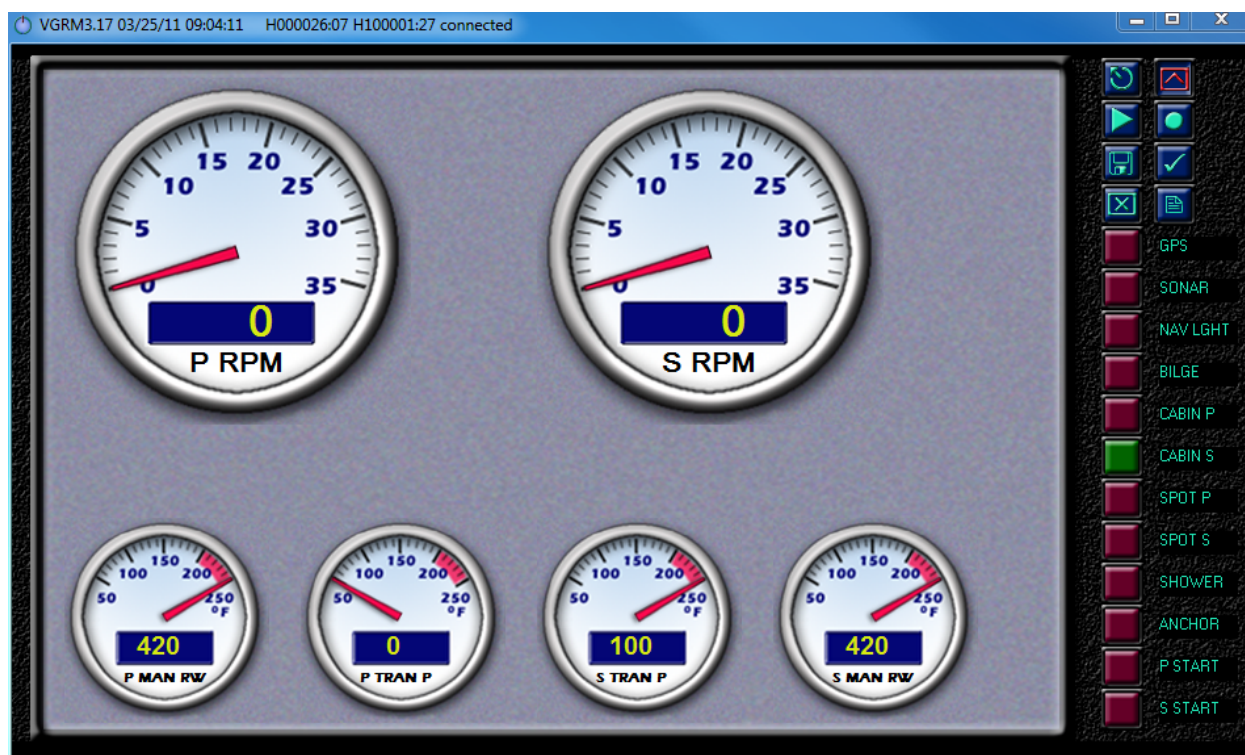

vDash™

Version 3.13.3 User's Manual Part I

Install, Connect, & Virtual Data Screen



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Important Product Information

WARNING!

USE THIS UNIT ONLY AS AN AID TO MONITORING ENGINE PERFORMANCE INFORMATION.

CAUTION

When showing sensor data, this unit will only show information based on the sender used and its installed position.

The operating and storage temperature for your unit is from -4 degrees to +167 degrees Fahrenheit (-20 to +75 degrees Celsius). Extended storage temperatures higher or lower than specified will cause the liquid crystal display to fail. Neither this type of failure nor its consequences are covered by the warranty. For more information, consult the factory customer service department.

All features and specifications are subject to change without notice.

Chetco Digital Instruments may find it necessary to change or end our policies, regulations, and special offers at any time. We reserve the right to do so without notice.

All screens in this manual are simulated.

NOTICE!

