stowe

WIND

FOR

INSTRUCTION & INSTALLATION MANUA

Datalíne

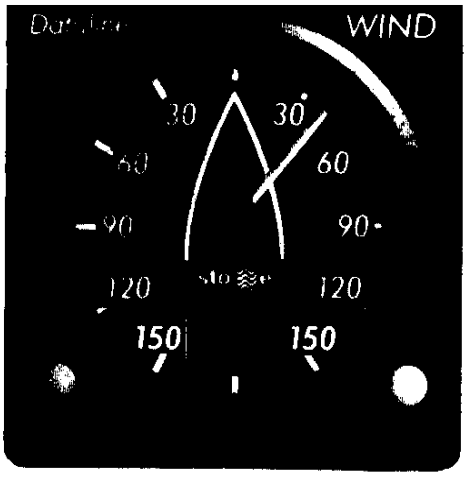
stowe

Stowe Marine Limited, 235 Bentley Way, LYMINGTON SO41 8JW
e-mail info@stowemarine.com
www.stowemarine.com

Dataline

INSTRUCTION & INSTALLATION MANUAL
FOR

WIND



CONTENTS ***Page***

1. INTRODUCTION TO DATALINE

DATALINE is a major advance in marine instrumentation.

Conceived by Stowe, a world leader in the manufacture of marine instruments, DATALINE fully utilises all the skill and experience acquired over 8 years manufacturing products such as the internationally acclaimed Navigator and Micro ranges of sail and powerboat instruments.

DATALINE takes all the recognised Stowe hallmarks of quality, ruggedness and reliability and combines them with the technological and visual appeal needed to satisfy the many and varied demands of today's yacht and powerboat owners.

Most significantly, though, DATALINE achieves this in a way that brings unprecedented benefits not only to the end user, but also to the boatbuilder and electronic installation specialist.

This is how it works:

The DATALINE system, as the name implies, is based on a single cable which carries both the power and the data round the boat on a serial Databus using a communication language called NMEA 0183.
This language is the established industry standard and since DATALINE provides both NMEA 0183 inputs and outputs, compatibility is achieved with other navigational aids, such as Satnavs, compasses, plotters and autopilots, which use the same language. By adopting the industry standard the boat's information system is not subject to the 'closed system' constraints of some manufacturers' products so you are free to interface with other compatible navigational aids, irrespective of manufacturer.

The signal is generated from the DATABOX which is installed in a safe, dry environment below deck near the mast, or behind the chart table, or perhaps in the engine compartment of a powerboat. All sensors are wired to the DATABOX.

The DATALINE itself is then THE ONLY WIRE that runs to the instruments, which are simply linked together in a 'daisy chain' in whatever order suits the installation.

The DATALINE system has the capability of linking from one up to 15 instruments and remains as flexible and as viable for any installation, big or small, power or sail.

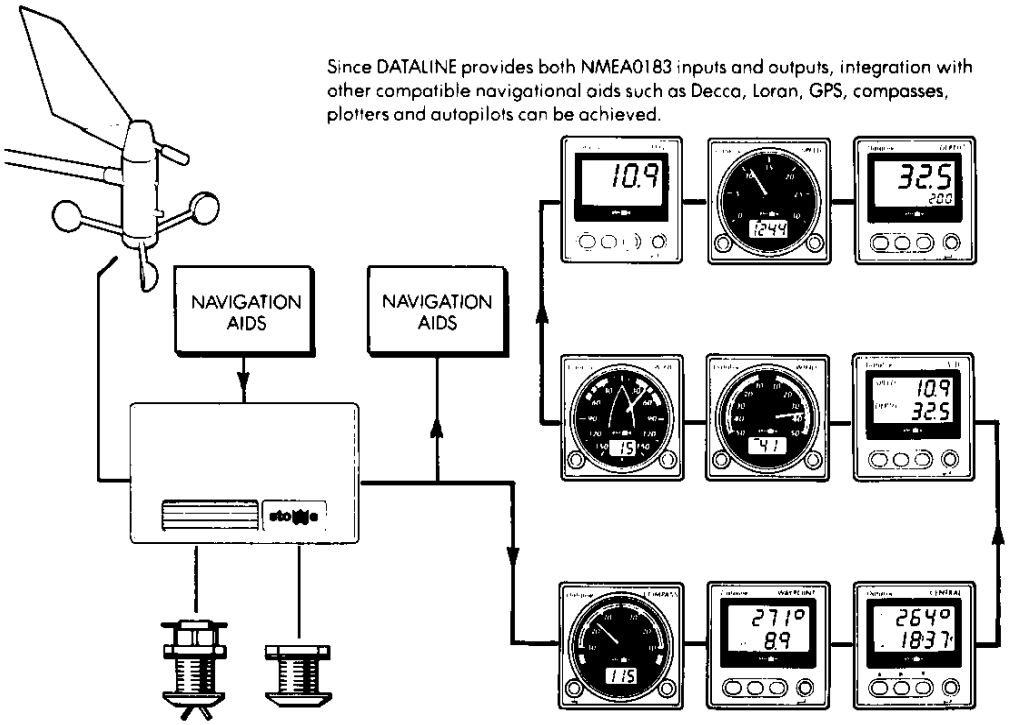
Since the DATABOX contains the total capability of the system any additional instrument head can be simply connected into the line without any upgrade to the electronics.

