

ST80
Analogue
Wind
owner's
handbook

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Chapter 1: Introduction

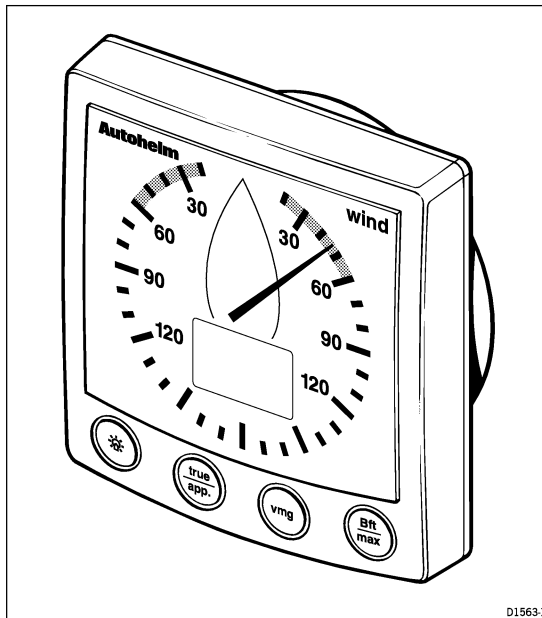
The Analogue Wind presents both wind angle and wind speed information on a combined analogue and LCD display.

- Wind speed is displayed on the dot-matrix LCD.
- Wind angle is displayed by the 360° analogue dial.

Additional features available at the touch of a button include: apparent wind, maximum and average wind speed, and maximum and average wind angle.

Wind speed and angle information is provided by the ST80 “active” wind transducer. This truly active transducer is connected to SeaTalk via any ST80 display head or 3-way connector block.

For night-time operation, the keypad, analogue dial and the LCD can be illuminated for superb readability and ease of operation.

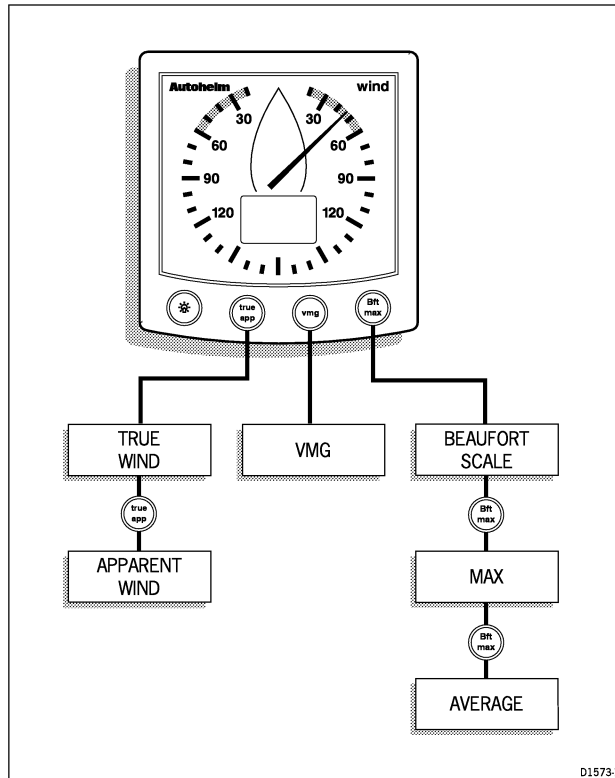


Chapter 2: Operation

2.1 Operation

The following flowchart shows the functions assigned to the **true/app**, **vmg**, and **Bft/max** keys.

Note: All key presses in this chart are momentary.



true/app

- This key toggles true and apparent wind speed and wind angle.
- The LCD identifies the current mode by displaying “**app**” or “**tru**” in the top left hand corner.

Note: True wind is “sailing true wind” relative to the water.

vmg

- Press **vmg** momentarily to display your velocity made good.
- The analogue dial continues to show the wind direction (true or apparent as previously selected).
- The current mode is identified by the “**vmg**” legend.
- If boat speed not available, the needle will point to zero and the LCD displays a series of dashes.

Bft/max

- Press **Bft/max** momentarily to display the ground wind speed according to the Beaufort Scale (e.g., BF2).
- The Beaufort scale, maximum and average wind speed displays are toggled using the **Bft/max** key.
- The Beaufort scale, maximum and average wind speed displays can be reset to the current value by pressing **Bft/max** for 3 seconds. The display flashes during the reset procedure.
- The current scale is displayed for 8 seconds prior to the LCD display returning to normal operation.

