NEXUS
PASSION FOR PERFORMANCE™

NX Sea Data Set 1

Installation and Operation Manual
English

Edition: April 2007

1   Part specification

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Items delivered with the instrument

Qty	Description	Reference
1	NX2 Sea Data instrument	1
1	NX Wind instrument	2
1	WSI-box	3
2	Instrument cover	4
2	Drill template for instrument	5
1	Installation and operating manual	6
1	Warranty card	7
4	Instrument mounting screws	8
4	Plastic nuts	8
2	Connection back cover	8
2	Silicon paste tube	8
4	Plastic cable strap	8
1	Inter-connection cable, 0,3 m (1 ft)	9
1	Nexus Network cable, 8 m (26 ft)	10
5	Cable protectors, 0,25 mm (0.1 inch)	11
5	Cable protectors, 0,75 mm (0.3 inch)	11
1	3m red power cable	12
1	3m black power cable	13
1	Through-hull fitting with nut	14
1	Tri-ducer TH52	15
1	Dummy plug	17
2	O-ring	18

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.
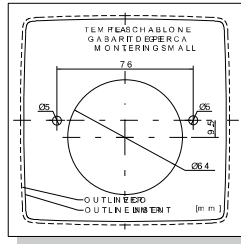
Warranty conditions see 12.

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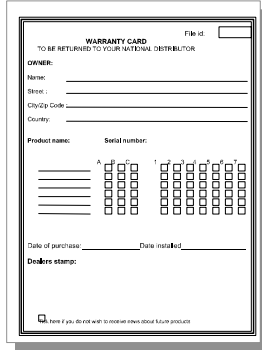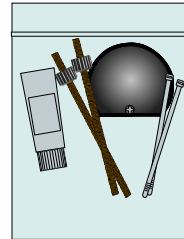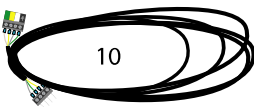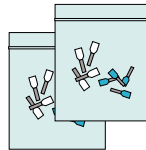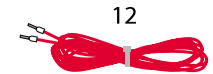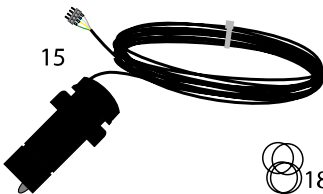
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2   Installation

- **The installation includes 6 major steps:**
1. Read the installation and operation manual.
2. Plan where to install the WSI-box, transducers and instruments.
3. Run the cables.
4. Install the WSI-box, transducers and instruments.
5. 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 not" 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.
   Small and large Philips and small flat head screw driver.
   Hole saw for the instrument clearance of 63 mm (2½").
   Hole saw for the transducer of 51 mm.
   2.8mm drill for the WSI-box mounting screws
   5 mm ($^1/_4$") drill for the mounting holes.
   Plastic cable ties

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

2.1 Installing the instrument

- Place the adhesive drill template on the desired location for the instrument. Drill the 2 holes using a 5 mm (1/4") drill for the two pin bolts. Use a 63 mm (2½") hole saw to machine the clearance hole for the instrument connection socket. Remove the template.
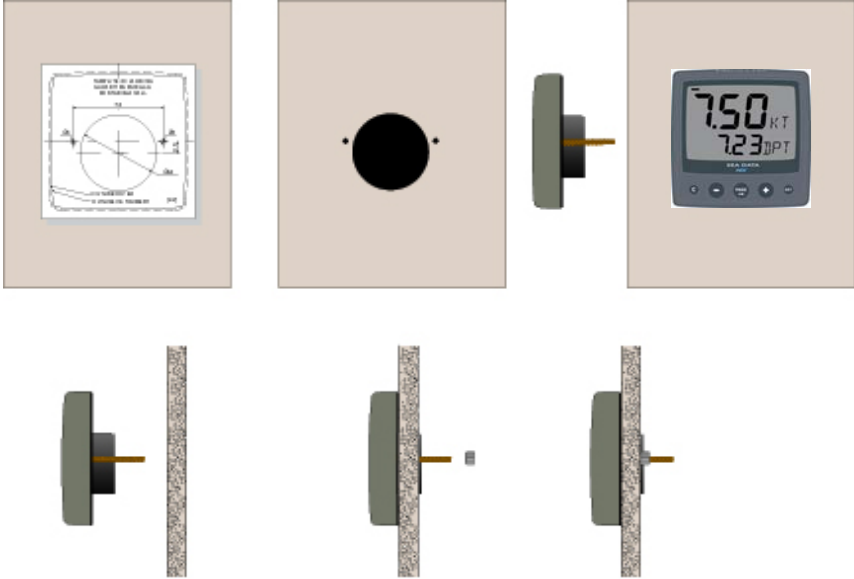
- Screw the two pin bolts to the instrument
- Put the instrument in place
- Screw the two nuts from the back

Note! The two nuts must just be tighten by hand only

- Run the Nexus Network cable from the WSI-box 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.
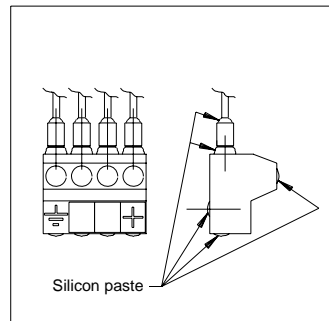
Silicon paste

Note: Must be done to avoid corrosion.

