

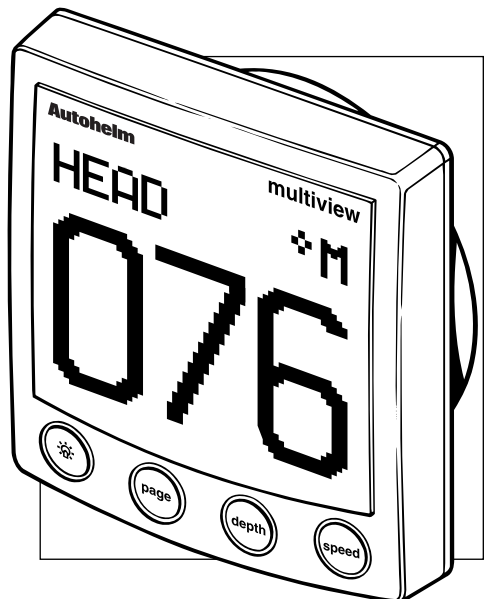
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Autohelm

ST80 Multiview

Operation & Setup



Package Contents

1. Multiview display head
2. Thumb nuts (2)
3. Threaded fixing studs (2)
4. White sun cover
5. SeaTalk cable
6. Installation template
7. Operation manual
8. Warranty card
9. Operation cue card
10. Display head installation guide

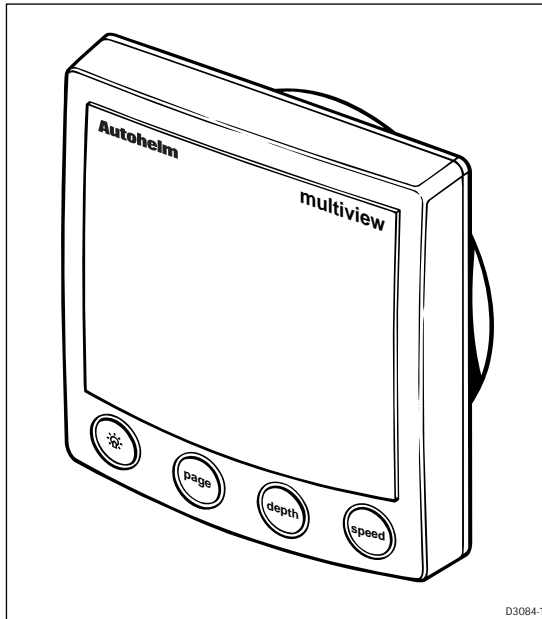
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Chapter 1: Introduction

The Multiview repeats information available on the SeaTalk bus. The display head comprises of four keys (lamp, page, depth and speed) dedicated to specific functions.

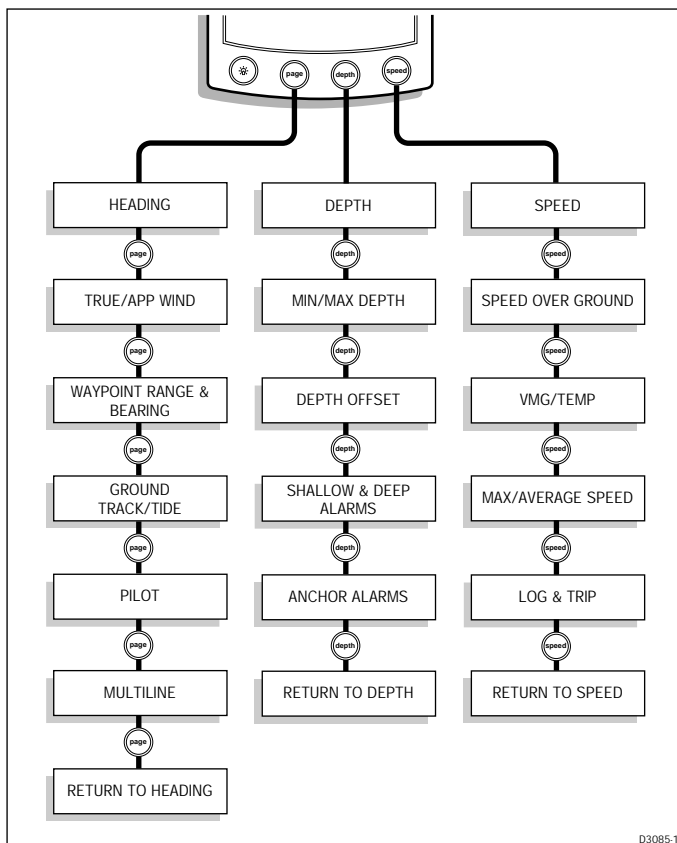


- The lamp key is used exclusively to adjust the LCD display illumination.
- The depth and speed keys cycle pages of information related to the speed and depth “chapters”.
- The page key cycles information such as: heading, true/apparent wind, and waypoint range and bearing.

