

Speed

- Instrument -



Installation and Operation Manual
English



SPEED



This manual is written for NX2 Speed instrument version 3.10 – 5.00
Edition: March 2007

1	Part specification	5
2	Installation	8
3	Installing the instrument.....	9
3.1	Mount the transducer	10
3.1.1	Correct location of paddlewheel transducer.....	10
3.1.2	Installing the through hull fitting	11
3.1.3	Run and install the cables.....	12
3.1.4	Installing instrument to the Server	13
3.1.5	Installing the transducer direct to the instrument.	13
3.1.6	Installing transducer to the Server	14
4	First start	15
4.1	Initialising the instrument	15
4.2	Re-initialising the instrument.....	15
5	Operation	17
5.1	About this manual	17
5.2	How to use the push-buttons	18
5.2.1	PAGE	18
5.2.2	MINUS.....	18
5.2.3	PLUS	18
5.2.4	SET	18
5.2.5	Clear / cancel / reset.....	19
5.2.6	Calibration	19
5.2.7	Lighting.....	19
6	SPEED functions	20
6.1	SPEED main-function	20
6.2	SPEED sub-functions	20
6.2.1	TRIP LOG (TRP)	20
6.2.2	TOTAL LOG (LOG)	20
6.2.3	MAXIMUM SPEED (MAX)	20
6.2.4	START TIMER (STA)	20
6.2.5	TIMER	20
6.2.6	AVERAGE SPEED (AVS).....	20
6.2.7	DISTANCE (DST).....	20
6.2.8	DEPTH (unit/DPT) Only in Nexus Network.....	21
7	Calibration.....	22
7.1	Calibration of speed C10	23
7.1.1	C10 Return (RET).....	23
7.1.2	C11 (Unit KTS)	23
7.1.3	C12 (1.25 CAL).....	23
7.1.4	C13 DAMPING (SEA).....	23
7.2	C20, calibration of depth.....	24
7.2.1	C20 (RET)	24
7.2.2	C21 (Unit m)	24
7.2.3	C22 (- 00.0 ADJ).....	24
7.2.4	C23 (Unit°C)	24
7.2.5	C24 (0°C TMP).....	24

8	Maintenance and fault finding	25
8.1	Maintenance.....	25
8.2	Fault finding.....	25
8.2.1	General	25
8.2.2	Fault - action	26
9	Specifications	26
9.1	Technical specifications	26
9.2	Optional Accessories	27
10	Warranty	29

1 Part specification

Items delivered with the instrument

<u>Qty.</u>	<u>Description</u>	<u>Reference</u>
1	Instrument, NX2 Speed Instrument	1
1	Instrument front cover	2
1	Drill template	3
1	Installation and user manual	4
1	Warranty card	5
2	Pin bolts for instrument mounting	6
2	Nuts for instrument mounting	6
1	Tube of silicon grease	6
1	Connection cover	6
2	4-pol screw terminal	6
1	Power cable, red and black, 3 m (9 ft)	7
5	Extra wire protectors, 0,25 mm (1/100")	8
5	Extra wire protectors, 0,75 mm (1/32")	8
1	Log transducer	9
1	Through hull fitting and dummy plug	10

Registering this product

Once you have checked that you have all the listed parts, please take time to fill in the warranty document and return it to your national distributor.

By returning the warranty card, it will assist your distributor to give you prompt and expert attention. Keep your proof of purchase. Also, your details are added to our customer database so that you automatically receive new product catalogues when they are released.

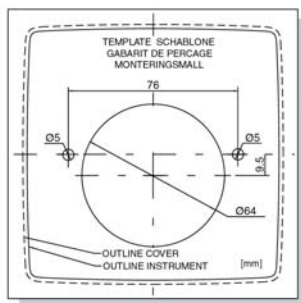
Warranty conditions see chapter 10.



1



2



3



4

A warranty card form with the following sections: 'File #:', 'WARRANTY CARD TO BE RETURNED TO YOUR NATIONAL DISTRIBUTOR', 'OWNER:' (Name, Street, City/Zip Code, Country), 'Product name:' and 'Serial number:' (with a grid for digits), 'Date of purchase:' and 'Date installed:', and 'Dealers stamp:'. A small checkbox at the bottom reads 'I hereby agree that I do not wish to receive news about future products'.

5



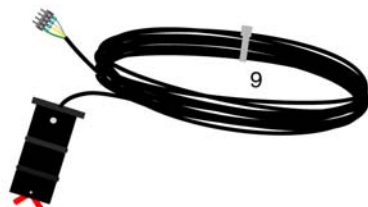
6



7



8



9



10

Welcome aboard the Nexus Network!

