

MANUAL

**Simrad
ISI 5 Wind**



[20220752]



[JA]

SIMRAD
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MAXIMIZING YOUR PERFORMANCE AT SEA

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This manual is intended as a reference guide for installing and using the analog IS15 Wind and IS15 Tack instruments and the IS15 Wind Transducer (masthead unit).

Please take time to read the manual to get a thorough understanding of the operation and system components and their relationship to a complete IS15 instrument system.

Other documentation material that is provided with your system includes a 'bridge card', and warranty card. The warranty card must be filled out by the authorized dealer that performed the installation and mailed in to activate the warranty. You will find the warranty card in this manual.

Document revisions

| Rev | Date | Written by | Checked by | Approved by |
|-----|--------|------------|------------|-------------|
| D | 100300 | NG | | ThH |
| E | 091100 | NG | | ThH |
| F | 191200 | NG | | ThH |
| G | 080202 | NG | | ThH |
| H | 230502 | NG | | ThH |
| I | 300403 | NG | | ThH |
| J | 300305 | NG | | ThH |

Document history

- Rev. D Addendum from rev. C implemented. Roblink Power Cable and IS15 Power Supply included. Chapter 5.7 added describing IS15 as NMEA repeaters.
- Rev. E Fault Finding, Maintenance and Spare Parts List included. Updated to software version V1R3.
- Rev. F Chapter 4.2 'Instrument Software Information' added.
- Rev. G Minor changes. Complies with software version V1R5.
- Rev. H Changes to comply with software version V1R6.
- Rev. I Minor corrections in text.
- Rev. J 1 Amp fuse included in Roblink Power Cable, Figure 1-1 and 5-3.

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1 INTRODUCTION

1.1 The Basic IS15 Wind System (W-1)

A basic stand alone Wind System comprises the following:

- IS15 Wind instrument w.: Mounting kit, 0,3 m (1') IS15 (Roblink) Cable and Operator's Quick Reference Guide ("bridge card").
- IS15 Wind Transducer w.: Mounting accessories, 30 m (99') mast cable, junction box, 10 m (33') IS15 (Roblink) Cable and manual.
- Roblink Power Cable: Special power cable 2,5 m (8').

Note !

This cable is only required when using a single IS15 Wind instrument as stand alone, see Figure 1-1.

The units must be interconnected as per below.

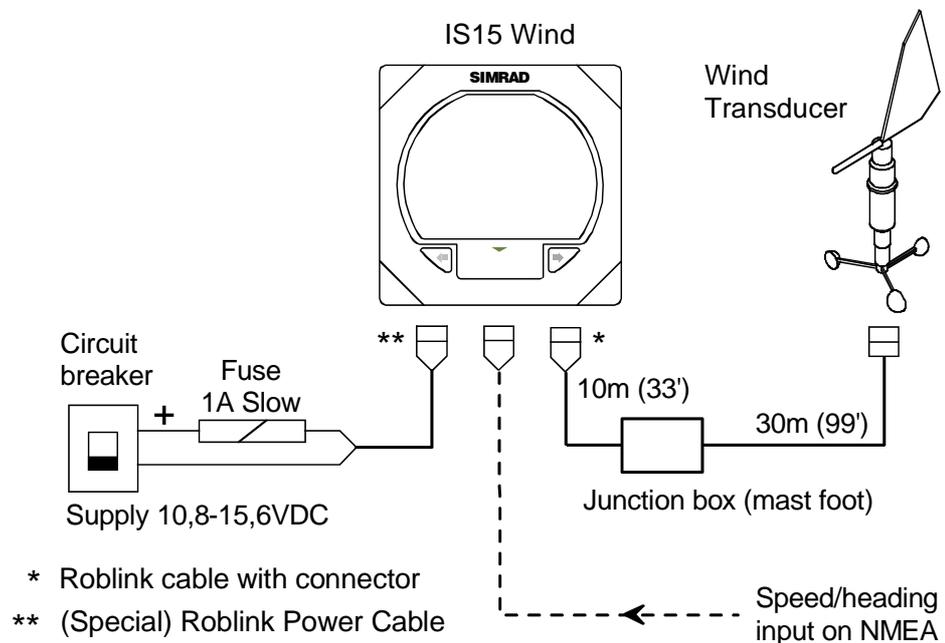


Figure 1-1 Basic IS15 Wind System

Note !

If no input is available on NMEA 0183 format, the above instrument system will only display apparent wind speed and angle. Refer to Chapter 5.4 for more information.

1.2 Optional equipment

- IS15 Cable 2 m (6,5') P/N 22093728
- IS15 Cable 5 m (16') P/N 22092548
- IS15 Cable 10 m (33') P/N 22092027

The cables can be used for extension and/or as cables for NMEA interface to peripheral equipment.

- IS15 Cable Adapter (joiner) P/N 22092001

Interconnects IS15 cables where cable extension is required.

- Roblink Power Cable 2,5 m (8') P/N 22093587.

Required when using 2 or 3 instrument heads as NMEA repeaters in a “daisy chain”. Comes as standard with a W-1 system, see previous page.

- IS15 Power Supply P/N 22093595.

Required when using 4-7 instrument heads as NMEA repeaters in a “daisy chain”.

2 OPERATION OF IS15 WIND INSTRUMENT



2.1 General Description

The display is divided into two sections, the scale with pointer, and the LCD. Both are controlled by the two buttons.

The Scale

The pointer indicates apparent or true wind angle, depending on the mode selected.

The LCD Display

During normal operation the LCD shows one of the items below:

- Apparent Wind Speed.
- True Wind Speed.
- Velocity Made Good to Wind (VMG)
- Wind Direction, (requires Heading or Course Over Ground and Water Speed or Speed Over Ground input to the instrument) see page 10.

There are three arrows at the top of the LCD indicating what data is being displayed at any one time. The arrow legend is printed on the scale. The right arrow indicates **APP** for 'Apparent Wind', the left **TRUE** for 'True Wind', and the center **VMG** for 'Velocity Made Good'.

Buttons and screens

The buttons are used to scroll through the display screens and to adjust illumination and damping levels.



Figure 2-1 - The Buttons

2.2 Powering Up

When the instrument is powered up for the first time, see section 6.1 'First Time Turn on'.

At normal power up the pointer will make one turn and the LCD display will show the software version for approximately two seconds.

The instrument will then display Apparent Wind Speed and Angle.

2.3 Display backlighting

Press the  button and hold for 2 seconds. The display then presents the backlighting level. Repeat pressing until desired backlighting level. Selectable values are 1-7 and off (0).

2.4 LCD Screens

Use short presses on the left/right buttons to select the preferred screen as shown below.

| Screen Display |  Screen 1 |  Screen 2 |  Screen 3 |  Screen 4 |  Screen 5 |
|-------------------|--|--|--|--|--|
| Analog | Apparent wind angle | True wind angle* | Apparent wind angle | True wind angle | True wind angle |
| LCD | Apparent wind speed | True wind speed | VMG to wind | VMG to wind | Wind direction ** |

* Requires speed input

** Requires heading or Course Over Ground input.

A BEEP will confirm correct operation of a button.

Screen 1

Apparent Wind Angle and Apparent Wind Speed

This is the first display that is shown at power up. The right LCD arrow is lit, showing 'APP.' for 'Apparent'.

The wind speed is shown in one of the selected units, Knots, Metres Per Second, Beaufort, or Kmh. All units except Beaufort are shown to one decimal place.

Screen 2

True Wind Angle and True Wind Speed

This display is indicated by the left LCD arrow being lit, showing 'True'.

As for apparent, the true wind speed is shown in one of the selected units.

Screen 3

Apparent Wind Angle and VMG

This display is indicated by the right arrow being lit, showing 'APP.' with the centre arrow also being lit, showing 'VMG'.

The VMG is shown in one of the selected units, Knots, Mph or Kmh, to one decimal place.

Note !

The VMG is shown as positive when heading upwind, and negative when heading downwind.

Screen 4

True Wind Angle and VMG

This display is indicated by the left LCD arrow being lit, showing 'True' (Wind Angle). Otherwise similar to the Apparent Wind Angle and VMG display.

Screen 5

True Wind Angle and Wind Direction

This display is indicated by the left LCD arrow being lit, showing 'True' (Wind Angle), with the LCD showing the wind direction in degrees.

Notes !

- 1. The Wind Direction is calculated from available heading data. The wind direction given is the effective wind direction over the water. The display will be most accurate after a period on one heading, however, it will respond rapidly to course changes.*
- 2. If there is no heading data, but Course Over Ground (COG) data is available then the Wind Direction is calculated from the Course Over Ground. In this case there is compensation for the tide, and the wind direction given is the effective wind direction over the ground. However the display will not be accurate after a course change, and will require a period on one heading before it is correct. (Any errors in the Navigation Receiver's fix will degrade the accuracy of the wind direction.)*
- 3. The Wind Direction is referenced to either Magnetic or True North as selected for the heading. The data can be converted from one to the other if the local magnetic variation is available.*

Sub screens

All main LCD screens have the same three sub screens to set the following: Display damping, (true) Wind Speed Alarm On/Off and (true) Wind Speed Alarm Limit.

