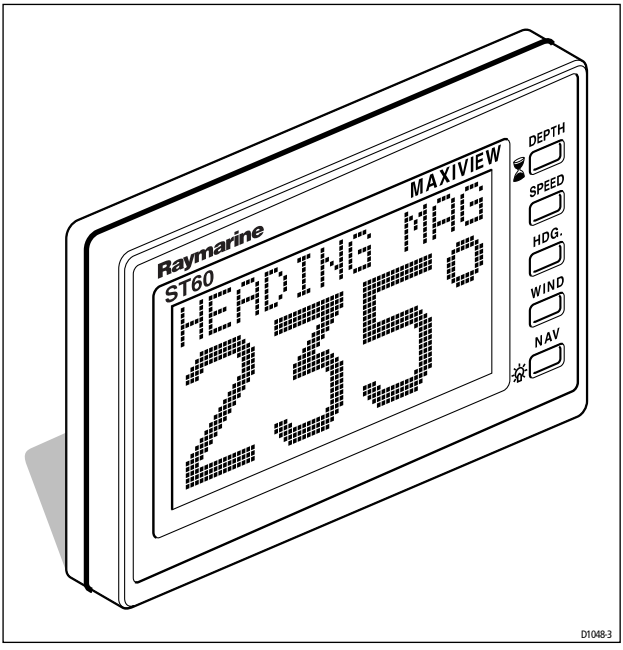
ST60 MaxiView
Owner's Handbook

Document number: 81156-2
Date: 1st April 2001



ST60 MaxiView™

Contents

Introduction

Congratulations. You are now the owner of an ST60 MaxiView intelligent SeaTalk repeater. This instrument will provide you with access to the full range of SeaTalk performance and navigational information via a single instrument lead.

Whatever your type of boat, power or sail, MaxiView gives you a large scale display of unprecedented clarity, as a result of the advanced super-twist LCD display technology used.

The waterproof construction incorporates a 5-button control system, and large format, scratch resistant display window. As an alternative, the MaxiView can be controlled by a SeaTalk remote control unit (A25006).

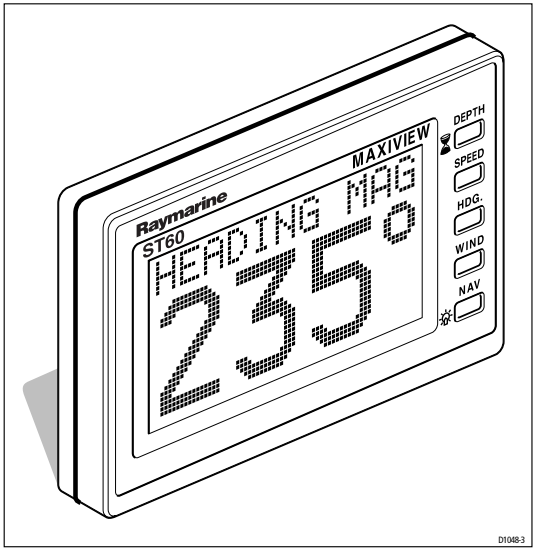
The MaxiView repeater can be mast or cockpit mounted on sailing yachts using one of our custom Autohelm 2-unit (D186) or 4-unit (D184) mounting pods.

When used in a full SeaTalk system the ST60 MaxiView can display:

- Water Depth
- Deep Alarm Warning
- Shallow Alarm Warning
- Sea Temperature
- Current Boat Speed
- Average Speed
- Timer
- Maximum Speed
- Trip Log
- Total Log
- Current/Locked Magnetic Heading
- VMG
- True and Apparent Wind Direction
- True and Apparent Wind Speed
- Wind Beaufort Strength
- Heading on Next Tack

If the boat's system contains a radio navigation receiver (with SeaTalk output or an NMEA 0183 interface), the following information is also available:

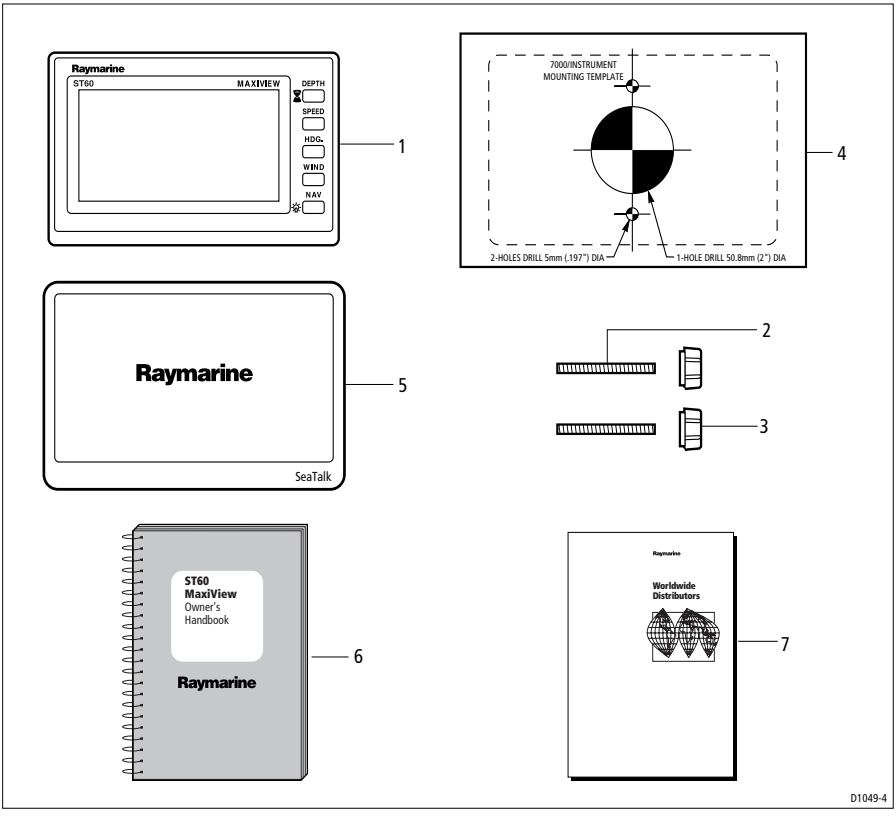
- Speed Over Ground
- Course Over Ground
- Bearing to Waypoint
- Cross Track Error
- Latitude (current position)
- Longitude (current position)
- Time and date (if available from navigation receiver)
- Estimated Time of Arrival at Waypoint
- Tidal Vector
- Velocity Made Good Over Ground
- Velocity Made Good to Waypoint



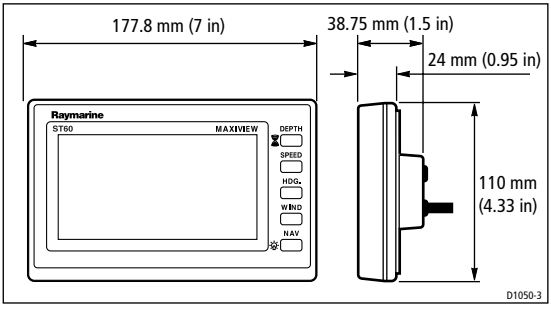
Package contents

The ST60 MaxiView contains the following items:

- Item 1 ST60 MaxiView instrument.
- Item 2 Fixing studs (2).
- Item 3 Thumb nuts (2).
- Item 4 Fitting template.
- Item 5 Instrument cover.
- Item 6 Owner's Handbook. A Warranty document is included at the rear of the handbook.
- Item 7 Dealer list.



