



USER MANUAL

NVIS LCD Display Models

15.0" Display

United States:	<p>Nauticomp International 1200 NE 7th Avenue Fort Lauderdale Florida, United States 33304</p> <p>p: +1 954 235 4875 f: +1-705-328-2990</p>
<p>URL: www.nauticomp.com E-Mail: sales@nauticomp.com</p>	

TABLE OF CONTENTS

1 GENERAL

1.1	Forward.....	3
1.2	Display Description.....	3
1.3	Contents of the Package.....	4
1.4	Warnings.....	5
1.5	Important Information.....	5

2 INSTALLATION

2.1	Handling Precautions.....	6
2.2	Planning.....	6
2.3	Power Requirements.....	6
2.4	Grounding.....	7
2.5	DC Power Connections.....	7
2.6	Extending the Power Cable.....	7
2.7	Cable Runs.....	8
2.8	Display Location.....	8
2.9	EMC Guidelines.....	9
2.10	Mechanical Installation – Display.....	10
2.11	Electrical Installation – Display.....	11
2.12	Recommendations for VGA and DVI Source.....	13

3 OPERATION

3.1	Primary Control Functions.....	14
3.2	Overview - Menu Mode.....	15
3.3	Button Functions – Menu Mode.....	15
3.4	Input Menu.....	16
3.5	Light Menu.....	17
3.6	Color Menu.....	18
3.7	Image Menu.....	19
3.8	Tools Menu.....	20
3.9	Tools Menu - OSD.....	21

4 MAINTENANCE

4.1	Routine Maintenance.....	22
4.2	EMC Servicing and Safety Guidelines.....	23

5 TROUBLESHOOTING

5.1	Common Symptoms and Possible Solutions.....	24
-----	---------------------------------------------	----

6 APPENDIX

6.1	Warranty Certificate.....	26
6.2	Warranty Limitations.....	26
6.3	Return of Goods Information (RMA).....	27
6.4	Document Revision History.....	27
6.5	Contact Details.....	28
6.6	Product Notes.....	29

1 GENERAL

1.1 Forward

Founded in 1997, Nauticomp Inc. designs and manufactures the widest range of watertight sunlight readable displays for worldwide markets. Nauticomp Inc. is a fully accredited ISO 9001:2000 Company with regional offices located in the United States of America and Europe.

With respect to product innovation, all Nauticomp displays are constructed to meet NMEA6/IP67 standards associated with the Industrial and Marine markets. The Displays are easily integrated into applications due to the use of industry standard interfaces and are designed to comply with the communications standards CE: CISPR/ EN55022 & EN 60945.

In support of the above, we offer the added value of a global network of experienced Dealers and Systems Integrators to ensure customer satisfaction.

Please carefully read and follow the procedures stated in this manual.

1.2 Display Description

NVIS LCD Displays offer the largest display in the smallest housing, minimizing overall dimensions, enabling multiple displays to be mounted and maximizing available space.

Each display is fitted with interface circuits that allow it to be connected with up to two (2) inputs from standard PC graphics cards. The display can accept signals of lower resolution, such as VGA. These signals are scaled so that they are displayed full screen.

Along with conventional LCD brightness and contrast controls, the display has an advanced dynamic brightness dimming technique, permitting full brightness to "Change to Red", "Change to Blue" and "Change to Green" selectable at any brightness which is typically employed during night-time operation at low backlight levels.

A unique but simple On Screen Display (OSD) user interface allows the user to adjust a wide variety of display parameters if necessary. Once the parameters are set they are stored in non-volatile EEPROM. This ensures that the set-up is retained after power is switched off.

All Displays are designed for operation from an external regulated 24V DC supply.

Each NVIS LCD Display is shipped with a 1 Year Limited Warranty 100% parts and labour.

1 GENERAL continued...


1.3 Contents of the Package

Each Display is shipped with:

Description	Part Number	Qty	Remarks
Power Cable	23-LTWPOWER	1	Feed from Nauticomp Power Supply: Display input 2pin (RED) connector – Length approx. 10' (3m).
Display - Mounting Kit	23-HARDWARE	1 Kit	
Power Supply 24V DC	00-0308	1	9-30V DC input. Waterproof.
VGA Cable	23-LTWVGA	1	Connects standard VGA Signals. Length approx. 10' (3m)
DVI Cable	23-LTWDVI	1	Connects standard DVI Signals. Length approx. 10' (3m)
Touch Cable	23-LTWTOUCH	1	Connects Touch screen to via USB.
Cut-Out (Paper) Kit	As Specified	1	X1 Display
User Manual	NVIS Manual Rev X	1	Installation & User Manual (Refer Section 8.5 for Rev)