Press and hold the  button for 2 seconds to access the sub-screens. Use short presses on the  button to select one of the sub screens.

Display Damping (d1-d4)

Both the wind angle and the wind speed are controlled by the same damping function. There are four damping levels.

On power up damping level 1 is always selected.

To change the damping level:

1. Press the  button, hold for 2 seconds and release. The display damping screen is shown [d1-d4].
2. Repeat the above. The figure flashes.
3. Select damping level (d1-d4) by pressing  or .
4. Press the  button and hold for 2 seconds to save the setting.
5. Press the  button shortly to enter the next sub screen (alarm on/off) or press and hold for 2 seconds to return to the main screen.

Wind Speed Alarm On/Off [A.On – A.OFF]

The IS15 Wind display has a true wind speed alarm, and it can be turned on or off as desired.

1. Enter the display damping screen.
2. Apply a short press on the  button. The wind speed alarm On/Off screen is shown.
3. Press the  button, hold for 2 seconds and release. The figure flashes.
4. Select On or Off by pressing  or .
5. Press the  button and hold for 2 seconds to save the setting.
6. Press the  button shortly to enter the next sub screen (alarm limit) or press the  button and hold for 2 seconds to return to the main screen.

Wind Speed Alarm Limit

The alarm limit can be set to any whole value in Knots, Metres per second, Kilometres per hour or Beaufort. It is always valid, and is controlled On or Off by the alarm On / Off setting.

The alarm limit is set as follows:

1. Enter the alarm on/off screen as described above.

2. Apply a short press on the  button. The wind speed alarm limit screen is shown.
3. Press the  button, hold for 2 seconds and release. The current value will be shown flashing.
4. Increase the alarm value using the  button.
5. Decrease the alarm value using the  button.
6. Press the  button, hold for 2 seconds and release to save the limit setting.
7. Press the  button and hold for 2 seconds to return to the main screen.

2.5 Alarm Sounding

Alarms are system wide and all the instruments will sound and flash a warning message.

If there is an external alarm connected this will sound at the same time (only if an IS15 Expander is part of the system).

To cancel a sounding alarm press any button on any of the instrument heads.

Note !

The flashing warning will remain as long as the alarm condition exists and disappears automatically when there is no longer an alarm condition. The sounding alarm will always have to be cancelled.

Alarm messages

The symbols that are shown when an alarm is triggered are as below:

‘SHAL’ = The Shallow Water Alarm

‘dEEP’ = The Deep Water Alarm

‘AnCH’ = The Anchor Alarm

‘HIGH’ = The High Wind Speed Alarm

‘Er.XX’ = System failure (Contact your Simrad dealer).

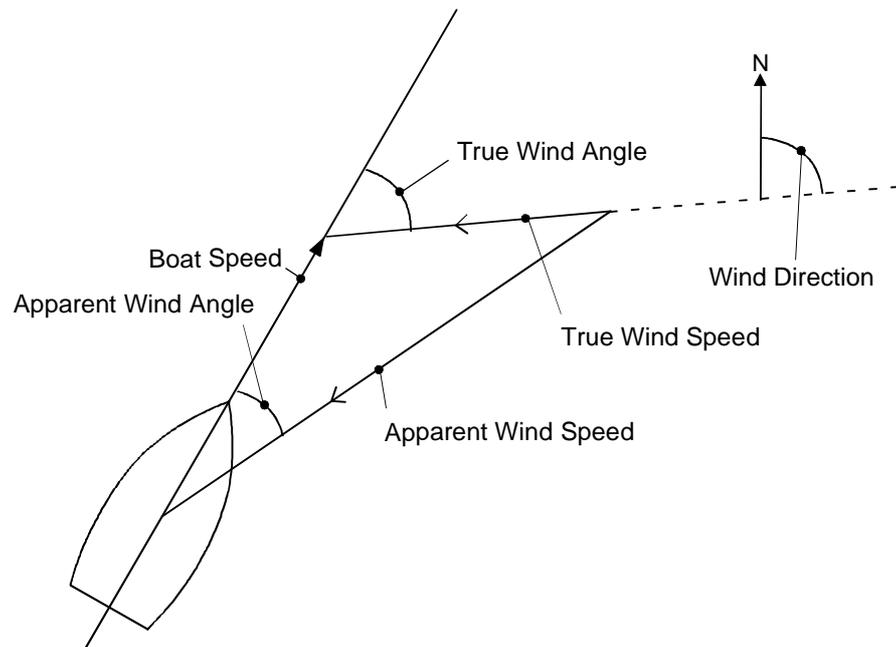
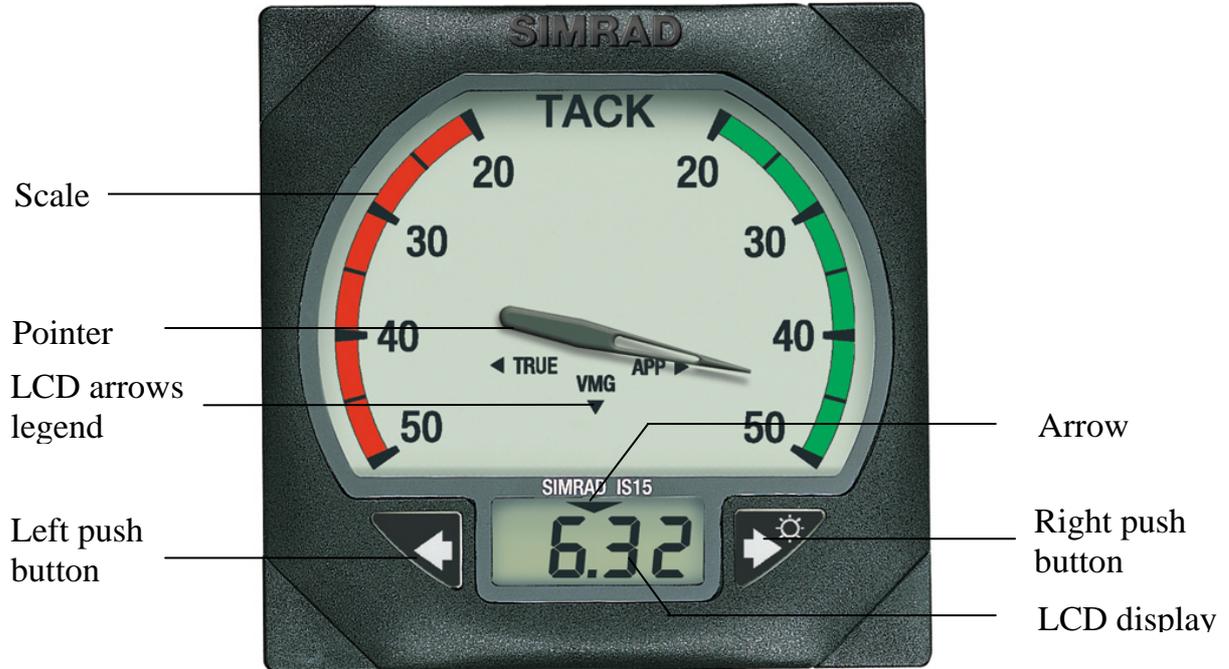


Figure 2-2 Apparent / True Wind and Wind Direction

3 OPERATION OF THE IS15 TACK



The IS15 Tack has basically the same functions as IS15 Wind. The difference is the magnified wind angle scale which makes it useful when sailing close hauled or running down wind.

The operation of IS15 Tack is identical to that of IS15 Wind with the same screen menus on the LCD. Refer to Sections 2 and 6 for further information.

