



LCD Installation Manual

**Version 1.0
(Multi-port)**

Edition

September 2006, AMBIENTNAV™ LCD Display

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Revision History

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Owner Record

Please take a moment and record your product serial number in the field below. If the display ever requires service refer to this information when contacting AmbientNAV support.

Serial Number	Invoice Date	Purchased from
_____	__/__/__	_____

Support Information

support@ambientnav.com or www.ambientNAV.com or

Call us directly at: (425) 248-2096 x2

Introduction

Welcome to your new AMBIENTNAV™ LCD Display! This manual is designed to assist you in your initial installation and setup of the hardware, and answer the most common questions that you may ask. The LCD display is very easy to install and only requires a few important steps. You are free to mount the display in any fashion within the parameters of this guide. If you have further questions, please contact your retailer from whom you bought the system. If they are not able to answer your questions, see the Technical support section for details on contacting CDI directly.

PLEASE READ THE ENTIRE MANUAL BEFORE
PROCEEDING WITH INSTALLATION

Overview

The AMBIENTNAV™ LCD Display is comprised of the main LCD Display, with facilities to either mount it on a pedestal (using the mounting holes on the back) or flush mount (using the included Flush Mount Kit) There is 9-32 Volt to 12v power supply or 110 vAC adaptor and a VGA cord that is used to attach the display to the computer. Each component has specific installation requirements which must be followed in order for the whole system to operate correctly and safely.

Before cutting any wood or drilling any holes to mount the system, please plan carefully. The system includes a video cable, which is used to connect the LCD Display to the main computer and a desktop power adaptor. Make sure the locations you choose can be connected with the included cables. If you need further distance, extension cables are available.

Let's start first with general mounting locations.

Factors to keep in mind!

- 1) Power to the display should first flow through a circuit breaker. If using DC power, **use only the AMBIENTNAV™ 12.3V Power Control Unit (PCU)**. Use of unregulated power directly from batteries or other supply will harm the voltage sensitive electronics inside. Each PCU uses a fuse to protect the equipment. **12v systems require a 5amp fuse, while 24v systems may use a 3 amp fuse.**
- 2) Distance from the display to the main computer is limited to the included video cable, unless you have extension cables. It is possible to use up to 40 feet of well-shielded video cable, please contact your retailer for details.
- 3) The display front is water resistant and can be used in an environment where water may splash on the front. This is only valid if the display is flush mounted and sealed along the bezel edge. The BACK of the display is NOT in any way WATER RESISTANT or able to function in temperatures above 113 degrees Fahrenheit Ambient. DO NOT place them in any location where water or heat will collect or there is a high level of condensation. Water damage is not covered under the warranty.

Tools

- 1) Phillips head screw driver
 - 2) 15-30 minutes
 - 3) cable ties (to secure any loose cables)
- 4-40 x 1/2" SS screws (can be used to secure the connections into the display)

Power Control Unit (PCU)

The PCU regulates and cleans your power to the display. Bypassing the unit will cause damage to the display and void your warranty. Use the two mounting tabs to attach your PCU to any suitable surface. The PCU will produce heat while operating so be sure the area has some ventilation.

Mounting the LCD Display

Flush Mount

The cutout dimensions for the display are:

AMBIENTNAV™ 17" : 12 15/16" vertical by 14 7/16" horizontal

AMBIENTNAV™ 15" : 11 1/16" vertical by 13 5/16" horizontal.

(Tolerance: -0.0", + 0.10" horizontal and vertical).

Maximum panel thickness is 2.0", minimum panel thickness is 0.25". The outside bezel flange is 3/8" all the way around. The display comes with (2) mounting tabs (Included in the accessory kit) that are used to easily create a snug fit between the display and the console cutout. Installing the display will require four simple steps.

Pre - Installation Steps

- 1) Wiring – Connections
 - a. All cables connect to the back of the display. If needed, there are five 4-40 threaded holes on the inside base that can be used to attach cable ties for strain relief. You will need to provide space for the cables to exit the display and go to the computer. It is highly recommended you evaluate all the cable connections and where they terminate before you cut or drill anything.