Free software upgrades will be available on our website at [http:// www.chetcodigital.com](http://www.chetcodigital.com) as they are released. Please check our website periodically for these and other information as they become available.

Thank you for choosing Chetco Digital Instruments

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the factory customer service department for help.

Specifications

Operating System:..... Windows XP/Vista/Windows 7

Maximum Update Rate:..... 1 per second

Supported Units: vGauge/SeaGauge-Remote, vGauge/SeaGaugeG12,
vGauge/SeaGaugeG12C, vGauge/SeaGaugeG18C,
vGauge/SeaGaugeG12N, G24, G24C, G32, G32C, vSwitch

Firmware Version:..... VGRM3.12, G12R1.14, G12C1.1

Analog Input Channels: 16

Pulse Input Channels:..... 3

NMEA Input Channels: 6 (NMEA 0183), optional NMEA 2000

Digital Switch Positions: 12

Display Graphics Options (color):..... Text, Horizontal Bar Graph, Vertical Bar Graph, Histogram, Small
Dial, Large Full Dial, Large Half Dial, Extra Large Text.

Display Pages: 8

Digital Interfaces: SERIAL, USB, TCP/IP

LOG File Format: *.CSV, *.TXT (NMEA \$IIXDR)

NMEA 2.0 Instrumentation Sentences \$IIXDR,A \$IIXDR,C \$IIXDR,D \$IIXDR,F \$IIXDR,G \$IIXDR,I \$IIXDR,P
\$IIXDR,R \$IIXDR,S \$IIXDR,T \$IIXDR,U \$IIXDR,V, \$GPGLL, \$SDMTW, \$SDDBT, \$SDVLW, \$SDVHW

Introduction

Thank you for purchasing a Chetco Digital Instruments product.

vDash™ is a software application utility that provides a virtual dashboard on a Windows XP, Vista or Windows 7 based PC/Laptop. vDash™ works with vSwitch, SeaSwitch, SeaGauge™ and vGauge/SeaGauge™ to allow configuration and data logging via attached serial cable, USB, or Bluetooth wireless interface.

Once installed on your PC/Laptop, vDash™ accepts NMEA 0183 (and optional NMEA 2000 data) from built-in serial ports, parses the recognized sentences and displays the data in a real-time viewer window. Up to 8 display screens can be laid out with a variety of graphic display formats using the point and click interface of attached computer mouse or touch pad. Once the desired formats are configured, vDash™ provides real-time programming of any attached or vGauge/SeaGauge™ product.

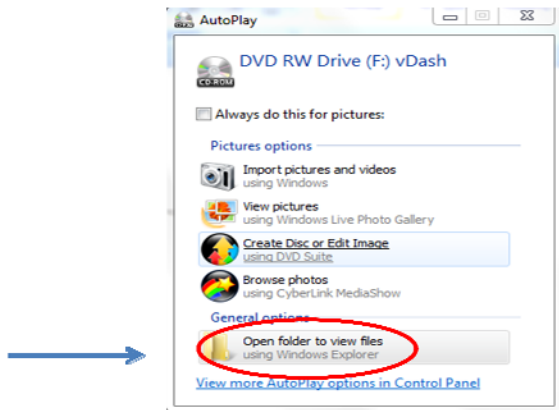
vDash™ allows complete configuration and programming of vGauge/SeaGauge™ and via attached PC. Custom user settings are stored in configuration files on the PC and then transferred to the attached units. Unit Firmware updates can also be performed using simple commands.

vDash™ provides real-time data logging of sensor data to host PC or optional USB memory stick from vGauge/SeaGauge-Remote units via USB or wireless interfaces.