Chapter 2: Operation

2.1 Basic Operation

The following flow charts show the displays assigned to the **page**, **depth** and **speed** keys.



Speed Key

Speed

- Boat speed can be displayed in KTS, MPH or KMH.
- Trend arrows replace the speed units (providing the trend option is switched on) if the boat speed increases or decreases at a rate greater than the value in User Setup.

Speed Over Ground (SOG)

- Speed over ground can be displayed in KTS, MPH or KMH.

Velocity Made Good (VMG)

- VMG is only displayed if your system is configured for use with sailing vessels.
- VMG can be displayed in one of the following KTS, MPH or KMH.

Temperature

- The sea temperature can be displayed in degrees C or F.
- The decimal place is lost if the temperature rises above 99.9.

Maximum & Average Speed

- The trip, log and maximum and average speed displays can be reset by pressing and holding the **speed** key for 4 seconds. The display flashes during this process.

Log & Trip

- The Masterview is capable of displaying up to 5 trips at any one time. However, the Multiview will only repeat the first of these trips.

Depth Key

Depth

- The depth is displayed in the units currently available on SeaTalk (FT, M or FA).
- Trend arrows replace the depth units (providing the trend option is switched on) if the depth increases or decreases at a rate greater than the value in User Setup.

Minimum & Maximum Depth

- The maximum and minimum depth displays can be reset by pressing the **depth** key for 4 seconds. The display flashes during this process.

Depth Offset

- This display shows the depth transducer offset currently available on SeaTalk.
- The offset can be either: waterline (positive offset), keel (negative offset) or transducer (zero offset).

Shallow & Deep Alarms

- This screen displays the current status (and value) assigned to the shallow and deep alarms.
- The status of these alarms is identified by a tick (on) or cross (off).

Anchor Alarms

- This screen displays the current status (and value) assigned to the anchor alarms.
- Once again, the status of these alarms is identified by a tick (on) or cross (off).

Note: The shallow and deep anchor alarms cannot be adjusted on the Multiview. Adjustments must be carried out on a Masterview.

Page Key

Heading

- The current heading is displayed in degrees M (mag.) or T (true).

True & Apparent Wind

- The wind direction is identified by a P (port) or S (starboard) next to the wind angle.

Waypoint Range & Bearing

- The bearing to waypoint value is either M (magnetic) or T (true).
- The distance to waypoint is displayed in NM, SM or KM.
- The estimated time to arrival (TTG) is displayed in hours and minutes or minutes and seconds.
- The cross track error (XTE) display consists of an error value (if applicable) and a direction to steer indicator (arrows)
- The direction to steer indicator shows the direction to steer to return to the correct waypoint bearing.

Ground Track & Tide

- The course over ground (COG) and set values are displayed in the true (T) or magnetic (M) units available on SeaTalk.
- The speed over ground (SOG) and rate values are displayed in the current SeaTalk units.

Pilot

- The pilot screen displays the current autopilot status: AUTO, STBY, VANE or TRACK.
- The pilot screen also displays the current heading in degrees true (T) or magnetic (M) and a rudder angle indicator (2° graduations).

Multiline

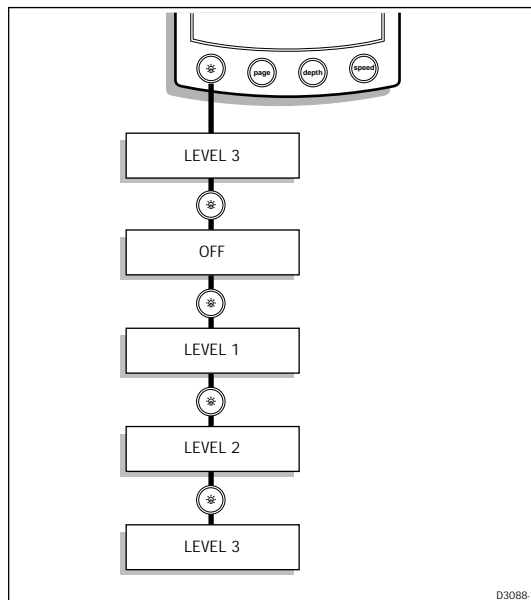
- The multiline screen displays four lines of data selected from a user definable list (refer to User Setup). The factory defaults for this screen are: Universal Time Constant (UTC), Local Time (LTC), Latitude and Longitude.