Installation

- 1) Mounting
 - a. Flush Mount:

Do NOT use pedestal mounts for flush mounting

 - i. Place the display into the cutout hole and use the supplied mounting tabs, snug them up on the backside and tighten bolts. Do not apply excessive force or the display can delaminate.
 - ii. For a waterproof console, use a soft sealant compound, to seal the front bezel. **DO NOT** use any hard permanent marine adhesive sealant like Sikaflex or 3M 5200. If you ever have to remove the display, you will not be able to; use a soft non-adhesive sealant like silicone. If you use a sealant that is considered strong and permanent, then your installation will also be permanent.
 - b. Pedestal Mount:
 - i. There are threaded holes on the back of the display that allow for either a standard VESA mount plate or a RAM mount plate to attach to the display (use 1/4-20 x 3/4 SS screws). See below for further details.
- 2) Plug in the cables and attach to the computer and power source.
- 3) Apply power:
 - a. Turn on the computer
 - b. Turn on the display using the switch on the left side of the display.
 - c. Turn up the dimming knob on the right side of the display. **NOTE:** See also “Dimming the brightness of the display” section.

- 4) You should see the computer starting up. Adjust the brightness to your liking.

Pedestal Mounting

VESA mount

The AMBIENTNAV™ display can easily be pedestal mounted. There are eight threaded mounting holes on the back of the display designed for the industry standard VESA mount. A wide variety of mounting arms are available with the VESA standard to choose from. Once you have chosen your mount, remember to buy (4) ¼"x20 by ¾" long stainless bolts along with four ¼" lock washers to attach the mount to the display.

RAM Mount

If you would like to mount this display using a RAM mount, the required parts are listed below in Figure 1.

Figure 1.

Count	Description	RAM Part#
1	1.5" ball mount (VESA 4.5" base)	RAM-246U
1	1.5" ball, arm 7.88" length	RAM-201U-D
1	1.5" ball, base mount	RAM-202U
1	(Optional) Complete kit containing above three items	RAM-101U-D-246
4	Bolts: ¼"x20 by ¾" long (stainless steel recommended)	n/a
4	¼" flat washers	n/a
4	¼" lock washers	n/a
3 or 4	Screws (to attach the pedestal mount to your dash - easily determined after you have received the mount and decided where the mounting location will be.)	n/a

CDI is a RAM dealer and can provide you with any mount you need.

Cleaning the LCD Display

- 1) **Acceptable cleaning agents:**
 - Water
 - Vinegar, mixed with water
 - Isopropyl Alcohol

- 2) **What are some of the basic supplies needed to clean an AR coated glass LCD screen?**
 - Always use a soft cotton cloth
 - Computer wipes

- 3) **Cleaning Cloth**
 - There are several Micro fiber cleaning cloths available that work great for gently cleaning the glass. CDI offers cleaning cloths (pn: CDI-ACC-CLO-001), either contact your retailer or contact our sales office for ordering information.

- 4) **Proper Cleaning Techniques:**
 - Do not spray any liquids on the LCD screen directly. Always apply the solution to your cloth first, not directly to the parts you are cleaning.
 - Stroke the cloth across the display in one direction, moving from the top of the display to the bottom.

- 5) **Unacceptable Cleaners:**
 - Acetone
 - Ethyl alcohol
 - Ammonia
 - Methyl chloride

Dimming the brightness of the display

NOTE: The display requires about 30 minutes to fully warm up in order for the dimming circuit to function as designed.
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To adjust the overall brightness of the AMBIENTNAV™ display, use the round knob on the right lower corner of the display. Turning it left will decrease the brightness and turning it right will increase the brightness. Turning the brightness knob all the way to the left will decrease the display image to black. The OSD is **NOT** used for dimming control.

Selecting the Input Source

These displays can accept input from the following sources:

- 1) Analog RGB (VGA)
- 2) Digital DVI (DVI-D)
- 3) Composite video
- 4) S-Video

Plug in the appropriate video sources and you will be able to select them using the INPUT button on the front of the display. Each time you press the INPUT button the input is switched to the next input in the order above. If there is no signal being received by the display, you will get a “No Signal” message in blue on the front of the display and the display will remain blank. The display will automatically sense the appropriate signals for each source. If you can not see the image you expect, most likely there is a problem with your source, not the display.

Using the On Screen Display controls (OSD)

The buttons on the bottom of the display are used to make changes to various characteristics of the LCD display and normally do not need to be modified. Below are the descriptions of the items most commonly adjusted.

Bringing up the On Screen Display (OSD).

Press the Menu button to open the OSD menu as shown.