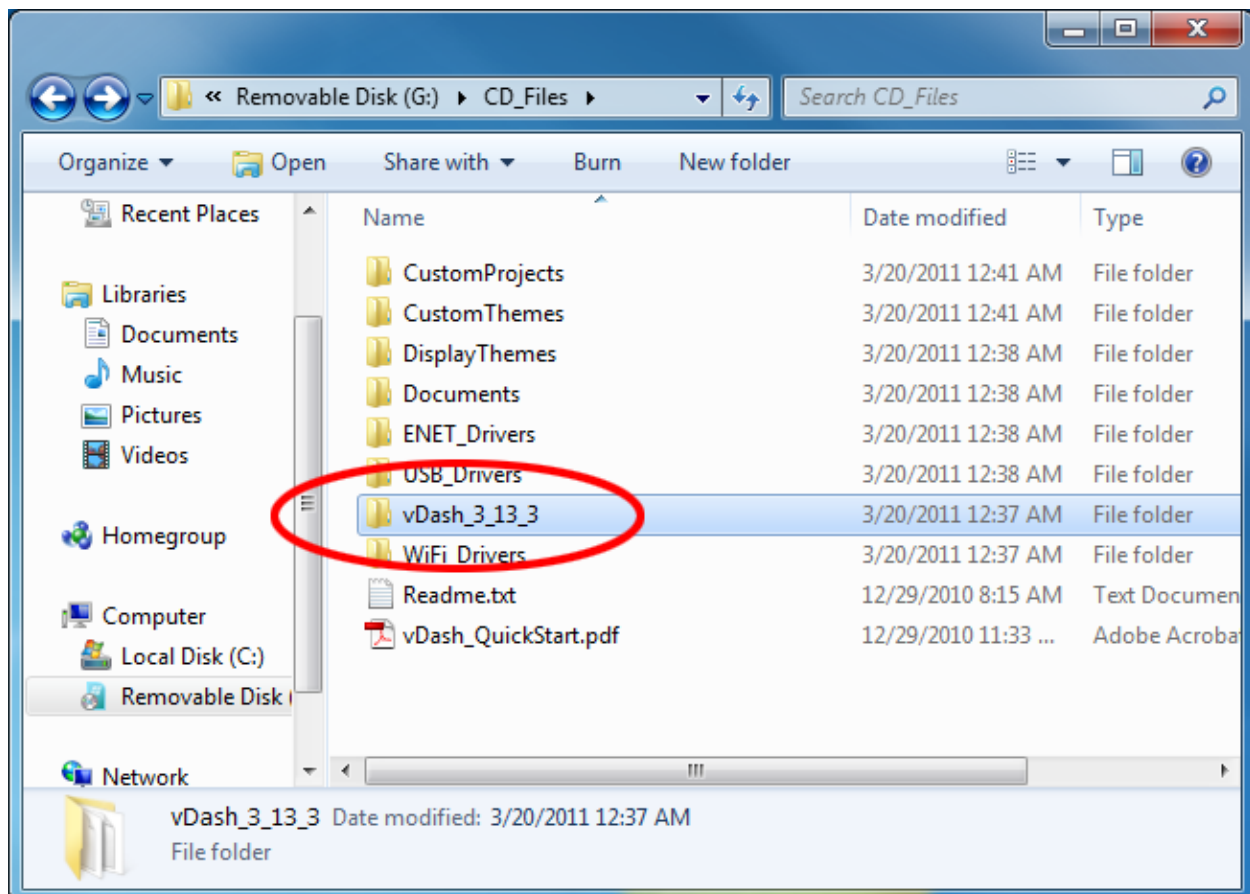
Installation

Windows 7

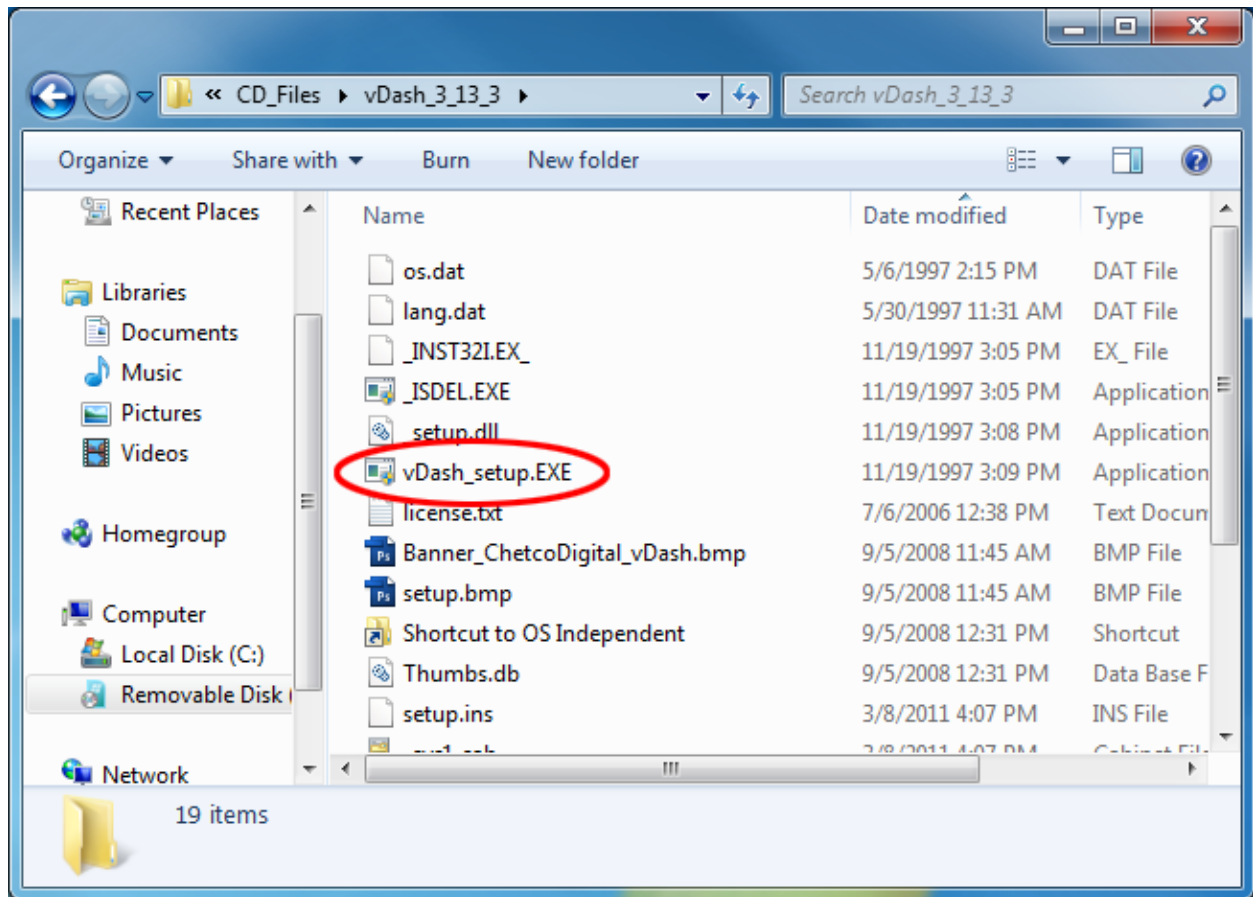
Step 1: Insert CD into computer drive slot (or plug in external flash USB drive). When the below screen appears point mouse pointer to “Open folder to view files” Left click mouse one time.



Step 2: Choose version of vDash you are loading and left click 2 times (if loading from a USB flash drive, the install files maybe within the “CD_files” directory).



