations such as 0volts to 5volts or -2.5v to 2.5 are acceptable.
- Subconn Male Connector is the standard marine connector for the NEP5000 tail section
- Shrouds are useful to protect optics and wiper mechanisms, but also to maintain calibration consistency.
- SDI12 interface is compatible with V1.3 equipment but do not support the full command set. Supported commands are Power-on / wipe / read / change range /power-off
- Customised wiper modes and wipe on power-up are set in the configuration software.
- A 180° backscatter sensor can have the wiping option

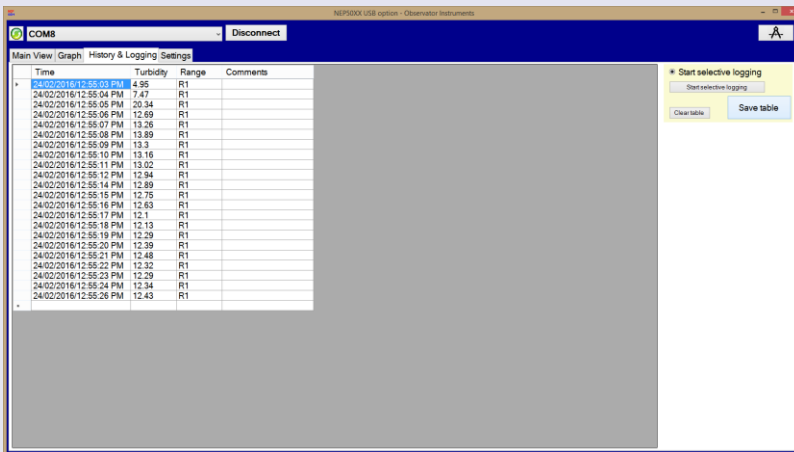
# NEP-5000-USB Tablet Software



Main screen shows turbidity, temperature, range and wiping alert.

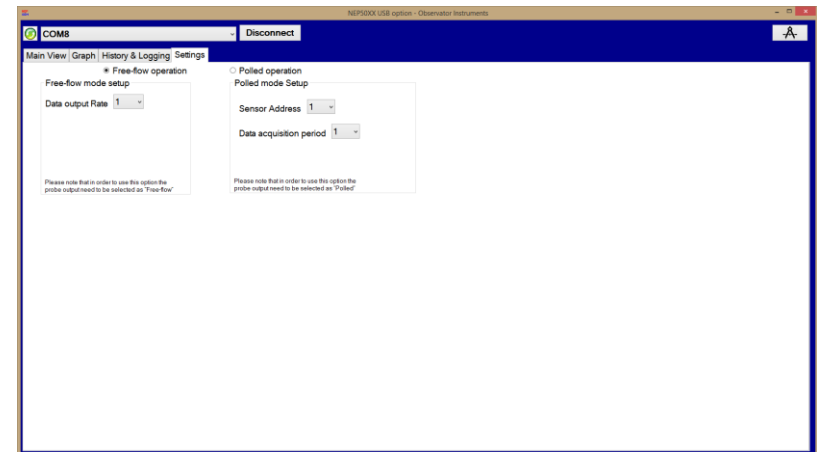


Graph screen shows turbidity and range.



Time	Turbidity	Range	Comments
24/02/2016 12:55:04 PM	4.95	R1	
24/02/2016 12:55:05 PM	7.47	R1	
24/02/2016 12:55:06 PM	20.34	R1	
24/02/2016 12:55:07 PM	12.89	R1	
24/02/2016 12:55:08 PM	13.06	R1	
24/02/2016 12:55:09 PM	13.89	R1	
24/02/2016 12:55:10 PM	13.3	R1	
24/02/2016 12:55:11 PM	13.16	R1	
24/02/2016 12:55:12 PM	13.02	R1	
24/02/2016 12:55:13 PM	12.94	R1	
24/02/2016 12:55:14 PM	12.89	R1	
24/02/2016 12:55:15 PM	12.75	R1	
24/02/2016 12:55:16 PM	12.63	R1	
24/02/2016 12:55:17 PM	12.1	R1	
24/02/2016 12:55:18 PM	12.13	R1	
24/02/2016 12:55:19 PM	12.29	R1	
24/02/2016 12:55:20 PM	12.39	R1	
24/02/2016 12:55:21 PM	12.48	R1	
24/02/2016 12:55:22 PM	12.32	R1	
24/02/2016 12:55:23 PM	12.29	R1	
24/02/2016 12:55:24 PM	12.34	R1	
24/02/2016 12:55:26 PM	12.43	R1	

Log screen streaming time/date, turbidity, and range. Logs to file.



