

### LT-500 AHRS SW v1.02 Release Notes

Part Number: 51-100294

Product Name: LT-500 AHRS

Software Ver.: 1.02                      LT-Service Tool: v1.04 (minimum req. SW)

Release Date: 5. August 2016

SW Update:     Optional                       Recommended                       Mandatory

File Name:        LT-500\_v1.02.Iti                      File size:            137 KB

Checksum:        5caf603adb61514115e80197e906a66b (MD5)

Downloads:       <http://thrane.eu/wdpress/index.php/lt-500-ahrs/>

Contact:           [support@thrane.eu](mailto:support@thrane.eu)

#### New Features

- Configuration of NMEA 0183 sentences:
  - Enable/disable sentence
  - Talker ID (HC, HE, HN, etc.)
  - Output rate (up to 40 Hz for attitude data)

The NMEA 0183 sentences can be configured from the LT-Service Tool, using the following command: 'nmea0183 sentences [ default | <sentence>:<interval (ms)>...]' (e.g. HEHDT:100, etc.)

The LT-Service Tool supports a function to make analysis of the NMEA 0183 output to verify correct configuration.

- Configuration of attitude filter (0 to 9.9 seconds). Low pass filtering of output data on NMEA 0183 and NMEA 2000: heading, pitch, roll, and ROT. The low pass filter is by default disabled. The configuration can be changed using the MMI (user interface) or LT-Service Tool.
- The following new features/data are available from the MMI (user interface):
  - Deviation Cal:    The number of deviation calibrations performed (initially 'none')
  - SW version:        The SW version loaded into the unit (e.g. '1.02 R')
  - Attitude filter:    The low pass filter can be configured from 0 to 9.9 seconds
  - Deviation:         The initially 5 degrees heading resolution can be disabled.  
The 15 seconds heading pause, when successful subsequent deviation calibrations are performed, can be disabled

## Changes

- NA

## Fixes

- NRU-242: Erroneous rate-of-turn on some bearings/courses
  - Sailing on some bearings/courses could cause inaccurate readings on rate-of-turn
- NRU-246: Pressure is offset with wrong sign
  - The algorithm that offsets the pressure based on the user supplied mounting offset had a wrong sign
- NRU-254: ISOBUS address conflict
  - Updated NMEA 2000 broadcast filter
- Other minor bugs

## SW Upload Instruction

Follow this procedure to upload a new application SW to the LT-500 AHRS:

- 1) Connect the LT-500 AHRS (NMEA 0183 interface) to a PC using one of these interfaces: USB to RS-422 adapter, serial RS-422 or RS-232. Details are available in the LT-500 User & Installation Manual.
- 2) When the LT-500 AHRS is connected and powered (9-40 VDC) – start the LT-Service Tool by double-click on the 'LT-Service\_v1.04.exe' file. The LT-Service Tool will automatically scan and detect any LT-500 AHRS connected to the PC. Type 'help' to get a full list of available commands.
- 3) Use the following command to upload the application SW: 'upload -b 115200 LT-500\_v1.02.lti'.