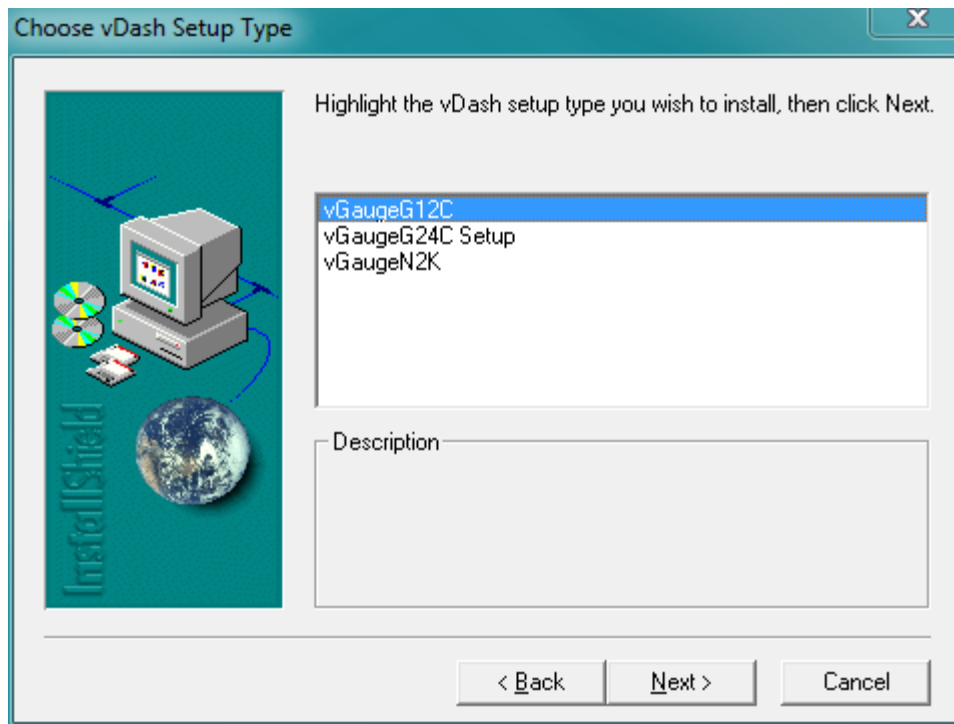
Step 3: Below screen will appear. Point mouse to vDash setup file. Double click on file.



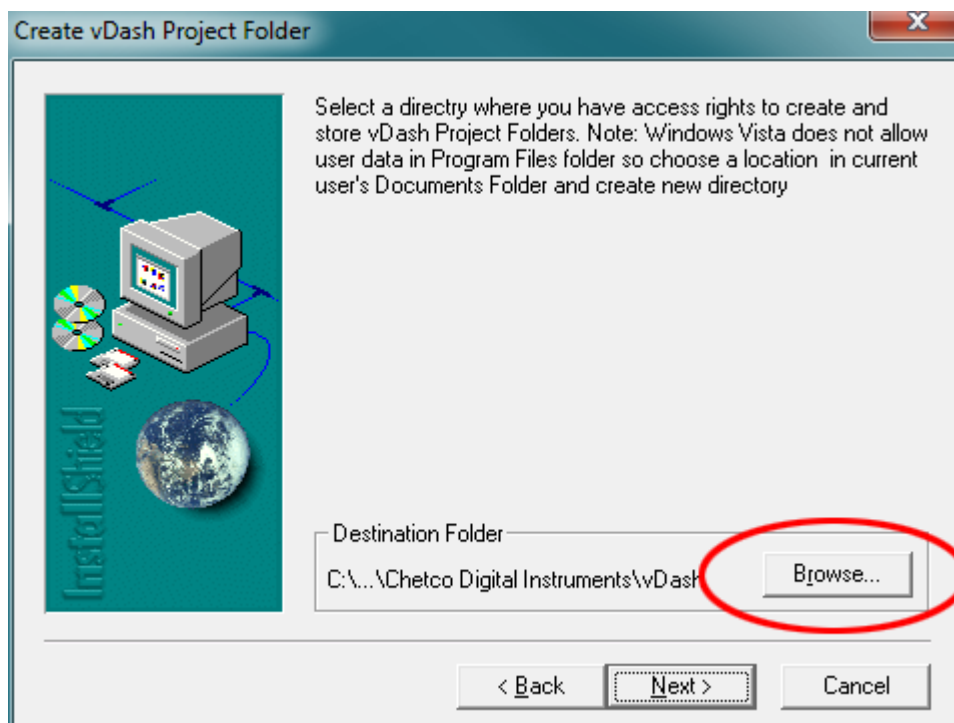
Step 4: Once the Welcome screen appears click next

Step 5: On License acceptance screen click "Yes"

Step 6: vDash Setup Type screen appears. Choose your vGauge/SeaGauge system. You may see more than the 3 listed below. This screen list will grow as we add more Gauge packages. After you highlight the Gauge of your choice point your mouse to "Next" and left mouse click.

