C-net

W I N D

User's Guide

CE

EMC Directive 89/336/EEC

This product has been designed to be compliant with the above EMC Directive.

Maximum performance and compliance with the EMC Directive can only be ensured by correct installation. It is recommended that the installation conforms with the following Standards:

       SMALL CRAFT - ELECTRICAL SYSTEMS:

    a) ISO 10133 - Extra Low-Voltage DC Installations
    b) ISO 13297 - Alternating Current Installations

       ISO - International Standards Organisation

Contents

Introduction

Thank you for buying this C-net product. We wish you to
enjoy your boating and intend that all C-net instruments
enhance your pleasure.

The instruments are designed to present the information that
you want in a clear, easy to read manner, safely and reliably.

The 902 384 C-net WIND

If you are installing more than one instrument from the C-net
range, the units can be networked together. This means that
the instruments are all connected in a chain by the 5 way
"C-net" cable (the C-net Bus). This cable carries power and
shared data to all the other instruments connected in the
chain.

This makes initial installation and subsequent system
expansion quick and easy. If you want a second Display or
Display Suite somewhere else on the vessel, all that needs
connecting is the C-net cable.

Using the Instrument

The C-net WIND instrument has two displays;

❯ a digital display of wind speed

❯ an analogue display of wind direction.

The wind speed and direction can be displayed as either Apparent or True. When the digits on the Liquid Crystal Display (LCD) are to the right-hand side (under the text "APP") the displays indicate Apparent Readings. When the digits are to the left-hand side (under the text "TRUE") the figures indicate True Readings.

In addition the C-net WIND has an Amplified Wind Angle option which magnifies the needle movement to make wind angle readings more accurate.

Operation   When first powered up the instrument will display '888' on the LCD. The display will then show the software revision as 'r' followed by a number 10 or greater. This will change to 'Pt' followed by a number indicating the Product Type that the unit is currently set to.

TRUE   APP

2 3

The display will now count down for 5 seconds, while the internal filters settle, then change to indicate the Apparent Wind Speed while the pointer on the analogue scale shows the Apparent Wind Direction.

TRUE   APP

2 2

To display True Wind Direction and True Wind Speed, press the PAGE button. The wind speed is now shown on the left-hand side of the LCD to indicate True Wind Readings. True Wind Direction and Speed will only be displayed if heading and boat speed information are available to the C-net WIND unit.

There are two wind angle scales on the analogue display, the smaller figures (half the value of the outer scale) allow for greater needle sensitivity and more accurate readings, especially when sailing upwind or downwind.

To engage the Amplified Wind Angle option press and hold the PAGE button until flashing dots on the LCD display indicate that the Amplified Wind Angle option is active. To return to the standard scale simply press and hold the PAGE button again until the flashing dots are no longer displayed.

TRUE   APP

| 4.92 |

If the vessel's speed information is available from the C-net Bus or from an NMEA Input, a further press of the PAGE button will then display the VMG (Velocity Made Good) on the LCD and the Apparent Wind Direction on the analogue scale. A decimal point indicates that VMG has been selected.

TRUE   APP

| p 0 6 |

The final LCD display option is the Peak Gust Display. This shows the peak wind speed value since switching the unit on. It is reset either by turning the unit off, or by adjusting the Wind Speed Alarm value.

Lighting

To set the instrument's backlighting or brightness simply press the LIGHT button until the desired lighting level is reached. Each press of the LIGHT button will step through the cycle; OFF, LOW or HIGH.

This also sets the backlighting of any other C-net instruments connected by the C-net Bus.

Alarms

The C-net WIND is able to show a range of alarm conditions on its LCD display. However, only one alarm, the Wind Speed Alarm, may be selected and controlled by the user.

Wind Speed Alarm

To set a speed threshold value press the ⊖ and ⊖ buttons together to access the Installation Settings Menu. Using the PAGE button, cycle through the options until the LCD displays the alarm option, "A00".

TRUE   APP

| a 0 4 |

Using the ⊖ and ⊖ buttons set a speed threshold value. This value will be in knots irrespective of the units selected for the wind speed display. To switch the alarm off set the alarm threshold speed value to zero.

Once the desired value is shown, use the PAGE button to cycle to the end of the Installation Settings Menu. Once "END" is displayed press the ⊖ button to exit the routine.

During normal operation the display will flash a warning, to indicate when the wind speed threshold has been passed. The display will stop flashing once the wind speed drops below the threshold setting.

Alarm Conditions

If an alarm occurs the LCD will display an alarm code and the internal sounder will activate. When the PAGE button is pressed the display will return to its original mode.

The alarm display will be added to the cycle of LCD messages available, so that it can be viewed by pressing the PAGE button repeatedly.