4 TECHNICAL SPECIFICATIONS

4.1 IS15 WIND (IS15 TACK)

True and Apparent Wind Angle Functions

| | |
|-----------------------|---|
| Wind Angle Display | 0 to 180° (0 to 50° – 130° to 180°) Port / Stbd |
| Wind Angle Resolution | 1/3° |
| Wind Angle Damping | 4 damping levels (default level 1) |

True and Apparent Wind Speed Functions

| | |
|-----------------------|--------------------------------------|
| Wind Speed Display | 0 to 99.9 Knots |
| Wind Speed Units | Knots/Metres per Second/Beaufort/Kmh |
| Wind Speed Resolution | 0.1 Knots/Metres Per Second/Kmh |
| Wind Speed Damping | Linked to Wind Angle Damping |

High Wind Speed Alarm

| | |
|-----------------------------|---------------------------------------|
| True Wind Speed Alarm | Settable / Retained Alarm |
| Wind Speed Alarm Value | 1 to 99 Knots |
| Wind Speed Alarm Unit | Knots/Metres per Second /Kmh/Beaufort |
| Wind Speed Alarm Resolution | 1 Knot, 1Kmh, 1 m/s, |

Velocity Made Good (VMG) Functions

| | |
|----------------|--|
| VMG Display | 0 to 99.9 Knots |
| VMG Units | Knots/MPH/Kmh (same as boat speed units) |
| VMG Resolution | 0.1 Knots/MPH/Kmh |
| VMG Damping | Linked to Wind Angle Damping |

Wind Direction Functions

| | |
|---------------------------------|---|
| Magnetic Wind Direction Display | 000 to 359° Magnetic/True (No indication on display of 'M' or 'T') |
| Wind Direction Resolution | 1° |
| Wind Direction Damping | Linked to Wind Angle Damping |

Additional Functions

| | |
|-----------------------------|---|
| System Calibration Facility | Yes |
| External Alarm Drive | Yes (via Expander Unit) |
| Display Backlighting | Green colour with seven levels plus Off |

| | |
|------------------------------|--|
| Display Backlighting Control | Two independent lighting banks or individual settings (bank 0) |
| Wind data Output | via NMEA port |

General

| | |
|--------------------------|--|
| Power Requirement | 10,8 to 15,6VDC, 70 mA, (100 mA with max. lighting) |
| Size | See Figure 4-1 |
| Weight | 225 grams |
| Environmental Protection | IP56 from front, IP44 from rear |
| Temperature Range | Operation: 0°C to +55°C (+32 to +130°F) Storage: -30°C to +80°C (-22 to +176°F) |

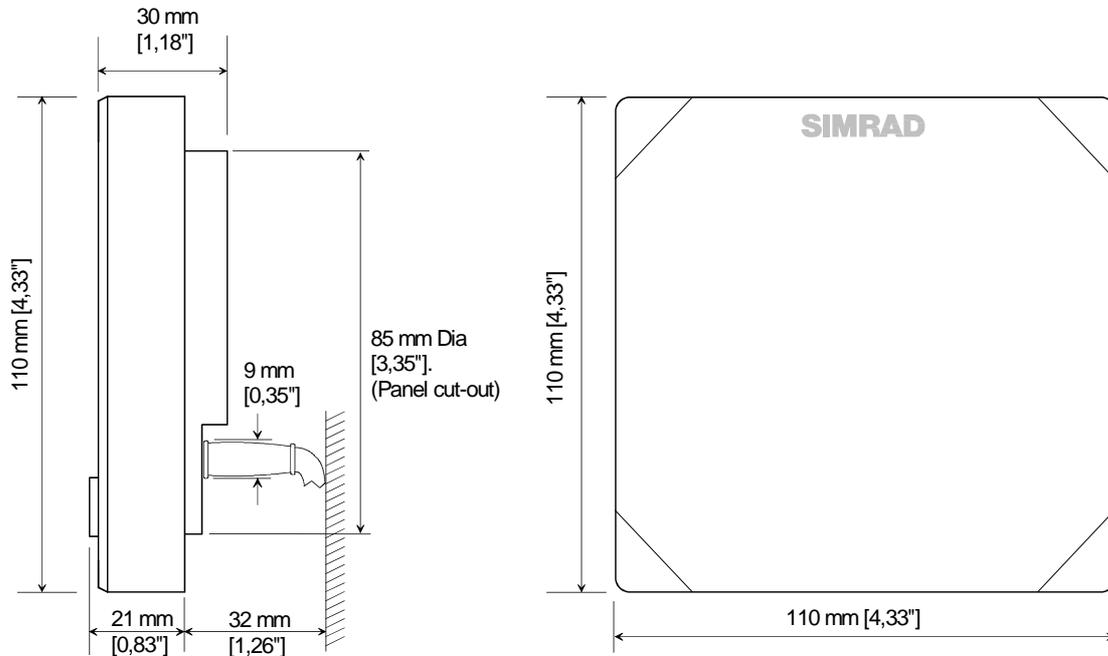


Figure 4-1 IS15 Dimensions

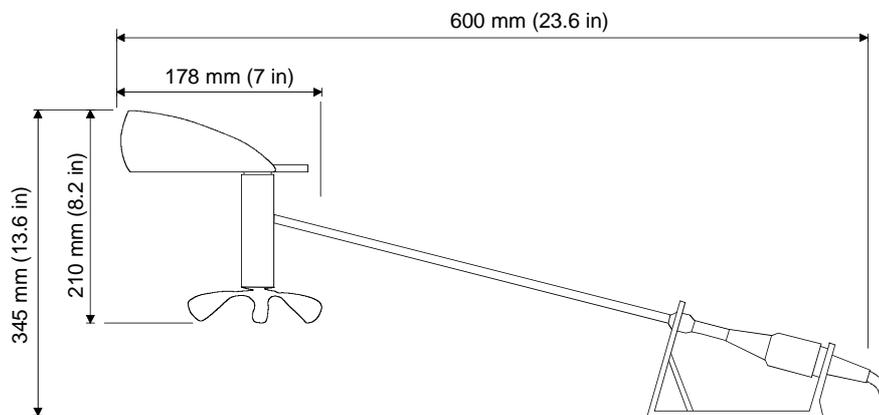


Figure 4-2 IS15 Wind Transducer

4.2 Instrument Software Information

V1R1: Beta version, not used in ordinary production.

V1R2: First production version

V1R3: Upgraded version with added features.

- Trip log replaces sea temperature on first screen of IS15 Combi.
- In Locked Course mode the LCD on IS15 Compass has been changed to show deviation in degrees from locked course.
- Improved log calibration procedure. Possible to set Log reading as percent (%) of default value. Log calibration can be set to same value on identical boats.
- Boat speed always reads 0.0 at zero speed. (V1R2 may show - - - at turn on and a 'residual' speed value when slowing down to zero speed).
- Improved boat speed and wind speed damping.
- Improved damping of heading displays.
- Depth transducer remains OFF at turn on if it was set to OFF while the system was running.
- Test screens added to Installation Menu to simplify trouble shooting.
- Roblink can be turned off and thus eliminate a possible interference when a single instrument is connected as NMEA repeater.
- 'Communication reset' added. Saves all settings in the event an anomaly in the system functions calls for a reset.

V1R4: Substitutes V1R3 that contains a bug. V1R3 should not be used.

V1R5: More features added. Not released, replaced by V1R6.

- Manual setting (In/Out) of NMEA port added.
- Wind offset also applies when wind data is from an external NMEA source.

V1R6: New software to comply with PCB Ass'y Revision H (B on round heads) onwards. V1R6 is backwards compatible with previous software and hardware versions.

Notes!

- 1. PCB Ass'y with this revision does not accept VIR2 or VIR4 software.*
- 2. VIR6 is backward compatible with VIR2 and VIR4. However, anomalies may be observed if attention is not being paid to the NMEA interface. In systems with mixed software, do not interface NMEA 'talkers' to heads with VIR2 software.*

5 INSTALLATION

5.1 General

This section provides detailed information required to successfully install an IS15 Instrument System utilising the IS15 Wind, IS15 Tack and IS15 Wind Transducer unit. It also describes the connection to peripheral equipment and interconnection with other types of IS15 instruments.

5.2 Instrument Head Mounting

The instrument head is fully waterproof from the front and can, therefore, be installed on deck or below.

Caution ! *Do not install the instrument where moisture at the rear could be present. It can cause damage by entering the breathing hole or by coming into contact with the electrical connectors.*

The position selected should, in the first instance, meet the requirements of the helmsman, or crew.

The selected surface for the instrument head must be flat and even to within 0.5 mm.

Before installation, note the Serial Number of the unit and keep it in a safe place.

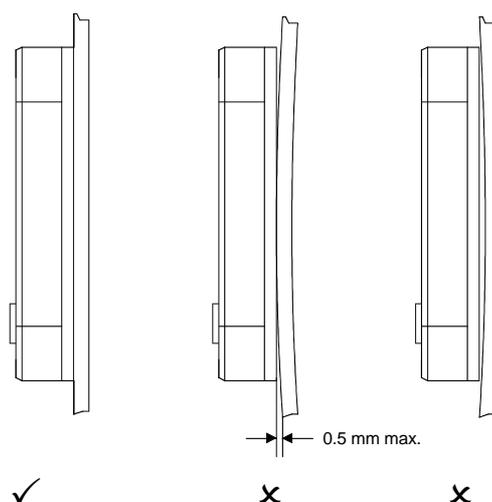


Figure 5-1 - Installation

1. Do not remove the protection film on the display before the installation and setup is completed.

2. Carefully position the self-adhesive template provided on the surface where the display head is to be mounted.
3. Allow sufficient space for the protection cover as shown on the template when instruments are installed adjacent to each other, see Figure 5-2.
4. Check the location on the other side of the panel or bulkhead to confirm suitability. Drill a small pilot hole first.
5. Open out the pilot hole to 85 mm (3.4") using a cutter in a hand-held brace, or an electric drill saw (86 mm or 3 3/8").
6. Drill the four screw holes using a 2.5 mm (0.1") drill.
7. Secure the instrument using the four self-tapping screws provided. Ensure that the sealing gasket is correctly located.
8. Apply the front panel corners.