A complete range of analogue and digital instrument heads provides unparalleled flexibility for use in cockpit, flybridge, chart table, or indeed any location on the boat.

In addition to the advances and benefits inherent in the DATALINE system concept, the instrument heads themselves incorporate design features that place DATALINE many years ahead of any comparable instrument system. These include an integral moulded window for water tightness and damage resistance, removable dessicant pack and replaceable clip on cover.

2. DATALINE SYSTEM DIAGRAM

The DATALINE range of yacht instruments includes SPEED multifunction, DEPTH, WIND, WIND PLUS, WAYPOINT Decca/Loran repeater, S/D speed/depth dual display and CENTRAL multifunction instrument.



3. DATALINE WIND

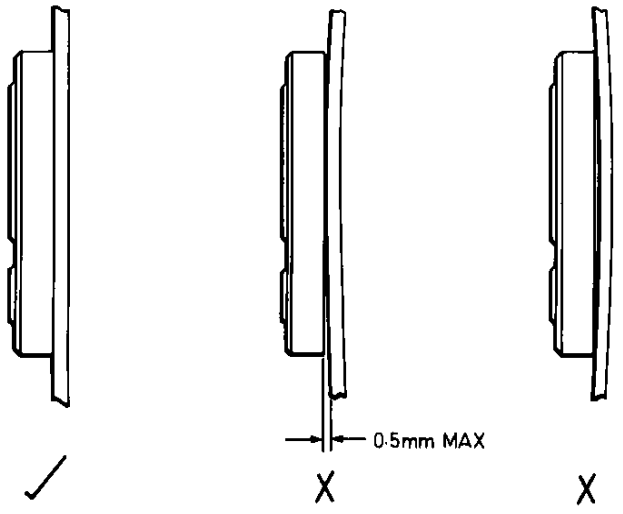
Technical Specification

Electronics	4 Bit Micro + 8K of ROM
Power	10 – 16V @ 70mA plus 90mA for lighting when required
Temperature Range	−10°C to 70°C
Size	110 × 100 × 17mm. Depth Overall 38mm
	4⅓ × 4 × ⅔ inches. Depth Overall 1½ inches
Weight (instrument)	225 grams
Mounting Hole Size	50mm (2 inches)
Weight (masthead unit)	300 grams
Max. Windspeed	90 knots
Masthead Cable	Standard — 20 metres; Max. — 40 metres

4. INSTRUMENT HEAD INSTALLATION

The instrument head is fully waterproof and can therefore be installed on deck or below. The connections should be protected from water penetration and should, if possible, allow rear access to remove the dessicant pack annually.
The position selected should in the first instance meet the requirements of the helmsman or crew. The analogue head should be at least 150mm (6") away from a magnetic compass.

The selected surface must be flat and even to within 0.5mm.



N.B. DO NOT OVERTIGHTEN FIXING SCREWS

Step 1 Once a suitable position has been found, the installation can begin. For security reasons a note should be made of the unit serial number, and kept in a safe place.

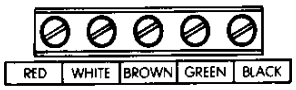
Step 2 Carefully position the self-adhesive template provided on the surface where the instrument is to be mounted.

Step 3 Drill a small pilot hole first and then check the location on the other side of the panel or bulkhead to confirm suitability.

Step 4 Open hole out using a 50mm (2") cutter in a hand held brace or electric drill. Drill the 4 fixing holes using a 2.5mm (3/32") drill.

Step 5 Connect the instrument to the Dataline wire, making sure that the colours are correctly wired to the terminals. The Dataline wire can either be taken from the Databox or from any convenient instrument head. Instrument heads can be connected in any order.

Connection Diagram



Step 6 Before finally fixing the instrument in position, the installation should be checked functionally.

step 7 If it is not possible to gain access to the instrument back when fitted, the terminals at this stage should be covered with a liberal coating of silicone grease, vaseline, WD40 (or similar moisture dispersant). These materials will not harm any other instrument components.

Step 8 Secure the instrument head in place using the 4 No. 6 self tapping screws provided and ensure the sealing gasket is correctly located. DO NOT OVERTIGHTEN as the instrument can be permanently damaged if distorted — tighten screws lightly and evenly.