Chapter 1: Installation



1.1 Siting

The ST60 MaxiView can be mast, helm or cockpit/bulkhead mounted. When mast or helm mounting the MaxiView requires a custom Autohelm mast or stormrail mounting pod:

2 unit Mastpod – D186

4 unit Mastpod – D184

Single unit ST60 Helmpod – D171

Note: *Installation procedures for helm and mast mounting are covered in the Instrument Pod handbook.*

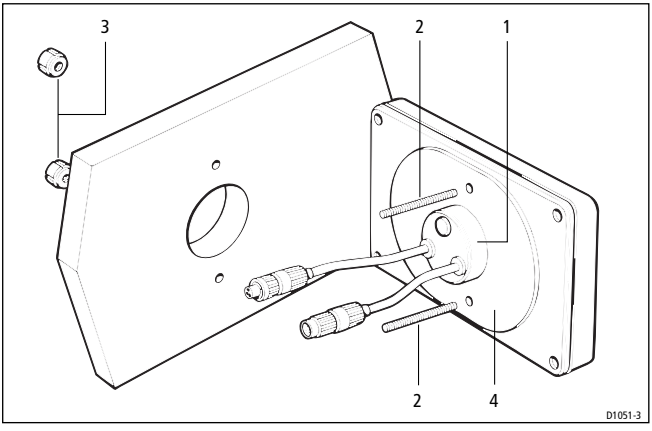
Site the MaxiView where it is:

- easily readable by the helmsman.
- protected from physical damage.
- at least 230 mm (9 in) from a compass.
- at least 500 mm (20 in) from radio receiving equipment.
- accessible from behind for ease of installation and cable running.

Note: *To prevent the accumulation of moisture, the ST60 MaxiView breathes through a small vent in the connector boss. The rear of the MaxiView must, therefore, be sited where it is protected from possible contact with water.*

The ST60 MaxiView is fitted with a foam gasket that forms a watertight seal between the rear case and the installation face.

1.2 Mounting procedure (cockpit/bulkhead)



1 Connector boss **2** Fixing studs **3** Thumb nuts **4** Sealing gasket

1. Make sure the surface to which the MaxiView is to be mounted is smooth, flat and clean.
2. Use the template (supplied) to mark the centres for the fixing studs (2) and the connector boss (1).

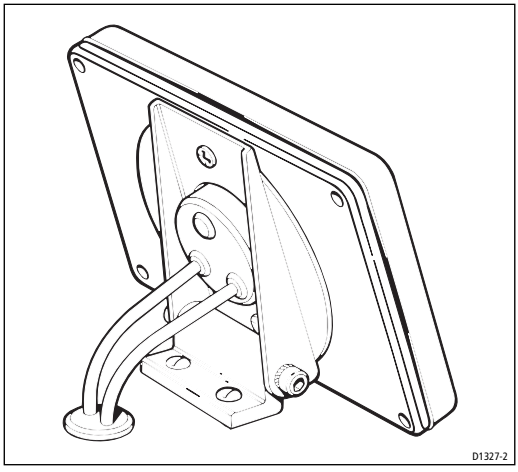
Note: *To allow protective covers to be fitted, adjacent MaxiView instruments should have at least 6 mm (1/4 in) gap between them.*

3. Drill two 5 mm 0.2 in) diameter holes for the fixing studs.
4. Using a 60 mm (2 3/8 in) diameter cutter, drill a hole for the connector boss (1).
5. Screw the two fixing studs (2) into the rear case of the MaxiView.
6. Install the MaxiView in the chosen location and secure with the thumb nuts (3).

Note: *The thumb nuts should be hand tightened only. Do not over-tighten using wrenches etc. Also, do not use silicone grease/sealants as an additional method of sealing - these expand and may, if applied to the seal attached to the rear case, distort the MaxiView casing.*

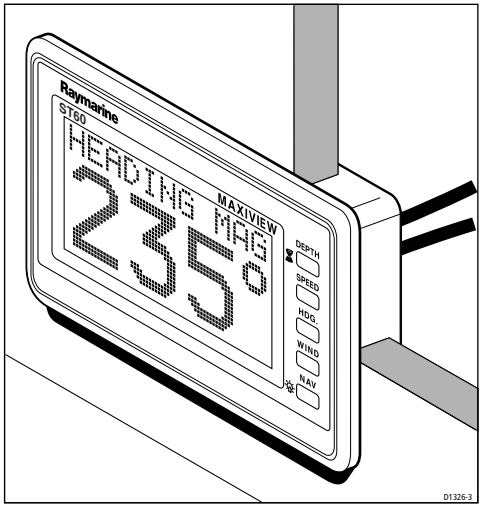
1.3 Bracket Mounting

As an alternative to bulkhead mounting, the ST60 MaxiView can, be bracket mounted using the Raymarine mounting kit (Catalogue No. D130).



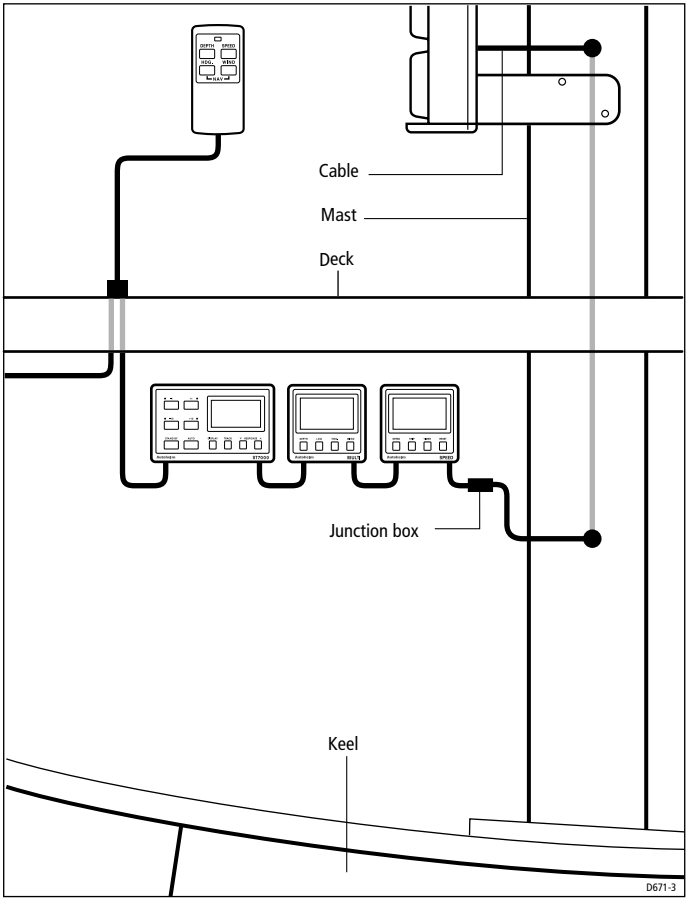
1.4 Flush Mounting

A flush mounting kit is available for situations where a low-profile installation is required or more desirable. Full instructions are provided with the kit (Catalogue No. E25017).



1.5 Power supply

Power for the ST60 MaxiView is taken from the SeaTalk bus.



The SeaTalk cable from the MaxiView pod should be connected to the cable tail of the last instrument in the existing SeaTalk system.

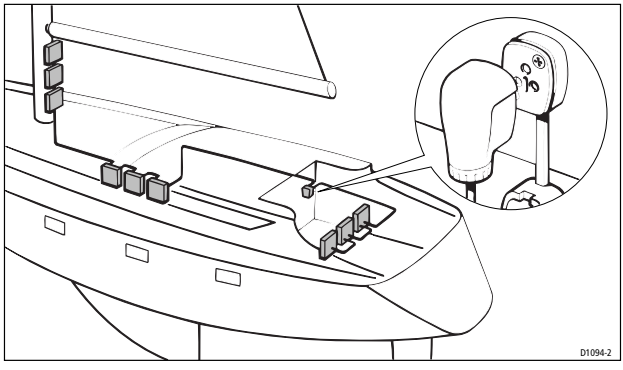
Chapter 2: Remote Installation

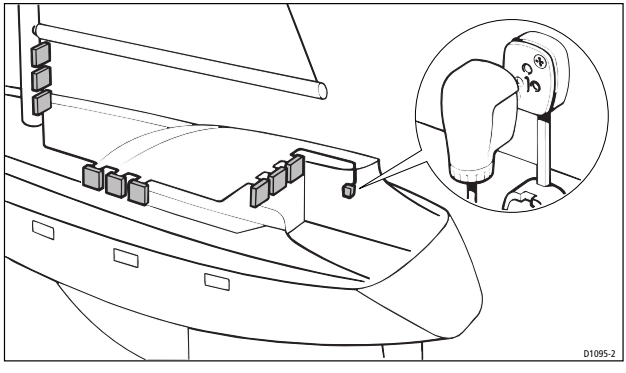
2.1 SeaTalk Socket Installation

The MaxiView remote controller (A25006) is SeaTalk compatible and controls the MaxiView instruments via the SeaTalk bus. It is supplied with a custom waterproof plug and socket. The plug comes ready assembled to the remote cable and the socket can be mounted in the cockpit area or anywhere a remote control is required. When correctly installed the SeaTalk socket is fully waterproof and can be situated in an exposed location.