Thank you for choosing NX2 and welcome to the world of the Nexus Network.

Through this manual we would like to help you install, operate and understand your new Nexus Network.

The NX2 speed log may be used stand alone where the log transducer is connected direct to the Speed Instrument or in a Nexus Network where the log transducer is connected to the Server and the Speed instrument work as a repeater.

The Speed instrument will automatically sense if it is stand alone or in a Nexus Network.

The Server is the "heart" of your Nexus Network, to which transducers for speed, depth, heading, wind and navigation (GPS, Loran or Decca) are connected.

From the Server the single Nexus Network cable transmits power and data to the instruments, which repeat the information sent from the Server, or other NX2 transducers.

The Nexus Network is designed with the industry standard RS 485 databus, which allows you to connect up to 32 NX2 instrument units on the single Nexus Network cable, thereby allowing you the flexibility to easily develop your system. The Nexus Network is capable of carrying data 10 times faster than NMEA 0183.

The connection system, with a single 5 mm (1/5") cable and 4-pole jack plugs with cable protectors, makes the installation easy. No need to drill big holes and the cable can be cut to exact lengths. The connections at the Server are colour coded and marked with a number for easy reference.

The instruments large display gives you very good viewing possibilities from any angle, even in bright sunlight. The display and the five push-buttons have red back lighting which you can set to three different lighting levels.

These NX2 instruments carry a two year warranty, which gives you as our customer, confidence to trust NX2 and our commitment to quality.

To get the most out of your new NX2 product, please read through this manual carefully before you start your installation.

Again, thank you for choosing NX2. If you see us at a show, stop by and say hello.

Good luck and happy boating!

2 Installation

- **The installation includes 6 major steps:**

1. Read the installation and operation manual.
2. Plan where to install the transducers and instruments.
3. Run the cables.
4. Install the transducers and instruments.
5. Take a break and admire your installation.
6. Learn the functions and calibrate your system.

Before you begin drilling ... think about how you can make the installation as neat and simple as your boat will allow. Plan where to position the transducers, Server and instruments. Think about leaving space for additional instruments in the future.

- **A few "do nots" you should consider:**

- Do not cut the cables too short. Allow extra cable length at the Server so it can be disconnected for inspection without having to disconnect all attached cables.
- Do not place sealant behind the display. The instrument gasket eliminates the need for sealant.
- Do not run cables in the bilge, where water can appear.
- Do not run cables close to fluorescent light sources, engine or radio transmitting equipment to avoid electrical disturbances.
- Do not rush, take your time. A neat installation is easy to do.



- **The following material is needed:**

Wire cutters and strippers.

Hole saw for the instrument clearance hole 63 mm (2½").

Hole saw for the Through hull fitting hole 43 mm (1 11/16").

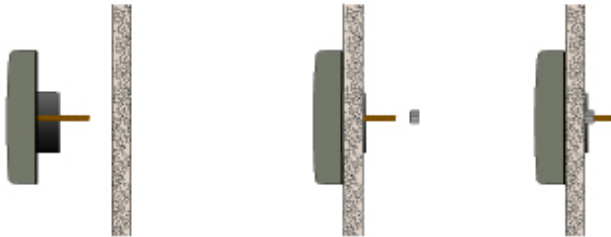
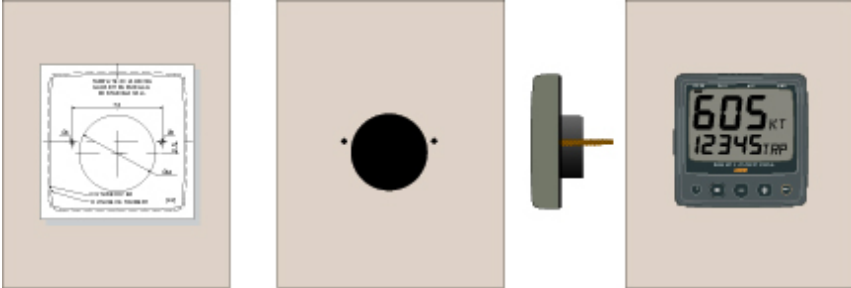
5 mm (¼") drill for the mounting holes.

Plastic cable ties

If you are doubtful about the installation, obtain the services of an experienced technician.

3 Installing the instrument

- Place the adhesive drill template on the desired location for the instrument. Drill the 2 holes using a 5 mm ($\frac{1}{4}$ ") drill for the two pin bolts. Use a 63 mm ($2\frac{1}{2}$ ") hole saw to machine the clearance hole for the instrument connection socket. Remove the template.



