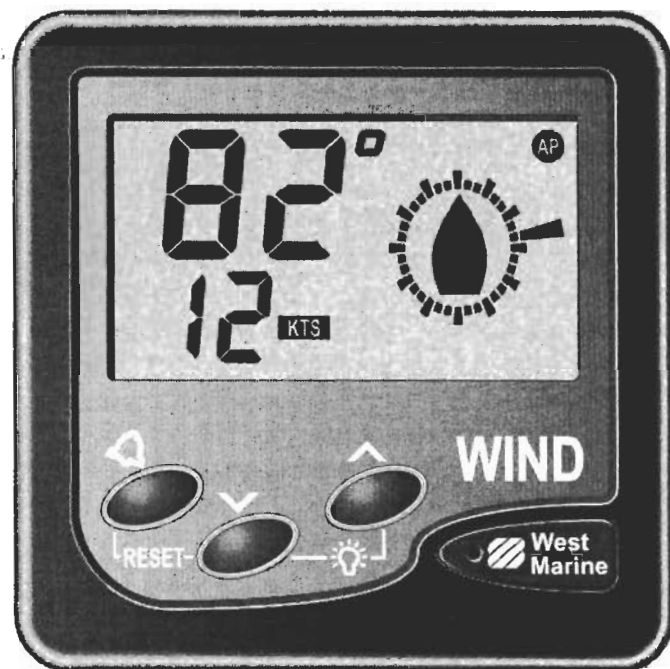


West Marine



MARINE PRODUCTS LIMITED WARRANTY

West Marine Product's warrants to the original purchaser only, that each new instrument will be free from defects in materials and workmanship under conditions of normal use and service for a period of one(1) year from the date of delivery to the Purchaser. West Marine Product's liability under this warranty shall be limited to repair or replacement of the defective product, at West Marine Product's option, and under no circumstances shall West Marine Product's be liable for consequential, incidental, or other damages arising out of, or in any way connected with a failure of the product to perform as set forth herein.

THIS LIMITED WARRANTY EXTENDS ONLY TO THE PURCHASER AND IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

In the event of a defect, malfunction, or failure of the product to conform to specifications during the one-year warranty period, West Marine Product's will repair or replace, at its option and without charge to the Purchaser, the product which upon examination by West Marine Product's shall appear to be defective or not up to factory specifications. West Marine Product's will pay all labour charges incurred in providing such warranty service. To obtain warranty service, the defective product must be returned to West Marine Product's together with proof of the date of purchase. The Purchaser must pay any transportation expenses in returning the product to West Marine Product's. West Marine Product's will examine the product and respond to the Purchaser in approximately four(4) weeks from date of receipt of the product claimed to be defective.

This limited warranty does not extend to any product which has been subjected to misuse, neglect, accident, improper installation, or subject to use in violation of the maintenance or operating instructions, if any, furnished by West Marine Product's; nor does this warranty extend to products on which the serial number has been removed, defaced, or changed. West Marine Product's reserves the right to make changes or improvements to its products during subsequent production without incurring the obligation to install such changes or improvements on previously manufactured or sold products.

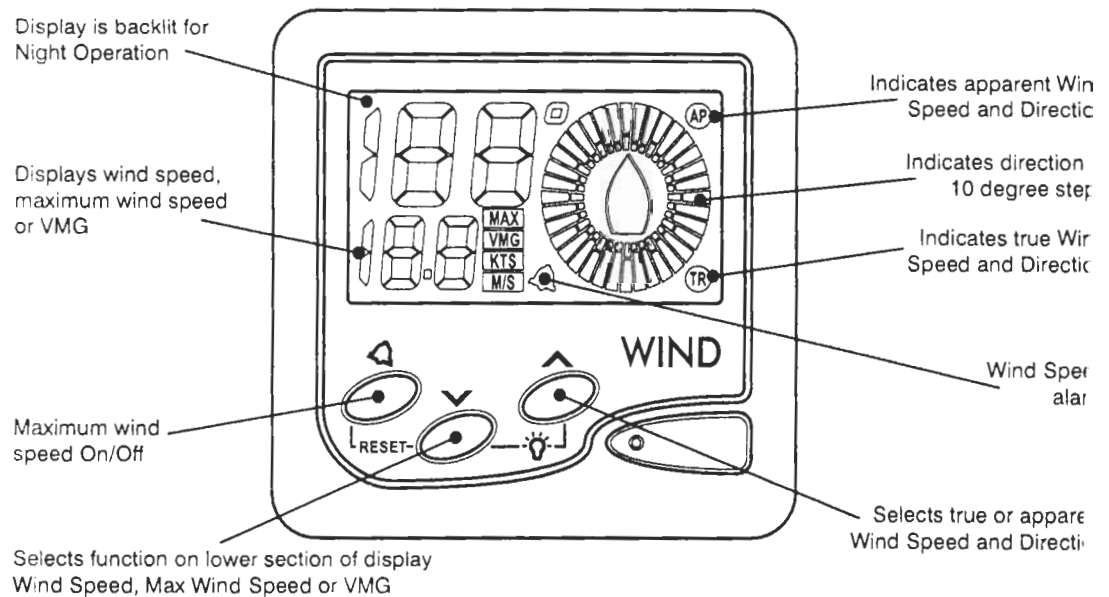
Some states do not allow limitations on the duration of the warranty or exclusions or limitations of incidental or consequential damages so these eliminations or exclusions may not apply to you. This warranty gives you specific legal rights which vary from state to state.