1 GENERAL continued...

1.4 Warnings

- 1.4.1 **Product Installation:** This equipment must be installed and operated in accordance with the Nauticomp instructions provided. Failure to do so could result in poor product performance, personal injury and/or damage to connected items.
- 1.4.2 **Electrical Safety:** Make sure you have switched off the power before you start installing this product. The display unit contains high voltages. Adjustments require specialized service procedures and tools only available to qualified service technicians. There are no user serviceable parts or adjustments. The user should never attempt to service the equipment doing so will void the products warranty.
- 1.4.3 **Navigation Aid:** When this display is used within a navigation system, it is only an aid to navigation. Its accuracy can be affected by many factors, including equipment failure or defects, environmental conditions, and improper handling or use. It is the user's responsibility to exercise common prudence and navigational judgments. This unit should not be relied upon as a substitute for such prudence and judgment. Always maintain a permanent watch so you can respond to situations as they develop.
- 1.4.4 **TFT Colour LCD Displays:** The colours of the Display may seem to vary when viewed against a coloured background or in coloured light. This is a perfectly normal effect that will be seen with all colour LCD displays. In common with all Thin Film Transistor (TFT) panels, the screen may exhibit a few (less than 7) wrongly illuminated pixels. These may appear as black pixels in a light portion of the screen, or as coloured pixels in black areas.
- 1.4.5 **EMC Conformance:** The design and manufacture of Nauticomp equipment and accessories conform to the appropriate Electromagnetic Compatibility (EMC) standards, but correct installation is required to ensure that performance is not compromised. Nauticomp displays are designed to comply with EN55022 Class A-Emission, EN 55024- Immunity Standards & EN 60945.
- 1.4.6 **Disposal: Waste Electrical and Electronic Equipment (WEEE) Directive**
 This Product complies with the WEEE directive (2002/96/EC) marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. To dispose of your Nauticomp electronic product, please contact your local Nauticomp dealer, distributor, or the factory directly by visiting www.nauticomp.com.
- 1.4.7 **User Manual Content:** The technical and graphical information contained in this handbook, to the best of our knowledge, was correct as it went to press. However, our policy of continuous improvement and updating may change product specifications without prior notice. As a result, unavoidable differences between the product and handbook may occur from time to time. Nauticomp cannot accept liability for any inaccuracies or omissions it may contain.

1.5 Important Information

This User manual contains important information on the installation and operation of your new display. In order to obtain the best results in operation and performance, please read this User Manual thoroughly. Nauticomp's Technical Service representatives or your local dealer will be available to answer any questions you may have.

2 INSTALLATION

2.1 Handling Precautions

The casing of the Display gives good protection to its internal components. To prevent damage to the LCD Display, it is important to observe a few simple precautions.

- 2.1.1 Unpack your display carefully to prevent damage.
- 2.1.2 Save the carton and packing in case you need to return the Display for service.
- 2.1.3 If the surface is soiled, wipe lightly with clean absorbent cotton or other soft cloth.
- 2.1.4 The TFT panel and circuit boards contain devices that are sensitive to Electrostatic Discharge. Adequate ESD precautions should be taken during unpacking, handling and installation of the TFT monitor.
- 2.1.5 There are no user serviceable parts inside the monitor. All servicing must be carried out by qualified personnel.
- 2.1.6 The casing should never be opened by unqualified personnel, as there are potentially harmful voltages within this equipment.

2.2 Planning

Before you install your Display, plan the installation considering:

- 2.2.1 Display location and mounting options.
- 2.2.2 Power requirements.
- 2.2.3 Cable runs do not run video cables near any AC power sources.
- 2.2.4 Additional components e.g.

2.3 Power Requirements

The display requires an external, regulated 24V DC power supply.

2 INSTALLATION continued...

2.4 Grounding

It is important that an effective RF ground is connected to the display. You must ground the display by connecting the drain (earth) terminal directly on the Nauticomp power supply to the nearest RF ground source (superstructure). The length should be as short as possible.

CAUTION:

This Display is not intended for use on 'Positive' ground circuits. The power input cable Earth screen connections must be connected directly to a RF ground source.

2.5 DC Power Connections

The power connection to the Nauticomp Power Supply should be made at either the output of the battery isolator switch or at a DC power distribution panel. Nauticomp recommends that power be fed directly to the Nauticomp Power Supply via its own dedicated cable system. An in-line fuse is required to be installed on the positive (+) feed going to the Nauticomp provided power supply.