2.2   Installing the WSI-box

Remove the WSI-box cover from the base plate by removing the screw. Drill the 3 screw holes using a 2.8 mm (0.11") drill. Mount the WSI-box using the 3 mounting screws.

Apply silicon paste on the screw terminal. Connect the 8 m Nexus Network cable supplied with cable protectors to the WSI-box on pins 13, 14, 15, and 16. Match the colour codes for each wire.

2.3   Installing the Log and depth transducers

2.3.1 Correct location of transducer
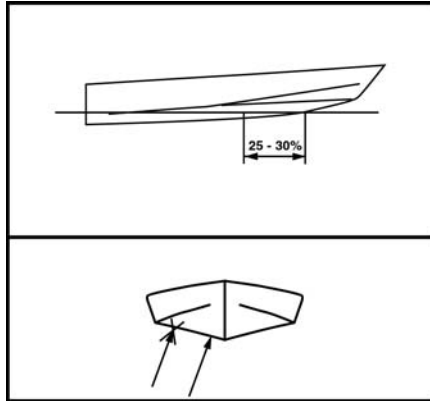
Generally the transducers should be placed as far forward as possible along the waterline length and close to the centreline.

It is important that the transducers are 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:
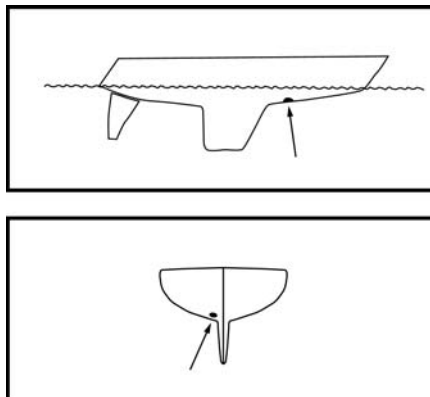
Sailboats with a fin keel must have the transducer located at least 25 cm but not more than 75 cm in front of the keel. It should be placed no more than 10 cm off the centreline.
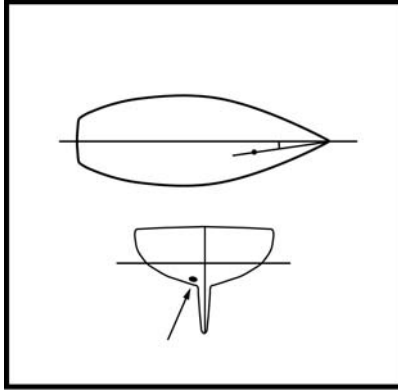
On sailboats with a pronounced "V" in the hull, such as full-keel yachts, it might be favourable to angle the transducer slightly so that it aims at the bow, rather than directly parallel to the centreline.
This will help balanced the passing waterflow measurement from one tack to another.
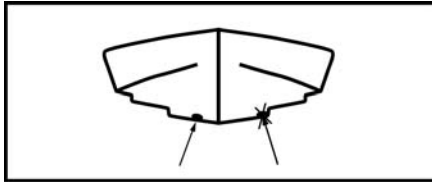
Avoid placing the transducer near the edge of sharp hull chines. Transverse waterflow in these areas can affect the accuracy of measurements.

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.

      2.3.2 Installing the through hull fittings

3   Installation

Cored fiberglass hull—Follow separate instructions on page 3.

Hole Drilling
Warning: Always wear safety goggles and a dust mask.

1. Drill a 3 mm or 1/8" pilot hole from inside the hull. If there is a rib, strut or other hull irregularity near the selected mounting location, drill from the outside.
2. Using the appropriate size hole saw, cut the hole from outside the hull. **Flush housin**g—Use a countersink tool to create a "seat" in the hull.
3. Sand and clean the area around the hole, inside and outside, to ensure that the sealant will adhere properly to the hull. If there is any petroleum residue inside the hull, remove it with either mild household detergent or a weak solvent (alcohol) before sanding.
   Metal hull—Remove all burrs with a file and sandpaper.