Free-flow mode setup

Data output Rate: 1

Polled mode Setup

Sensor Address: 1

Data acquisition period: 1

Setting screen selects polled or streaming modes

# NEP-5000-USB Turbidity Probe SPECIFICATIONS

## TURBIDITY

Technique 90° modulated infra-red (ISO7027)  
180° backscatter available upon request

Ranges 3 Internal Ranges:  
  
Low (example 0-10NTU)  
Medium (example 0-1000NTU)  
High (example 0-5000NTU)

4 Range Combinations:  
  
V1 Low 10/Medium 400/High 1000  
V2 Low 10/Medium 400/High 5000  
V3 Low 100/Medium 1000/High 5000  
V4 Custom Specification

Minimum LOW Range 0-5 NTU  
Maximum HIGH Range 0-5000 NTU  
Custom Ranges available  
Auto-Range Hopping Capable

Resolution Range Resolution  
Up to 100NTU ±0.01NTU  
Up to 400NTU ±0.1NTU  
Up to 1,000NTU ±1.0NTU  
Up to 5,000NTU ±2.0NTU

Accuracy ±1% at 25°C up to 3000NTU.  
±2% at 25°C up to 5000NTU

Linearity Better than 1% for 0 to 3000 NTU  
Better than 2.0% for 0 to 5000 NTU

Temp. Coefficient Better than ±0.05% per °C.

Zero Drift Less than ±0.1NTU

## MECHANICALS

Weight NEP5000 Delrin models 300 gms  
  
NEP5000 Metal models 770 gms  
  
\* 100gms connector plus 70 gms per meter of cable

Construction Delrin Composite casing is standard  
316 Stainless Steel  
Titanium  
Anti-Bio foul CW352H 70/30%  
Copper / Nickel

Cable Glanded Cable to USB

Cable Length 5 metre only

Depth Rating 200m (660ft) Non-wiping  
100m (330ft) Wiping

Operating Temp. -10°C to 40°C.

Storage Temp. -20°C to 50°C.

Accessories NEP-SIL-WIPE - Wiper replacement kit  
NEP-SHRD - Protective shroud for optic head

Options Stainless steel Titanium, and Copper casing  
  
Marine Connectors

## OPERATION

Outputs Serial USB streaming or polled

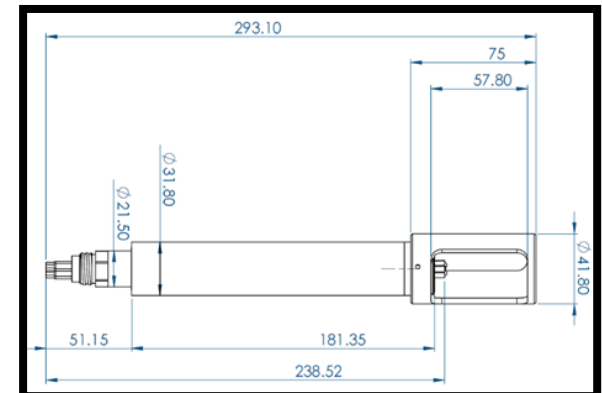
Calibration Factory calibrated using non-toxic AEPA polymer solutions. Formazin Referenced

Power and 9.6 - 28V dc, 15mA on. 40mA reading  
60mA Wiping

Settling Time < 1 second after application of power to 99%

Wiping Wiping is configurable through the PC configuration tool. Wipe directions or alternate settings and timeouts will prolong probe life. During a wipe, the output remains within ±1% full scale of the turbidity value just prior to the wipe.

Wipe Time 8 seconds nominal



NOTE - Dimensions shown are for the connector version with shroud