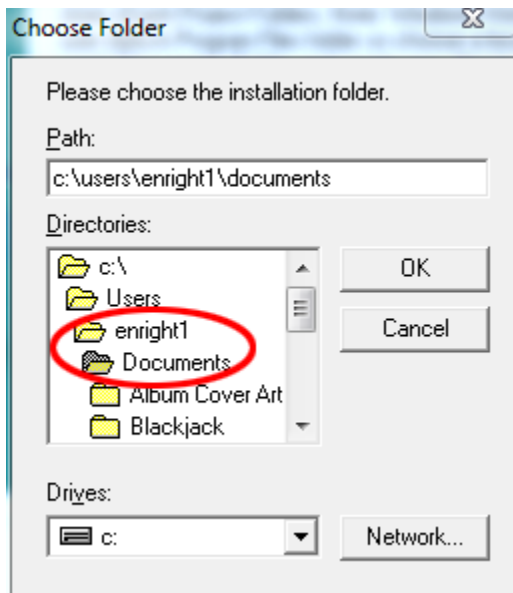


Step 7: Create vDash Project Folder appears. Click on “Browse”. Select a location in your documents folder or briefcase folder (or advanced users select any location on your drive) to park your vDash project folder. It is important to remember what folder you select as you will need to refer to this folder in the future.



A: Double left click on “C:\”

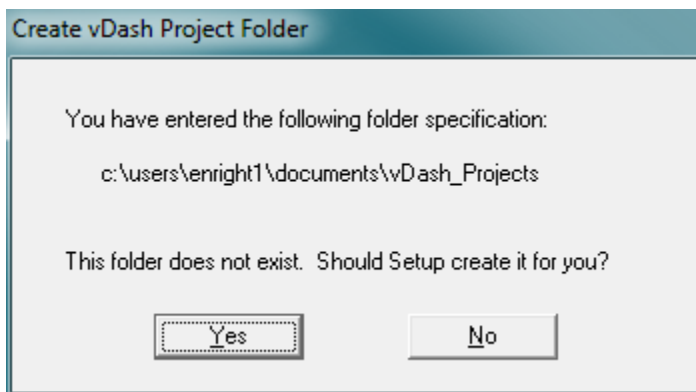
- B: Double left click on “Users”
- C: Double left click “your name” (In this case it was “enright1”)
- D: Double left click on “Documents”
- E: Single left click “OK”
- F: Single left click “Next”



After you select a location point the mouse cursor to ‘Next” and click.