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Specification

- **Power Supply**
10.7 to 16.6 VDC, 30mA nominal, 40mA with backlight on.
- **Operating temperature**
0°C to 45°C.
- **Size of display**
112 x 112 x 24mm (4.4 x 4.4 x 1"), overall depth 35mm (1.4") behind panel.
- **Display type.**
Twisted Nematic (TN) grey background, 0°C to +70°C.
- **Illumination**
Red LED switchable from key pad.
- **RF interference**
Less than 6 dB maximum quieting on any marine radio channel with 3 dB gain antenna within 1 meter of instrument display head (European EC specifications).
- **Wind Direction**
Apparent and true 180 degrees to port and starboard.
- **Wind speed**
0 to 99 knots, or 0 to 50 m/sec with maximum wind speed recording.
- **Alarm**
Wind speed alarm user settable value.
- **VMG display**
Displayed in 0.1 steps to 19.9 knots and 1.0 steps above 20 knots.
- **NMEA input (for VMG and True Wind Data calculation)**
Accepts VHW sentence from S100 speed log or other instrument with NMEA output.
- **NMEA output**
NMEA 0183 format VWT, VWR, MWV, VPW for R100 system repeater or other NMEA compatible instrument. Short circuit protected. Drive capability for up to four NMEA receivers.
- **Transducer cables.**
5 pin Fuji connector for wind mast head transducer, 5 conductor cable for NMEA input, output and power connections.
- **Transducer**
Lightweight weatherproof type with 30 meters of cable. Electronic sine cosine output.



Installation

Location

The W100 is designed for above or below deck installation. Select a position that is:

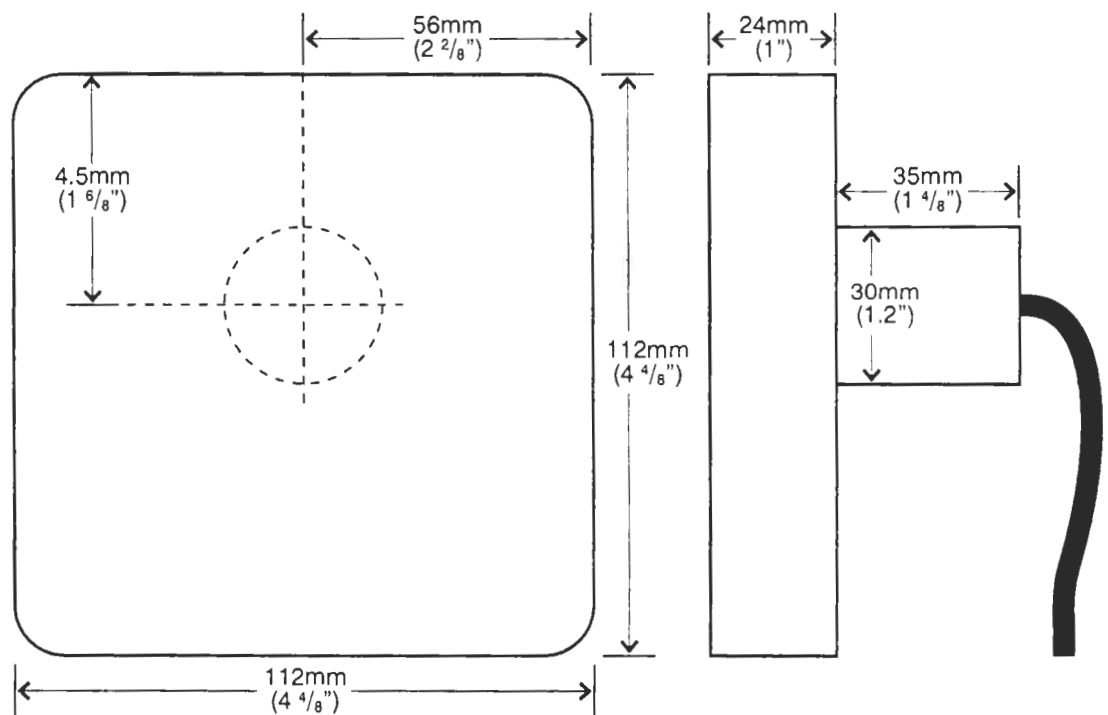
- At least 300mm from a compass
- At least 500mm from any radio
- Easy to read by the helmsman and crew
- Protected from physical damage
- Accessible to electrical cable connections