WARNING: DO NOT use any form of sealing compound on the instrument back. This can damage the instrument and prevent access to the dessicant pack.

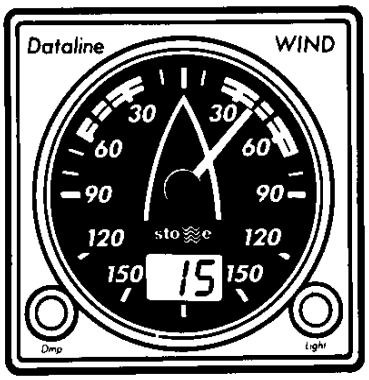
Step 9 Finally, the cover of your choice, black or white, can be clipped on over the instrument.

WARNING — DATALINE ANALOGUE REPEATER

The window in this instrument is virtually unbreakable.
However, impact or heavy pressure on the window will cause it to deflect and seize the pointer.

Return to factory carriage paid for free re-alignment (during warranty period only).

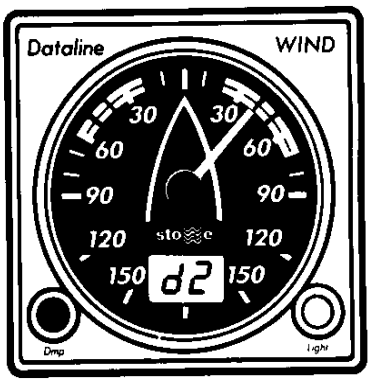
5. DATALINE WIND OPERATING INSTRUCTIONS



FUNCTIONS

After switching on the system, the display will begin to read wind speed and the pointer will show the wind angle.

i.e. In this example the wind is blowing at 15 knots from an angle of 40° starboard.



low damping
medium damping
high damping

WIND ANGLE DAMPING

To select a different damping level for the wind angle, press the damp button for 3 seconds. The display will then show the current damping level. When the button is released the display will revert back to showing wind speed. To change the damping level continue to hold the damp button and the display will cycle, release the button when the desired level is obtained.

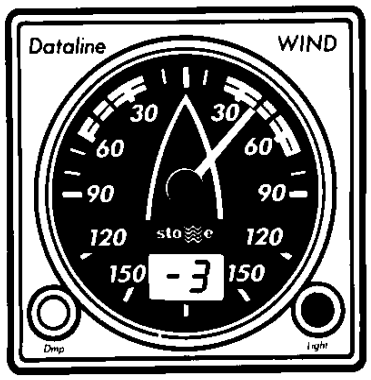
LIGHTING

The lighting on the wind instrument is controlled in exactly the same way as all the other instruments in the range.

Holding the light button down for 3 seconds will cause the lights to go on, continuing to hold the button will cycle the level as follows:

high — medium — low — off

Release the button to set the level. All other instruments will set to the same level.



- on
- medium
- low
- off

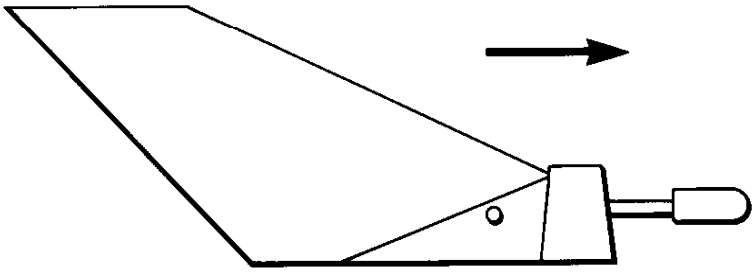
WIND ANGLE CALIBRATION

In the event of the masthead unit not being correctly aligned, it may be calibrated to take out any errors. To get accurate results the wind vane needs to be turned by hand whilst fitted to the mast. Alternatively, satisfactory results can be obtained by motoring into the wind on a calm day.

Procedure

1. Set the wind vane to line up directly with the centre line of the boat with the pointer facing forward.

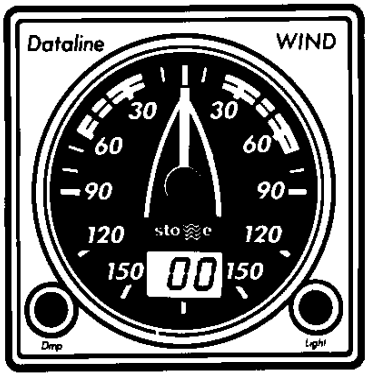
e.g.



2. If the angle on the display is not 0°, then the unit requires calibration.

3. Take a note of the angle displayed, e.g. 6° port.

4. Enter the calibration mode. This is achieved by pressing both buttons for 3 seconds. If the unit has not previously been calibrated then it will show 0° at the pointer and 0 on the LCD.