See table below for reference:

Power Source	Rating of Fuse
24 V DC	10 Amp

2.6 Extending the Power Cable

Longer power cable runs may require larger wire gauges to minimize any voltage drop in the cable. Ensure that the minimum voltage specification of the display is met at the junction of these cables when the display is operating at full brightness. If a longer power cable run is required, use the supplied power cable to connect to the display unit. Then use a suitable connector block to connect the free end to the extension cable; take particular care to ensure correct polarity and grounding of the screening braid to an RF ground source. The supplied 3m power cable has a cross-section of 16 AWG.

2 INSTALLATION continued...

2.7 Cable Runs

Consider the following before installing the Display:

- 2.7.1 All cables should be adequately secured, protected from physical damage and protected from exposure to heat. Avoid running cables through bilges, doorways, or close to moving / hot objects.
- 2.7.2 Acute bends must be avoided.
- 2.7.3 Where a cable passes through an exposed bulkhead or deckhead, a watertight feed-through should be used.
- 2.7.4 Make sure any excess cable is coiled and secured.
- 2.7.5 Do not run video cables near AC power sources or wires.

CAUTION:

Do not 'Pull' cables through the bulkheads, walls or tight spaces using a cord attached to the connector. This could damage the connections.

2.8 Display Location

- 2.8.1 **Viewing angle:** This LCD panel has been chosen to give the very best performance, including viewing angle. However, the contrast and colours seen on all LCD displays vary slightly with viewing angle.

Note: Viewing an LCD panel from the bottom angle (outside specified display viewing angle characteristic) is typically unacceptable.
- 2.8.2 **Access:** There must be sufficient space behind the display to allow cable connections to the rear connectors, avoiding tight bends in the cable. All connections are rear entry.
- 2.8.3 **Interference:** The selected location should be far enough away from devices that may cause interference, such as motors, generators and radio transmitter/receivers (see the EMC guidelines section 2.9).
- 2.8.4 **Magnetic compass:** Mount the display unit at least 3 ft (1m) away from a magnetic compass.
- 2.8.5 **Environment:** To prevent overheating, do not restrict airflow at the front or rear of the display unit; ensure there is adequate ventilation.

2 INSTALLATION continued...

- 2.8.6 **Heat Management:** The display is designed to work within most high ambient heat conditions. There are extreme yet rare conditions that may cause the display to go black or "Blackout". This is normally caused by concentrated and excessive UV rays (DIRECT SUNLIGHT) acting on the LCD panel.

To minimize the risk of the Display being subjected to the above one should endeavour to:

2.8.6.1 Employ additional cooling to assist with heat dissipation.

2.8.6.2 Provide additional shading.

2.9 EMC Guidelines

All Nauticomp Displays and accessories are designed to the best industry standards for use in the rugged electronic environment. The design and manufacture conforms to the appropriate Electromagnetic Compatibility (EMC) standards (Section 1.4.5 refers), but correct installation is required to ensure that performance is not compromised. Although every effort has been taken to ensure that they will perform under all conditions, it is important to understand what factors could affect the operation of the product. The guidelines given here describe the conditions for optimum EMC performance, but it is recognized that it may not be possible to meet all of these conditions in all situations. To ensure the best possible conditions for EMC performance within the constraints imposed by any location, always ensure the maximum separation possible between different items of electrical equipment.

For optimum EMC performance, it is recommended that where ever possible Nauticomp Displays and cables connected should be:

- 2.9.1 At least 3 ft (1 m) from any equipment transmitting or cables carrying radio signals e.g. VHF radios, cables and antennas. In the case of SSB radios, the distance should be increased to 7 ft (2 m).
- 2.9.2 More than 7 ft (2 m) from the path of a radar beam. A radar beam can normally be assumed to spread above and below the radiating element.
- 2.9.3 Supplied from a separate battery from that used for engine start. Voltage drops below 10 V, and starter motor transients, can cause the equipment to reset and or cause the loss of some information and may change the operating mode.
- 2.9.4 Used with Nauticomp specified cables. Cutting and rejoining (Splice) these cables can compromise EMC performance and must be avoided.

NOTE:

If a suppression ferrite is attached to a cable; this ferrite should not be removed.

2 INSTALLATION continued...

2.10 Mechanical Installation - Display

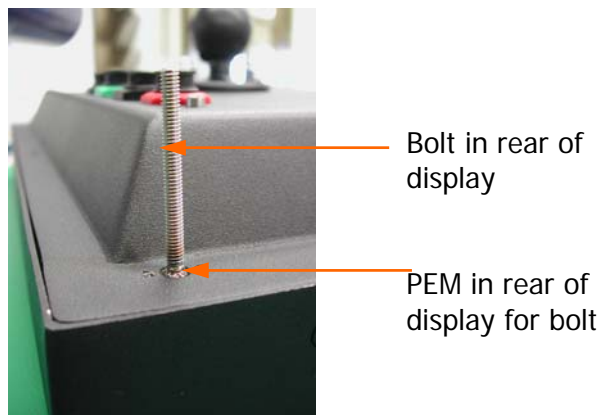
2.10.1 Surface Mounting (15.0" Display)

Step 1 Leave protective cover on LCD in place until completion of installation.