Cabling

The bulkhead socket is wired to the bus using a SeaTalk extension cable (Cat. No. D131). This can either be connected to a cable that links instruments in the nav area to those in the cockpit, or connected directly to the spare SeaTalk tail on the last instrument or autopilot control unit (also using D131).

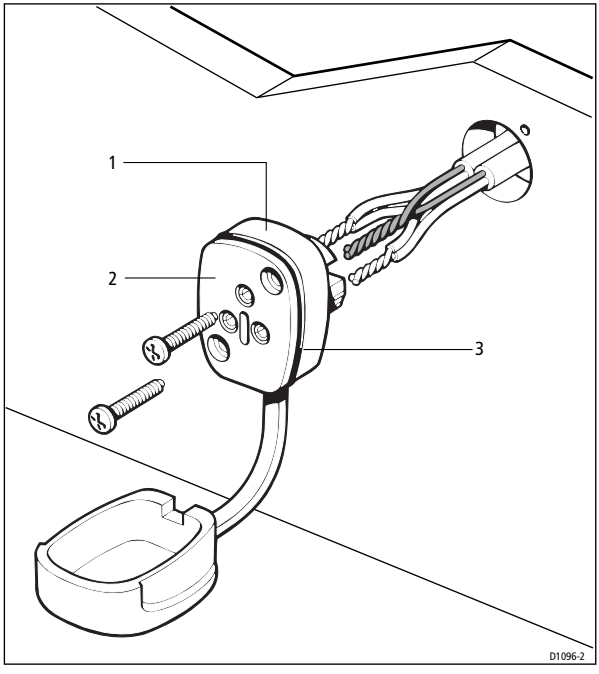




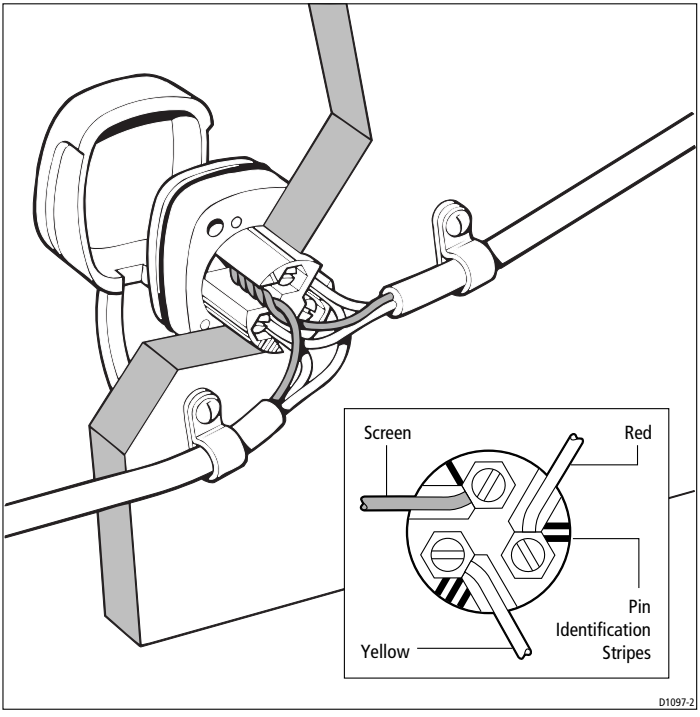
2.2 Mounting/Cabling

The socket is assembled as follows:

1. Apply the self adhesive template to the bulkhead at the selected location.
2. Carefully drill an 18 mm (23/32 in) clearance hole and two 2.4 mm (3/32 in) pilot holes. Remove the template.
3. Fit the cap plug (1) to the socket body (2) as shown.
4. Assemble the 'O' ring (3) to the groove between the plug cap and socket body.

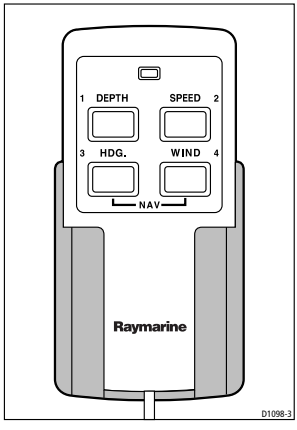


5. Cut and strip back the SeaTalk cable.
6. Thread both cables through the 18 mm (23/32 in) bulkhead hole and wire into the socket as shown, making sure that the wires are connected to the correct pins.
7. Attach the socket to the bulkhead using the two self tapping screws supplied.
8. Secure the cables as shown in the following illustration.



2.3 Bulkhead bracket installation

The ST60 MaxiView remote is supplied with a bulkhead mounted stowage bracket. This should be attached to a convenient bulkhead using the 3 double sided adhesive pads supplied with the unit.



Chapter 3: Fault Finding and Maintenance

3.1 Fault Finding

All Raymarine products are subject to comprehensive test and quality assurance programmes, prior to packing and shipping. However, if a fault arises with the ST60 MaxiView, the following table may help to identify the probable cause and provide the most likely cure.

Fault	Cause	Action
Display blank	No power supply	Check power supply Check cabling and security of connectors. Check fuse/ circuit breaker.
No transfer of information between hand-held remote and MaxiView	SeaTalk bus open circuit	Check security of all SeaTalk connectors and wiring to the socket.

3.2 Maintenance

Instrument

Certain atmospheric conditions may cause condensation to appear on the display window. This will not harm the unit and may be cleared by switching on the instruments lights (level 3).

Chemical and abrasive materials must not be used to clean the ST60 MaxiView; if it is dirty, clean with a soft, damp cloth.

Cabling

Examine all cables for chafing or damage to the outer shield and, where necessary, replace and re-secure.

Advice

For advice, or further information regarding installation of this product, please contact the Raymarine Product Support Department or your own National distributor.

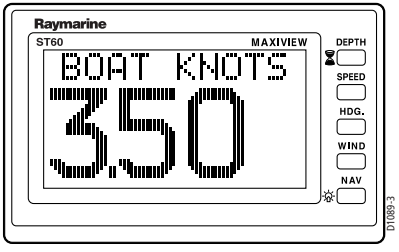
Chapter 4: Operation

4.1 Introduction

The ST60 MaxiView can be programmed to operate in Full mode, Cruising mode or Race mode.

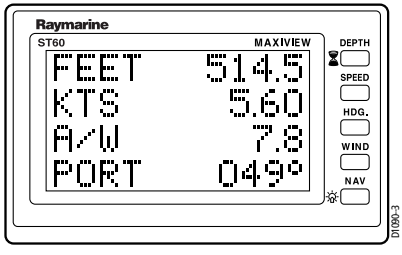
Full mode

In Full mode most functions are displayed in large format and called up by cycling the relevant key.



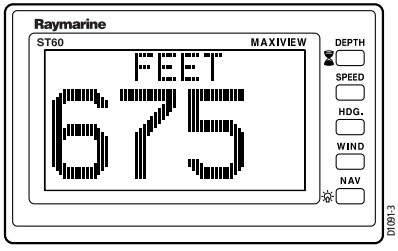
Cruising mode

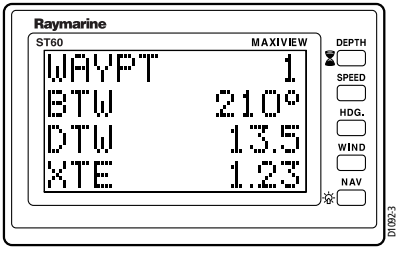
Cruising mode condenses information into a smaller format to display four lines of information at a time.