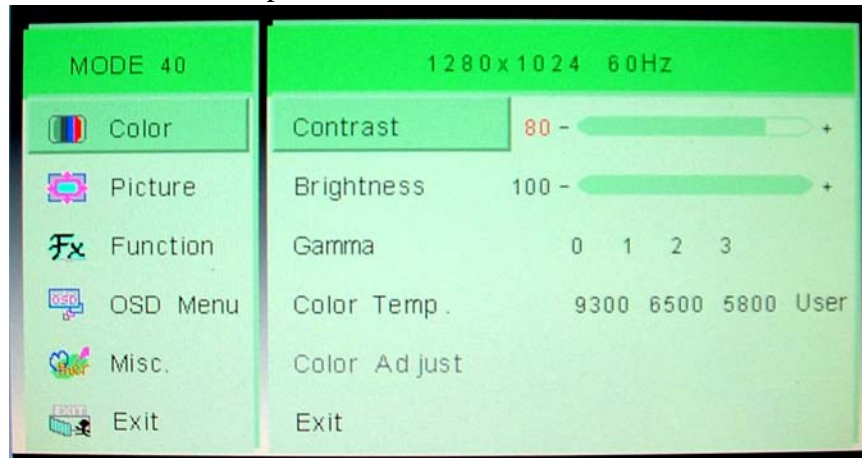
This will bring up the On Screen Display (OSD), where you can make changes to brightness, contrast, color depth, and color definition.

Selecting Brightness

Brightness is NOT adjusted using the On Screen Menu. Use the Brightness knob on the lower right of the display.

Selecting Contrast

Press Menu, Menu to open the OSD menu and select the color screen as shown. Using the Up or Down buttons, highlight the word Contrast and press the Menu button to select.



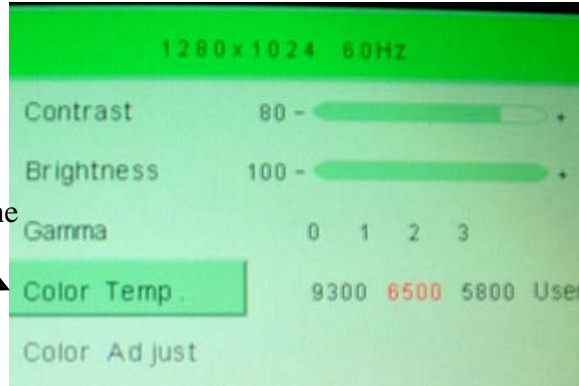
If you want to increase the contrast level, press the Up button. If you would like to decrease the display contrast, press the DOWN button.

Press Exit or Menu button to leave this item, or wait 20 seconds and the menu will automatically close.

Selecting Color Temperature.

Press Menu, Menu to open the OSD menu and select the color screen as shown.

Highlight the word Color Temp. and press the Menu button to bring up the color options.

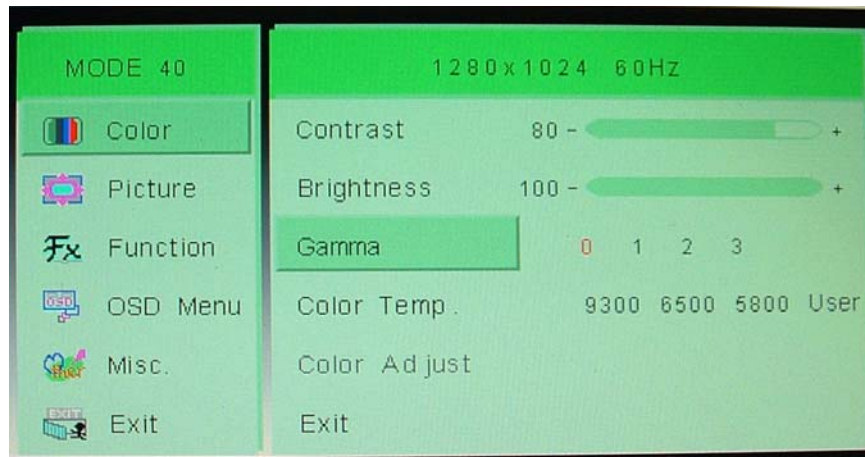


This menu allows you to modify the display color range and is used mainly to modify how colors appear. Select from one of the four choices. We have found that the 6500k color choice appears best, but select the others and see which appears best to you. Use the Up and Down buttons to highlight and then use the MENU button to make your choice.