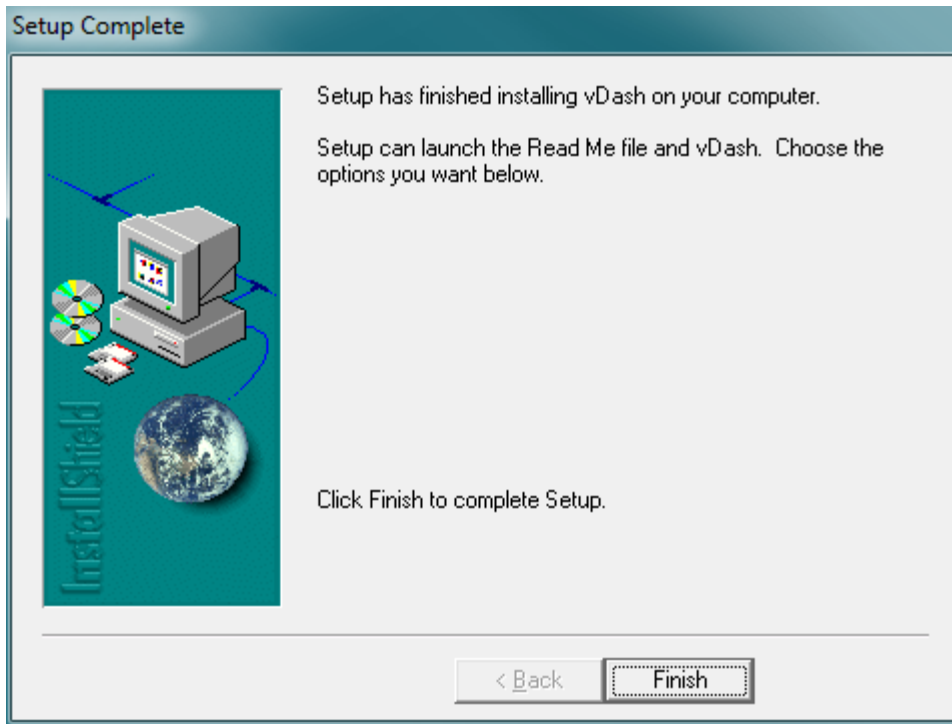
Step 7 continued: Select a location in your “Documents” folder (advanced users select any location on your drive) to park your vDash project folder. **It is important to remember what folder you select** as you will need to refer to this folder in the future.

Step 8: The following screen will appear. Select and click on “Yes”

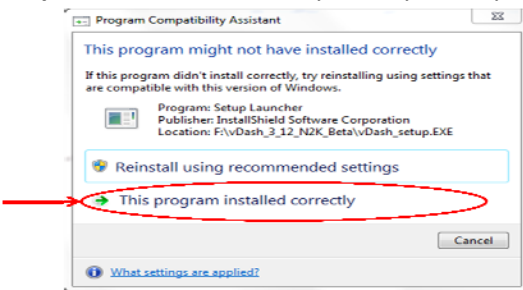


Step 9: Select program window will appear. Left single click “Next”

Step 10: vDash software installation status window will display installation graphs. When installation is complete the ‘Setup Complete” window will appear. Click “Finish”.