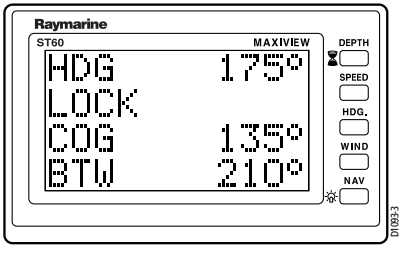


Race mode

Race mode allows the user to define up to 6 screens from either the Full or Cruising menus, which can be remotely paged using the Maxi Remote Controller (A25006).





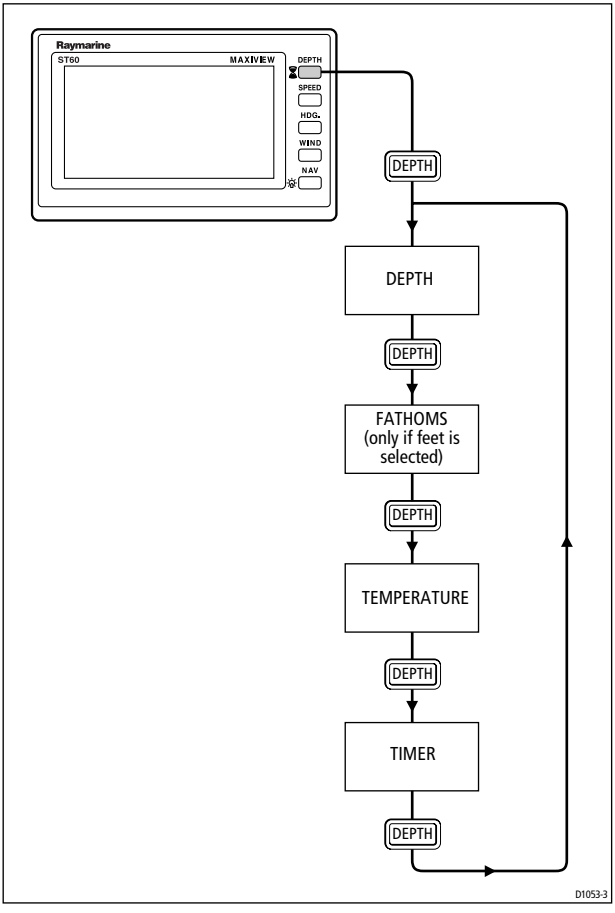


Please refer to Calibration for information on setting the operating mode.

4.2 Full Mode

Depth

Depth is displayed in either FEET or METRES depending on the setup of the main speed instrument.



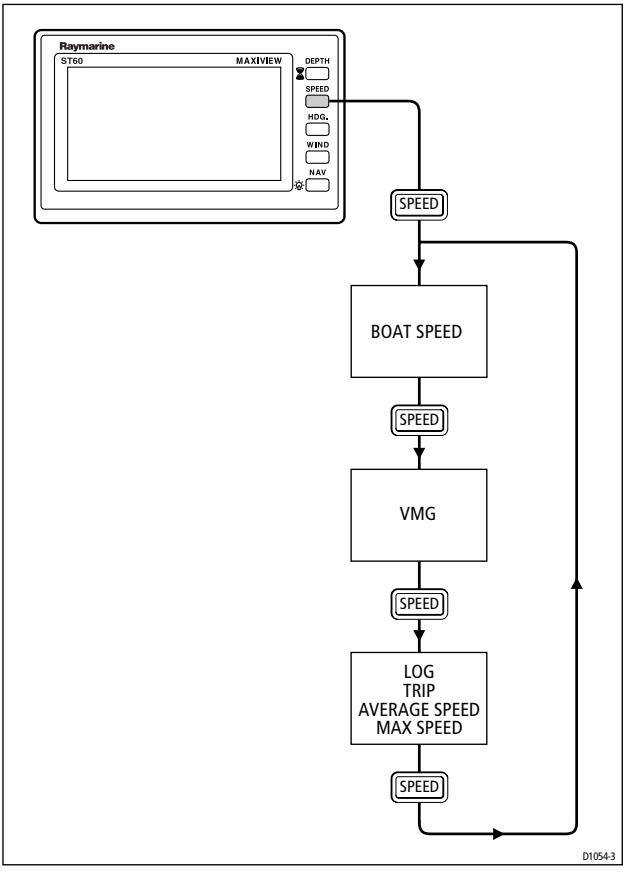
Note: *Fathoms will only be displayed if the units are set to FEET on the main depth instrument.*

If the depth echo is lost LOST ECHO will be displayed alternately with FEET or METRES .

If the shallow alarm is activated SHALLOW ALARM will be displayed alternately with FEET or METRES .

If the deep alarm is activated DEEP ALARM will be displayed alternately with FEET or METRES .

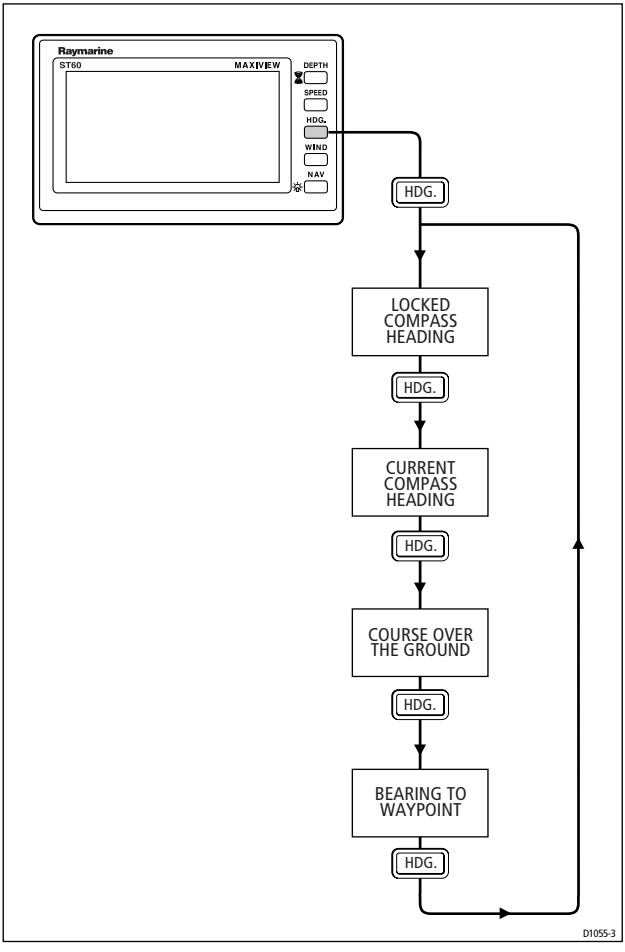
Speed Key



A one second press of **SPEED** resets the MAXIMUM speed reading.

Speed will automatically be displayed in either mph or knots depending on the setup of the main speed instrument.