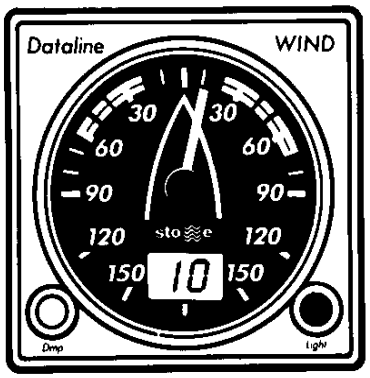


Hold for 3 seconds
enter and mode

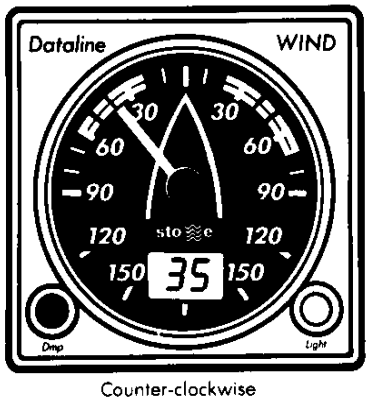
5. By using the buttons the angle can be offset either port or starboard by up to 180°. Use the 'light' button to move the pointer clockwise and the 'damp' button to move the pointer counter-clockwise. To obtain the correct setting the pointer must be offset in the opposite direction to the error.

   e.g. The example in 2 was 6° port, therefore the needle should be set to 6° starboard.

   To adjust the angle, a single press to a button will move the pointer by 1°. If a large offset is required the pointer will move automatically if the button is held down.



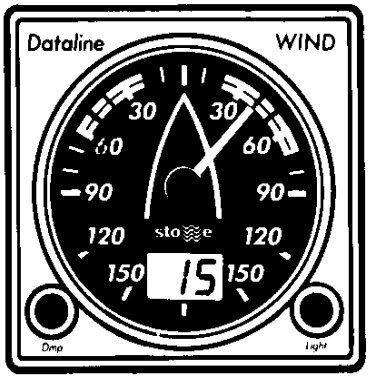
Clockwise



Counter-clockwise

6. Exit the calibration mode by pressing both buttons.

7. Re-check that the pointer now shows 0° when the vane is set along the centre line as before. If not, re-calibrate using the same procedure until the desired accuracy is obtained.



Exit calibration mode

6. OPERATIONAL CHECKLIST & TROUBLE SHOOTING GUIDE

Stowe instruments are carefully tested and proven before shipment. However, installation conditions and procedures (and very occasionally failures of components within the instruments) can cause difficulties and the following check list will direct the user to the source and remedy.

For additional assistance call your local agent listed at the rear of the manual.

CONDITION	PROBABLE CAUSE	ACTION
All Repeaters have blank LCD displays	● No 12V power supply	Check supply. Check wiring. Check 5A fuse in Databox. Return Databox for service.
All Repeater LCD's show bars	● No information from Databox	Check wiring from Databox to repeaters, particularly Green and White wires. Return Databox for service.
One Repeater has blank display or bars	● Faulty Repeater	Check wiring at rear of Repeater. Return Repeater for service.

DEMONSTRATION MODE

This function allows the user to learn the instrument whilst being away from the rest of the system. It allows the user to use all the functions of the instrument, using example values produced by the instrument.

To enter the Demonstration Mode, connect the instrument as follows:

0V to the BLACK terminal

12V to the RED terminal

Before switching on the supply (or connecting to the battery), press the orange 'LIGHT' button, and hold whilst applying power. The instrument will then power up in the DEMO mode.

To leave the DEMO mode, the instrument should be switched off and then back on again in the normal way.

TRANSDUCERS

Refer to Databox manual for trouble shooting the system transducers.

7. CARE AND MAINTENANCE OF INSTRUMENT HEAD

The instrument head will under normal use require little maintenance as the cases are made from high impact material (polycarbonate) to withstand the rigours of an exposed cockpit. It is important to avoid using chemical cleaners and hydrocarbons such as diesel, petrol etc.
If the instrument requires any form of cleaning, use fresh water and a mild soap solution (not a detergent).

It is advisable at the start of each season to check all connections to the instrument head and cover with silicone grease, vaseline or WD40. The dessicant pack at the rear of the instrument above the terminal block should be removed and dried if signs of condensation appear on the instrument glass. This can be achieved by partially removing the M3 screw and pulling on the screw. The pack can then be dried by placing in a warm place for 24 hours. Do not use a gas oven for this purpose.

8. REMOVAL OF THE INSTRUMENT

To remove the instrument head, the outer cover must first be removed. This can be done by squeezing the instrument sides between finger and thumb and applying an upward pressure. At the same time place a wide bladed screwdriver between the bulkhead or panel and the cover, and gently rotate. Then remove the four fixing screws securing the head in place, and very gently lever off the head.