3.1   Bedding

Apply a 2mm (1/16") thick layer of marine sealant around the lip of the housing that contacts the hull and up the sidewall of the housing. The sealant *must* extend 6mm (1/4") higher than the combined thickness of the hull, washer(s), and hull nut (see Figure 2). This will ensure there is sealant in the threads to seal the hull and to hold the hull nut securely in place.

3.2   Installing

Caution: Never pull, carry, or hold the sensor by the cable as this may sever internal connections.

1. From outside the hull, push the housing into the mounting hole using a twisting motion to squeeze out excess sealant (see Figure 2). *Align the arrow on the lip of the housing to point forward toward the bow.* If the sensor is not installed on the centerline, angle the housing slightly toward the centerline to align it with the water flow.
2. From inside the hull, slide the washer onto the housing. **Aluminum hull less than 6mm (1/4**") **thic**k—Use an additional rubber, fiberglass, or plastic washer. *Never* use bronze since electrolytic corrosion will occur. *Never* use wood since it will swell, possibly fracturing the plastic housing.
3. Screw the hull nut in place *being sure* the notch on the upper rim of the housing and the corresponding arrow on the lip are still positioned forward toward the bow. (If your plastic housing has wrenching flats, *do not* clamp tightly, possibly causing the housing to fracture.) **Hand-tighten** only. *Do not* over tighten. **Wood hull**—Allow for the wood to swell.

4. Remove any excess sealant on the outside of the hull to ensure smooth water flow over the paddlewheel. *Warning: The O-rings must be intact and well lubricated to make a watertight seal.*

5. After the sealant cures, inspect the O-rings on the valve assembly (replace if necessary) and lubricate them with the silicone lubricant supplied (see Figure 3).

plastic housing
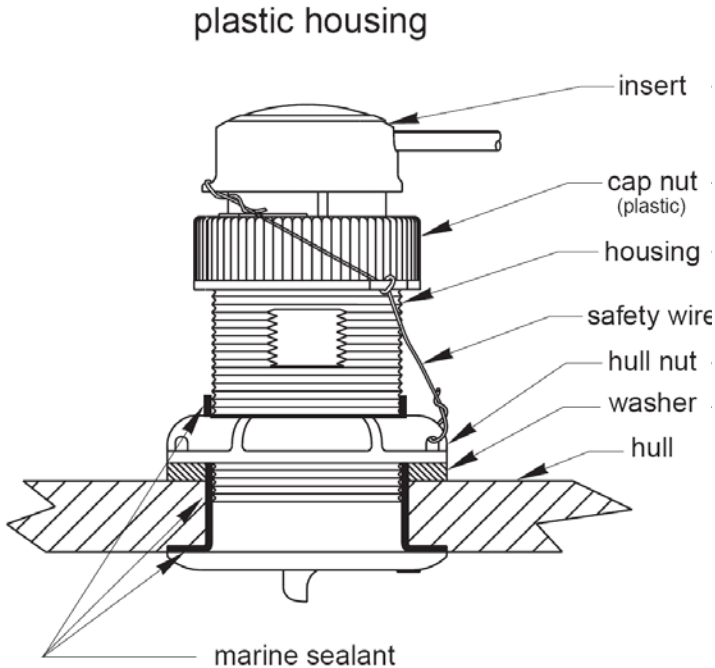
6. Screw the plastic cap nut in place and **hand-tighten** only. *Do not* over tighten.

7. Attach one pull ring to the paddlewheel insert (see Figure 5). Similarly, attach a pull ring to the blanking plug.

8. Inspect the O-rings on the paddlewheel insert (replace if necessary) and lubricate them with the silicone lubricant supplied.

9. Slide the paddlewheel insert into the housing with the arrows on the top pointing forward toward the bow. Seat it into place with a pushing twisting motion until the keys fit into the notches. The arrows on the top of the insert, the notch in the housing, and the arrow on the lip will be aligned. *Be careful* not to rotate the housing and disturb the sealant.

10. Attach one safety ring to one end of the retaining pin. Slide the retaining pin through the valve assembly and paddlewheel insert. Attach the second safety ring to the retaining pin (see Figure 2).
    Warning: *Always attach the safety wire to prevent the insert from backing out in the unlikely event that the cap nut fails or is screwed on incorrectly.*

11. Attach the safety wire to one eye in the hull nut. Thread the **short** emergency plug onto the wire. Lead the wire in a counterclockwise direction and thread it through one eye in the cap nut. Thread the wire through the eye a second time. Then lead the wire through the pull ring and the second eye in the cap nut. Twist the wire securely to itself.