- Screw the two pinbolts to the instrument
- Put the instrument in place
- Screw the two nuts from the back

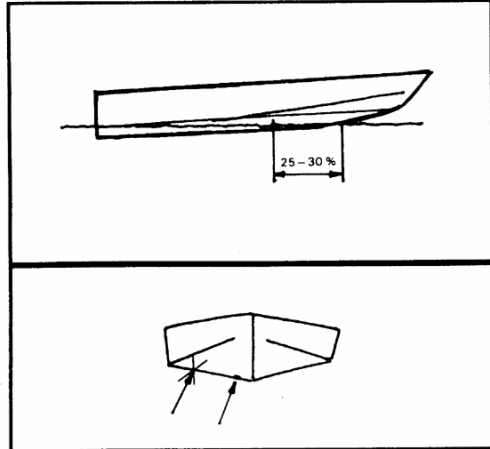
Note! The two nuts must just be tighten by hand

3.1 Mount the transducer

3.1.1 Correct location of paddlewheel transducer

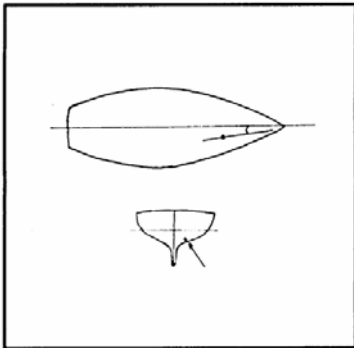
Generally the transducer should be placed as far forward as possible along the waterline length and close to the centreline.

It is important that the transducer is always in the water, within the whole speed range of the boat. Please note that the actual waterline length of fast power boats shortens considerably at high speeds. Therefore the transducer should be placed at 25-35% along the true waterline from the bow, when at full speed



Example:

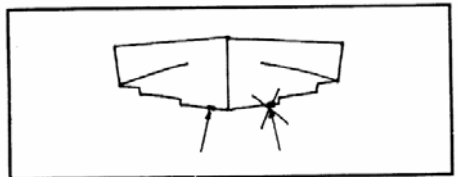
Sailboats with a fin keel must have the transducer located at least 25 cm but not more than 75 cm in front of the keel. It should be placed no more than 10 cm off the centreline.



On sailboats with a pronounced "V" in the hull, such as full-keel yachts, it might be favourable to angle the transducer slightly so that it aims at the bow, rather than directly parallel to the centreline.

This will help balanced the passing water flow measurement from one tack to another.

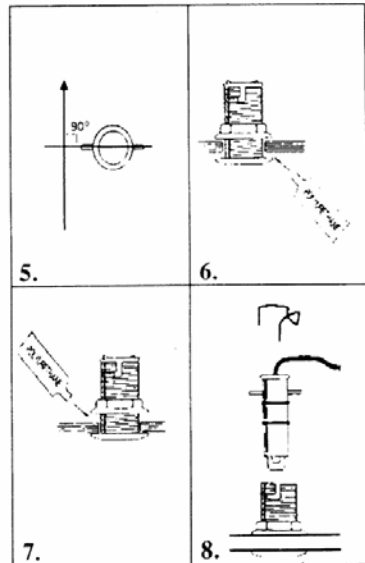
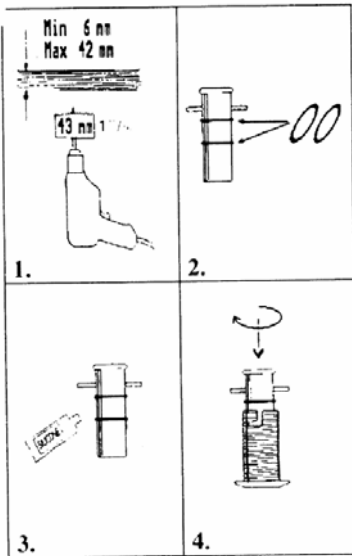
Avoid placing the transducer near the edge of sharp hull chines. Transverse water flow in these areas can affect the accuracy of measurements.



If you have a questions about the location of the through-hull, contact your builder, yacht dealer, or other owners of similar boats for advice. Always remember to allow for accessibility from the inside of the yacht when determining the final location.