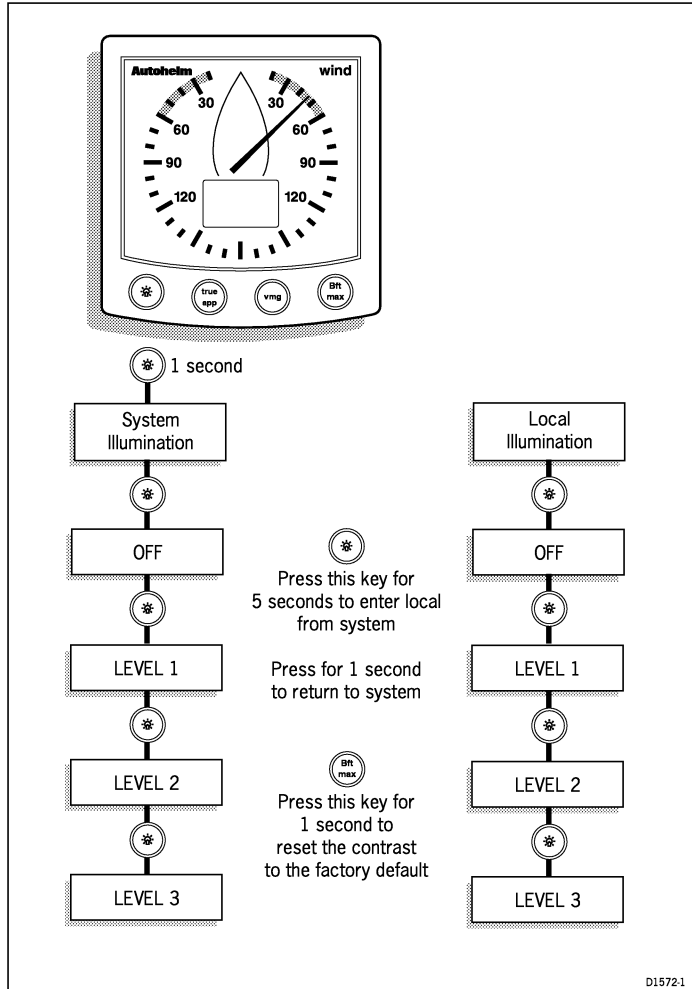
Man-Over-Board (MOB)

- The LCD displays “MOB” if the ST80 Wind instrument receives a man-over-board signal via SeaTalk.
- This display overrides the current display until the MOB signal is cancelled.

Illumination

Instrument Illumination sets the lighting for the Analogue Wind only.

System illumination adjusts the lighting of all the display heads in system mode.



The illumination display returns to normal operation after 8 seconds of keypad inactivity. However, you can return to normal operation immediately by simply pressing the **true/app**, **vmg**, or **Bft/max** key.

Operation by Remote Control

It is possible to operate the Analogue Wind from a remote location, using the ST80 Remote Keypad. This keypad mirrors the functions of the ST80 display head keypads.

For operation and setting up details, please refer to the Remote Keypad Operation and Setup manual.

Audible Alarms

There are basically two types of audible alarm: high priority and low priority.

High priority alarms beep continuously while low priority alarms consist of three beeps followed by a 5 second break.

- High priority alarms will always override low priority alarms.
- Once the high priority alarm has cleared, the previous alarm, if it is still current, will be reinstated.