Note ! *Ensure that all sockets without cable connections have the protecting bung inserted.*

Caution ! *Do not over-tighten fixing screws.*

Do not use sealing compound on the instrument back.

Do not use WD40 or any solvent on any part of the instrument.

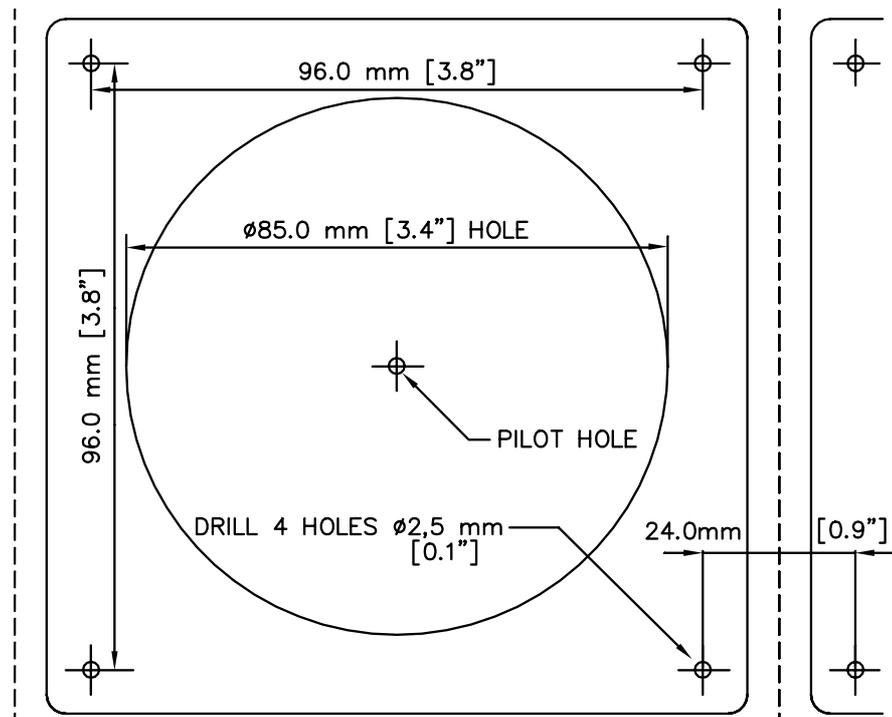
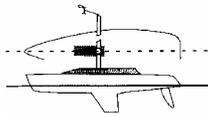


Figure 5-2 - Mounting Details (Not To Scale)

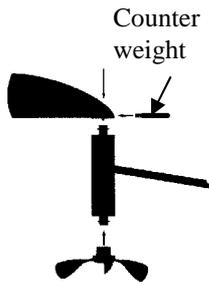
5.3 Wind Transducer

Location

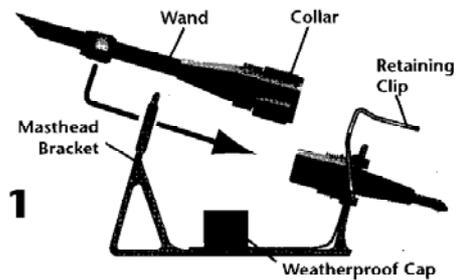


The sensor must be mounted in the fore-aft direction, with the sensor forward of the mast so that the wind flow is not affected by the sails.

Assembly



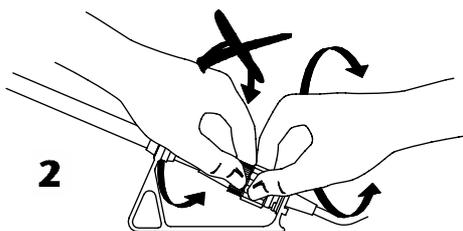
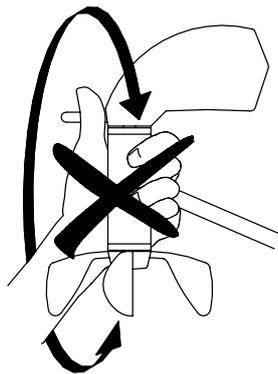
The transducer is supplied with the vane and cups packed separately. Fit the vane to the top collar of the transducer body, so that the shaft in the vane fits into the collar bearings. Once the vane is in place, screw the counterweight in by hand far enough to lock the vane into place. Check that the vane rotates freely - do not over tighten the counterweight using the supplied Allen key or it may restrict the vane's movement.



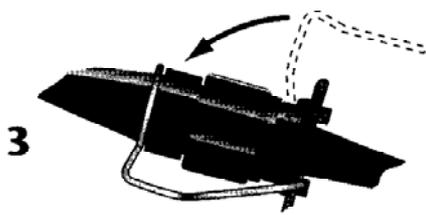
The anemometer cups fit to the base of the transducer body in a similar way. Once fitted, they are held in place by a grub screw, which should be tightened enough to hold the cups in place without restricting their movement. Push the cups all the way up before tightening the screw. Check that the cups rotate freely afterwards.

To install unit

1. Before installing, apply a coat of silicon grease to both the plug and socket to protect the contacts.
2. Apply the self adhesive template supplied (in the junction box) to the masthead, pointing fore-aft.
3. Using the template, drill 4 holes 3.7 mm (1/8 in) diameter.
4. Fix the Masthead Bracket to the mast with the screws supplied.
5. Locate the wand into the Masthead Bracket as shown (1) and carefully push home.



Caution! *Do not turn the wand after it is correctly located.*



6. When the wand is correctly in position, screw down the collar until it is **HAND** tight (2).

7. Lock the retaining clip into place (3).

Note !

Remove the wand in the reverse order.

8. The cable is easily threaded down the mast if a pull-through cord or mouse has been left for that purpose. If there is no mouse, it may help to fix a weight to the end of the cable to assist its passage through the mast.

9. If there is a small error in the alignment of the masthead unit, this can be compensated for. Please refer to the relevant calibration instructions for more details.

Note ! *The masthead bracket includes an integral weatherproof cap that should always be fitted to the socket if the wand has been removed.*

5.4 Cabling

Stand Alone system (W-1)

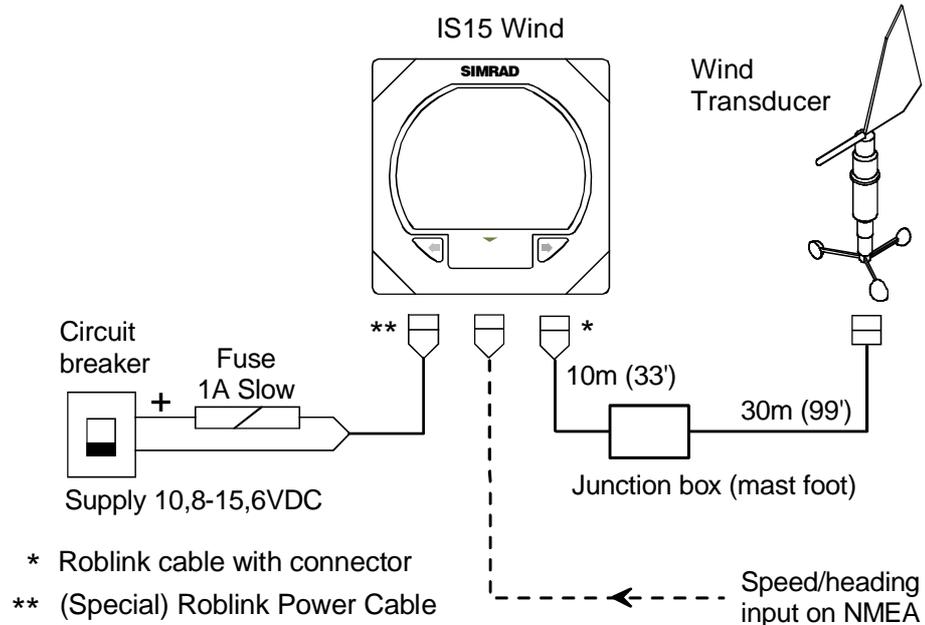


Figure 5-3 W-1 IS15 Wind System

Use the Roblink Power Cable (P/N 22093587) for supply to connector no. 1. Cut off one of the plugs on the supplied 0,3 m (1') cable and extend it to the NMEA source using twisted pair cable. Use connector no. 4 for NMEA connection (see Figure 5-9). Connect the Wind Transducer to no. 3 connector (sensor).

Notes !