12. Route the cable to the instrument *being careful* not to tear the cable jacket when passing it through the bulkhead(s) and other parts of the boat. To reduce electrical interference, separate the sensor cable from other electrical wiring and the engine. Coil any excess cable and secure it in place with zip-ties to prevent damage.

13. Refer to the instrument owner's manual to connect the sensor to the instrument.

3.3   Checking for Leaks

Warning: *Never install a thru-hull sensor and leave the boat in the water unchecked for several days.*

When the boat is placed in the water, **immediately** check around the thru-hull sensor for leaks. Note that very small leaks may not be readily observed. It is best not to leave the boat in the water for more than 3 hours before checking it again. If there is a small leak, there may be considerable bilge water accumulation after 24 hour. If a leak is observed, repeat "Bedding" and "Installing" on page 2 **immediately.**

3.4   Installation in a Cored Fiberglass Hull

The core (wood or foam) *must* be cut and sealed carefully. The core *must* be protected from water seepage, and the hull *must* be reinforced to prevent it from crushing under the hull nut allowing the housing to become loose. ***Warning***: *Always wear safety goggles and a dust mask.*
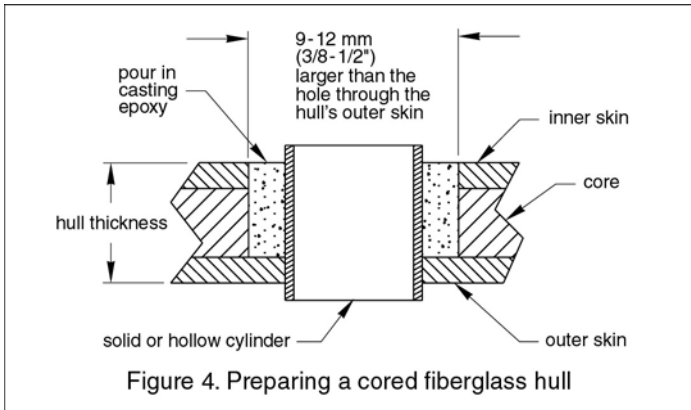
Figure 4. Preparing a cored fiberglass hull

1. Drill a 3mm or 1/8" pilot hole from inside the hull. If there is a rib, strut, or other hull irregularity near the selected mounting location, drill from the outside. (If the hole is drilled in the wrong location, drill a second hole in a better location. Apply masking tape to the outside of the hull over the incorrect hole and fill it with epoxy.)

2. Using the 51mm or 2" hole saw, cut the hole from outside the hull through the *outer* skin only (see Figure 4).

3. From inside the hull, use the 60mm or 2-3/8" hole saw to cut through the *inner* skin and most of the core. The core material can be very soft. Apply only light pressure to the hole saw after cutting through the inner skin to avoid accidentally cutting the *outer* skin.

4. Remove the plug of core material so the *inside* of the outer skin and the inner core of the hull are fully exposed. Sand and clean the inner skin, core, and the outer skin around the hole. ***Caution**: Completely seal the hull to prevent water seepage into the core.*

5.   If you are skilled with fiberglass, saturate a layer of fiberglass cloth with a suitable resin and lay it inside the hole to seal and strengthen the core. Add layers until the hole is the correct diameter. Alternatively, a hollow or solid cylinder of the correct diameter can be coated with wax and taped in place. Fill the gap between the cylinder and hull with casting epoxy. After the epoxy has set, remove the cylinder.

6. Sand and clean the area around the hole, inside and outside, to ensure that the sealant will adhere properly to the hull. If there is any petroleum residue inside the hull, remove it with either mild household detergent or a weak solvent (alcohol) before sanding.