These are the alarms that we hope you never see:

TRUE   APP   C-net NETWORK BUS OR NMEA IN ERROR

f 0 1   Check connections and cables, then turn the unit off and back on again. If the fault persists, contact a Global Dealer.

TRUE   APP   COMPASS DATA MISSING

f 0 2   The Product Type has been set incorrectly.
See Page 9.

TRUE   APP   WIND DATA MISSING

f 0 4   Check the connections to the Masthead Sensor.

TRUE   APP   The battery voltage is less than 10V for a 12V system or less

b a t   than 20V for a 24V system.
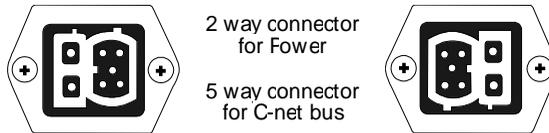
Installation

The Display Decide where you are going to install the C-net WIND unit.
Use the supplied template to help you mark out and drill the
hole for the back of the unit.

Unclip the front cover of the WIND unit (a "screwdriver" slot
is provided at the bottom edge of the cover). Position the
WIND unit and fix it with the four screws, one in each corner.
Clip on the front cover, making sure that the buttons locate
correctly.

Fixing holes
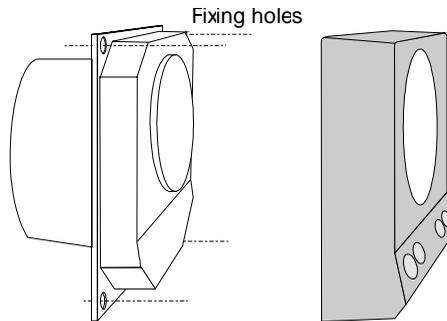
Wiring The two connectors on the rear of the units are connected in
parallel so either can be used.

2 way connector
for Power

5 way connector
for C-net bus

For a Single Unit Installation

Connect the two wire cable, Red to Ship's Supply positive and
Black to negative, then plug the connector into the back of
the unit. The supply should come from the switched side of a
Circuit Breaker and must be fused or protected at 5 Amps.
The 5 way C-net cable is not required for a single unit.

For Networked Installations

Connect one unit to Ship's Supply positive and negative using the two wire power cable that plugs into the 2 way connector on the rear of the unit (Red to positive, Black to negative). The supply should come from the switched side of a Circuit Breaker and be fused or protected at 5 Amps.

Ideally the power should connect to the centre unit of the system to ensure an even distribution of power. Again, ideally, the centre unit should be the Depth Master as this draws surges of power.

Connect all the instruments in the network to each other using the 5 way C-net cables. Try to keep cable runs as short as possible to reduce the risk of voltage drop and interference. If a remote instrument(s) is so far away that it suffers from voltage drop, a second power cable can be used PROVIDED it comes from the same point as the original. Each unit draws a maximum of 300mA with the lights on HIGH.

Neg   Pos

5 Amp

A second feed can be used PROVIDED it comes from the same point as the original.
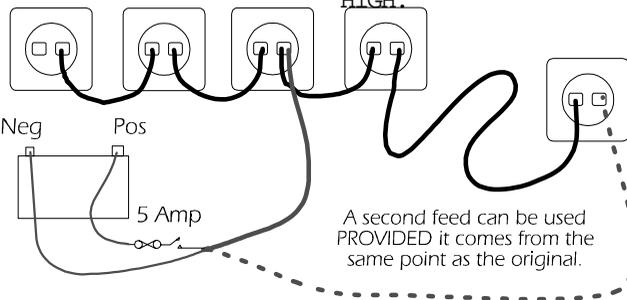
Good Wiring Practice

All cable runs should be kept as clear as possible from other cables carrying RF (Radio Frequency) or pulsed signals.

If it is necessary to extend any of the data cables, the same type of cable must be used and the screens must be carried through.

The Masthead Sensor

If the C-net WIND unit is the first of its type in the system it will require input from a Masthead Sensor.

Installation instructions are supplied with the Sensor. Fit the Masthead Sensor, according to the supplied instructions, then wire it to the 10 way terminal block on the rear of the C-net WIND unit as shown in the diagram below.
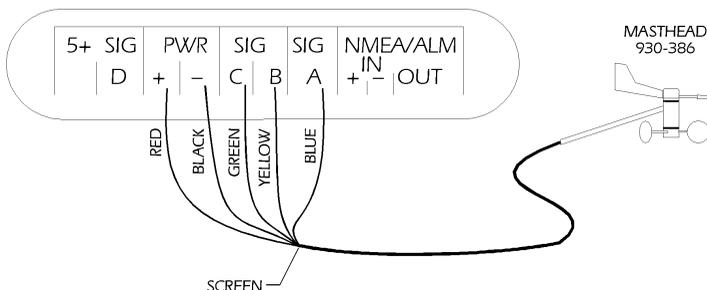
Cable Routing

When installing the Masthead Sensor it is important that the cable is not fitted in close proximity to antennae cables or cables carrying high currents. If the cable has to follow a similar route to cables of this type, ensure the distance between the cables is > 100mm (4").