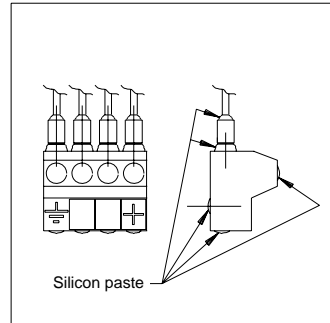
3.1.2 Installing the through hull fitting

1. Use a 43 mm (1 11/16") hole cutter to cut through the hull. (See above for correct location).
2. Slide both rubber O-rings on the dummy plug.
3. Generously apply the silicone grease to the exterior of the dummy plug.
4. Install the dummy plug in the through-hull fitting. Use a slow twisting motion and be sure that is properly seated into the fitting.
5. With the dummy plug properly installed in the through –hull fitting, mount the fitting so that the handle is exactly at right angles (90°) to the boats centreline. (For pronounced V-hulls see section 3.1).
6. Apply the polyurethane sealing compound on the outer flange of the through-hull fitting and tighten the nut on the inside by hand.
7. When this outer sealant has cured, remove the nut and apply sealant on the inside. Tighten the nut again by hand.
8. Install the wire locking device onto the dummy plug /paddlewheel transducer.

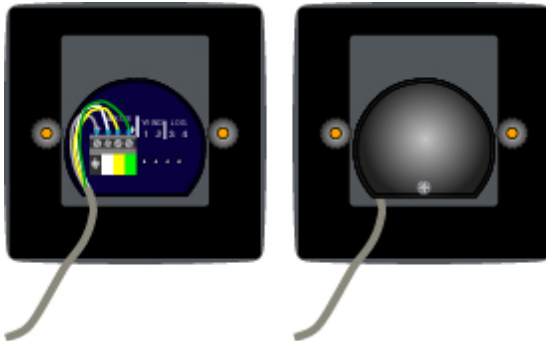


3.1.3 Run and install the cables

- Run the Transducer cable from the transducer or from the Server to the instrument.
- If you want to cut the Nexus Network cable to length, disconnect 4-pole jack plug and cut the cable. Peel off about 35 mm (1,4") of the cable insulation. Remove about 6 mm (1/4") from the 3 isolated wires (the 4th wire is an earth / screen). Attach the 4 cable protectors to the wires using a pair of flat pliers.
- Connect the 4 cable protectors to the 4-pole jack plug as shown. Apply silicon paste on all locations as shown.



Note: Must be done to avoid corrosion.



- Apply silicon paste to the instrument connection pins at the back of the instrument. Press the jack plug onto the instrument pins. Press the cable in to the cable leads.
- Mount the connection back cover with the screw.

3.1.4 Installing instrument to the Server

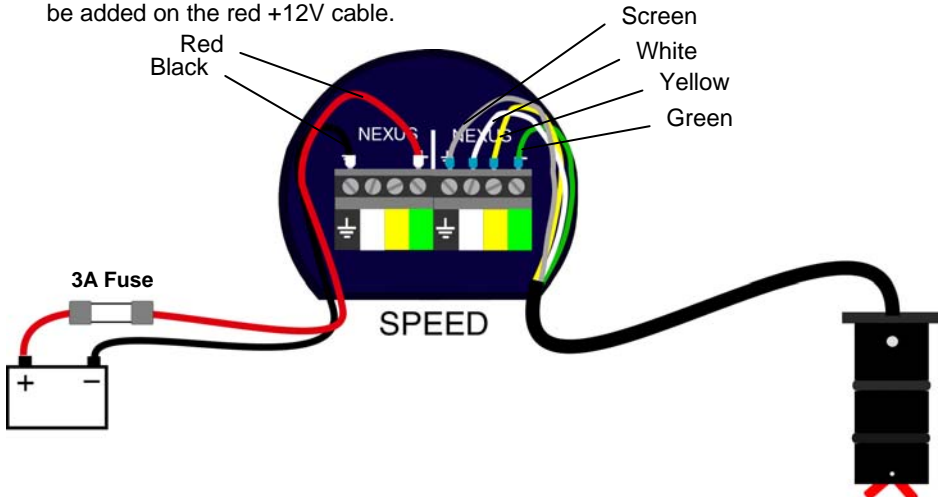
All NX2 instruments are connected directly to the Nexus Network in a daisy chain. They all use the same colour coded 4-pole jack plugs.



3.1.5 Installing the transducer direct to the instrument.

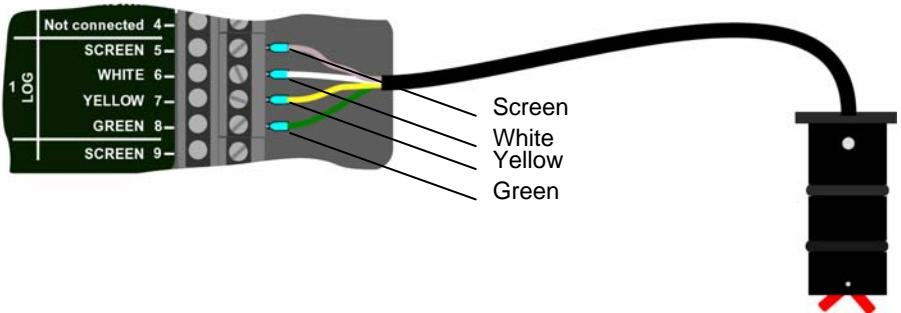
If you use the NX2 speed as a stand alone unit (not in a Nexus Network), the transducer and the power supply are connected direct to the instrument.