HDG Key

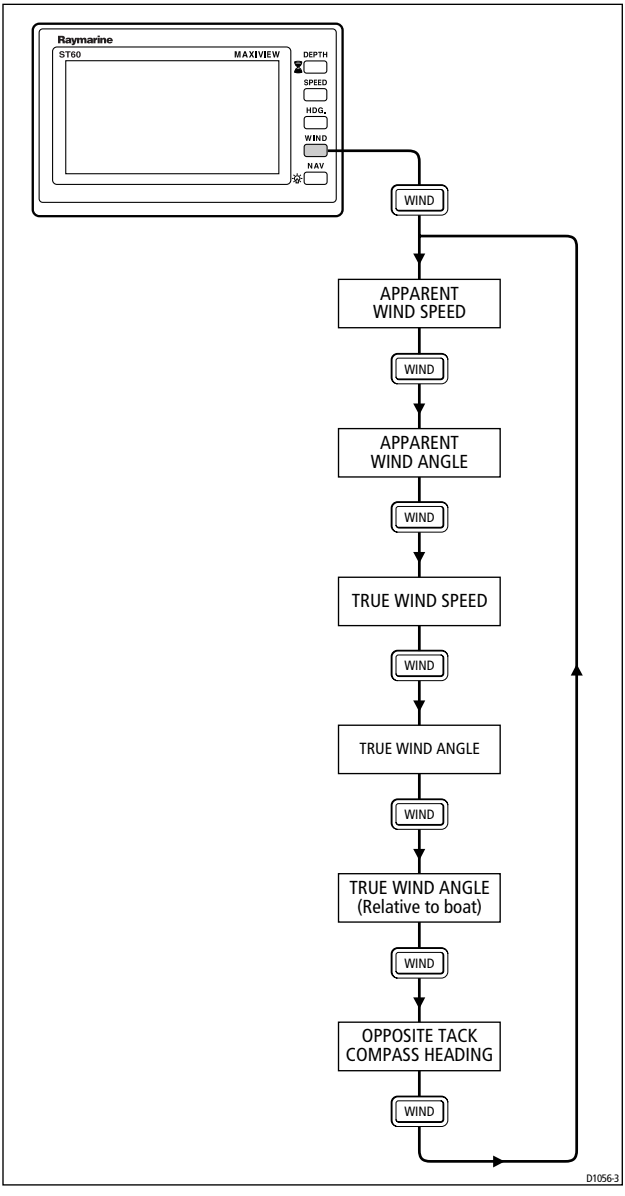


Note: *Headings will be either True or Magnetic depending on the calibration setting (refer to section 5.1).*

The units displayed by the master instrument will be those displayed by the repeating unit.

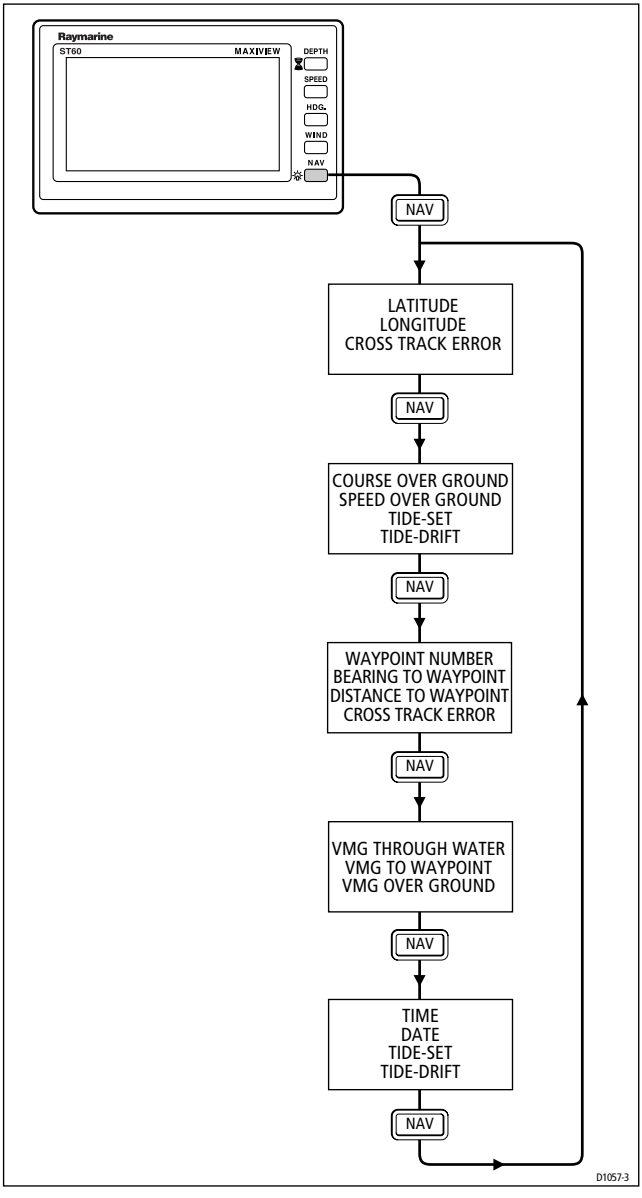
LOCKED HEADING appears only when the autopilot is in AUTO mode or the steering compass is in LOCKED mode.

Wind Key



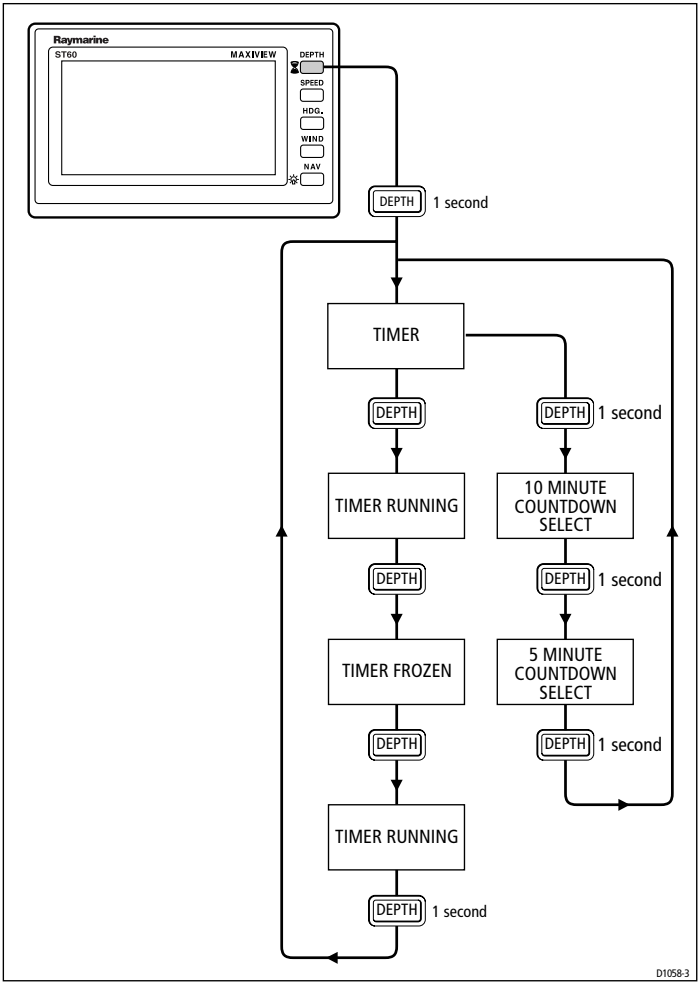
Wind will automatically be displayed in either knots or mph depending on the setup of the main wind instrument.

NAV Key



Navigation units will automatically be displayed in the same format as the main navigation instrument.

Timer Control

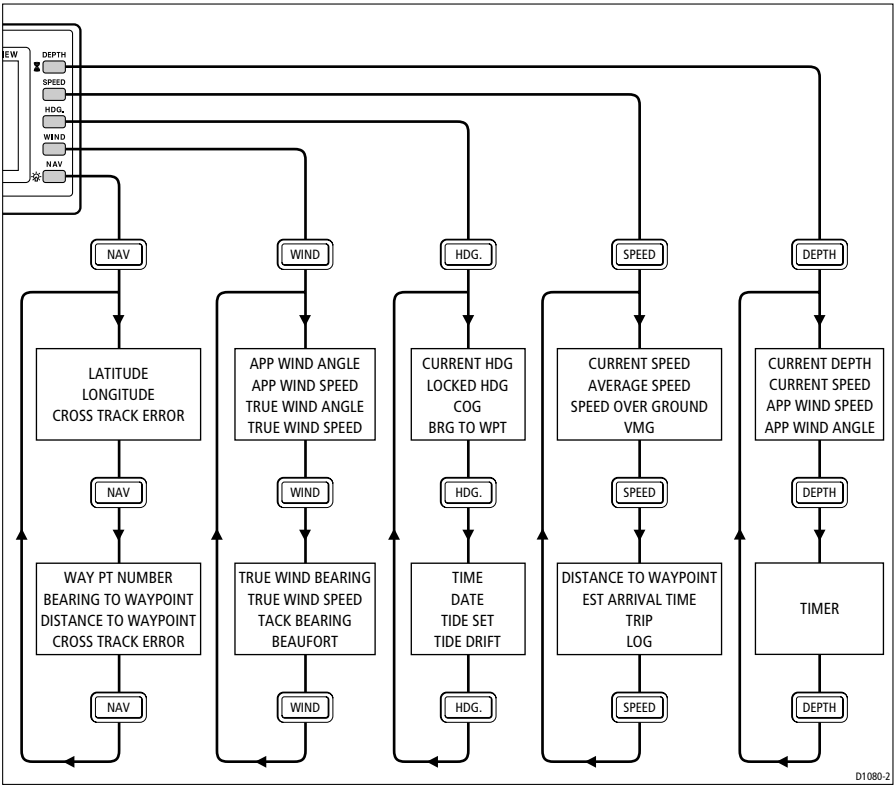


When the timer is running, a 1 second press of **NAV** will stop the timer. A further press of **NAV** for 1 second will set the timer to zero.