Mounting

The mounting surface must be flat. Use the template to set the centre of the fixing hole.

- Drill a 32mm (1.25") diameter mounting hole through the bulkhead.
- Remove the fixing nut. Peel the protective paper off the foam gasket and attach the gasket to the rear of the instrument.
- Insert the instrument through the bulkhead.

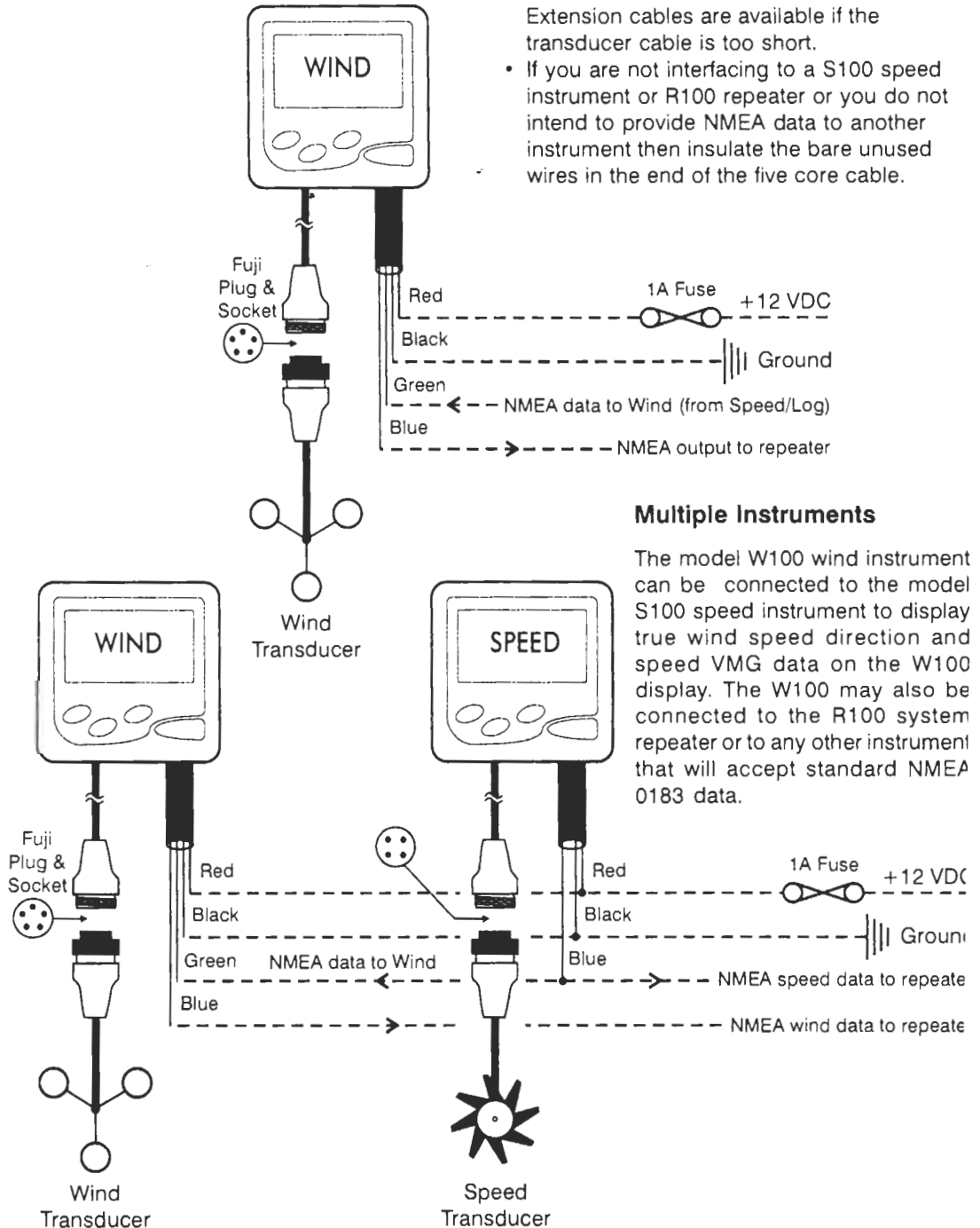
Hand tighten the nut and then finally tighten with a spanner. Do not over tighten so that the water sealing ability of the gasket is damaged.