Illumination

There are four illumination settings (off, level 1, level 2 and level 3) plus two illumination adjustment modes (local and system).

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


Local mode adjusts the Multiview illumination only.



Switching to System Mode

To switch to system mode from local mode, press and hold the  key for 1 second.

Switching to local Mode

You can return to local mode from system mode by pressing and holding the  key for 5 seconds.

Exiting Illumination Adjustment

The illumination display times-out to normal operation after 8 seconds of keypad inactivity. Alternatively, you can press any of the three right hand keys to return to normal operation immediately.

LCD Contrast

The factory default should be suitable for most lighting conditions. However, if you do need to make any adjustments, please refer to the User Setup chapter for details.

Resetting the LCD Contrast

When the illumination adjustment screen is active, the contrast can be reset to the factory default by pressing the **speed** key for 1 second.

2.2 General Operating Information

Default Multiview Screen

The Multiview can be configured to time-out (after 8 seconds) to one of the following screens: speed, depth, or a combined speed and depth. Please refer to the User Setup chapter for selection details.

Quick Entry to Response

It is possible to adjust the rate at which the various screens are updated without entering User Setup.

- Press **depth** and **speed** together for 1 second.
- Adjust the response values using the **page** and **depth** keys.
- Once the response values have been adjusted, press **depth** and **speed** together for 1 second to return to normal operation.

Pop-Up Pilot

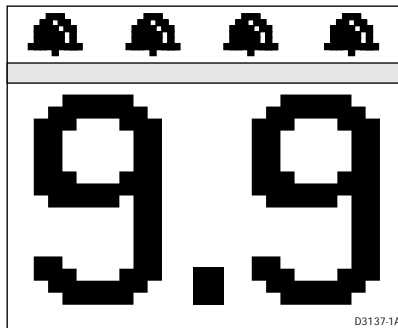
During autopilot operation, various information screens pop-up to advise you of a pilot status changes.

The pop-screens you may encounter include:

- Response
- Rudder (gain)
- Heading offset (Deviation, Heading Offset, Turn Boat and Turn Slower)
- Status (Standby, Auto, Vane or Track)
- Course change
- Auto tack (Starboard Tack or Port Tack)
- Old Heading
- Old Wind Angle

Alarms

When the Multiview receives an alarm, the title bar of the current display is replaced with alarm bells and an audible warning is activated.



To determine which alarm has been received, press any key to display a description of the alarm.

Cancelling Alarms

Press any key to silence or turn an alarm off. The following table shows the action applied to the currently active alarm when a key is pressed.

| Alarm | Silenced? | Turned Off? |
|--------------------------|-----------|-------------|
| Shallow depth | Yes | No |
| Deep depth | No | Yes |
| Anchor | Yes | No |
| True wind high speed | No | Yes |
| True wind low speed | No | Yes |
| True wind high angle | No | Yes |
| True wind low angle | No | Yes |
| Apparent wind high speed | No | Yes |
| Apparent wind low speed | No | Yes |
| Apparent wind high angle | No | Yes |
| Apparent wind low angle | No | Yes |
| Manual off course | Yes | No |
| ST80 full watch | Yes | No |

Pilot Alarms


The Multiview supports several additional alarms to those described above. These alarms are:

- No NMEA data
- Drive stopped
- Pilot off course
- Waypoint advance (consists of a waypoint number, bearing and direction to steer information)

Man Overboard

The man overboard screen is activated by pressing the MOB key on another unit (e.g., ST80 MOB Keypad) or waypoint 999.

The default man-overboard screen consists of dead-reckoned data. If there is insufficient information to calculate a dead reckoned range and bearing, a range and bearing to the position (based on Lat/Lon) at which the man-overboard condition was initiated is displayed.

Man-overboard data can be toggled between position based and dead-reckoned displays by pressing the  key momentarily.