Press Exit to leave this screen, or wait 20 seconds and the menu will automatically close.

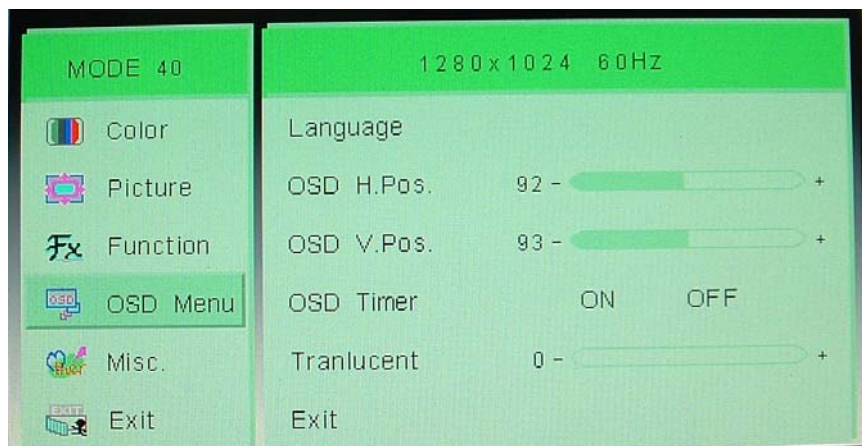
Selecting Gamma Correction (color intensity)

This adjusts the color intensity of the screen. If your screen appears somewhat washed out, you can adjust this setting to both add color and improve image quality. Highlight the word Gamma and press the MENU button. This will bring up the selection below for options 0,1,2,3. Select the option that works best for you and press Menu to commit your choice, or wait 20 seconds and the menu will automatically close.



Selecting the Manager Menu

Using the Up and Down buttons to scroll the menu icons, Select OSD Menu and press the MENU button to open the OSD Menu.



The OSD Menu is used to change the screen position as it appears on the display, select what language the display uses, set the timeout for the menu, and how the menu appears on the screen. Press Exit after you have applied your settings.

Language

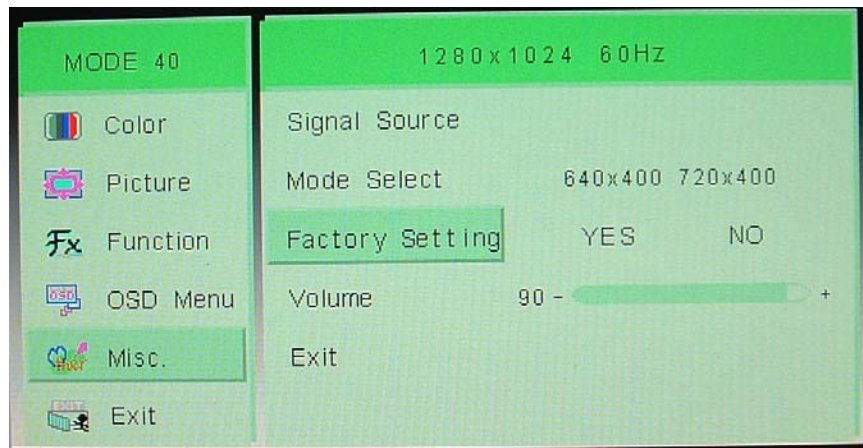
The OSD menu can be displayed in six different languages: English, French, German, Spanish, Italian, and Danish. To select the desired language, on the OSD Menu, press the Menu button to activate the menu, press the Menu button, scroll to the desired language, and press the Menu button.

OSD Timer

Currently, it is set for a 20-second delay before it automatically exits. Disable it to make the OSD available until you manually exit.

Reset to Original Factory Configuration

If you have made changes and do not know how to undo them and need to simply reset all the setting to OEM, press the following keys in order: Press Menu, Up, Up, Menu to open the OSD menu and select the Miscellaneous screen as shown below. Using the Up or Down buttons, highlight the word **Factory Setting** and press the Menu button to execute. This will reset all functions. Please only do this if you need to.



Technical Support

There are no internal adjustments or access. If you have questions regarding the operation of this display not answered by this manual, please contact the retailer through whom you purchased this display. If they are not able to answer your questions, CDI can be contacted below.

Email: support@ambientnav.com

Web: www.ambientnav.com

Phone: (425) 248-2096 x2