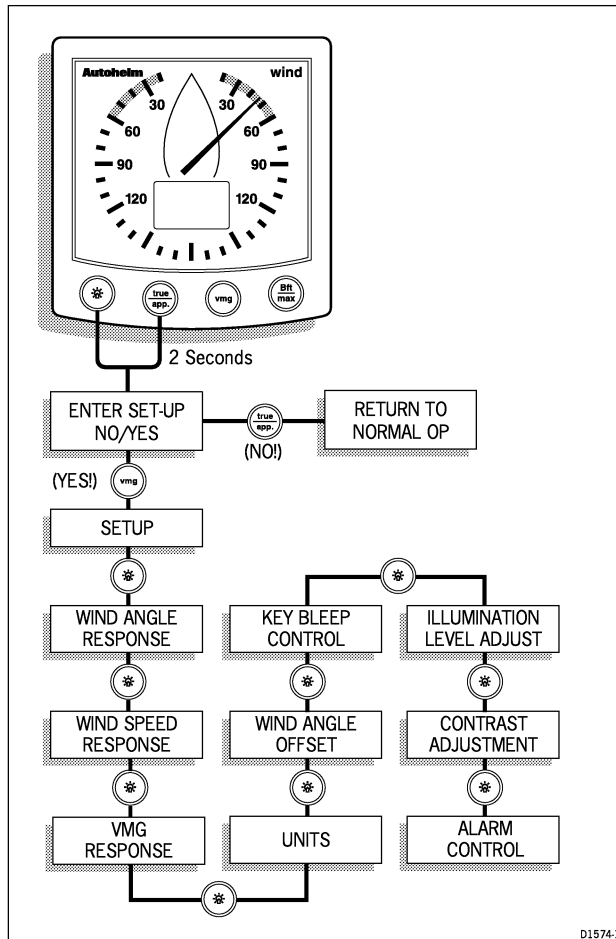
Chapter 4: Setup

The Analogue Wind must be calibrated to your vessel before it is used as a navigational aid.

The following flow charts show the menu structure for a particular key sequence. If a feature is adjustable, instructions follow the chart in the order of appearance.

Adjustable features consist of bargraph's with corresponding digital values. Modes that are simply ON or OFF appear in reverse video.

4.1 Setup



D1574-1

Note: If the display reads "SETUP OFF" you should contact your dealer.

Wind Angle Response (A), Wind Speed Response (S) and VMG Response (V)

- Response controls the rate at which wind speed, wind angle and VMG information is updated.
- The range is between 1 and 15; a low number provides a smooth response and a high number a much livelier response with rapid pointer movement.
- The displayed value is adjusted using the **true/app** or **vmg** keys.

Units (UNIT)

- This option is used to select the wind speed units: mph, m/s, or kts.
- Use the **true/app** or **vmg** keys to toggle the units.

Note: Any unit changes will be reflected by other SeaTalk instruments.

Wind Angle (Mast) Offset

- Wind angle offset is used to align the Active Wind Transducer to the wind direction.
- This is achieved by sailing directly into the wind and adjusting the pointer to “0” using the **true/app** or **vmg** keys.
- This is not available if a wind transducer is not connected.

Key Beep (BEEP)

The keypad, by default, beeps when a key is pressed. However, this can be turned ON and OFF as required using the **true/app** or **vmg** keys.

Illumination (L)

- This feature is used to adjust the brightness of the dial for each illumination setting.
- Use the **true/app** (decrease) or **vmg** (increase) keys.

Contrast (C)

Adjusts the display contrast. The range is from 0 to 15 and is adjusted using the **true/app** (decrease) or **vmg** (increase) keys.

Alarm Control (ALRM)

- Alarm control is used to select one of two alarm modes: all or specific.
- “All” sets the analogue wind to respond to all the alarms listed below while “specific” responds to a select few.

Alarm	Alarm Displayed	Specific
Shallow depth	SHAL DPTH	Yes
Deep Depth	DEEP DPTH	Yes
Anchor	ANCR ALRM	Yes
True Wind High Speed	TWSPHIGH	No
True Wind Low Speed	TWSPLOW	No
True Wind High Angle	TWAN HIGH	No
True Wind Low Angle	TWAN LOW	No
Apparent Wind High Speed	AWSPHIGH	No
Apparent Wind Low Speed	AWSPLOW	No
Apparent Wind High Angle	AWAN HIGH	No
Apparent Wind Low Angle	AWAN LOW	No
Manual Off-Course	OFFCRSE	Yes
ST80 Full Watch		No

Quitting Setup

- If you want to quit setup, simply press **✳** and **true/app** together momentarily to display the exit (STOR) screen.
- Select YES or NO as required using the **true/app** (No) and **vmg** (Yes) keys. Once you have made your selection, press **✳** to accept this selection and return to normal operation.

Chapter 4: CodeLock Security

4.1 What is CodeLock?

- CodeLock is a personal four digit security code designed to protect your valuable equipment against theft.
- CodeLock does not have to be switched on, but it's there if you decide that you need it.
- When CodeLock is switched on, the code number is stored in the memory of all CodeLock compatible equipment on the same bus.
- A CodeLocked piece of equipment, if stolen, cannot be used without the correct code number.
- There are basically two types of CodeLock compatible equipment: master's and slave's.

Master's

- Are used to create and enter a CodeLock code number.
- The ST80 Masterview is a master display head.