If there is insufficient data to provide a dead-reckoned or position based man-overboard information, MOB is displayed on screen.

2.3 Operation using a Remote Keypad

The Multiview can be operated from a remote location using the ST80 Remote Keypad. For full operational details, please refer to the remote operation manual.

Chapter 3: CodeLock Security

3.1 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: masters and slaves.

Master's

- Are used to create and enter a CodeLock code number, or to turn CodeLock on/off.
- The Masterview is the only display head that can be used as a master.

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 and the 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.

Automatic CodeLock Systems

In an automatically transmitted CodeLock system, the Multiview 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 Masterview or Multiview 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.

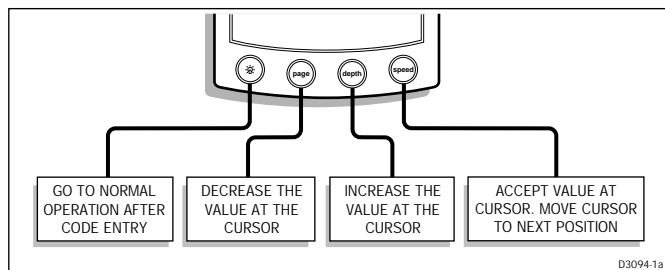
Note: When the Multiview is waiting for the correct code number, two “padlocks” are displayed.

3.2 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.

3.3 Entering the Code Number from the Multiview

Although the Multiview is only a slave, once CodeLock has been switched on using a Masterview, the chosen code number can, in a manual CodeLock system, be entered from the Multiview keypad.



Chapter 4: User Setup

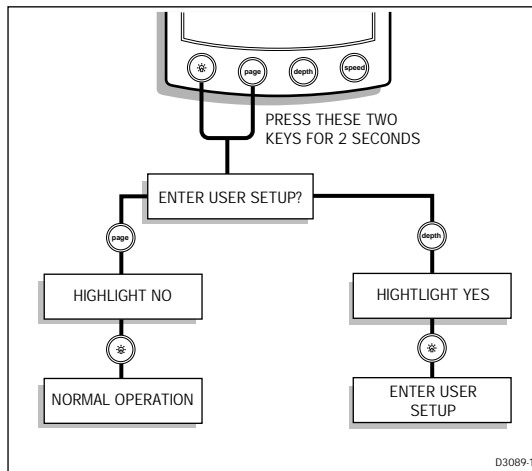
4.1 About this Chapter

This chapter describes how to adjust the Setup features using a combination of flow charts and text.

The flow charts are designed to show the roll-over sequence for individual keys or key sequences (all key presses are, unless stated otherwise, momentary).

Entering User Setup

Enter setup as follows:



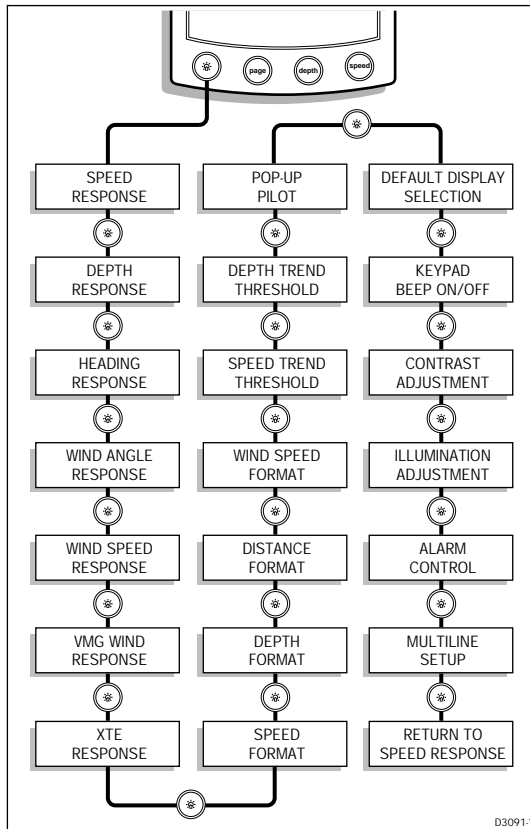
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Note: If the display reads "SET-UP OFF", contact your Autohelm dealer for further instructions.

The "ENTER SET-UP?" screen times-out to normal operation after 8 seconds of keypad inactivity.

