

## N1E, NMEA/Ethernet LWE interface, provisional manual

### 1 Description



The N1E NMEA/Ethernet interface is intended as a gateway between standard “LWE” IEC 91162-450 Ethernet bridge networks and standard NMEA 0183/IEC 61162-1/-2 interfaces.

NMEA input and output are fully isolated from DC power supply and from network connection.

**Note that this manual describes a pre-series unit, intended for customer evaluation only!**

However, the unit has no currently (2009-06-28) known issues compared to existing committee drafts of the standard.

The unit can be powered from almost any DC supply in the range 10 – 40 V.

### 2 Technical Data

Dimensions:	Boxed 68 x 110 x 22 mm.
Serial input:	Opto coupler isolated input, compliant with NMEA 0183/0183HS and IEC 61162-1/-2.
Serial output:	Opto coupler isolated output, compliant with NMEA 0183/0183HS and IEC 61162-1/-2.
Network port:	10/100 Mbit Ethernet, using standard RJ45 connector.
Connectors:	Phoenix screw terminals, accepting up to 1.5 mm <sup>2</sup> cable.
Power requirements:	10 – 40 V DC, less than ?? mA at 24 V (typically ?? mA) with open outputs.
Environmental:	Meets or exceeds IEC 60945 class “Protected”

### 3 Indications

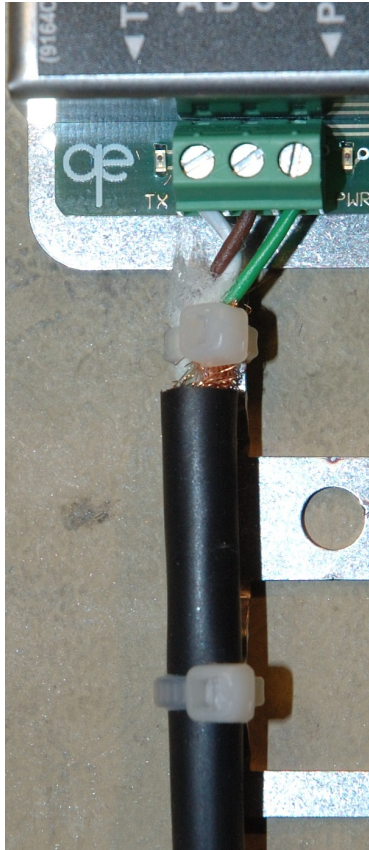
TBD.

### 4 Installation, setup

The unit should be bolted to a flat surface, preferably vertically and with wiring from below.

#### 4.1 Wiring termination

On the lower part of the unit an area is provided for securing the cables using wire straps. Connection should be done using shielded cable and making sure the installation will be compliant with the EMC requirements of IEC 60945 it is necessary to make sure that the outer cable shield is securely connected to the chassis if the unit.



The simplest way to accomplish this is to remove the outer insulation of the cable and to fold down the screen on the outside of the insulation and to secure the cable with the straps supplied.

#### 4.2. Input connection

When connected to an output, the yellow input LED should light when the digital input goes active. With a normally working NMEA connection, this LED will flash as data are received and will be unlit between messages. If the opposite indication is observed, the input terminals “A” and “B” should be reversed.

#### 4.3. Output connection

When outputting serial data, the yellow output LED should light when the digital output goes active. With a normally working NMEA connection, this LED will flash as data is output and will be unlit between messages.

#### 4.4. Configuration


The unit can be configured via an internal server via the network port using a standard browser (such as for instance FireFox).

It is however essential that the ip address of the unit is known. When the unit is delivered, its default ip address is 176.16.0.2. Since this address can be set to any value and since it is necessary to always have the possibility to bring the unit to a pre-determined ip address, a set-up jumper will be provided. Inserting this jumper forces the unit to a common home/office range ip address 192.168.5.33.

**Note that the prototype units described here lacks this jumper! Instead, the same function is achieved by connecting the NMEA input directly to the NMEA output and re-applying power to the unit.**

To enter set-up, make sure that the computer hosting the browser is connected to the same network and set to the same sub-net as the N1E. Then enter N1E's ip address directly in the browser's address field.

This will show a start page, which can be used to view and change various network and port settings of the unit:



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Marine navigation  
interface products  
for AIS, VDR, S-VDR, ECDIS  
and other ship's integration.

- Home
- Network settings
- Server settings
- Channels settings
- Serial port settings
- System info
- Statistics
- Set default values
- Restart device

## Device Configuration

From these pages you can do all necessary device configuration and also show device information as well as current statistics counters.

Device information	
Product	QE-N1E
Ser no.	0
HW	9498 Rev A0
SW	99059 Ver 0.1-0
SW build	Jun 2 2009 20:10:44

The left field can be used to enter sub-pages for network, server, channel, serial port setting etc.

#### **4.4. Test tool (not to be included in the production version of the manual)**

To test and evaluate the unit, there is a DOS window utility “wn8e.exe”.

In order to start this, open a DOS window and invoke the application by entering “wn8e -?”.

It is many cases desirable to use two instances of wn8e, where one is used as a UDP listener and the other one can be used as The unit can be configured via an internal server via the network port using a standard browser (such as for instance FireFox).

## **5 CE Declaration of conformity according to the EMC Directive 89/336/EEC and amendments**

**To be added!**