7. Proceed with "Bedding" and "Installing" on page 2.

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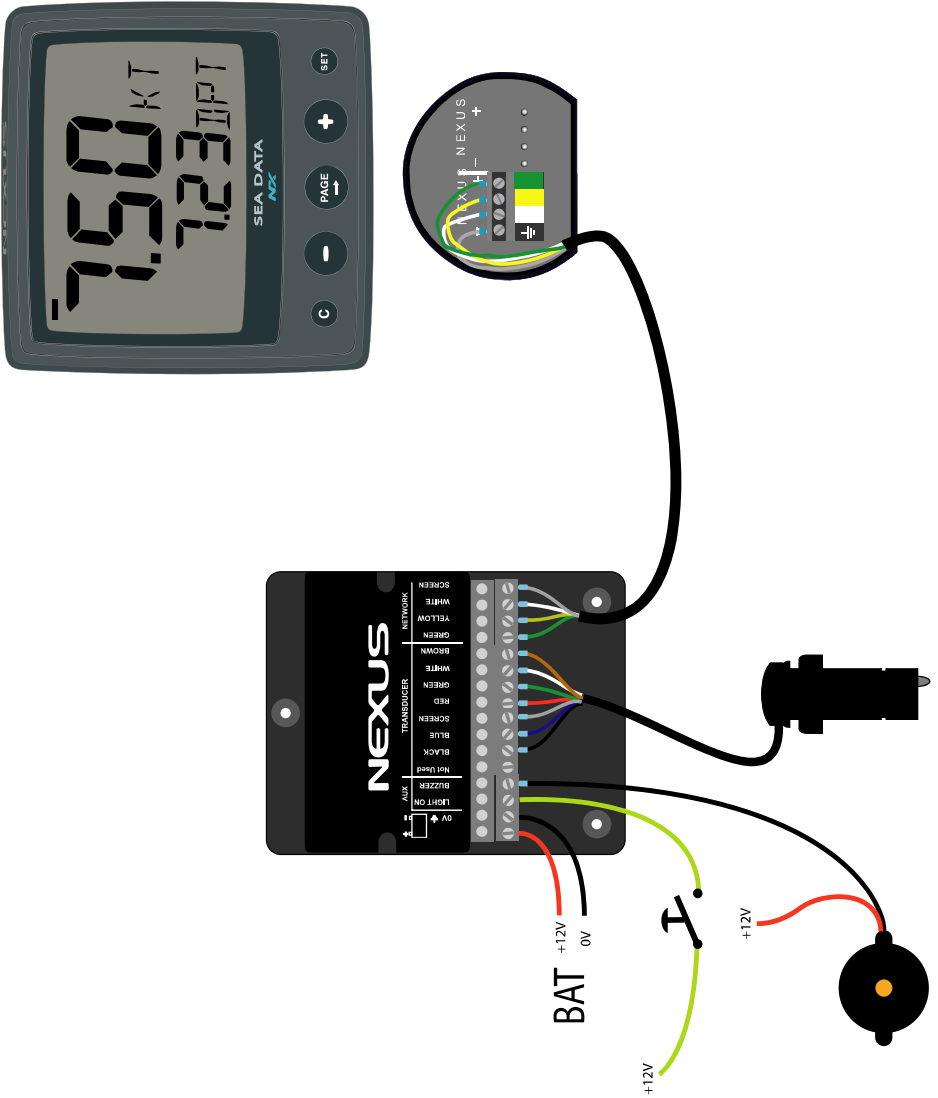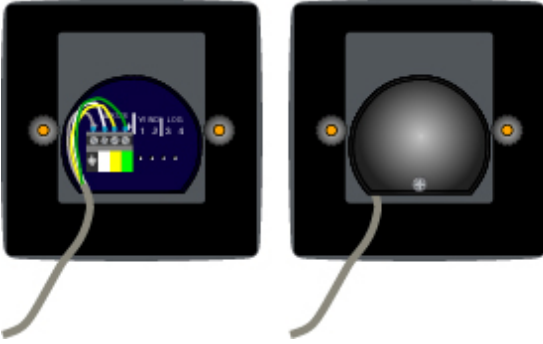
- Apply silicon paste to the instrument connection pins at the back of the instrument. Press the jack plug onto the instrument pins. Press the cable in to the cable leads.
- Mount the connection back cover with the screw.

4   First start

4.1   Initialising the instrument

You will be asked to press **SET** (PrESkey) on the instruments the very first time after installation. This will give the instrument a logical ID number that belongs to your specific Nexus Network.

Press **SET**, on each installed instrument, one at the time.

⚠️ **Always wait for the text 'Init OK' to be displayed, <u>before</u> you press SET on the next instrument!**

The first unit ID number is 16, then 17 and so on in the order which you press **SET.**

The example shows that the Sea Data instrument version number is 1.0 and that the instrument was given the logical ID number 16. The bottom row in the Sea Data shows the software version (4.8) and ID number (0) of the network master (WSI-box or Server).

When the NX WSI-box is network master, the ID number is 2
When the NX2 Server is network master, the ID number is 0

17
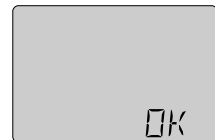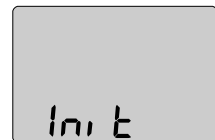
4.2 How to use the push-buttons of the Sea Data

MAIN PAGE

SUB FUNCTION

MAIN FUNCTION

CLEAR

Clear trip log, cancel alarms or reset the timer.

MINUS

Move to the next sub-function.

In edit mode: Decreases the shown value

PAGE

Change main function, either SPEED or DEPTH.

In edit mode: Moves the cursor

PLUS

Move to the previous sub-function
.
In edit mode: Increase the shown value

SET

Set or edit alarm value or calibration. Start race timer

4.3   Instrument backlight

The back light may be switched on at the Sea Data or wind instrument.