When either the 10 minute or 5 minute timers are selected, a single push of the **DEPTH** key will start the countdown.

A small '**c**' will appear in the lower right hand side of the display when in Timer Control mode.

4.3 Cruising Mode



4.4 Race Mode

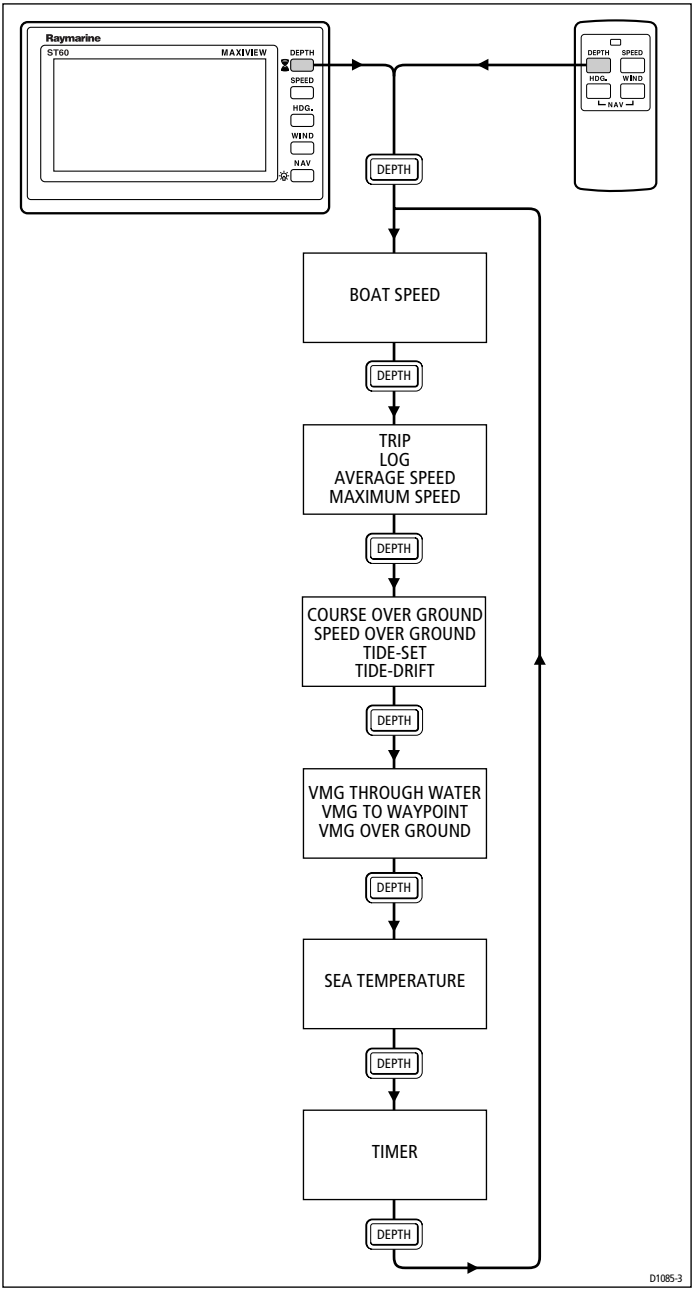
The following diagram is an example of a RACE mode setup with the **DEPTH** key chosen to page through 6 pages of selected information.

For detailed procedures on how to set-up Race mode, please refer to *Chapter 5*, *Calibration*.

Remote Timer Operation

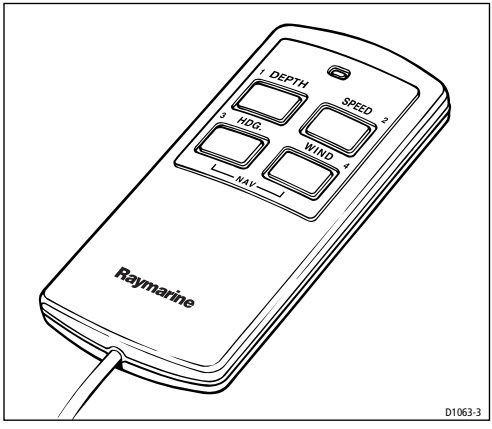
To control the timer using the MaxiView Remote:

- Set up the MaxiView to respond to key number 1 (see *Chapter 5*).
- Pressing **DEPTH** and **SPEED** together on the MaxiView Remote now has the same action as pressing **DEPTH** on the MaxiView (see *Timer Control*).


Raymarine
ST60
MAXIVIEW
DEPTH
SPEED
HDG.
WIND
NAV
DEPTH
BOAT SPEED
DEPTH
TRIP
LOG
AVERAGE SPEED
MAXIMUM SPEED
DEPTH
COURSE OVER GROUND
SPEED OVER GROUND
TIDE-SET
TIDE-DRIFT
DEPTH
VMG THROUGH WATER
VMG TO WAYPOINT
VMG OVER GROUND
DEPTH
SEA TEMPERATURE
DEPTH
TIMER
DEPTH
D1085-3

4.5 Remote Control

The MaxiView can be remotely controlled using the Maxi Remote Control (cat. no. A25006). Each instrument can be programmed to respond directly to each key or page through a sequence of pre-programmed displays.



Operation

In FULL or CRUISING mode the remote control will operate the MaxiView in exactly the same way as the MaxiView keypad. A simultaneous press of **HDG** and **WIND** will call up NAV information.

In RACING mode a single key is dedicated to each MaxiView. Pressing the selected key (or any key on the MaxiView facia) will page through up to six screens selected from the FULL or CRUISING menus.

Refer to *Section 5.1* for information on setting up the MaxiView to operate with the Remote Control.

4.6 LCD Illumination

A 1 second hold down of the **NAV** key will switch on the night-time display illumination. There are 3 levels of brightness, which can be selected using the **NAV** key. The display will automatically return to its normal mode after 8 seconds.

Chapter 5: Calibration Procedures

The MaxiView has a Calibration mode that allows various operating parameters to be set up. These include:

- Operating mode
- Measurement units
- Local Magnetic Variation
- True or Magnetic bearing display
- European/USA date format
- Remote control enable
- Damping

5.1 Basic Calibration

Enter Basic Calibration mode by holding down **NAV** and **WIND** for 2 seconds. The features can now be cycled by pressing **NAV**, and adjusted using **DEPTH** and **SPEED**.

To exit and store values, hold **NAV** and **WIND** until the display returns to normal mode.

Headings can be selected to display either TRUE or MAGNETIC but not both.