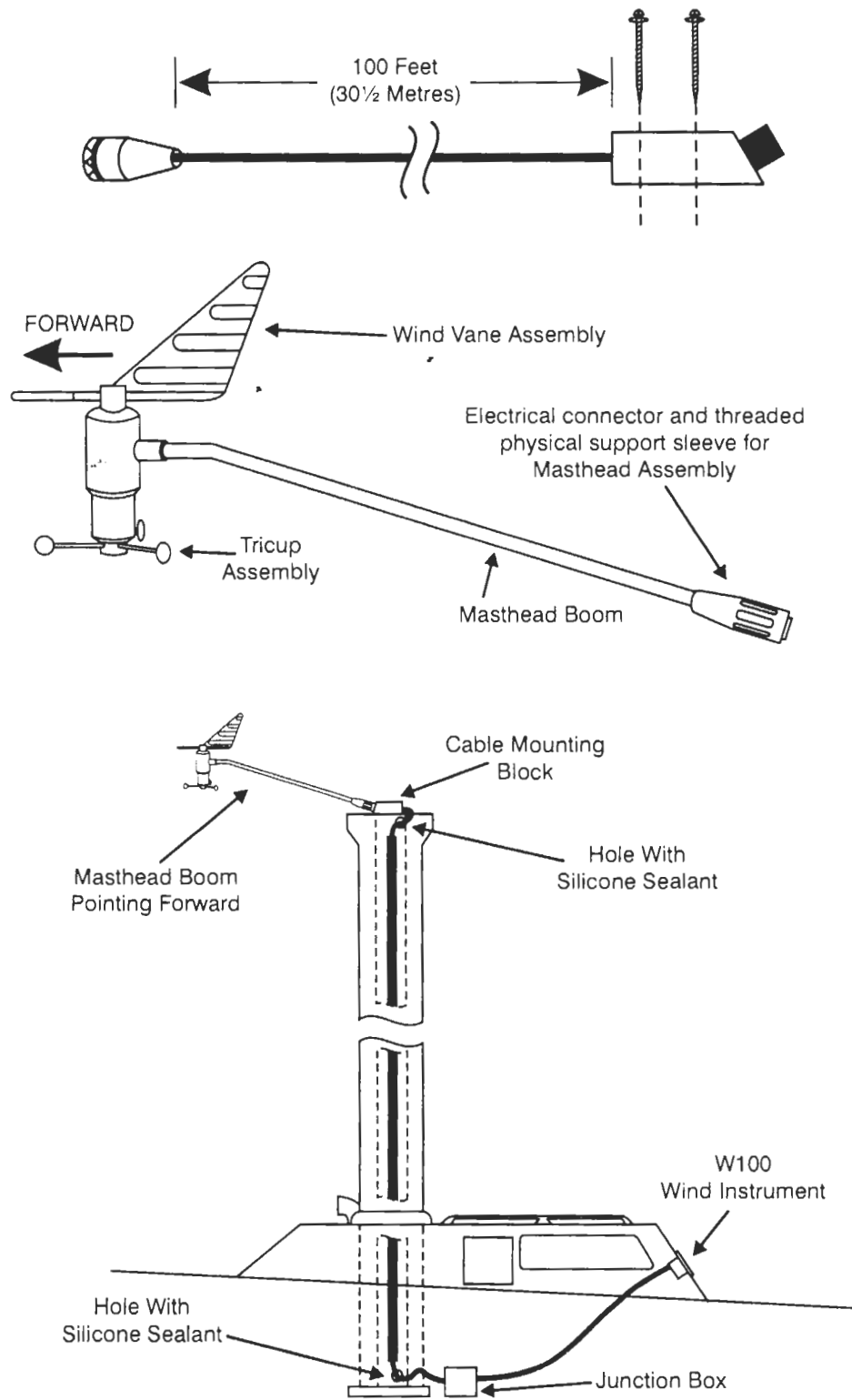
Wiring Connection

- Keep electrical and transducer cables away from alternator or other noise generating electrical cables. Avoid connecting the instrument to power circuits that share loads with ignition, alternators, inverters and radio transmitters. Electrical power supply connections should always be as short as possible.

- Connect the red wire to the positive supply via a 1 amp fuse or a 1 amp circuit breaker. Connect the black wire to the electrical ground. A 1 amp fuse will provide protection for up to five 100 series instruments.
- Connect the 5 pin Fuji connector to the wind transducer cable connector. Do not cut or shorten the transducer cable. Extension cables are available if the transducer cable is too short.
- If you are not interfacing to a S100 speed instrument or R100 repeater or you do not intend to provide NMEA data to another instrument then insulate the bare unused wires in the end of the five core cable.



Installation of the W100 Mast Head Transducer



Calibration Procedures

Linearization of the Wind Sensor and Instrument

Each wind direction sensor has slightly different electrical characteristics. To provide a highly accurate display of wind direction data these characteristics must be entered into the wind display. This process is called linearization.

Alignment of the Wind Vane and Display