1. Disconnect the connector on the transducer cable (only used when connecting to Server)
2. Connect the transducer to the instrument as below
3. Connect power to the instrument, always remember to use a 3 Amp fuse between the battery and the instrument
4. Note that there are no power on/off switch on the instrument. In order to switch of the instrument, a external switch has to be added on the red +12V cable.



3.1.6 Installing transducer to the Server

The log transducer are supplied with a connector for quick connection to the server.



4 First start

4.1 Initialising the instrument

Only in a Nexus Network

At power on, the instrument will perform a self test. The display will first show all segments, then the software version number and the Nexus Network ID number.

At first power on after installation, you will be asked to press **SET** (PrESkey). This will give the instrument a logical ID number on the Nexus Network.

To initialise the instrument, press **SET** on all installed digital instruments, one at the time.

Note: Always wait for the text "Init OK" to be displayed, before you press SET on the next instrument!



The Server automatically gives the first unit ID number 16, then 17 and so on. The order in which you press **SET** is the same order as the instruments will be given a logical ID number on the Nexus Network.

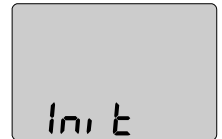
The example shows that the instrument version number is 2.0 and the given logical ID number is 16.

4.2 Re-initialising the instrument

If two instruments by mistake have the same ID number, this can cause disturbance and block the information on the Nexus data bus.

To re-initialise the instrument, press **CLEAR** during the power up sequence when version and ID numbers are displayed.

The display self test is then re-started on all instruments and you will be asked to press **KEY** on each instrument as explained above.



Note! If you do not succeed to re-initialise, we suggest you disconnect all but one instrument with the same ID number, then repeat the above procedure.

5 Operation

5.1 About this manual

- In this manual each time a push-button is referred to, the push-button name will appear in **bold** and CAPITAL letters example **PAGE**.
- Unless otherwise stated the push-button presses are momentary.
- Each time a function is mentioned in the text, it will be in brackets and in the same format, where possible, as displayed, ex. (TRP).

5.2 How to use the push-buttons



5.2.1 PAGE

The **PAGE** button is used to move the cursor when in edit mode. A press on **PAGE** moves the cursor in a circular pattern, one step to the right for every press. A press on **PAGE** and **MINUS** together, back steps cursor to the preceding step.



5.2.2 MINUS

A press on **MINUS** moves to the next sub-function. In edit mode it decreases to the previous digit.



5.2.3 PLUS

A press on **PLUS** moves to the previous sub-function. In edit mode it increases to the next digit.



5.2.4 SET

A press on **SET** unlocks a digit to access edit mode. When unlocked, the digits are "active" (flashes) and can be edited by pressing **MINUS**, **PLUS** and **PAGE** as required. When finished editing, lock the digit by another press on **SET**.



5.2.5 Clear / cancel / reset

A press on **CLEAR**, clear digits, cancel alarms or resets the counters.



5.2.6 Calibration

To access calibration mode, press and hold **SET** more than 2 seconds.



To return to main-function mode, press **SET** when the text return (RET) is shown.

5.2.7 Lighting

The instrument uses red back lighting for the display and the 5 push-buttons. The lighting can be set at 4 different levels.



To quick access the light control, press and hold **PAGE** for more than 2 seconds. The flashing text (Lit OFF) will be displayed and the display will be lit momentarily.

To select between the 4 light levels, Press **PLUS**: LOW, MED, MAX and OFF. To lock the selected level press **SET**.

The selected light level will be copied to all NX2 instruments connected to the system. When the lighting is on, it is not possible to reduce or turn off the lighting on an individual instrument.

6 SPEED functions

6.1 SPEED main-function

Boat speed through the water.

Unit available in knots (KT), km/h (Kh) or miles/h (Mh) (See 7.1.2,C11).



6.2 SPEED sub-functions

6.2.1 TRIP LOG (TRP)

0-199,99 NM, only displayed in NM. Distance covered from power on.



To reset TRIP LOG press **CLEAR**.

6.2.2 TOTAL LOG (LOG)

0-19999 NM, only displayed in NM. Can not be reset.