Step 2 Refer to the cut-out dimensions supplied in the package, make a cut-out in the mounting location and drill holes for Surface bolts.

Step 3 Install bolts in rear of display then place your NVIS Display into the cut-out.

Step 4 Install 'Wing nuts' (x4) on bolts on rear of display.



Above Illustration – 'Bolt' on the rear of the Display.

2 INSTALLATION continued...

2.11 Electrical Installation - Display

2.11.1 Cabling – Electrical Supply

Step 1 Connect input voltage wires from the Nauticomp Power Supply to the vessels power supply.

Example: On DC systems connect the **RED** wire to the positive and the **BLACK** wire to the negative.



Example of Power Supply

2 INSTALLATION continued...

2.11.2 Cabling – Connections

- 2.11.2.1 Power output from the provided Nauticomp Power Supply is to be 24V DC. Please check voltage before connecting to the Display for the first time.
- 2.11.2.2 To aid installation ALL circular connectors on the display are colour coded and labelled to match corresponding interface cables.
- 2.11.2.3 All cables can only be installed one-way. Do not force any cables in.
- 2.11.2.4 All Nauticomp cables have locking mechanisms to ensure proper installation.
- 2.11.2.5 All connectors must be connected to the output source before connecting to Display.

15.0" NVIS LCD Display



Above Illustrations – Interface Connections (Rear Entry)

CAUTION:

Always connect all video input cables before connecting the power.

- Step 1 Align LTW logo on each circular connector so that it faces away from the display – Press in and turn connector clockwise until secure.
- Step 2 Gently pull all cables to ensure that they are connected securely. Repeat steps for all circular connectors.

2 INSTALLATION continued...

2.12 Recommendations for VGA/DVI Source

All Nauticomp Displays comply with VESA DDC1/2B Windows Plug and Play. No driver disks are required. A computer running Windows 2000, XP and later versions may interrogate the display for its technical characteristics. For best results Nauticomp recommends that you set the PC or device to match the "native" resolution, and suggested frequency as suggested in section 6 of this manual. (see specifications for your particular display)

For Example: 1024 x 768 at 60Hz is the preferred resolution and refresh rate. Unlike CRT Displays, LCD displays do not flicker; hence selecting a higher refresh rate provides no advantage.






3 OPERATION



3.1 Primary Control Functions

On initial 'Power Up' the buttons illuminate blue. Each button performs a primary control function.

Button Layout

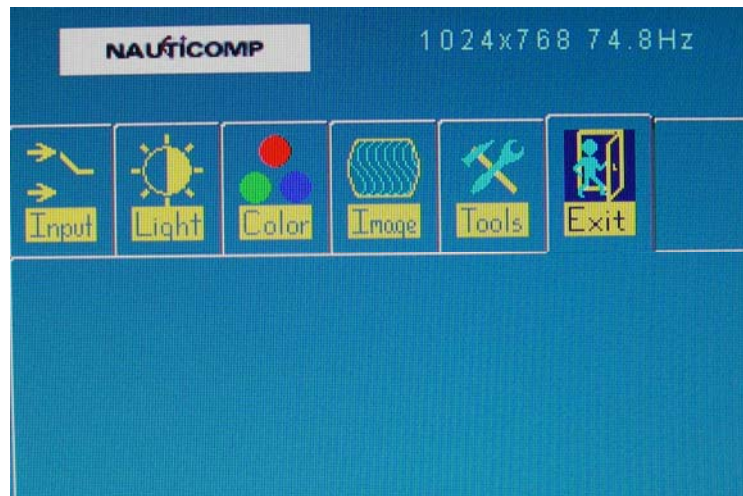


- | 1) |  | Button – Primary Control Function (non Menu Mode) |
|----|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Press to change the input |
| 2) |  | No function |
| 3) |  | Press to access the menu (OSD - On Screen Display) |
| 4) |  | Change to Red, Blue or Green: Momentarily press to toggle between standard colors and Red, Blue and Green for day time and night time viewing at any brightness level. |
| 5) |  | ON/OFF: Momentarily press to turn display on or off. Display turns on at lowest brightness in Red mode. |

Switch Layout	Switch – Primary Control Function
	Turns the NVIS feature ON and OFF. Up position is ON down position is OFF.
	Turns the Touch feature ON and OFF. Up position is ON down position is OFF.