It is very difficult to align the mast head transducer in an exact fore and aft position during installation on the mast. The W100 allows the user to carry out adjustments to the displayed wind direction after the transducer is installed.

Wind Speed Calibration

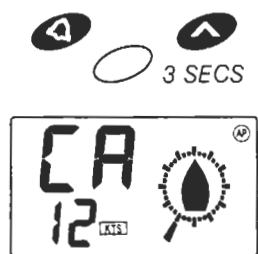
The W100 wind speed transducer is factory calibrated to read the correct wind speed under normal conditions. If necessary the user is able to make adjustments to the wind speed reading.


Note:


When first installing the W100, the Linearization should be performed first, followed by Alignment then Wind Speed.

Wind Speed


Press and hold the  and  keys for 3 seconds.





To increase reading press the  key.

To decrease reading press the  key.

Each key press results in a 5% change. It may take 2 or 3 key presses before a change to the speed can be observed.

To exit press the  key.

Alignment



While in Wind Speed mode, momentarily press the  and  keys.



Press the  and  keys to change the displayed wind direction.

To exit press the  key.

Linearization

While in Alignment mode, press the  and  keys until the display shows LE. The display will flash for 6 seconds before displaying LE.



Rotate the wind vane through two complete revolutions to allow the W100 to perform the automatic linearization process. The vane can be rotated in either direction.

To exit press the  key.

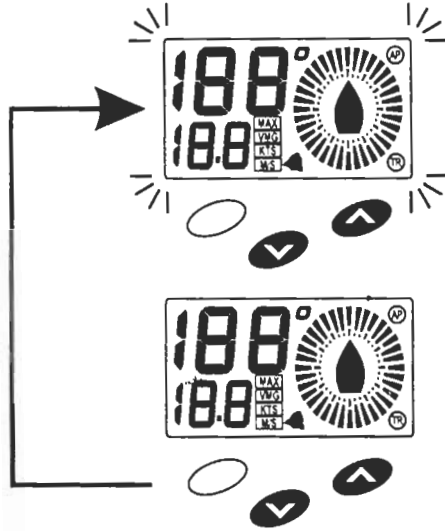
Note:

If there is any doubt about the accuracy of the display wind direction, repeat the linearization & alignment calibration procedures.