6.2.3 MAXIMUM SPEED (MAX)

Maximum speed since power on, or from reset of timer. To reset, press **CLEAR**.



6.2.4 START TIMER (STA)

Count down timer from 59 to 1 minutes.

To start the timer from minus 10 minutes (-10'STA) press **SET**.

The figure 1 in 10 is flashing. If you want to start count down from 10 minutes, press **SET**.

If you want to start the timer from any other time (59 to 1 minute) for example minus 5 minutes (-5'STA), press **PAGE**, **MINUS** and **PLUS** as required to set 5 minutes and start the timer with **SET**.

When started, displays the count down time in minutes and seconds.

During the last 10 seconds the alarm will sound once every second.



6.2.5 TIMER

Elapsed time in hr/min/sec from power on, or from end of start timer count down. To reset, press **CLEAR**.



6.2.6 AVERAGE SPEED (AVS)

Average speed from power on, or from reset of timer. To reset press **CLEAR**.



6.2.7 DISTANCE (DST)

Covered distance from power on, or from reset of timer. This distance are reseted when the start timer reach zero.



6.2.8 DEPTH (unit/DPT) Only in Nexus Network

Depth from the water surface or the keel depending on calibration setting (See 7.2.3, C22).

Unit available in meters (m), feet (FT) or fathoms (FA). (See 7.2.2, C21).

The text alternates between the selected (unit) and (DPT).



7 Calibration

To get the most out of your Nexus Network, it is important to carefully calibrate the Network. The calibration values are stored in a non volatile memory.

To access calibration mode, press and hold **SET** more than 2 seconds.

To select a calibration code, press **MINUS**, **PLUS** and **PAGE** as required.

To return to normal mode, press **SET** when the text return (RET) is displayed.

To change a calibration value, press **SET**.

To select calibration value, press **MINUS**, **PLUS** and **PAGE** as required.

To lock the selected value, press **SET**

In a Nexus Network, all calibration groups are available. The different calibration routines are divided into five groups:

C10 - calibration of SPEED

C20 - calibration of DEPTH

C30 - calibration of NAVIGATE

C50 - calibration of WIND

C70 - calibration of Network and NMEA settings

For instructions, see the NX2 Multi Control Manual

If you use the NX2 Speed stand alone, the following calibration groups are available:

7.1 Calibration of speed C10

7.1.1 C10 Return (RET)

To return to normal mode, press **SET**.

7.1.2 C11 (Unit KTS)

Unit for speed. Knots (KTS), km/h (K/h) or miles/h (m/h).

7.1.3 C12 (1.25 CAL)

Calibration value for speed and distance (1.00 - 1.99).

Drive the boat a measured distance at normal speed.

Compare the distance with the trip counter.

Calculate the value with the following formula:

True distance from the sea chart :	T
Log trip counter distance:	L
The current calibration value:	C
New calibration value.	N

$$\frac{T}{L} \times C = N$$

If you suspect a current in the water, drive the boat in both directions and divide trip counter distance by 2.

7.1.4 C13 DAMPING (SEA)

Damping of indicated boat speed through the water. Controls the response time of speed changes.

To change damping, press **SET**.

To select damping level, press **PLUS** and select from:

(LOW) 1 sec, **(MED)** 5 sec and **(MAX)** 22 sec.

To store the value, press **SET**.

Default value is **(LOW)**, for use in calm sea. But if the sea is rough, you may want to "stabilise" the readout on the display, then select **(MED)** or **(MAX)**. Damping is set separately for each instrument.



7.2 C20, calibration of depth

7.2.1 C20 (RET)

To return to normal mode, press **SET**.

7.2.2 C21 (Unit m)

Unit for depth. Metre (m), feet (Ft) or fathoms (FA).

7.2.3 C22 (- 00.0 ADJ)

Calibration of the depth transducer position.

This option is used to select whether the displayed water depth is measured from the water level or the keel.

To measure from the keel, use the minus (-) sign.

Example: (- 01.2 ADJ). The distance from the transducer to the keel is 1.2 m

To measure from the water surface, use the underlining character (_) sign.

Example: (_ 00.4 ADJ). The distance from the transducer to the water surface is 0.4 m.

The selected value will be subtracted or added from the measured depth.

7.2.4 C23 (Unit°C)

Unit for temperature. Celsius (C) or Fahrenheit (F).

7.2.5 C24 (0°C TMP)

Value for compensation of the temperature.

To add, use underlining character (_) ahead of the digit (_1 TMP).

To subtract, use minus character (-) ahead of the digit (-1 TMP).