1. *If one or two more instruments are added to the above system the Wind Transducer must be connected to the no. 2 connector on the last instrument in the daisy chain.*
2. *The above system needs speed input on NMEA 0183 format to display True Wind angle and speed. To display wind direction also heading input is required together with speed from the same source, e.g. a GPS with SOG and COG output. Alternatively speed and heading may come from separate sources. Then a second head must be added for interfacing.*
3. *When connected to an IS15 Tri-data system as shown on Figure 5-4 speed is available on Roblink format and heading on NMEA format.*

Integrated systems

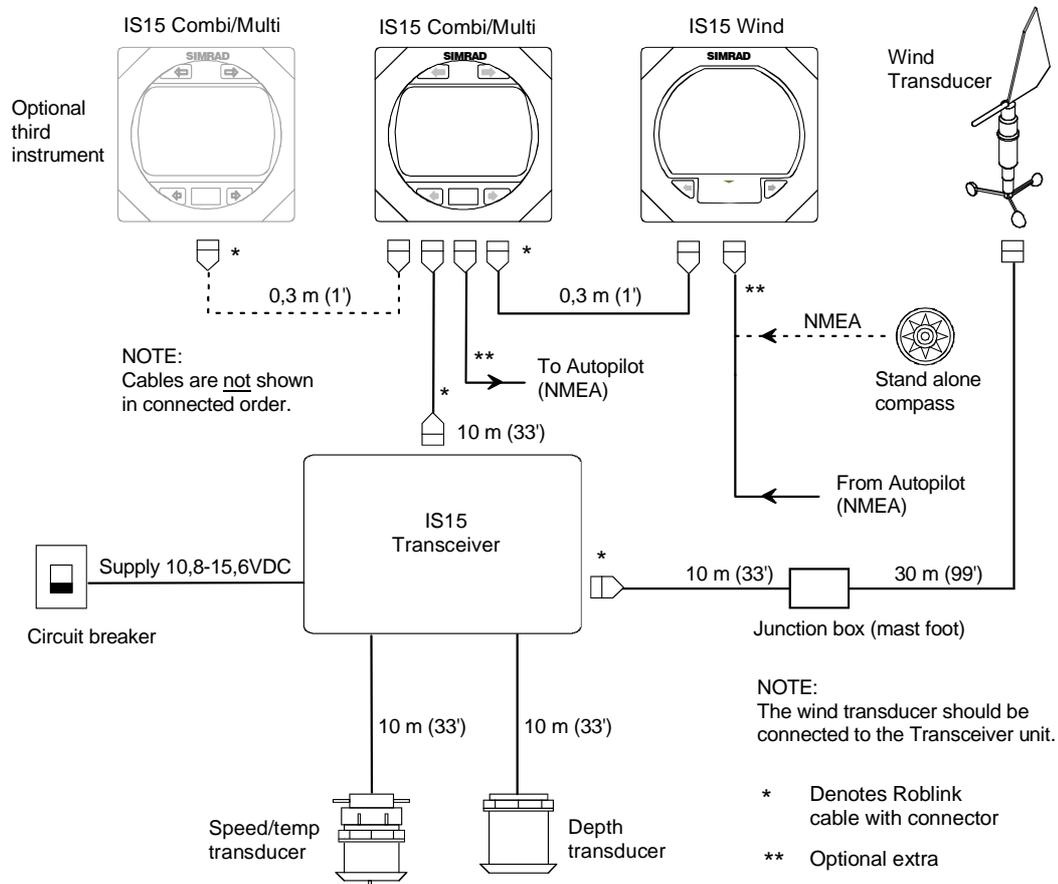


Figure 5-4 IS15 Wind – IS15 Combi (Tri-data) System layout

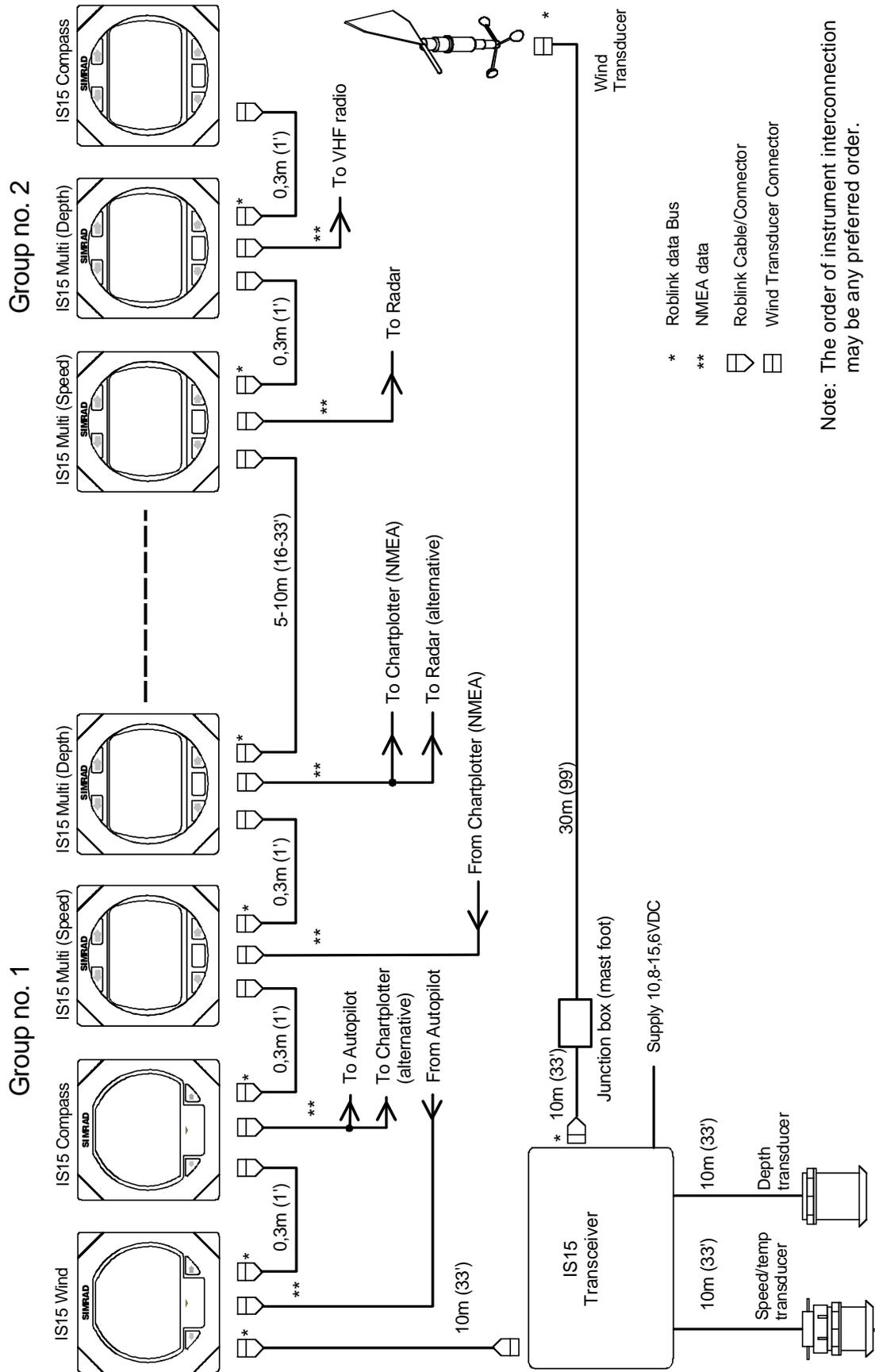


Figure 5-5 IS15 Instrument system – Cabling diagram

An example of a fully equipped IS 15 system is shown in Figure 5-5. See also the Interconnection – Principle diagram Figure 6-5 in the IS15 General Manual.

Choosing the Cable Routes

When routing the cables choose the most direct paths while avoiding the following hazards:

- Sharp bends or kinks in the cable
- Hot surfaces (exhaust manifolds or cooking equipment)
- Rotating or reciprocating equipment
- Sharp or abrasive surfaces
- Door and window jambs
- Corrosive fluids or gases

Extending Cables

Refer to page 6 for information.

Note ! *The total length of (Roblink) cables in a system should not exceed 30 m not including the cable to the Wind Transducer. Refer to section 6.6 in IS15 General Manual.*

Securing the Cables

After the ideal cable routing has been established, use tie-wraps, 'P' - clips or other fixings to secure the cables along the routings.

Note ! *To prevent chafing add protection for the cable jackets where the cables pass through bulkheads, or past sharp edges.*

Secure the cable near to the terminals for strain relieving. See also Figure 5-6 below.

Secure the cable ends with enough slack to allow for easy connection / disconnection with the instrument removed from its location.

Cut any spare wire ends to an appropriate length.

Securing the connectors

For extra security fasten the connectors with the enclosed self-tapping screws.

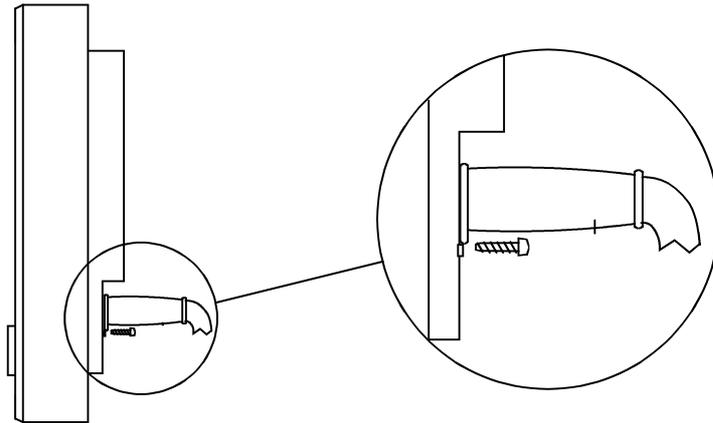


Figure 5-6 Securing connectors to the instrument

Make sure that all empty sockets have the protective bung inserted. Coat the connectors with silicone grease or petroleum jelly. These products will not harm the instrument.