Operation

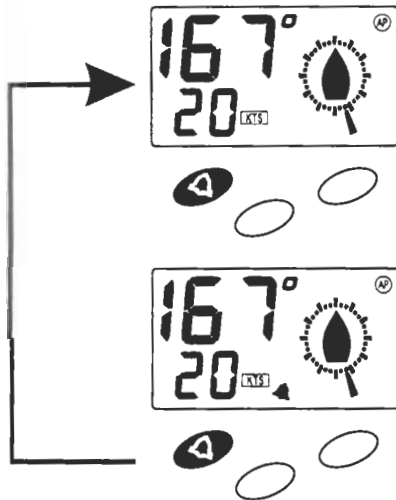
Backlighting On / Off

Simultaneously press the \wedge and \vee keys to turn the backlight on. Repeat this procedure to turn the lighting off.



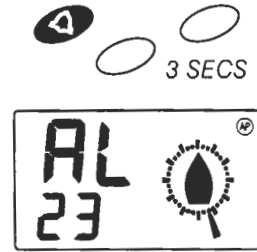
Wind Speed Alarm On/Off

Press the \triangleleft key to switch the alarm on and off.



Set Wind Speed Alarm

Press and hold the \triangleleft key for 3 seconds.

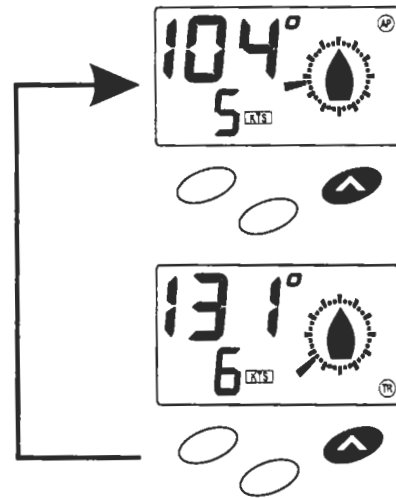


Use the \wedge or \vee keys to set alarm value.

Press the \triangleleft key to exit.

True or Apparent Wind Display

Press the \wedge key to switch between True or Apparent wind speed.

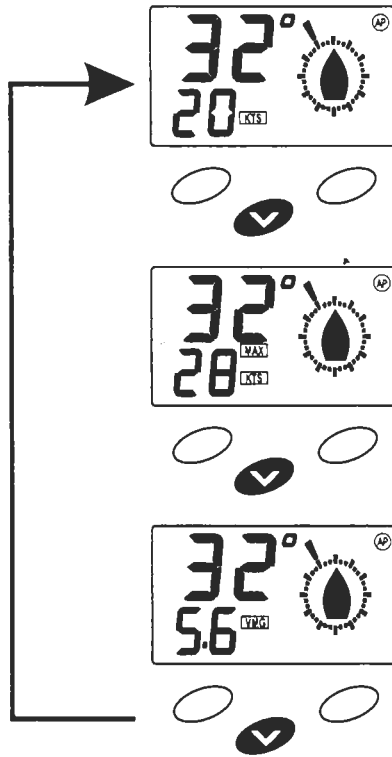


Note:

To obtain true wind data the W100 must be provided with NMEA (VHW) data from a speed/log instrument, such as the S100.

Select Speed Function

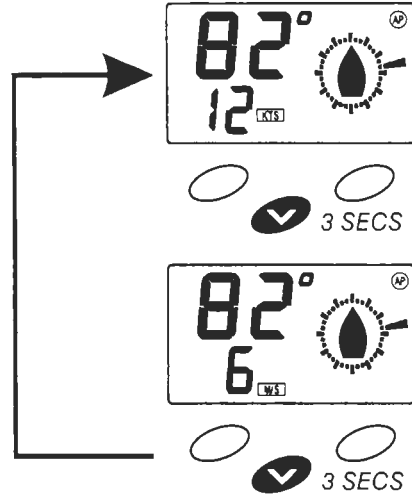
Press the ∇ key to switch between Wind Speed, Maximum Wind Speed and VMG.



Note:
VMG units of measure are the same as the speed instrument (Knots, MPH, KPH) providing the boat speed data.

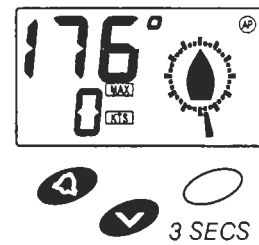
Select Speed Units

Press the \wedge or ∇ key for 3 seconds to switch between Knots or Meters/Second.