Setup Menu

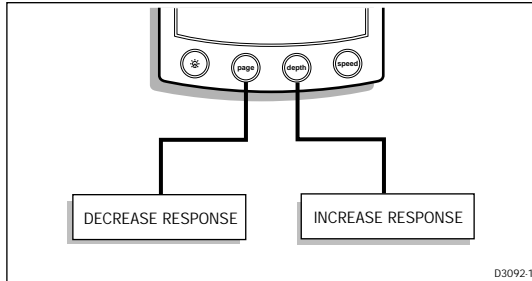
The following flow chart shows the complete Setup menu.



Response

The response screens control the rate at which information is updated.

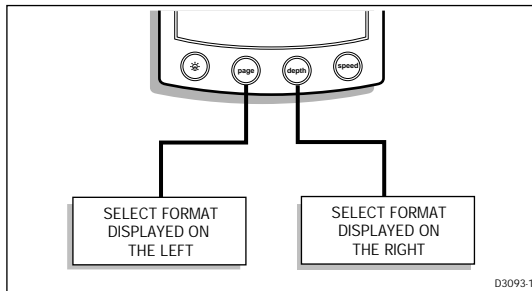
The range for response is 0 to 15. A high number provides a lively response and a low number a slow but smooth response.



Note: The current operating value (e.g., SPEED 9.99 KTS) for the currently selected response screen is displayed above the bargraph.

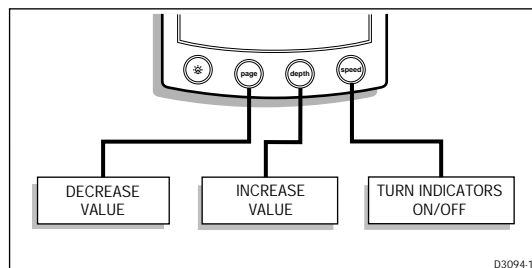
Display Formats

These displays are used to select the data formats for the individual screens. The options are: whole numbers, one or two decimal places.



Trend Indicator Thresholds

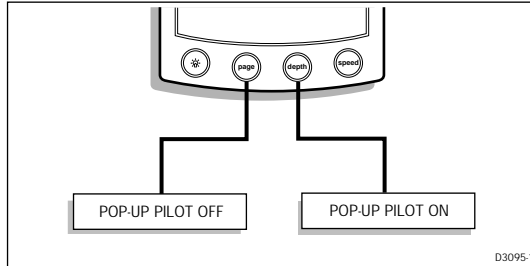
The trend indicators show whether the general trend is towards increasing or decreasing speeds and depths. The threshold that governs these indicators is adjusted as follows:



Pop-Up Pilot

When the pop-up pilot option is enabled, the Multiview responds to autopilot status or configurations changes by displaying **CHANGE IN STATUS**.

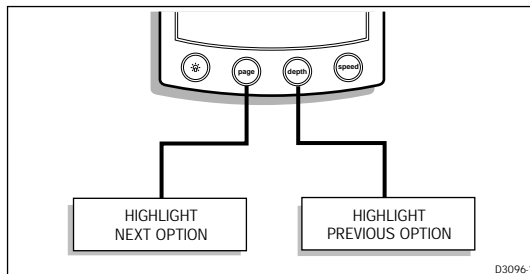
The pop-up pilot option is select or de-selected as follows:



Default Display

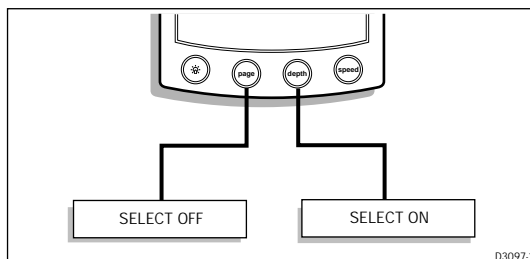
The Multiview can be configured to time-out (after 8 seconds of keypad inactivity) to the primary speed or depth displays or, alternatively, to a combined speed and depth display.

The NONE option deselects the time-out feature.