Screen Connection

Where a Screen/Chassis connection is available, (NOT SS-ve), connect the Screen of the Masthead cable to this point.

Note:

In order for the C-net WIND to receive data from either the C-net Bus or a Masthead Sensor, the C-net WIND must be set to Product Type 0 during the Installation Settings.

Installation Settings

Once the physical installation has been completed, the
Installation Settings should be carried out.

To enter Installation Mode press the ⊖ and ⊜ buttons,
together, immediately after power up.

TRUE   APP

p t 0

The LCD will display the message "Pt" followed by a number.

Pressing the PAGE button now will cycle through a number
of selections that can be used to customise the product and
assist in adjustments.

TRUE   APP

s e t

If Installation Mode is not entered immediately after power
up, the first three adjustments are not accessible. The LCD
will display the "SEt" message to identify this limited settings
routine.

A full list of the settings and a description of the various
functions follows; those marked with an * are only available
from the full installation routine, entered immediately after
power up.

Display	Function	Description

TRUE   APP

p t 0

Set Product Type*

0 = Normal Operation
1 = Demo Mode (For Factory Use)
2-6 = NOT USED – The C-net WIND
will not operate if any of these settings
are used.
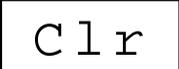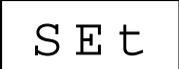Use the ⊖ and ⊜ buttons to change
the setting.

TRUE   APP

N a l

Needle Align*

Align needle to zero using the ⊖ and
⊜ buttons (this is factory set and
should not normally require
adjustment).

TRUE APP	Wind Speed	Calibration	Used only with Analogue Windvanes. The default setting is 50, simply use the ⊖ and ⊕ buttons to correct the accuracy of the displayed wind speed. This should not require adjusting unless the cable length has been extended, when inaccuracies may occur.

C 5 0

Wind Speed Calibration — Used only with Analogue Windvanes. The default setting is 50, simply use the ⊖ and ⊕ buttons to correct the accuracy of the displayed wind speed. This should not require adjusting unless the cable length has been extended, when inaccuracies may occur.

TRUE   APP

C l r

Clear Memory* — Press the ⊕ button to erase the memory. The unit must be powered down after this function, the Product Type and needle alignment will then require resetting. This function is primarily for factory use and should only be used with extreme caution.

TRUE   APP

S E t

No function — Press the PAGE button to move to the next setting.

TRUE   APP

d p 6

Damping Adjust — Press the ⊖ or ⊕ button to alter the damping.
Least damped (most active readings) = 0
Most damped (least active readings) = 9

TRUE   APP

A L N

Masthead Align — Use the ⊖ and ⊕ buttons to align the needle to zero when the wind is dead ahead.

TRUE   APP

U N 2

Units Selected — Use the ⊖ or ⊕ button to change the speed units;
0   =   Knots
1   =   Metres per Second
2   =   Beaufort
3   =   M P H

TRUE   APP   Wind Speed Alarm

```
A 0 0
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Use the ⊖ and ⊖ buttons to set a speed threshold value in knots.

A00 = OFF.

TRUE   APP   Exit the routine

```
E N D
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Press the ⊖ button to exit the routine or the PAGE button to step around the routine again.

All settings are stored in the memory when you exit the Installation Mode.

Self Calibration

The Masthead Sensor Unit is self calibrating and will perform automatic linearisation during slow 360° revolutions of the windvane. The unit will 'beep' each time a calibration is performed.

Carry out a calibration in steady wind conditions by motoring slowly in clockwise circles such that the turn takes more than 40 seconds but less than two minutes.

Calibration is complete when the unit beeps, which is usually after two turns. It is wise to check the Masthead Sensor alignment after calibration.

If You Need Assistance

If you do ever need to contact your Global Dealer or Distributor, it would save time if you could make a note of the following details for them:

Model Number:

Serial Number:

Software Version Number:

A description of the failure.

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Marine Electronic Services
Innovation House, 132 Nibley Road, Bristol, BS11 9XN
Tel: +44 1179 821522 Fax: +44 1179 521702

Express Marine
1 Donnington Park, Birdham Road, Chichester, Sussex, PO20 7DU
Tel: +44 1243 771000 Fax: +44 1243 778111