5.5 Instrument head connections

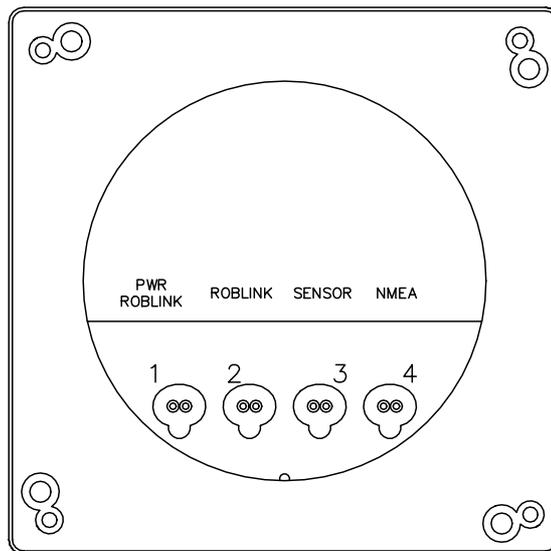


Figure 5-7 - Instrument Connections

The instrument head has four identical two-pin connector sockets protected by rubber plugs. Each socket is identified by number and signal markings.

Caution ! *The NMEA cable must be plugged into connector no. 4. Wrong connection may damage the connected equipment.*

Interconnection between instrument heads is made by the supplied 0.3 m Roblink cable or Roblink extension cables. See page 6. Refer also to section 5.4 and 5.6 for further information.

NMEA connections general

Note ! *The NMEA port on the IS15 instruments is unidirectional, i.e. it is automatically configured for input (listening) or output (talking). Thus you will need a minimum of any two instrument heads to make the system both 'listen' and 'talk' (I/O).*

Roblink cables can be ordered separately for NMEA connections when required (see page 6).

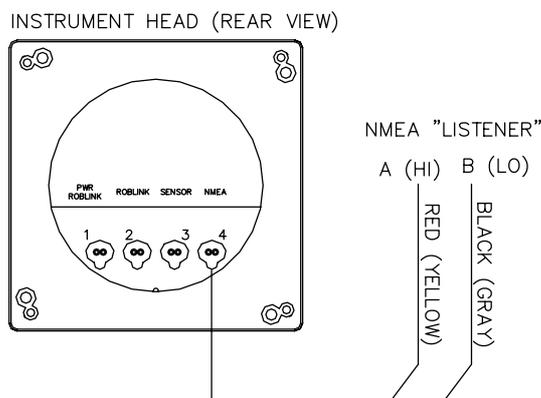


Figure 5-8 NMEA out

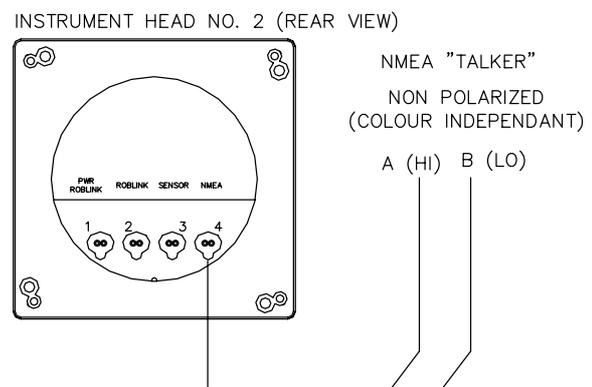


Figure 5-9 NMEA in

Use no other connector than no. 4.

Connecting a Simrad Robertson “X” series autopilot

NMEA Out

This connection will provide wind input to the autopilot. The connection is made to the J3xx Junction Unit Main Board, Terminal RX1+ and RX1-. Observe the color code for correct polarity.

NMEA In

This will provide the instrument with heading data.

Connect the Roblink cable to the NMEA socket on one of the instrument heads.

Connect the other end to the screw terminals in the J3xx Junction unit Main Board TX1+ and TX1-.

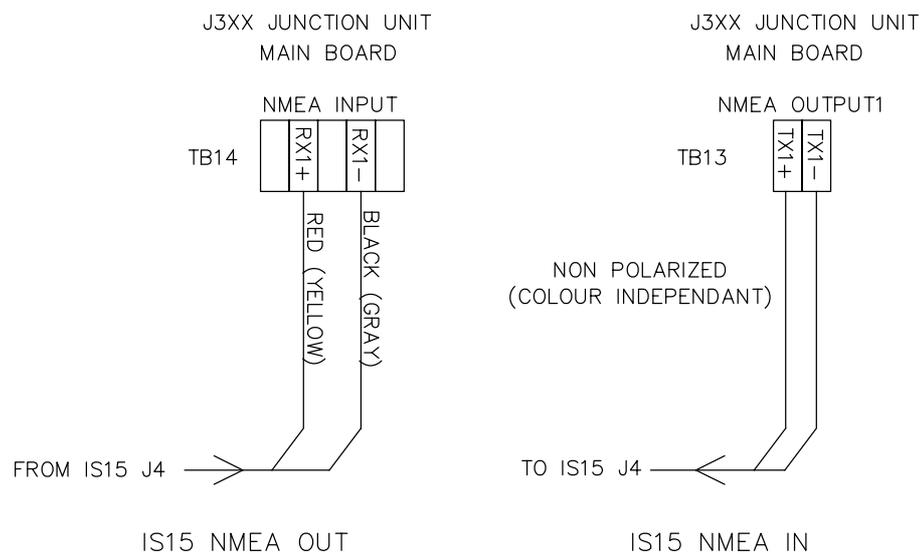


Figure 5-10 Simrad Robertson “X” series autopilot connection

Connecting to a Simrad XX32/XX40/XX50 series GPS Plotter

NMEA out

This will provide the chart plotter also with wind information if the Wind/Tack instruments are part of the IS15 system, see Figure 5-4 and Figure 5-5. (Connect the chart plotter input to the optional instrument in Figure 5-4).

NMEA in

This will provide position and navigation data to the instrument system.

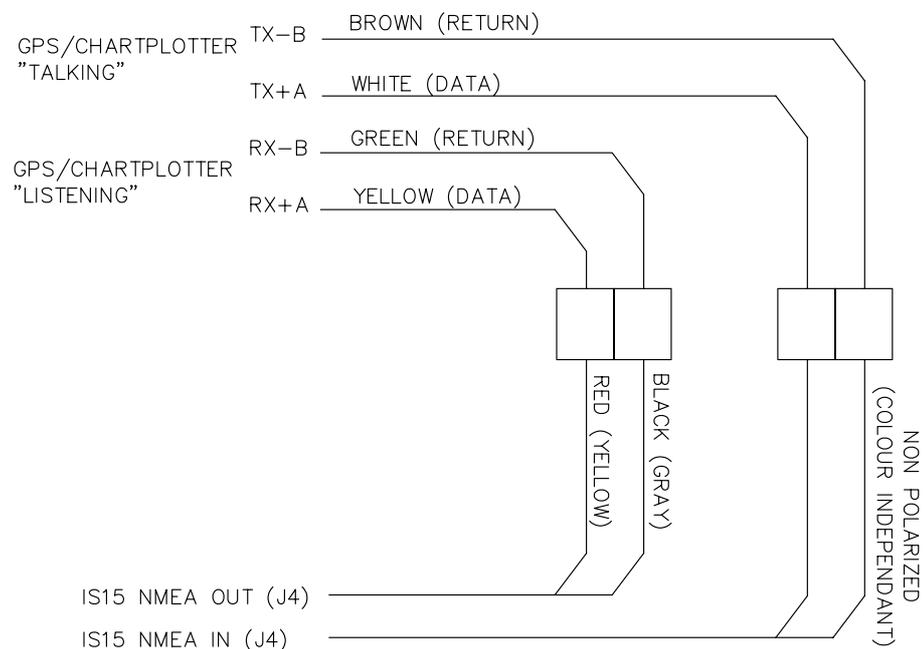


Figure 5-11 Simrad XX32/XX40/XX50 series connection

Note ! *Even if the NMEA input is automatically polarized on the IS15 instruments, it may be necessary to interchange the wires from XX32/40/50 series if depth sounding problems are observed in models that contain a depth sounder.*

5.6 Wind Transducer connection

The Wind Transducer should be connected to the IS15 Transceiver if there is one in the system.

1. Cut the masthead cable to an appropriate length and connect the wires to the terminal as shown. Only the red and black wires are active in the system.