1. Press and hold PAGE

<div align="right">

PAGE
→
2 sec

</div>

2. Select backlight level with PLUS

<div align="right">

+

</div>

3. Set the light level with SET

<div align="right">

SET

</div>

5   Function overview of the Sea Data

The functions in the Sea Data instrument are divided into 2 pages:
SPEED and DEPTH.
The selected page is indicated by the LCD mark at top of the display.

Each page has 2 types of functions that can be displayed together:

1. Main-function, displayed at the top of the display in 30 mm high digits.
2. Sub-function, displayed at the bottom part of the display in 17 mm high digits.

You can easily customise your favourite combination of functions, (See 9).

The instrument can display metric and imperial units.
For unit selection, (see 9).

For function overview and transducers needed to display each function, see below.

6 SPEED functions

The Sea Data instruments SPEED page is indicated by the LCD marker at top of the display. You can easily combine this main function with any sub function (See 9).

SPEED main-function

Boat speed through the water
Unit available in knots (KT), km/h (Kh) or miles/h (Mh)

$$6.05\,{\scriptstyle KT}$$
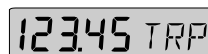
SPEED sub-functions

Both water speed and water temperature is measured from the log transducer.

TRIP LOG (TRP)

Distance from 0 to 199,99 NM
To reset TRIP LOG press **CLEAR**.
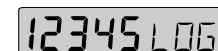
$$123.45\,TRP$$

TOTAL LOG (LOG)

Distance from 0 to 19999 NM.
The total log can not be reset.

$$12345\,LOG$$

START TIMER (STA)

Count down timer can be set between 59 and 1 minute.
To start the timer from minus 10 minutes (-10'STA) press **SET**.
The figure 1 in 10 is flashing. Press **SET** to start.

$$-\ 10'STA$$

Change start timer.
Set to 5 minutes (-5'STA), press **PAGE**, **MINUS** and **PLUS** as required to set 5 minutes (or any value), Press **SET** to Start**.**

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

TIMER

Elapsed time in hour, minute and seconds from power on, or from end of start timer count down. Press **CLEAR** to reset.

$$12:04'52$$

AVERAGE SPEED (AVS)

The average speed from power on, or from reset of timer
To reset press **CLEAR**

$$4.56\,AVS$$

MAXIMUM SPEED (MAX)

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

$$0.00 \text{ MAX}$$

DEPTH (unit/DPT)

Depth reading can be set to show distance from the water
surface or from the keel.
Unit in meters (m), feet (FT) or fathoms (FA)
The text alternates between the selected (unit) and (DPT).

$$23 \text{ M}$$

BATTERY (BAT)

The Battery voltage measured in the WSI unit.

$$13.3 \text{ BAT}$$

TEMPERATURE (TMP)

Water temperature is measured in the log transducer.
Unit available in Celsius (C) or Fahrenheit (F)

$$20°C \text{ TMP}$$

7 DEPTH functions

DEPTH main-function

The actual depth between the boats keel or the water surface.
Units in meters (m), feet (FT) or fathoms (FA)
Preference is set by the user.

$$23_m$$

DEPTH sub-functions
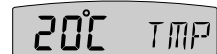
LIGHT CONTROL

Set light level for all instruments, LOW, MID, MAX or OFF.

$$Li\ t\ \ OFF$$

SHALLOW ALARM (SHA)

Aaudible and visual alarm is activated if the actual depth becomes
less than the pre-set value.

$$3.0'SHA$$

DEPTH ALARM (DEA)

Aaudible and visual alarm is activated if the actual depth becomes
deeper than the pre-set value.

$$30.0'DEA$$

ANCHOR ALARM

Aaudible and visual alarm is activated if the actual depth becomes
less or deeper than the pre-set values.

Set shallow (SHA) alarm to actual depth minus 1,5 m / 5 FT then
set depth (DEA) alarm to actual value plus 1.5 m / 5 FT.

BOAT SPEED (BSP/unit)

Boat speed 8water speed)
Unit in knots (KT), km/h (Kh) or miles/h (Mh)
Text alternates between (BSP) and the selected (unit).
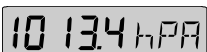
$$6.05\ BSP$$

Barometric pressure (unit/hPA)

The wireless windtransducer has a built in barometric pressure
sensor. The Sea Data instrument displays the barometric
pressure in the following units; Hecto Pascal (hPa) or Inch HG
(INH). To set the unit (See 9.1.9, C25).
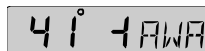
$$10\ 13.4\ hPA$$