3 OPERATION continued...

3.2 Overview - Menu Mode There are up to Six (6) different Menu Tabs:



Buttons 1, 2 & 3 (section 3.1 refers) are used to navigate and select OSD (On Screen Display) settings:-

- 3.2.1 Momentarily pressing button 3 (**Menu** button) activates the Display's OSD. When this is done the monitor displays the NVIS Menu - In Menu Mode other functions for button 3 are: **Access / Select / Save**. Refer to table section 3.3
- 3.2.2 In Menu Mode the functions of buttons 1 & 2 (**up/down**) are changed to operate: **Move / Scroll / Adjust**. Refer to table section 3.3
- 3.2.3 To close the menu highlight the word EXIT located in the Option area on the far right and press the **Menu** button. Alternatively, the menu can be left to time out and disappear by itself.

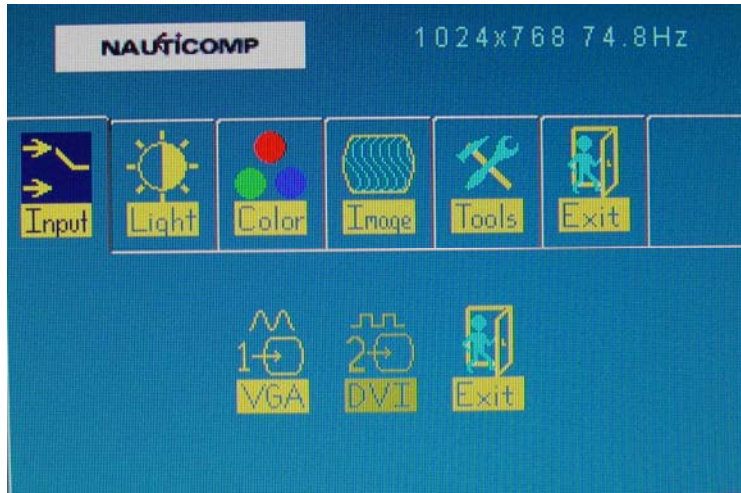
3.3 Button Functions – Menu Mode

Navigation Function	Button
ACTIVATE the Menu Mode:	Press the 3 button
MOVE to next Menu TAB:	Use 1 & 2 buttons
ACCESS Selected Menu TAB (highlighted Blue):	Press the 3 button
SELECT a desired parameter/setting:	Press the 3 button
ADJUST parameter/setting:	Use 1 & 2 buttons
SAVE parameter/setting:	Press the 3 button

Detailed description of the OSD menus are listed on the following pages:

3 OPERATION continued...

3.4 Input Menu

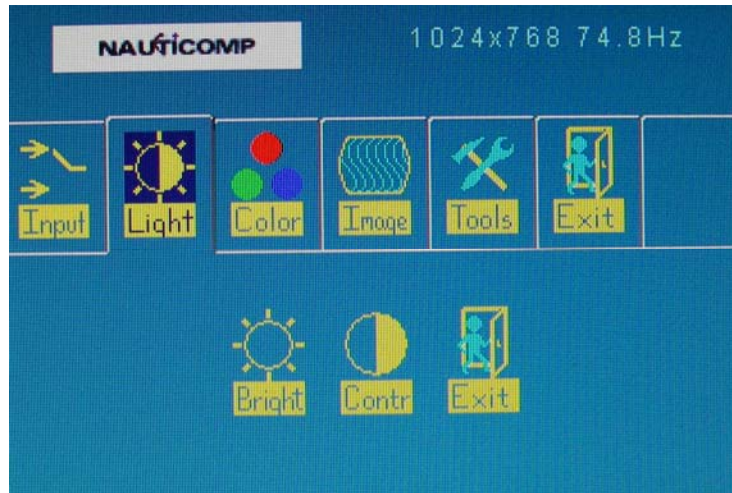


Input Menu - As viewed on Display



INPUT - Functionality...		
OPTION	FUNCTION	DESCRIPTION
MAIN SOURCE	Signal Inputs: 1) VGA 2) DVI	Select one (1) Signal Input source to be viewed in the Main Screen.
EXIT		