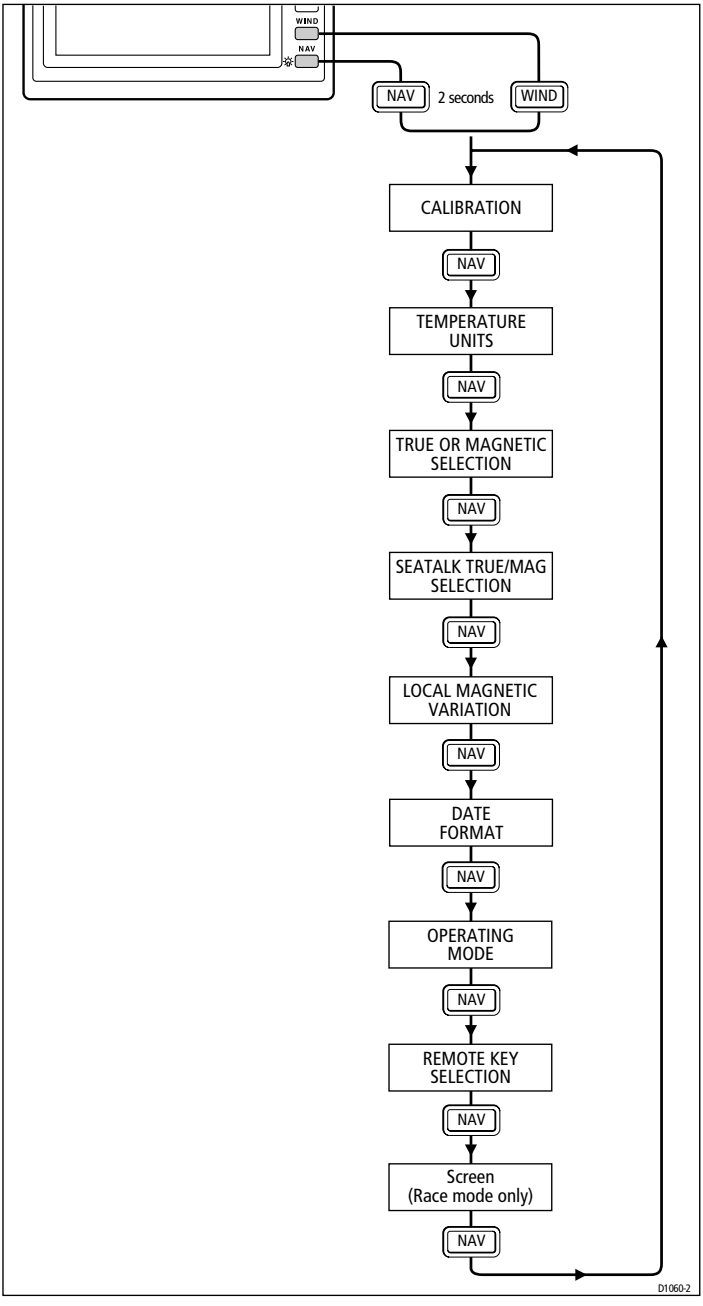
SeaTalk TRUE/MAGNETIC SELECTION defines the heading information received by the MaxiView as either TRUE or MAGNETIC - some owners prefer to set up primary compass instruments or autopilots to display and, therefore, transmit TRUE heading.

Date format can be switched between USA and European format.

Operating mode can be set to RACE, CRUISING or FULL.

Remote key selection in FULL or CRUISING mode is simply on or off:

- ON: MaxiView responds to remote keys.
- OFF: MaxiView ignores remote keys.


WIND
NAV
NAV
2 seconds
WIND
CALIBRATION
NAV
TEMPERATURE UNITS
NAV
TRUE OR MAGNETIC SELECTION
NAV
SEATALK TRUE/MAG SELECTION
NAV
LOCAL MAGNETIC VARIATION
NAV
DATE FORMAT
NAV
OPERATING MODE
NAV
REMOTE KEY SELECTION
NAV
Screen (Race mode only)
NAV
D1060-2

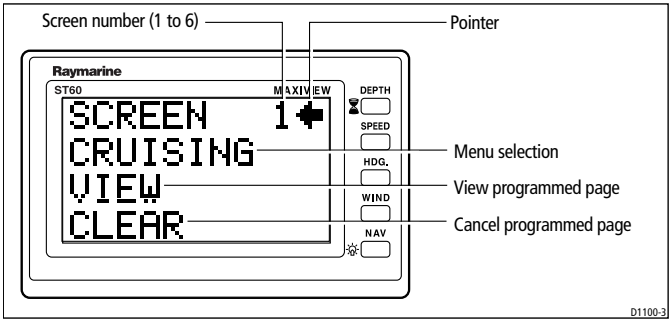
In RACE mode five possible settings are available:

- NONE: MaxiView ignores remote key.
- 1: MaxiView responds to the remote **DEPTH** key only.
- 2: MaxiView responds to the remote **LOG** key only.
- 3: MaxiView responds to the remote **HDG** key only.
- 4: MaxiView responds to the remote **WIND** key only.

Once this key is defined, up to 6 pages of information from either the Full or Cruiser menus can be programmed into the MaxiView. Each time the nominated key is pressed the MaxiView will scroll onto the next programmed page.

Each of the six pages are set up as follows:

1. Make sure RACE has been selected in Basic Calibration.
2. Cycle Basic Calibration until the Screen Selection page is displayed.



Note: *If the Screen has not been programmed VIEW and CLEAR will not be displayed. Also, a Screen cannot be changed without first clearing its contents.*

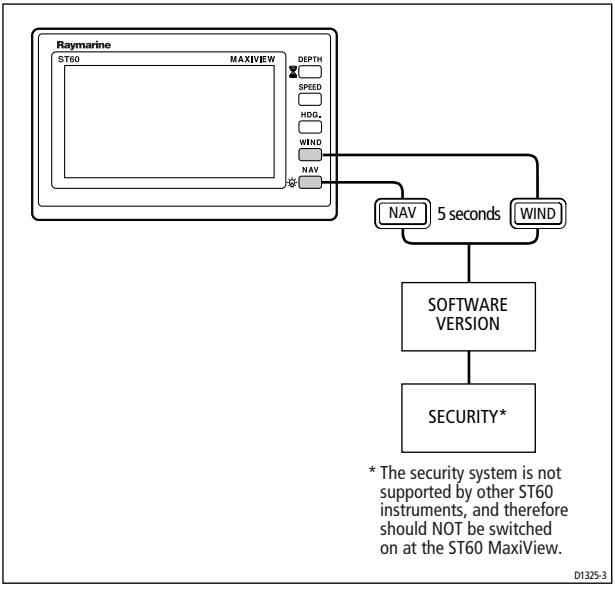
3. With the pointer towards SCREEN select the screen to be programmed (1 to 6) by holding down the **DEPTH** key for 1 second.
4. Move the pointer to the Menu Selection with a momentary press of **DEPTH**.
5. Press **DEPTH** for 1 second to select either FULL or CRUISER, depending on which mode your chosen page appears.
6. Press **NAV** for 1 second to gain access to the FULL/CRUISER menu.
7. Select the page required and then press **NAV** for 1 second to return to Screen Selection.

8. Move the pointer back to SCREEN and select the next screen number by holding down **DEPTH** for 1 second.
9. To continue basic calibration, press **NAV**.
10. To store the selected screens press **WIND** and **NAV** for 2 seconds.
11. Setting up further screens is a repeat of steps 3, 4, 5, 6, 7 and 8.

Note: *The selected screen can be viewed at any time by pressing* ***DEPTH*** *momentarily to move the arrow to VIEW and then pressing* ***DEPTH*** *for 1 second. The screen will be displayed for as long as* ***DEPTH*** *is pressed.*

As well as being able to view the selected screen, it may also be cleared by pressing **DEPTH** momentarily to move the arrow to CLEAR and then pressing **DEPTH** for 1 second.

5.2 Intermediate Calibration



5.3 Extended Calibration

Extended calibration contains a calibration on/off feature, damping menus and a boat show program.

Calibration On/Off

This feature is designed to protect your customised basic calibration settings. Once it is switched on, access is restrained to the extended calibration menu only. Calibration must be turned off to regain access to the basic calibration settings.

Calibration is turned on and off by pressing **DEPTH.**

CALIBRATION 0 = On
CALIBRATION 1 = Off

Damping

Damping controls the averaging applied to the displayed data. The range is 1 (minimum) to 15 (maximum), with the factory default set to 4.