7.1.1 TRUE WIND ANGLE (TWA)
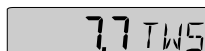
This function requires a log transducer.

$$44°\ \dashv TWA$$

22

7.1.2 APPARENT WIND ANGLE (TWA)

Displays the apparent wind angle.

$$41\overset{\circ}{}1\,AWA$$

7.1.3 TRUE WIND SPEED TWS

This function requires a log transducer. Displayed in m/s (m/s), knots (KTS) or Beaufort (BF). (See 12.5, C52).The text alternates between (TWS) and the selected (unit)

$$7.7\,TWS$$

7.1.4 APPARENT WIND SPEED (AWS)

Units displayed in m/s (m/s), knots (KTS) or Beaufort (BF), (see 12.5, C52). The function alternates between (AWS) and the selected (units).

$$10.2\,AWS$$

7.2 Set shallow (SHA) and depth alarm (DEA)

Select shallow (SHA) or depth (DEA) alarm, press **SET**.
The first digit in the previous value flashes.
If you want to reset the previous value to zero (0), Press **CLEAR**.
To select desired depth press **MINUS**, **PLUS** and **PAGE** as required.
Press **SET** to lock the selected value.
By this last press on **SET**, you have turned on the selected alarm function, which is indicated by the minute sign (´) above the last depth digit in the sub-function.

7.3 Set and turn on anchor alarm (ANC)

Select anchor alarm (ANC), press **SET**.
The first digit flashes.
The instrument will suggest a value for the shallow (SHA) alarm (actual depth minus 1,5 m / 5 FT).
To store the value press **SET**, or select your own depth as in 7.3.
The minute sign (´) is shown above the last depth digit in the sub-function.
The instrument will suggest a value for the depth (DEA) alarm (actual depth plus 1,5 m / 5 FT).
To store the value press **SET**, or select your own depth as in 7.3.
The minute sign (´) is shown above the last depth digit in the sub-function.

7.4 Clear an alarm value

Select the alarm function to be cleared, press **SET**.
The first digit flashes.
To clear the alarm, press **CLEAR**. All digits are set to zero (0).
Press **SET** to lock the function.

7.5 Silencing an alarm

To silence a triggered alarm that sounds and flashes, press **ANY** button.
The sound is silenced and the flashing stops.
The alarm is only triggered again if the selected depth value is exceeded (shallower or deeper) by 2 m (6 feet).

7.6 Turning OFF or ON an alarm

Select the alarm function to be turned off / on.
To turn the alarm off / on, press **CLEAR**.
The minute sign (´) disappears / appears.

When a triggered alarm has been silenced, it will only be triggered again if the selected depth value differs by +/-2m (6 ft)

If a different page than DEPTH is shown when the alarm is triggered, the set alarm function will automatically be shown flashing, until you silence or turn off the alarm. The instrument will then automatically return to the previous page.

Loss of depth signals are indicated with 3 dotted lines (---) until a new echo is received.

8   Customise your display

All sub-functions are organised in a list under the main-function. The first location in the sub-function list is an empty display. You can have your favourite sub-function moved in the same sub-function list, or copied and locked to any other page.

8.1   Move and lock a sub-function

Example: In SPEED page, move and lock the sub-function depth (DPT) to the top of the sub-function list.

Select the SPEED page and find the sub-function depth (DPT). Press **PAGE** and **SET** together. All digits flash.
To lock the sub-function press **SET.**

Each time the SPEED page is selected, the sub-function (DPT) will be displayed at the top of the sub-function list.

8.2   Copy and lock a sub-function

Example: Copy and lock the sub-function true wind speed (TWS) from DEPTH page to SPEED page.

Select DEPH page and find the sub-function (TWS).
Press **PAGE** and **SET** together.
All digits flash. To move and copy to SPEED page, press **PAGE**.
To lock the function, press **SET**.

Each time the SPEED page is selected, the sub-function (TWS) will be displayed.

The copied sub-function remains in its original location. It is only copied to a second location, where it takes the place of the empty sub-function in the list.

8.3   Select power on function

The last selected combination of page and sub-functions according to your selection in 8.2 is the first page the instrument will display at power up.

8.4   Cancel a moved or locked sub-function

Example: To cancel the previous moved sub-function true wind speed (TWS) from SPEED page.

Select the new combination, SPEED page and sub-function (TWS).
Press **PAGE** and **SET** together.
All digits flash.
To cancel the moved sub-function, press **CLEAR**.
The sub-function is cancelled and the main-function still flashes.
To return to the original display, press **SET**.

9 Calibration setting up the Sea Data instrument

To get the most out of your Nexus instrument, it is important to carefully calibrate the instrument. The calibration values are stored in a memory and will keep the values even if the instrument is un powered for more than 1o years.