3 OPERATION continued...

3.5 Light Menu

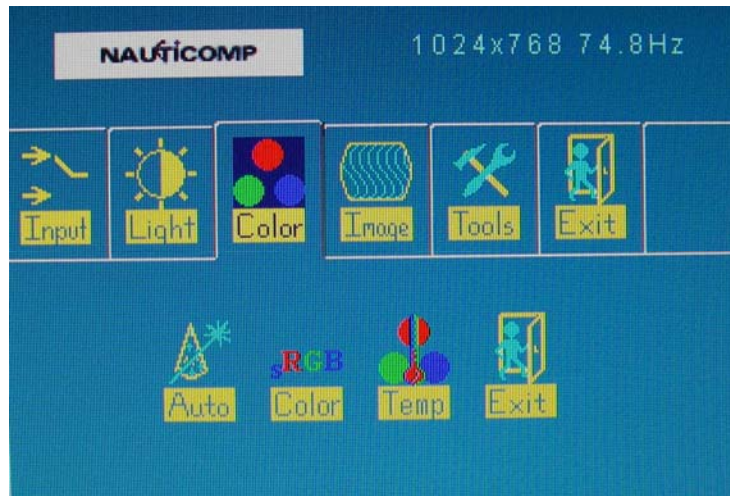


Light Menu - As viewed on Display...

LIGHT - Functionality...		
OPTION	FUNCTION	ILLUSTRATION
BRIGHTNESS	Adjusts the LCD Panel Brightness (not Backlight)	
CONTRAST	Adjusts the LCD Panel Contrast	
Note: When you select an OPTION - The above corresponding 'Adjust Bar' appears along the bottom of the OSD.		

3 OPERATION continued...

3.6 Color Menu



Color Menu - As viewed on Display...

COLOR - Functionality...		
OPTIONS	FUNCTION	ILLUSTRATION
Auto	Automatically adjusts color settings for display.	
Color	Automatically adjusts the RGB settings for the display	
Temp	Adjust the color temperature of the display	
Exit		

Note:
When you select an OPTION - The above corresponding 'Adjust Bar' appears along the bottom of the OSD.

3 OPERATION continued...

3.7 Image Menu

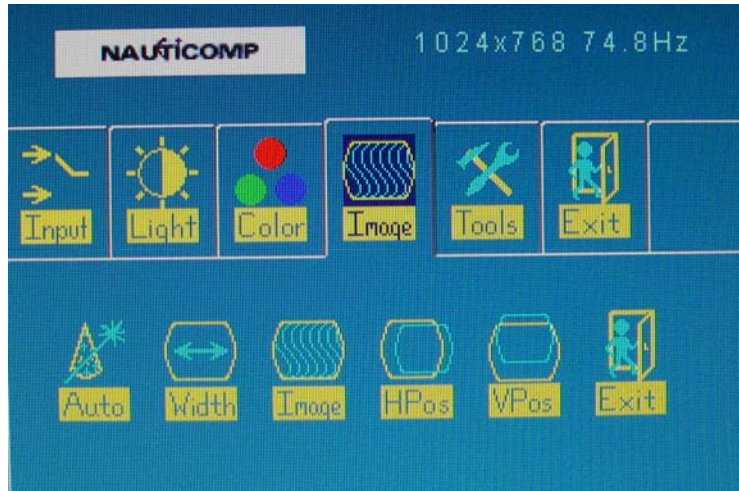


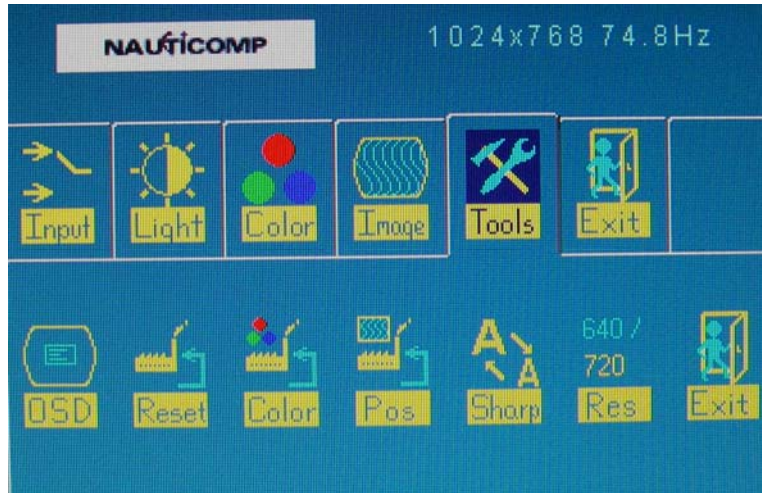
Image Menu - As viewed on Display...

IMAGE - Functionality...		
OPTION	FUNCTION	DESCRIPTION / ILLUSTRATION
AUTO	Automatically adjusts the image position	
WIDTH	Adjust the width of the image	
IMAGE	Adjusts the image	
H POSITION	Adjusts the image left and right	
V POSITION	Adjusts the image up and down	
EXIT		







Note:
When you select an OPTION – The above corresponding 'Adjust Bar' appears along the bottom of the OSD.