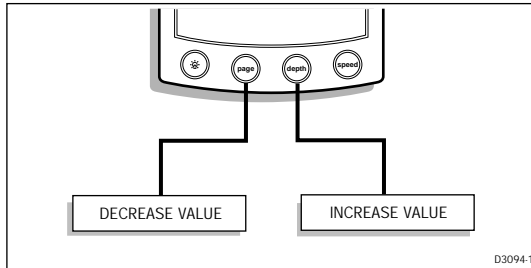
Keypad Beep

The Multiview, by default, beeps every time a key is pressed. This can be turned on and off as follows:



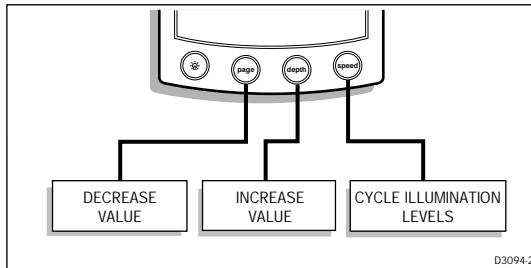
Contrast Adjustment

The LCD contrast can be adjusted to suit most lighting conditions. Adjustments, if necessary, are made in the following manner:



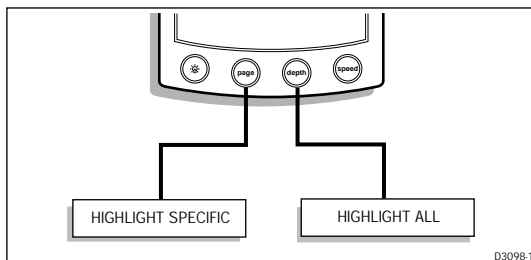
Illumination Adjustment

The brightness of each illumination level (1, 2 and 3) can be adjusted as a percentage of the maximum brightness for each level.



Alarm Control

The Multiview can be configured so that it responds to all or, alternatively, just specific alarms. For a complete list of alarms, please refer to the Masterview Operation and Setup manual.

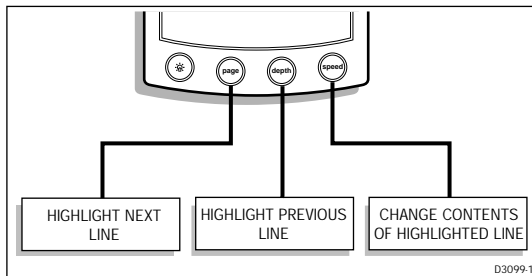


Multiline Selection

This option is used to select four lines of data (from the list below) to be displayed when the multiline screen is selected.

- Universal time coordinate (UTC)
- Local time coordinate (LTC)
- Latitude
- Longitude
- Speed
- Speed over ground (SOG)
- VMG to waypoint (VMGWP)
- Depth
- True wind angle (TWNDA)
- True wind speed (TWNDS)
- Apparent wind angle (AWNDA)
- Apparent wind speed (AWNDS)
- Beaufort (BEAUF)
- VMG to wind (VMGWND)
- Heading (HDG)
- Locked heading (LOCK)
- Course over ground (COG)
- Tack
- Waypoint number (WPNUM)
- Distance to waypoint (DTW)
- Estimated time to arrival (ETA)
- Cross track error (XTE)
- Tide set (SET)
- Tide rate (RATE)

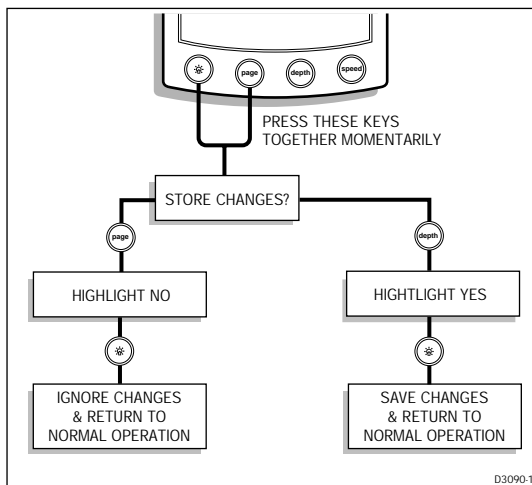
Lines are selected in the following manner:



Note: You can change the contents of a highlighted line to the previous option by pressing the **speed** key for 1 second.

Quitting User Setup

You can quit User Setup at any time as follows:



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 displays two “padlocks” 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: | 100 mA with illumination off 200mA with illumination full on |
| Operating temperature: | -10 to +70°C (14°F to 158°F) |
| Illumination: | 3 level illuminated LCD keypad permanently illuminated |

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Autohelm