To access calibration mode, press and hold **SET** more than 2 seconds.
To select a calibration code, press **MINUS**, **PLUS** as required.
To return to normal mode, press **PAGE** followed by **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**

9.1 Calibration of speed C10

9.1.1 Return C10 (RET)

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

```
 C 10
        RET
```

9.1.2 Unit for Speed, C11 (Unit KTS)

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

Note, this is a local setting and has to be done on both Sea Data and the Wind instrument

```
 C 11
  Uni t KTS
```

9.1.3 Calibration of Speed, C12 (1.25 CAL)

This is a system setting and you only need to enter the value on one of the instruments.
Calibration value for speed and distance (0.00 - 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:

```
 C 12
   1.30 CAL
```

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.

9.1.4 Damping of Speed, C13 (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
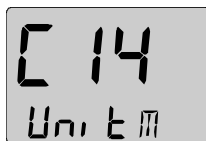select (**MID**) or (**MAX**).
Damping is set separately for each instrument.

9.1.5 Unit for Depth readings, C14 (Unit m)

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

Note, this is a local setting and has to be done on both Sea Data
and the Wind instrument

9.1.6 Adjust Depth readings, C15 (- 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.
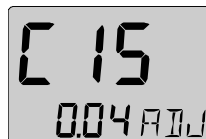
9.1.7 Unit for Temp readings, C16 (Unit°C)

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

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9.1.8   Adjustment of Temp reading,C17 (0°C TMP)

Value to adjust the temperature.
To add, use underlining character (_) ahead of the digit (_1 TMP).
To subtract, use minus character (-) ahead of the digit (-1 TMP).

9.1.9   Unit for Air Pressure, C18 (Unit hPA)

Future function. Unit for air pressure. Hecto Pascal (hPa) or Inch HG (INH).

9.1.10   Unit for Wind Speed, C19 (Unit m/s)

Unit for wind speed. Metre/second (m/s), knots (KTS) or Beaufort (BF).
Note, this is a local setting and has to be done on both Sea Data and the Wind instrument

9.1.11   Adjustment of Wind Angle, C20 (000° ADJ)

Mast top unit misalignment adjust value or the so called "A-fault", makes it possible to choose any horizontal mounting angle.
Example 1: If the wind angle is +4° (from Starboard) when you sail/drive the boat straight into the wind. Set the calibration channel C54 to 356°.
Example 2: If the wind angle is -4° (from port) when you sail/drive the boat straight into the wind. Set the calibration channel C54 to 004°.

9.1.12   Damping of Wind Readings, C21 (SEA LOW)

Damping of wind information. Controls the response time of wind 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 selected value, press **SET**.
Factory 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 MID or (MAX). Damping is set separately for each instrument.

9.1.13   Key beep setting, C22 (OFF KEY)

(On) = Sound when push buttons are pressed. (OFF) = no sound.

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10 Maintenance and fault finding

10.1   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.

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

10.2.1   General fault finding

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 3).

10.2.2   Fault - action

1. Speed and distance functions: No reading (---)
For more information, see manual for WSI-box or NX2 Server.

Irregular values: Check the speed damping (SEA), (see 9.1.4).

2. Wind: No reading (---)
For more information, see manual for WSI box or NX2 Server.

10.2.3   Error messages

The following error messages can appear on the display:

ERROR 2   Nexus Network is missing, check colour coded
connections
ERROR 3   No data received within a given time.
ERROR 10   Range error caused by bad format e.g. 400°.

If other error messages than the above appears on the Sea Data
instrument, contact your Nexus dealer.

11 Specifications

11.1 Technical specifications Sea Data

Dimensions:	Sea data 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:**	Sea Data instrument: 0,08W with maximum lighting 0,8W. Server: 0,2W.
Temperature range:	Storage:-30°to +80°C (-22°to +176°F) Operation: -10° to +70°C(14°to +158°F)
Weight:	Sea Data instrument:　　　　260 gram (9.17 oz).
Enclosure:	Sea Data Instrument:　　　　Water proof

11.2 Technical specifications WSI-box

Dimensions:	WSI-box: 110 x 65 x 30 mm.
Instrument cable:	8 m (26 ft).
Power supply:	12V DC (10-16V). The instruments are polarity protected
Power **consumption at 12V:**	WSI-box: 0,2W.
Temperature range:	Storage:-30°to +80°C (-22°to +176°F) Operation: -10° to +70°C(14°to +158°F)
Weight:	130 gram. (7.76 oz).
Enclousure:	Splash proof

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

12 Waranty

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
_____	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐
_____	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐
_____	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐
_____	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐
_____	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐
_____	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐

Date of purchase:_____ Date installed:_____

Dealers stamp:

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