2. Refer to section 5.4 and connect one end of the supplied 10 m Roblink cable to one of the Roblink sockets in the Transceiver or to the WIND instrument.
3. Cut the Roblink cable to an appropriate length for connection to the Junction Box.
4. Connect the two Roblink wires to the screw terminal as shown. The connection is non-polarized (colour independent).

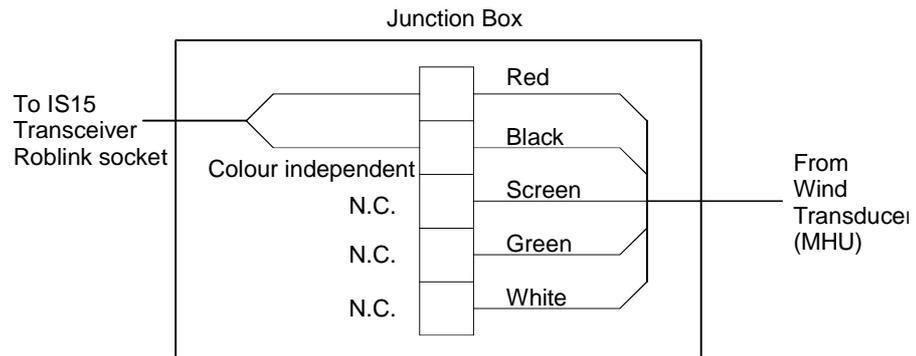


Figure 5-12 Wind Transducer Junction Box connections

5.7 IS15 Instruments as NMEA repeaters

All IS15 instrument heads can be used as NMEA repeaters either as stand alone units or connected in a “daisy chain” with more heads. Please refer to the IS15 General Manual for detailed information.

6 SETTING-UP

6.1 First Time Turn on

Note ! *Always turn on all NMEA “listeners” and “talkers” connected to the system before the first time you turn on the IS15 system. This includes turn on after a COMMUNICATION RESET or a MASTER RESET. The system will then automatically configure the IS15 NMEA ports as talkers or listeners.*

Before leaving the factory a Master Reset has been performed on all the instruments. The first time power is applied to a Wind or Tack instrument, the display will read:

1.6 (software version) and then PrES

To assign an instrument to a system, press the  button. In a multiple instrument system the instruments are assigned to the system and given an Id number in the same sequence as the  buttons are pressed. The instrument that is assigned as #1 will be the master unit and broadcast common set-up information on the Roblink to the other instruments.

Id:1

Notes !

1. *In a system with mixed software always start assigning the ones with the latest software version.*
2. *When assigning more than one instrument to a system, allow a few seconds interval between each assignment, while the display is showing:*

3. *When an instrument is replaced it is important that a Master Reset has been made on the new one before it is connected to the system. Refer to Local Master Reset on page 41.*

After having assigned all instruments, turn the system off and then on (the instruments will display P.OFF if you forget). The pointer will make a 360° turn and then the instrument will display apparent wind.

6.2 Installation and Calibration Menu

The installation menu is arranged as follows:

| | | | | |
|-------------------|--|---|--|---|
| Screen Display |  Screen 1 |  Screen 2 |  Screen 3 |  Screen 4 |
| Analog Digital | Apparent wind angle Illumination bank bAn.1 | Apparent wind angle Wind speed unit SPd1 | Apparent wind angle VMG to wind unit SPd1 | Apparent wind angle Wind angle, automatic calibration OFS.A |
| Screen Display |  Screen 5 |  Screen 6 |  Screen 7 |  Screen 8 |
| Analog Digital | Apparent wind angle Wind angle offset (manual calibration) OFFS | Apparent wind angle Shop mode (on/off) SHOP | Apparent wind angle NMEA In/Out n183 | Apparent wind angle Roblink On/Off robl |
| Screen Display |  Screen 9 |  Screen 10 |  Screen 11 | |
| Analog Digital | Apparent wind angle Roblink test tESt | Apparent wind angle Communication reset C.rES | Apparent wind angle Master reset rES | |

To enter the Installation Menu:

1. Press the  button, hold for 10 seconds and release to access the Installation Mode.
2. Apply a short press on the  or  button to select one of the LCD screens in the Installation Mode.
3. Press the  button, hold for 2 seconds and release to access a setting. The item to be set starts flashing.
4. Apply a short press on the  or  button to select a new setting.
5. Press the  button and hold for 2 seconds to save a setting.
6. Apply a short press on the  button to show the next screen or press the  button and hold for 2 seconds to return to normal operation.

Screen 1

ILLUM. BANK [bAn.1]

The display reads **bAn.0 – bAn.2**

The IS15 instrument system can have two separate banks of instruments. Setting the lighting level on one display will set all the other displays in that bank to the same level, but will not effect any displays in the other bank. For instance, the lighting level can be independently controlled for:

- The cockpit and chart table displays of a yacht.
- The cockpit and mast displays of a yacht.
- The cabin and flybridge of a power boat.

Note !

You can also have individual lighting on all instruments. Then the illumination bank setting must be 0.

To select the illumination bank that the particular instrument shall be allocated to, use the above procedure.

Screen 2

WIND SPEED UNIT SELECTION [SPd1]

The display reads **SPd1 – SPd4** with both arrows lit on top.

Displayed wind speed units may be set to Knots, Metres Per Second, Beaufort or Kmh (shown in the LCD display as SPd1, SPd2, SPd3 or SPd4).

To select the Wind Speed Unit, use the above procedure.

The different speed units are selected according to the table below.

| | | |
|--------|---|-------------------|
| 'SPd1' | = | Knots |
| 'SPd2' | = | Metres Per Second |
| 'SPd3' | = | Kmh |
| 'SPd4' | = | Beaufort |

Screen 3

VMG TO WIND UNIT SELECTION [SPd1]

Note !

This is the same unit as boat speed unit.

The display reads **SPd1 – SPd3** with the centre arrows lit on top.

Displayed Velocity Made Good units may be set to Knots, Miles Per Hour or Kilometres Per Hour. (This will be the same as the systems setting for boat speed.)

To select the VMG to Wind Unit use the above procedure.

The different VMG to Wind units are selected according to the table below.

'SPd1' = Knots
'SPd2' = Kilometres Per Hour
'SPd3' = Miles Per Hour

Screen 4

WIND ANGLE OFFSET – AUTO CALIBRATION [OFS.A]

The display reads **OFS.A**.

The IS15 instrument system can be automatically corrected for errors in the mounting of the wind angle sensor. Head the vessel directly into the wind, and then activate the automatic calibration function. Any error in the wind angle will be corrected to zero the reading on the scale.

To activate the Wind Angle Offset Auto Calibration press the  button for 2 seconds and the display will flash (two times) 'Auto' and then 'done'.

The display reads **OFS.A**, starts flashing and finally reads **done**.

Screen 5

WIND ANGLE OFFSET – MANUAL CALIBRATION [OFFS]

Any residual errors in the apparent wind angle display can be corrected manually by entering the required offset.

To select the Wind Angle Offset Manual Calibration use the above procedure.

The display reads **OFFS**, then starts flashing **000**.

- Adjust the wind angle to starboard using the  button (positive reading).
- Adjust the wind angle to port using the  button (negative reading).

Screen 6

SHOP MODE [SHOP]

The instrument has a demonstration mode that can be activated by selecting 'Shop' On. This function is very useful for dealers when they want to demonstrate the IS15 system or when it is put on display on a show. The Shop Mode is turned off when power is turned off.

Use the above procedure to select and activate the Shop mode.

The display will show **SHOP** and then start flashing 'OFF' or 'ON'. Select the preferred mode.

Note ! *When in Shop Mode the instruments will display real data if any data is received.*

Screen 7

NMEA IN/OUT [n 183]

This screen allows you to manually change the NMEA 'talker' port = NMEA OUT to a 'listener' port = NMEA IN. Hence you need not make a Master reset or a Communication reset. Refer to chapter 6.1 First time turn on. See also note below.

The setting is local to each instrument.

Press the  or  button to select NMEA OUT. Press and hold the  button to confirm.

Note ! *If there is an active 'talker' connected to the NMEA port, you will not be able to change this port from 'IN' to an 'OUT' port unless the 'talker' is disconnected.*

Screen 8

ROBLINK ON/OFF [robl]

It is possible to turn off the Roblink.

The display reads 'robl'. Press the  button and hold for 2 seconds. The LCD display shows (flashes) 'Id:x', 'x' being the instrument's present Roblink Id. number.

Press the  or  button to select Roblink OFF. Press and hold the  button to confirm.

Notes !

1. *The Roblink must be turned Off when the instrument is used as a single NMEA repeater. However, if more heads are daisy-chained as NMEA repeaters the Roblink must be On.*
2. *When the Roblink has been turned Off it will not default to ON even after a Master Reset. If required it must therefore be turned On again using the procedure above.*

Screen 9

ROBLINK TEST [tESt]

Refer to section 7 'Fault Finding' for details.