8 Maintenance and fault finding

8.1 Maintenance

- To clean the instrument, use only mild soap solution and rinse with water.
- Do not use detergents or high pressure washing equipment.
- At least once a year, check all your connections and apply additional silicon paste at each connection point.
- Always use the instrument cover for protection, when not in use.
- Storing transducers and instruments when not in use for longer periods: It is advisable to remove the instruments and transducers, and store them inside the boat or at home in room temperature, if possible.



8.2 Fault finding

Before you contact your NX2 dealer, and to assist your dealer to give you a better service, please check the following points and make a list of:

- All connected instrument and transducers, including their software version numbers.
- Server software version number.
- Nexus Network data bus ID numbers for each instrument (displayed at power up).

8.2.1 General

In most cases, the reason for faults in electronic equipment is the installation or poor connections. Therefore, always first check that:

- Installation and connection is made per instructions for instrument and transducers, (see 2).
- Screw terminals are carefully tightened.
- No corrosion on any connection points.
- No loose ends in the wires causing short cuts to adjacent wires.
- Cables for damage, that no cables are squeezed or worn.
- Battery voltage is sufficient, should be at least 10V DC.
- The fuse is not blown and the circuit-breaker has not opened.
- The fuse is of the right type.
- Two instruments do not have the same ID number, (see 4.2).

8.2.2 Fault - action

1. Speed and distance functions: No reading (---)

- C95 (COG) should be OFF, if no navigator is connected.

If wrong speed and distance are displayed, calibrate the unit.

For more information, see manual for NX2 Server.

Irregular values: Check the speed damping (SEA), (see 7.1.4).

9 Specifications

9.1 Technical specifications

Dimensions:	Speed log instrument: 113 x 113 x23 mm (4.3x4.3 inch).
Instrument cable:	8 m (26 ft).
Power supply:	12V DC (10-16V). The instruments are polarity protected
Power consumption at 12V:	Speed log instrument: 0,08W with maximum lighting 0,8W.
Temperature range:	Storage: -30°to +80°C (-22°to +176°F) Operation: -10° to +70°C(14°to +158°F)
Weight:	Speed log instrument: 260 gram (9.17 oz).
Enclosure:	Speed log instrument: Water proof

CE approval

The products conforms to the EMC requirements for immunity and emission according to EN 50 08-1.

9.2 Optional Accessories

Below find a selection of optional accessories available. Please contact your local NX2 dealer for more information.

NX2 Completes

22118-3	Multi Control instrument and Server, 8m cable
22118-2	Multi Control and Server with Speed Log and depth transducer, 8m cable
22118-1	Speed log with log transducer, 8m cable
22118-4	Wind Data, with transducer, 25m cable, mast bracket
22118-5	Compass Data, with transducer 35°, 8 m cable
22118-6	GPS Navigator, with GPS Antenna, 8+10m cable

NX2/Nexus Transducers

22120-1	Server compl with 3m power cables
20707	Log/Temp transducer, 8 m cable (for Nexus and Star)
19915-8	Depth transducer, 8m cable (for NX2 only)
21731	Compass transducer 35°, 8m cable
20860	Compass transducer 45°, 8m cable
20721	Wind transducer, 25m cable, mast bracket
20721-1	CF-wind transducer, Carbon Fibre, 1260mm long, 380g, no mast cable incl.
20594	Nexus mast cable 25m
21721	MTC (Mast Twist Compensation) box, 8m cable, for Wind Data instr.
69980	MRC (Mast Rotation Sensor Compensation) box
21970	GPS Antenna, with NMEA 0183 output
21735	Bracket for GPS Antenna and 35° Compass transducer for bulkhead mount

NX2 Digital Instruments (all supplied with 0.2m cable)

22117-1	Speed log instrument
22117-3	Multi Control instrument
22117-4	Wind Data instrument
22117-5	Compass Data instrument
22117-6	GPS Navigator instrument
22117-7	Autopilot instrument

NX2 Analog Instruments (all supplied with 0.2m cable)

22115-01	NX2 Analog Wind Angle
22115-02	NX2 Analog Steer Pilot
22115-03	NX2 Analog Speed Trim
22115-05	NX2 Analog Speed 0-16kts
22115-06	NX2 Analog Speed 0-50kts
22115-07	NX2 Analog Depth 0-200m
22115-08	NX2 Analog Depth 0-600ft
22115-09	NX2 Analog Rudder angle
22115-10	NX2 Analog Compass
22115-11	NX2 Analog GPS Speed 0-16kts
22115-12	NX2 Analog GPS Speed 0-50kts
22115-13	NX2 Analog GPS Course

Nexus Remote Control Instrument

21210	Remote Control Instrument (RCI), with Autopilot control, 5m cable, bracket
21218-1	Bracket Remote Control instrument
20966	Connector 4-pole, NEW model (Allows cable - cable connection)

Nexus Multi XL

21680-1 Multi XL instrument, 4m cable (RCI or Multi Center needed to control Multi XL)
21684-1 Multi XL Set, Multi XL instrument and Remote Control instrument
69995 Mast bracket XL, in aluminium for Multi XL and Nexus / Star 110x110mm instr.