3 OPERATION continued...

3.8 Tools Menu

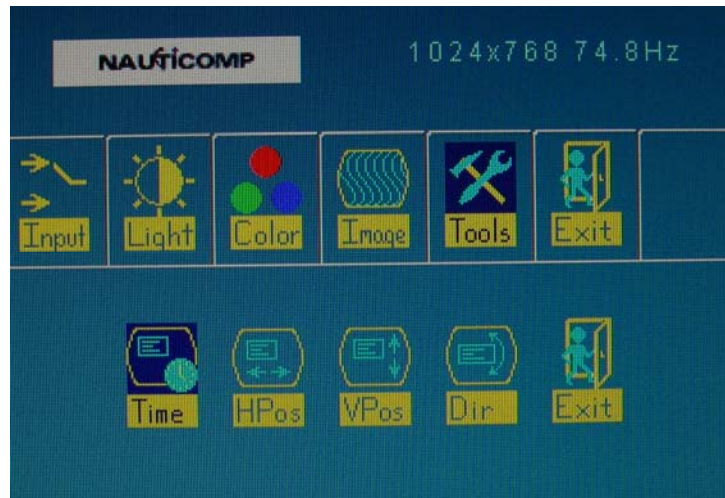



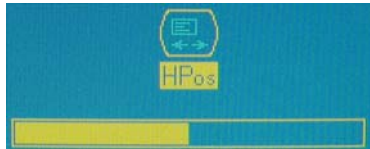


Tools Menu - As viewed on Display...

TOOLS - Functionality...		
OPTION	FUNCTION	ILLUSTRATION
OSD	Select to change settings of the OSD	
RESET	Resets to factory defaults	
COLOR	Resets to factory default color	
POS	Resets to factory default position	
SHARP	Adjusts the sharpness of the display	
RES		
EXIT		
Note: When you select an OPTION - The above corresponding 'Adjust Bar' appears along the bottom of the OSD.		

3 OPERATION continued...

3.9 Tools Menu - OSD



OSD - Functionality...		
OPTION	FUNCTION	ILLUSTRATION
TIME	Adjusts the time out of the OSD	
H POSITION	Adjusts the OSD Horizontal Position	
V POSITION	Adjusts the OSD Vertical Position	
DIRECTION	Adjusts the Direction of the OSD	
EXIT		

Note:
When you select an OPTION - The above corresponding 'Adjust Bar' appears along the bottom of the OSD.

4 MAINTENANCE

4.1 Routine Maintenance

Good performance requires maintenance checks regularly. The following are recommended:

- 4.1.1 Check all cable connectors on the rear of the display to ensure they are secured.
- 4.1.2 Check the cable connectors on the external Nauticomp Power Supply. Inspect for corrosion on all connections – Terminal contacts must be tightly fastened.
- 4.1.3 Examine all cables for signs of damage such as; chafing, cuts, nicks or corrosion.
- 4.1.4 Take care when cleaning the display. Wipe the LCD with clean, damp cloth to remove dust or salt deposits. Use an LCD cleaner to dissolve the debris and change the cloth frequently so as not to scratch or damage the glass. To remove grease marks, carefully apply a mild detergent solution or IPA (Isopropyl Alcohol). After cleaning the display polish glass with the microfiber cloth.

CAUTION:

Ensure the Display is disconnected from power before carrying out routine maintenance.

CAUTION:

Do not wipe the Display with a dry cloth - As this could scratch the screen coating.

CAUTION:

Do not use Acid, Ammonia based or abrasive products.

4 MAINTENANCE continued...

4.2 EMC Servicing and Safety Guidelines

Only authorized Nauticomp service technicians should service Nauticomp Displays. They will ensure that service procedures and replacement parts used will not affect performance.

Kindly note the following:

- 4.2.1 There are no user serviceable parts in any Nauticomp Display or power supply.
- 4.2.2 Some products generate high voltages. Never handle the cables/connectors when power is being supplied to the equipment.
- 4.2.3 When powered up, all electrical equipment produces electromagnetic fields. These can cause adjacent pieces of electrical equipment to interact with one another with a consequent adverse effect on operation. In order to minimize these effects and enable you to get the best possible performance from your Nauticomp display, guidelines are given in the installation instructions (Section 2.9 refers), to enable you to ensure minimum interaction between different items of equipment, i.e. ensure optimum Electromagnetic Compatibility (EMC).
- 4.2.4 Always report any EMC-related problem to your Nauticomp dealer. We use such information to improve our quality standards.
- 4.2.5 In some installations, it may not be possible to prevent the equipment from being affected by external influences. In general this will not damage the equipment but it can lead to spontaneous resetting action, or momentarily may result in faulty operation.

