



MULTI

User's Guide



Cetrek[®]

SYSTEMS & CONTROL SYSTEMS



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Registered to BS 5750 Part 1
(ISO9000) (EN 29001)

A Company committed to Quality.

Cetrek Ltd. 1 Factory Road, Poole, Dorset, BH16 5SJ, England.

Tel: (0202) 632116 ■ Fax: (0202) 631980.

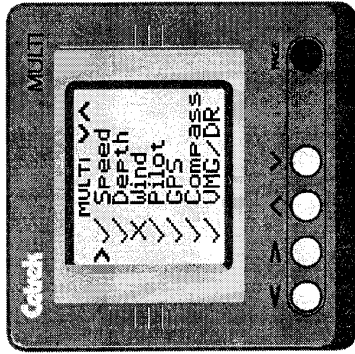
Cetrek USA. 640 North Lewis Road, Limerick, PA 19468, USA.

Tel: (215) 495 0671 ■ Fax: (215) 495 0675.

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 930-530 C-net MULTI

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. This cable carries power and shared data to all the other instruments connected in the chain. Therefore installation is quick and easy, as is expanding the system at a later date.

If you want a second Display or Display suite somewhere else on the vessel, all that needs connecting is the C-net cable.

Note: Polarised sunglass lenses may cause viewing problems with these, or any other, Liquid Crystal Displays.

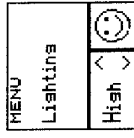
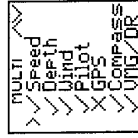
Using the Instrument.

The C-net MULTI instrument is designed to receive information from all C-net instruments connected to your system.

Whether mounted on or below deck you are kept in touch with the Speed, Trip Log, Temperature, Depth, Bearing, Wind Direction, Cross Track Error, Heading, etc throughout your journey.

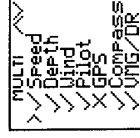
Calculations are also made during your journey for Velocity Made Good, True Wind Direction and your Dead Reckoned position.

The first page shows a listing of the C-net instruments available and indicates, with a tick or cross, whether connected to your system.



A second page enables access to the lighting adjustment.

The MULTI Page

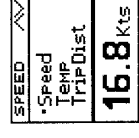


This page allows access to the various C-net DATA Pages, by using the four direction buttons to follow the paths to the information displays.

The buttons are represented by the symbols ⬅️ ➡️ ⬆️ ⬇️ in this manual.

When a C-net instrument option on the MULTI page is selected, by pressing the ➡️ button, this allows access to the various display options, the C-net instrument is indicated at the top left corner of the display.

The DATA Page



Three options are displayed at a time and one choice has a square symbol ■ alongside it, the information displayed in the lower window corresponds to the indicated choice.

If you want to view information from one of the other options, press the ⬅️ or ⬆️ button and the n will move or the order of the options will scroll round.

Press the PAGE button to return to the MULTI Page.

This list shows the C-net instruments, with the available displays indented to show the structure.

MULTI Page:



- Speed**
 - Speed
 - Temp
 - Trip Dist
 - Trip Time
 - Avg Speed
 - Max Speed
 - Total Distance
 - Total Time
- Depth**
 - Depth
 - Shallow AI
 - Deep Alarm
- Wind**
 - App Speed
 - App Dir
 - True Speed
 - True Dir
- Pilot**
 - Heading
 - Course
 - Status
- GPS**
 - Bearing
 - Dist
 - XTE
 - SOG
 - COG
 - WP no
 - Time
- COMPASS**
 - Heading
 - Variation
 - Status
- VMG/DR**
 - VMG
 - DR CMG
 - DR DMG
 - DR TIME
 - RESET

VMG. Velocity Made Good, this is your speed progress directly up-wind or downwind, available when C-net Speed and Wind Instruments are connected to your system.

DR. Dead Reckoned calculations are available when C-net Speed and either Compass or Pilot Instruments are connected to your system. Course Made Good is the average bearing made since reset. Distance Made Good is the direct distance covered from reset. Neither calculation includes tidal stream corrections and these must be applied to provide a more accurate Estimated Position (EP).

This page allows access to the LIGHTING option which is for adjusting the backlighting level of the display.

The MENU Page

Press the  or  button to cycle through the settings; OFF, HIGH or LOW, stopping at the one you wish to select.

If the backlighting is turned off, whenever the Page button is pressed (the one with the small raised pip), the backlighting will still turn on for about 15 seconds.

Press the PAGE button to return to the MULTI Page.

There are two classifications of Alarms;

- Warnings that are not urgent, or
- Alarms that are urgent and need immediate correction.

If a Warning is triggered then the audible alarm will sound and a picture (known as an icon) will be displayed in the Alarm Window corner of the MENU Page.

These will clear themselves when the fault condition clears.