Screen 10

COMMUNICATION RESET [C.rES]

Allows you to reset the system communication (Roblink) in the event anomalies are observed on one or more instruments. This reset will not default the calibration or settings.

Press the  button and hold for 2 seconds. The LCD display shows 'P.OFF'. Turn the system off, refer to the beginning of this section and assign the instrument(s) to the system.

Screen 11

MASTER RESET [rES]

When a MASTER RESET is performed on one of the instruments in a system it becomes system wide and all instruments are reset to default values.

Note ! *Do not perform a Master Reset unintentionally because it will default settings and calibration values.*

Press the  button and hold for 2 seconds. The LCD display shows 'P.OFF'. Turn the system off, refer to the beginning of this section and assign the instrument(s) to the system.

Note ! *After the Master Reset a new set-up has to be performed.*

7 FAULT FINDING

If the instrument is part of an IS15 instrument system including a Transceiver (IS15 Power Supply or Expander), or if it is connected to another instrument system as a NMEA repeater, then see the IS15 General Manual.

General Display and Communications Faults

| Condition | Probable Cause | Action |
|--|---|---|
| All instruments have blank displays. | No 12V Power Supply. | <p>Check that the ships instrument system fuse(s) or circuit breaker(s) are not blown / tripped.</p> <p>Check the power supply wiring to the IS15 Transceiver.</p> <p>Check the green LED lamp inside the Transceiver indicating supply polarity OK. (In order to remove the top cover to the Transceiver first remove the six fastening screws.)</p> <p>Measure the voltage (10,8-15,6V)</p> <p>Check the Roblink/power cable from the Transceiver to the instruments.</p> <p>Measure the voltage. Should be \approx 18VDC.</p> <p>Contact your dealer.</p> |
| One instrument in the middle of the chain have blank display | Instrument head is defective. | Replace instrument (Perform master reset and new setup). |
| One or more instruments at the end of a chain have blank displays. | There is no Roblink/ supply to the affected instrument (s). | <p>Check the Roblink/power cable(s) to the affected instrument(s).</p> <p>Contact your dealer.</p> |
| One or more instrument(s) always show '----', with the pointers of analog instruments at their zero positions. | No data is reaching the affected instrument(s). | <p>Check the signal wiring to the affected instrument(s).</p> <p>Check Roblink data by entering the Roblink test menu on a Combi instrument.</p> <p>Wind data missing? See next page.</p> <p>NMEA input data missing? See IS15 General Manual</p> |

Wind Display Faults

| Condition | Probable Cause | Action |
|--|--|---|
| <p>There are no Wind Speed or Wind Angle displays, or these displays always show '----'.</p> | <p>The wind transducer is not fitted to the mast head connector.</p> <p>The wind transducer is not connected to the IS15 Transceiver properly.</p> | <p>Check, and fit the transducer if necessary.</p> <p>Check the wind transducer's Roblink connection to the Transceiver.</p> <p>Check that the wind transducer cable is not damaged.</p> <p>Check the connections in the Junction Box at the mast foot.</p> <p>Contact your dealer.</p> |
| <p>The Wind Speed displays always show '0.0', but the Wind Angle displays are shown.</p> | <p>The anemometer (cups) is seized.</p> | <p>Check the anemometer cups and have the wind transducer serviced if necessary.</p> <p>A broken anemometer cup may be replaced by the dealer/customer.</p> |
| <p>The Wind Speed is too low, when it was previously correct.</p> | <p>Worn anemometer cups/bearing.</p> <p>Damaged anemometer rotor or transducer body.</p> | <p>Check the anemometer cups and rotor bearings or have the wind transducer serviced if necessary.</p> <p>Check that the rotor (cups) and transducer are not damaged.</p> <p>Make other checks as for 'always showing 0.0' above.</p> |
| <p>The Wind Speed is too high or erratic, when it was previously correct.</p> | <p>Damaged wiring causing intermittent contact.</p> | <p>Make checks as for 'always showing 0.0' above.</p> |
| <p>The Wind Speed has always been too low or too high.</p> | <p>The wind transducer may be poorly sited.</p> | <p>Check the transducer location.</p> <p>Contact your dealer.</p> |

| Condition | Probable Cause | Action |
|--|--|--|
| The Wind Angle displays are incorrect. | The wind transducer is not connected to the IS15 Transceiver properly. | Check the wind transducer's connections to the IS15 Transceiver and to the Junction Box. Check that the wind transducer cable is not damaged. Contact your dealer. |
| The Wind Angle has always been incorrect. | The wind transducer is not calibrated. | Calibrate the wind transducer. (Using another instrument.) Make checks as for 'the wind angle displays are incorrect' above. |
| <p>Note ! <i>A broken vane can only be replaced by the factory, as the Masthead Unit (MHU) needs new calibration.</i></p> | | |

Roblink test display

The Roblink test display monitors the data flow on the Roblink. On the IS15 Wind and Tack the Roblink test monitors the data utilized by the instrument head, e.g. wind data and compass heading.

- Press and hold the  button for 10 seconds to enter the installation menu.
- Press the  or  button until the display reads **tEst**.
- Press and hold the  button for 2 seconds to start the test. As on the Combi, the display will start counting from 136.

Actions to Roblink test results:

1. Zero (0) reading means 'no message available'.
2. If the numbers are continuously flickering or counting down, perform a Communication Reset on the system.
3. Make sure the recommended cable length or number of instruments in the system are not exceeded. Refer to section 6.6 in the IS15 General Manual.
4. Check all NMEA connections.
5. Check the output rate of the NMEA 'talkers' connected to IS15. The rate should not be slower than 0.7 Hz.

8 MAINTENANCE

8.1 General Maintenance

Caution ! *Do not use any abrasives, chemical cleaners, petrol or diesel to clean this unit.*

The instrument head will require no maintenance apart from occasional cleaning. Use fresh water and a mild soap solution (not a detergent).

8.2 Annual Maintenance

Check all connections to the instrument and, if necessary, cover with silicone grease or petroleum jelly.

The wind transducer is a robust unit that should give you years of reliable service. However, it will benefit from an application of silicone grease to the connector at the beginning of each season. It is also recommended that the wand is removed over Winter if the boat is not in use. To prevent corrosion of the connector, always fit the protective cap to the socket when the wand has been removed.

Note ! *A broken vane can only be replaced by the factory, as the wind transducer needs new calibration.*

A broken anemometer cup may be replaced by the dealer/owner.

8.3 Removal of Instrument

1. If rear access is possible unplug the Roblink connectors from the rear of the instrument.
2. Remove the four front panel corners and the fixing screws.
3. Pull the instrument free from the panel, being careful not to strain the wiring if the connectors have not yet been removed.
4. If they are not yet removed, unplug the Roblink connectors from the rear of the case, and make up the cables if necessary.

8.4 Return for Service

Prior to return please ensure that an instrument that is believed to be faulty is correctly installed, the wiring is in good condition and correct, that all connections are secure, and that a correct supply is present at it's Roblink/power connector.

Should the unit have to be returned to your dealer, adequate packing must be used. Please ensure that your name, telephone number, return address, a clear fault description, and if possible a copy of the receipt of purchase are included with any returned equipment. Simrad and their representatives are not responsible for any equipment lost in transit.

Please quote the instrument's serial number in all correspondence. This is found on the back of the instrument.

8.5 Local Master Reset

When an instrument is leaving the factory a Master Reset has been made. However, if an instrument is being used in a different system or setup, you can perform a local Master Reset on the instrument in that system before it is disconnected and move it to a system where you want to put it.

Refer to screen 7 on page 35.

1. Turn off the Roblink as per instructions
2. Perform a Master Reset as per instructions
3. Turn on the Roblink as per instructions

You can now install the instrument in another system without having to make a system wide Master Reset and loose the existing calibration and settings in that system.

9 SPARE PARTS LIST

22092100 IS15 Wind Instrument

22092704 IS15 Wind PROM (programmed) V..R..

20220794 IS15 Wind/Tack Operator's Quick Reference Guide

22092142 IS15 Tack Instrument

22092712 IS15 Tack PROM (programmed) V..R..

20220794 IS15 Wind/Tack Operator's Quick Reference Guide

22092837 IS15 Mounting kit consisting of:

22084529 Cabinet corners

44165181 Screw 3.5x32

44160232 Screw (for securing the connectors)

22091854 IS15 Protection cover

22092241 IS15 Panel gasket

22092753 IS15 Wind Transducer

22093017 IS15 Wind Transducer PROM (programmed) V..R..

22092415 IS15 Wind Transducer PCB

44166858 IS15 Wind Transducer Bracket w/30m (100') cable

44175446 Junction box

Roblink Cables

22092019 Roblink Cable 0,3 m

22093728 Roblink Cable 2 m (6,5')

22092548 Roblink Cable 5 m (16,5')

22092027 Roblink Cable 10 m (33')

22093587 Roblink Power Cable

22092001 Cable Adapter (for interconnection)