Reset Maximum Wind Speed

While Maximum Wind Speed is displayed, press and hold the \wedge and ∇ keys for 3 seconds to reset the maximum wind speed to zero.



Troubleshooting Chart

No display:

Check DC power connections and DC polarity with voltmeter. Voltage must be between 10.7 and 16.6 volts.

Faulty wind speed or wind direction indication:

1. Possible defective Masthead Cable
2. Possible defective Masthead Assembly
3. Possible defective instrument

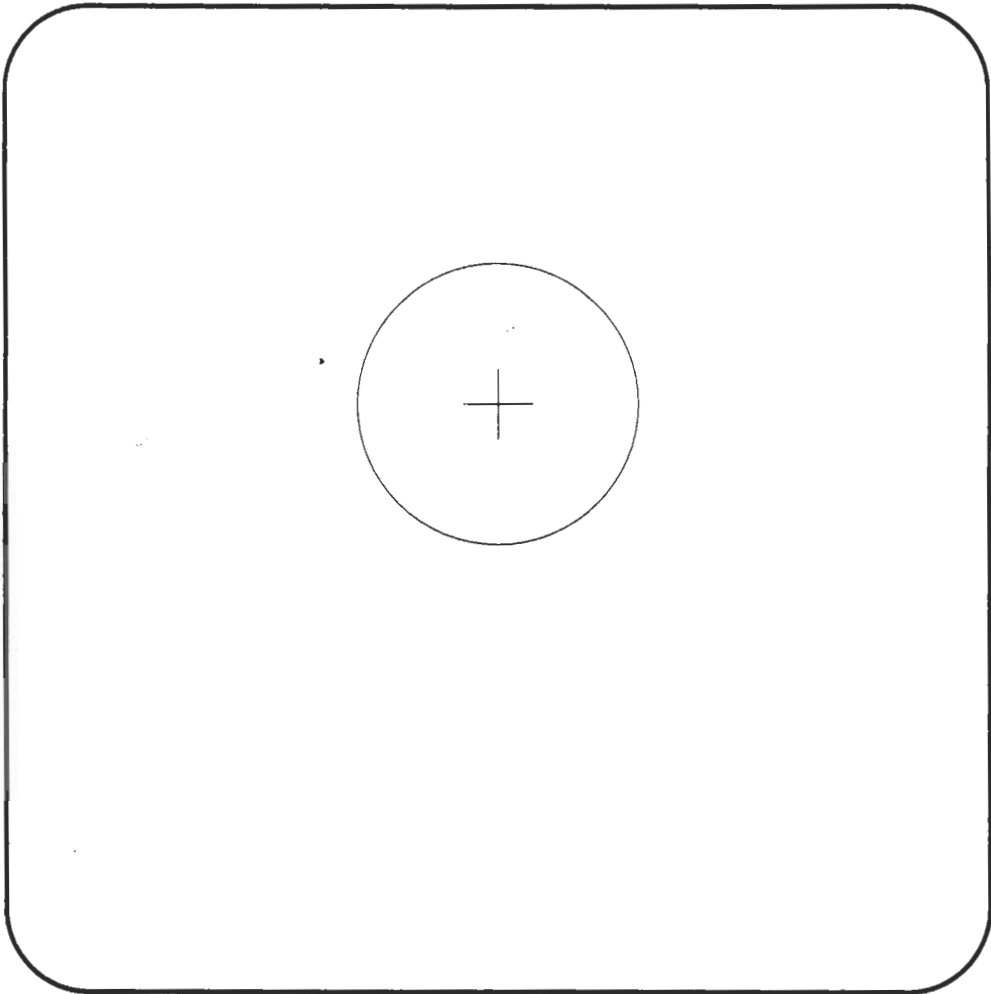
Remove the Masthead Assembly from the masthead and connect it directly to the instrument red moulded cable. If the indication is normal, the Masthead Cable is defective. If the problem persists, contact your supplier for service.

NOTE: The instrument and Masthead Assembly may be connected directly for linearization of the repaired or new equipment prior to installation.

No wind speed or wind direction indication

Check the DC power source applied to the W100.

W100 TEMPLATE



Photocopy this template and afix the copy to the surface before drilling

ACCESSORY PART NUMBERS

267221	Panel Gasket
267247	Dust Cover
318826	Junction Box

	Wind Masthead Cable
	Assy Masthead
	Wind Vane
	Tricups