Slave's

- Cannot be used to create a CodeLock code number.
- Can be used to enter a code number to unlock a system.
- Receive and transmit your chosen code number only.
- ST80 slave's consist of the: Analogue Wind, Analogue Close Hauled Wind, Analogue Compass, Analogue Multitrim, Maxiview and Multiview.

Code creation is usually a once-off procedure carried out on a master display head, which, ideally, is situated in a secure location below deck. Once entered, the code is automatically sent to all CodeLock compatible SeaTalk equipment without further intervention.

If you require a higher degree of security, perhaps all your instruments are mounted in exposed locations, CodeLock can demand that you enter your personal code every time the system is switched on. In this configuration, the code can be entered into any convenient master display head.

4.2 Analogue Display Heads

Automatic CodeLock Systems

In an automatically transmitted CodeLock system, the Analogue Wind reads the code number and starts-up automatically without any user input.

Manual CodeLock System

In a manually transmitted CodeLock system, the code number is entered via the keypad of any master display head. This code is then sent to all compatible equipment on the same SeaTalk bus. Once this code has been received, the equipment operates in the normal way.

4.3 Enabling CodeLock

The CodeLock security feature can only be switched on from a Masterview display head. Therefore, please refer to the Masterview Operation & Setup manual for details.

Chapter 5: Problem Solving

5.1 Problem Solving

Display is blank - keypad not illuminated

- Make sure that the power supply is connected.
- Check the fuse or circuit breaker.
- Make sure that the SeaTalk cables are not damaged.

Display is blank - keypad illuminated

- Check the contrast and illumination settings
- Faulty LCD module.

No exchange of information between SeaTalk instruments

- Make sure that the cables are attached securely.
- If the problem persists, disconnect your instruments one by one to isolate the faulty unit.

Failure of a group of SeaTalk instruments

- Make sure that the SeaTalk connections to non-functioning instruments are secure.

LCD shows “Code ON” when the power supply is switched on

- The CodeLock anti-theft system is operational.

Poor character definition

- Adjust the contrast.

Chapter 6: EMC and Servicing Guidelines

6.1 Important information

All Autohelm equipment and accessories are designed to the best industry standards for use in the leisure marine environment.

Their design and manufacture conforms to the appropriate Electromagnetic Compatibility (EMC) standards, but good installation is required to ensure that performance is not compromised. Although every effort has been taken to ensure that they will perform under all conditions, it is important to understand what factors could affect the operation of the product.

6.2 Installation

To avoid the risk of operating problems, all Autohelm equipment and cables connected to it should be:

- At least 1m (3 feet) from any equipment transmitting or cables carrying radio signals, e.g., VHF radios, cables and antennas. In the case of SSB radios, the distance should be increased to 2m (7ft).
- More than 2m (6ft) from the path of a radar beam. A radar beam can normally be assumed to spread 20 degrees above and below the radiating element.
- The equipment should be supplied from a different battery than the one used for engine start. Voltage drops below 10V in the power supply to our products can cause the equipment to reset. This will not damage the equipment, but will cause the loss of some information and can change the operating mode.
- Genuine Autohelm cables should be used at all times. Cutting and rejoining these cables can compromise EMC performance and so should be avoided unless doing so is detailed in the installation manual.
- If a suppression ferrite is attached to a cable, this ferrite should not be removed. If the ferrite has to be removed during installation it must be reassembled in the same position.

6.3 Check Before Going to Sea

- Always check the installation before going to sea to make sure that it is not affected by radio transmissions, engine starting etc..
- In some installations, it may not be possible to prevent the equipment from being affected by external influences. In general this will not damage the equipment but can lead to it resetting, or momentarily may result in faulty operation.

6.4 Servicing and Safety

- Autohelm equipment should be serviced only by authorised Autohelm service engineers. They will ensure that service procedures and replacement parts used will not affect performance. There are no user serviceable parts in any Autohelm product.
- Some products generate high voltages, and so never handle the cables/connectors when power is being supplied to the equipment.
- Always report any EMC related problem to your nearest Autohelm dealer. We will use any such information to improve our quality standards.

Chapter 7: Specification

Dimensions:	110 x 114.5 x 18.25mm (4.33 x 4.5 x 0.71in)
Power supply:	10 to 16 V DC
Current consumption:	50 mA with illumination off 250mA with illumination full on
Operating temperature:	-10 to +70°C (14°F to 158°F)
Illumination:	3 level illuminated dial and LCD Keypad permanently illuminated