If an Alarm is triggered, when viewing the MULTI Page, then the audible alarm will sound and the alarm page will be displayed immediately giving an explanation of the alarm. Pressing the Page button will remove the message from the display. The audible alarm will stop but the icon in the MENU Page Alarm Window will remain active until the fault is corrected.

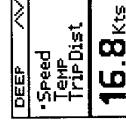
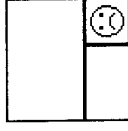
If an alarm is activated when viewing data in the DATA Page the title at the top left will indicate the alarm condition and the alarm will sound. Press page to clear the sound.

The NOT LOCKED warning gives a visual display only.

The smiling face in the alarm window can be turned off so that nothing is displayed unless there is an alarm or warning. (See the Installation settings on page 8).

Press the Page button to store any changed settings.

Alarms

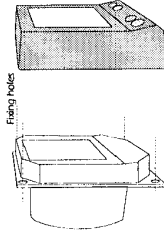


Remember

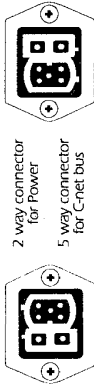
INSTALLING the C-net DISPLAY

Decide where you are going to install the display unit making sure that you leave sufficient room at the bottom edge to unclip the cover when the unit is installed (a "screwdriver" slot is provided at the bottom edge of the cover). A small right angled lever is available, part number 191-327, to allow removal of the cover in confined locations. Use the template to help you position and cut the hole for the back of the unit.

Unclip the front cover of the Display unit. Position the Display unit and fix it with four screws, one at each of the corners. Clip on the front cover, making sure that the buttons locate correctly. A gasket is supplied for fitting between the bulkhead and the back of the unit if that seal needs to be watertight.



The two connectors on the back are wired in parallel so either can be used.



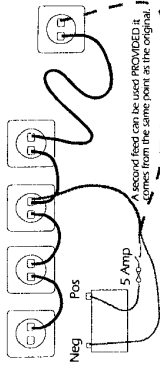
For a single unit installation.

Connect the unit to Ship's Supply positive and negative using the two wire power cable that plugs into the 2 way connector on the back of the display (Red to positive, Black to negative). The supply should come from the switched side of a circuit breaker and should 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 back of the display (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.

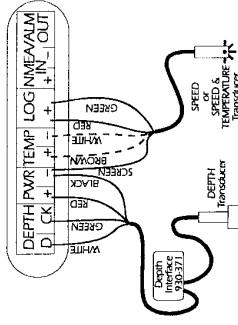
Connect all the instruments in the network to each other using the 5 way C-net cables. Try to keep cable runs as short as possible to reduce the risk of voltage drop and interference. If a remote instrument(s) is so far away that it suffers from voltage drop, a second power cable can be used PROVIDED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



If the display is the first of its type in the system it will require input from a transducer (unless it is a MULTI that reads all its data from the C-Net bus).

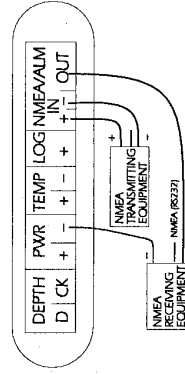
Transducers

Installation instructions are supplied with each transducer. Fit the transducer according to the supplied instructions, then wire it to the 10 way terminal block on the back of the display as follows:



NMEA Connections

Connect NMEA equipment to the network as follows:



External Alarms

External alarms are connected the same as the NMEA receiving equipment in the diagram above;

0 volt is a No alarm signal;
+5 volt is an alarm signal.

INSTALLATION SETTINGS

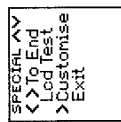
Selecton of Product type

Having completed the mechanical installation of the C-net Display the next step is to complete the initial installation settings.

Each Display can be set-up as either a Demo (Demonstration), Master or Slave Unit. The Master is the first unit of that type in the network and requires connection to a transducer to give it signals that it can interpret. Subsequent units connected to the network simply read the information put onto the network by the Master and must be set as 'Slave' types.

A Demo simply displays typical data without the need for transducer input.

After the unit has been fitted and wired, the correct Product type must be set. When first turned ON the Test screen is displayed and this will show a number that counts down from 05 to 00. At the bottom of the screen is the description of the Product type to which the unit is set. If it needs changing, follow these steps.



Power the unit up and press the and buttons simultaneously before the Test screen count down reaches 00. The display will then change to a SPECIAL menu.

Use the button to move the arrow down until it lines up with the 'CUSTOMISE' option.

Press the button to display the Customise screen.

Use the and to select the Product type as required.

Press the button to turn the smiling face OFF (or back to ON again).

Press the Page button to change the language the display will use (English, Spanish, French, German or Italian).

Press the button to return to the SPECIAL menu.

Press the button to select the EXIT option then press the button to exit the Special menu and return to the normal display pages.