NX2 GPS

22118-6 GPS Navigator, with GPS Antenna, 8+10m cable
22117-6 GPS Navigator instrument
21970 GPS Antenna, with NMEA 0183 output
20992-2 Bracket GPS Antenna, plastic with female thread 1" x 14 tpi
21735 Bracket for GPS Antenna and 35° Compass transducer for bulkhead mount

Nexus Autopilot components

22117-7 Autopilot instrument
21210 Remote Control instrument, with Autopilot control, 5m cable, bracket
22115-09 NX2 Analog Rudder angle

21035-2 Servo Unit A-1510, 8m cable
20860 Compass transducer 45°, 8m cable
21731 Compass transducer 35°, 8m cable
21036 Rudder Angle Transmitter RFU-25, 15m cable, ball joint linkage 230mm x 2
69981 Linear Rudder Angle Transmitter

21134 Pumpset PF-0.3 12V
21134-24 Pumpset PF-0.3 24V
21341 Pumpset PF-0.3S 12V, with solenoid
21341-24 Pumpset PF-0.3S 24V, with solenoid
21136 Linear Drive AN-23, stroke 229mm, peak thrust 680kg
69991-12 Integrated Linear Drive HP-40, stroke 254mm, peak thrust 500kg

10 Warranty

WARRANTY

GENERAL

All our products are designed and built to comply to the highest class industry standards. If the products are correctly installed, maintained and operated, as described in the installation and operation manual, they will provide long and reliable service. Our international Network of distributors can provide you with the information and assistance you may require virtually anywhere in the world.

Please read through and fill in this warranty card and send it to your national distributor for product registration.

LIMITED WARRANTY

The warranty covers repair of defective parts due to faulty Manufacturing and includes labour when repaired in the country of purchase. The warranty period is stated in the product manual, and commences from the date of purchase. The above warranty is the Manufacturer's only warranty and no other terms, expressed or implied, will apply. The Manufacturer specifically excludes the implied warranty of merchantability and fitness for a particular purpose.

CONDITIONS

- The supplied warranty card and receipt with proof of purchase date, must be shown to validate any warranty claim. Claims are to be made in accordance with the claims procedure outlined below.
- The warranty is non-transferrable and extends only to the original purchaser.
- The warranty does not apply to Products from which serial numbers have been removed, faulty installation or incorrect fusing, to conditions resulting from improper use, external causes, including service or modifications not performed by the Manufacturer or by its national distributors, or operation outside the environmental parameters specified for the Product.
- The Manufacturer will not compensate for consequential damage caused directly or indirectly by the malfunction of its equipment. The Manufacturer is not liable for any personal damage caused as a consequence of using its equipment.
- The Manufacturer, its national distributors or dealers are not liable for charges arising from sea trials, installation surveys or visits to the boat to attend to the equipment, whether under warranty or not. The right is reserved to charge for such services at an appropriate rate.
- The Manufacturer reserves the right to replace any products returned for repair, within the warranty period, with the nearest equivalent, if repair within a reasonable time period should not be possible.
- The terms and conditions of the warranty as described do not affect your statutory rights.

CLAIMS PROCEDURE

Equipment should be returned to the national distributor, or one of its appointed dealers, in the country where it was originally purchased. Valid claims will then be serviced and returned to the sender free of charge.

Alternatively, if the equipment is being used away from the country of purchase, it may be returned to the national distributor, or one of its appointed dealers, in the country where it is being used. In this case valid claims will cover parts only. Labour and return postage will be invoiced to the sender at an appropriate rate.

DISCLAIMER

Common sense must be used at all times when navigating and the Manufacturer's navigation equipment should only be considered as aids to navigation.

The Manufacturers policy of continuous improvement may result in changes to product specification without prior notice.

File id:

WARRANTY CARD

TO BE RETURNED TO YOUR NATIONAL DISTRIBUTOR

OWNER:

Name: _____

Street : _____

City/Zip Code : _____

Country: _____

Product name:

Serial number:

	A	B	C	1	2	3	4	5	6	7
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Date of purchase: _____ Date installed _____

Dealers stamp:

Tick here if you do not wish to receive news about future products

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