5 TROUBLESHOOTING

All Nauticomp Displays are subjected to comprehensive testing and quality assurance programs. However, if this unit should develop a fault, please refer to the following table to identify the most likely cause and the corrective action required to restore normal operation.

If you still have a problem after referring to the table below, contact Nauticomp Technical Services Department for further advice.

Always quote the product serial numbers. Display unit serial number is printed on the back of the unit.

5.1 Common Symptoms and Possible Solutions

Symptom	Cause	Solution
Display will not power on?	24V DC Power Supply	Physically Check: <ol style="list-style-type: none"> a) Ensure power cable is installed securely on rear of display. b) Ensure power cable is connected to power supply correctly. c) Ensure power supply is outputting 24 volts. d) Power cable for cut and nicks. e) For voltage at end of cable. f) To see if the fuse has blown.
No Video Signal?	1) Connections 2) Output Source	Ensure video cable is connected securely to output device and the back of Display. Ensure output device is powered on and working correctly with another display if possible.
Poor Video Signal?	1) Connections 2) Interference 3) Resolution	Ensure video cable is connected securely to output device and back of display. Physically Check: <ol style="list-style-type: none"> a) Ensure cables are not run close to high power output devices, and are not making sharp angles. Ensure: <ol style="list-style-type: none"> a) Output device is in proper resolution for the display you are running. b) Pins on the interface cables are not bent.

5 TROUBLESHOOTING continued...

Symptom	Cause	Possible Solution
Screen Blacking Out?	Excessive UV Rays	If LCD does black out the Display needs to be shaded until picture returns to normal. ...Once the affected area's temperature decreases normal operation will resume.
Display seems dim?	Backlight Brightness to low	a) In high ambient light conditions adjust the LCD panel Brightness & Contrast.

6 APPENDIX continued...

6.1 Warranty Certificate

The Nauticomp Warranty terms and conditions as described below do not affect the customer's statutory rights:

Limited Warranty

Nauticomp warrants each new NVIS LCD Display to be of good materials and workmanship. Nauticomp or its approved agents will repair or exchange under warranty any parts proven to be defective in material or workmanship under normal use, for a period of 1 Years/12 months from date of shipment from Nauticomp. Nauticomp Limited Warranty covers the parts and labour associated with any warranty repair as described above, provided that the unit is returned to Nauticomp or one of its appointed agents.

6.2 Warranty Limitations

Warranty Limitations

Nauticomp Warranty policy does not apply to equipment that 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. Nauticomp assumes no responsibility for damage incurred during installation or as a result of improper installation. This Warranty does not cover routine system checkouts, alignment/calibration, sea-trials or commissioning.

A suitable proof of purchase, showing date, place, and serial number must be made available to Nauticomp or authorized service agent at the time of request for Warranty service. Overtime/premium labour 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 Nauticomp facility or an authorized dealer at owner's expense and then 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.

6.2.1 This warranty is strictly limited to the terms indicated herein, and no other warranties or remedies shall be binding on Nauticomp including without limitation any warranties of merchantable or fitness for a particular purpose.

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

All Nauticomp 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 Nauticomp equipment.

6 APPENDIX continued...

6.3 Return of Goods Information (RMA)

Obtaining Warranty Service

In the event of Warranty service being required, contact Nauticomp directly. A suitable proof of purchase, showing date, place of purchase, and serial number must be made available to Nauticomp or authorized service agent at the time of request for Warranty service.

Note

Make sure to call Nauticomp Technical support to obtain an RMA Number before returning ANY defective product to Nauticomp. Failure to do so may result in rejection of shipment.

6.4 Document Revision History

The current issue is the last on the list.

Revision	Date	Author	Checked & Approved
2	Feb 23rd 2010	Nay & Jay	YES

6 APPENDIX continued...

6.5 Contact Details

United States:

Nauticomp International.
1200 NE 7th Avenue.
Ft Lauderdale, Florida, 33304.
Tel: +1 954 235 4875

Nauticomp Inc. is fully accredited ISO 9001:2000 Company



INTERTEK
Certification N° 4546



Copyright © 2009 Nauticomp Inc.

Information in this manual is copyrighted to the respective owners.
All other product names or trademarks are properties of their respective owners.

All rights are reserved by Nauticomp Inc. This information may not, in whole or in part, be copied, photocopied, reproduced, translated or reduced to any electronic medium or machine-readable form without the prior written consent of Nauticomp Inc.