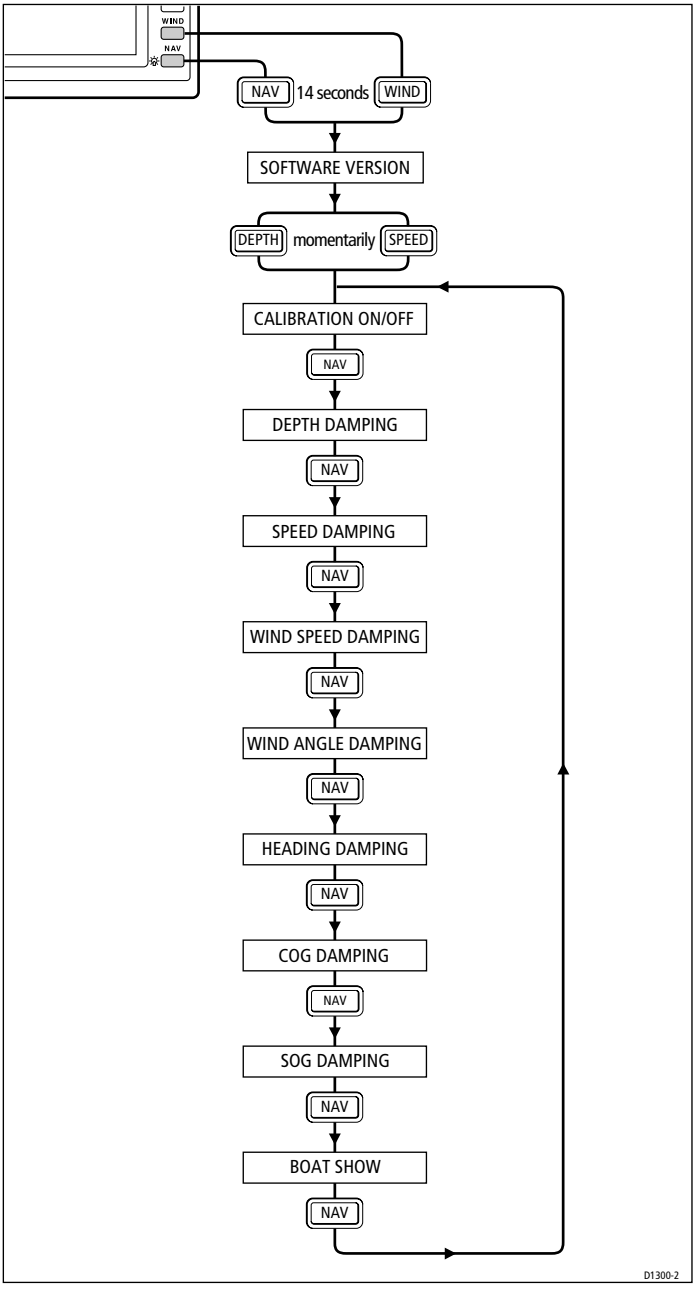
The averaging can be adjusted by pressing **DEPTH** or **SPEED** to increase or decrease the displayed value.

Boat Show

The boat show program is for demonstration purposes only. **This should always be set to 0.**

Exit Extended Calibration

Press and hold **WIND** and **NAV** for 2 seconds to return to normal operation.


WIND
NAV
NAV
14 seconds
WIND
SOFTWARE VERSION
DEPTH
momentarily
SPEED
CALIBRATION ON/OFF
NAV
DEPTH DAMPING
NAV
SPEED DAMPING
NAV
WIND SPEED DAMPING
NAV
WIND ANGLE DAMPING
NAV
HEADING DAMPING
NAV
COG DAMPING
NAV
SOG DAMPING
NAV
BOAT SHOW
NAV
D1300-2

Limited Warranty Certificate

Raymarine warrants each new Light Marine/Dealer Distributor Product to be of good materials and workmanship, and will repair or exchange any parts proven to be defective in material and workmanship under normal use for a period of 2 years/24 months from date of sale to end user, except as provided below.

Defects will be corrected by Raymarine or an authorized Raymarine dealer. Raymarine will, except as provided below, accept labor cost for a period of 2 years/24 months from the date of sale to end user. During this period, except for certain products, travel costs (auto mileage and tolls) up to 100 round trip highway miles (160 kilometres) and travel time of 2 hours, will be assumed by Raymarine only on products where proof of installation or commission by authorized service agents, can be shown.

Warranty Limitations

Raymarine Warranty policy does not apply to equipment which has been subjected to accident, abuse or misuse, shipping damage, alterations, corrosion, incorrect and/or non-authorized service, or equipment on which the serial number has been altered, mutilated or removed.

Except where Raymarine or its authorized dealer has performed the installation, it assumes no responsibility for damage incurred during installation.

This Warranty does not cover routine system checkouts or alignment/calibration, unless required by replacement of part(s) in the area being aligned.

A suitable proof of purchase, showing date, place, and serial number must be made available to Raymarine or authorized service agent at the time of request for Warranty service.

Consumable items, (such as: Chart paper, lamps, fuses, batteries, styli, stylus/drive belts, radar mixer crystals/diodes, snap-in impeller carriers, impellers, impeller bearings, and impeller shaft) are specifically excluded from this Warranty.

Magnetrons, Cathode Ray Tubes (CRT), TFT Liquid Crystal Displays (LCD) and cold cathode fluorescent lamps (CCFL), hailer horns and transducers are warranted for 1 year/12 months from date of sale. These items must be returned to a Raymarine facility.

All costs associated with transducer replacement, other than the cost of the transducer itself, are specifically excluded from this Warranty.

Overtime premium labor portion of services outside of normal working hours is not covered by this Warranty.

Travel cost allowance on certain products with a suggested retail price below $2500.00 is not authorized. When/or if repairs are necessary, these products must be forwarded to a Raymarine facility or an authorized dealer at owner's expense will be returned via surface carrier at no cost to the owner.

Travel costs other than auto mileage, tolls and two (2) hours travel time, are specifically excluded on all products. Travel costs which are excluded from the coverage of this Warranty include but are not limited to: taxi, launch fees, aircraft rental, subsistence, customs, shipping and communication charges etc. Travel costs, mileage and time, in excess to that allowed must have prior approval in writing.

TO THE EXTENT CONSISTENT WITH STATE AND FEDERAL LAW:

(1) THIS WARRANTY IS STRICTLY LIMITED TO THE TERMS INDICATED HEREIN, AND NO OTHER WARRANTIES OR REMEDIES SHALL BE BINDING ON RAYMARINE INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABLE OR FITNESS FOR A PARTICULAR PURPOSE.

(2) Raymarine shall not be liable for any incidental, consequential or special (including punitive or multiple) damages.

All Raymarine products sold or provided hereunder are merely aids to navigation. It is the responsibility of the user to exercise discretion and proper navigational skill independent of any Raymarine equipment.

Document number: 84064-8
April 2001

Raymarine

Factory Service Centers

United States of America

Raymarine Inc
22 Cotton Road, Unit D
Nashua, NH 03063-4219, USA

Telephone: +1 603 881 5200
Fax: +1 603 864 4756
www.raymarine.com

Sales & Order Services
Telephone: +1 800 539 5539 Ext. 2333 or
+1 603 881 5200 Ext. 2333

Technical Support
Telephone: +1 800 539 5539 Ext. 2444 or
+1 603 881 5200 Ext. 2444
Email: techsupport@raymarine.com

Product Repair Center
Telephone: +1 800 539 5539 Ext. 2118

UK, Europe, Middle East, Far East

Raymarine Ltd
Anchorage Park, Portsmouth
PO3 5TD, England

Telephone: +44 (0)23 9269 3611
Fax: +44 (0)23 9269 4642
www.raymarine.com

Customer Support
Telephone: +44 (0)23 9271 4713
Fax: +44 (0)23 9266 1228

Email: techsupport@raymarine.com

Stick barcode label here

Purchased from

Purchase date

Dealer address

Installed by

Installation date

Commissioned by

Commissioning date

Owner's name

Mailing address

This portion should be completed and retained by the owner.