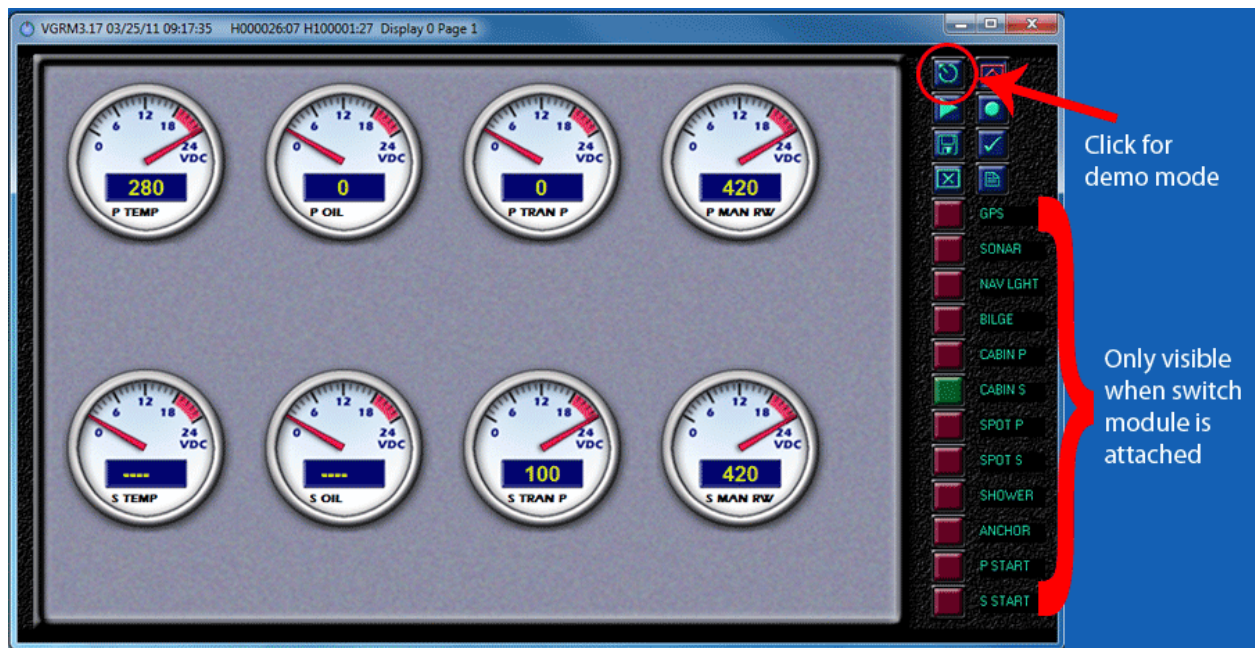


Step 11: After installation you may or may not see the following message:



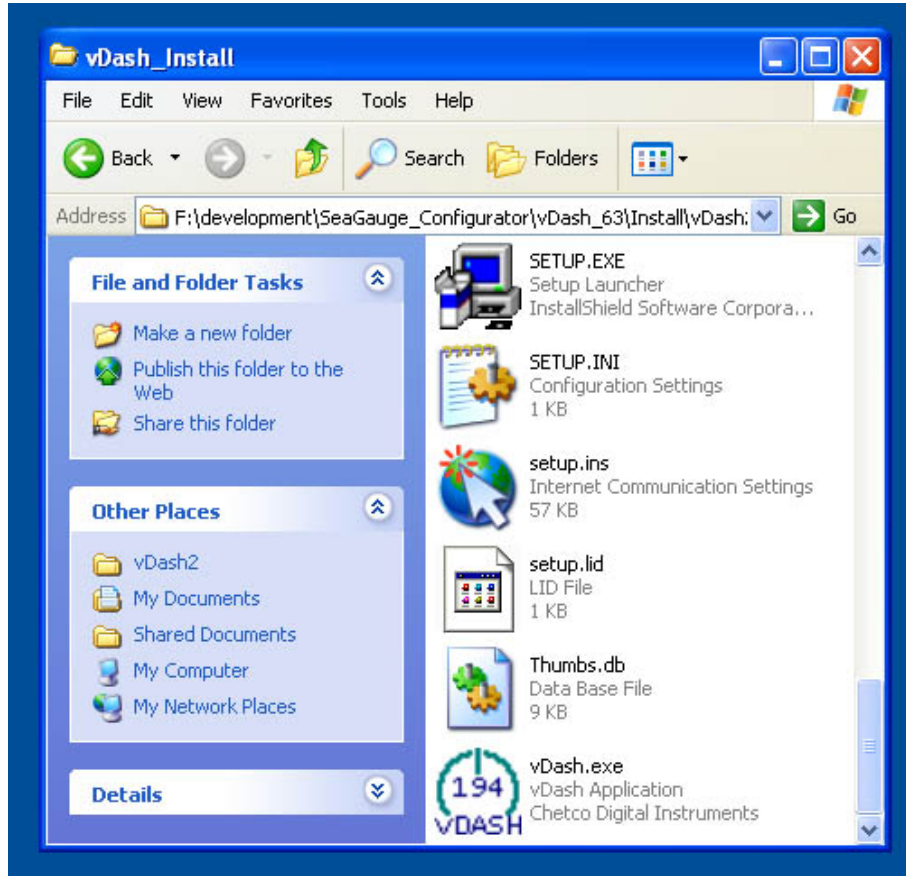
If you see this message; disregard it and click on “This program installed correctly”.

Step 12: vDash is now installed on your computer. Go to your Windows programs page and locate the vDash icon and single click. This will launch the vDash program. Once launched you will see the screen below. This is the vDash main screen. To confirm installation click on the ‘Demo’ button. The vDash program will display a demo version of functioning gauges. The data that will be displayed is ‘ONLY a DEMO’ and not live data.

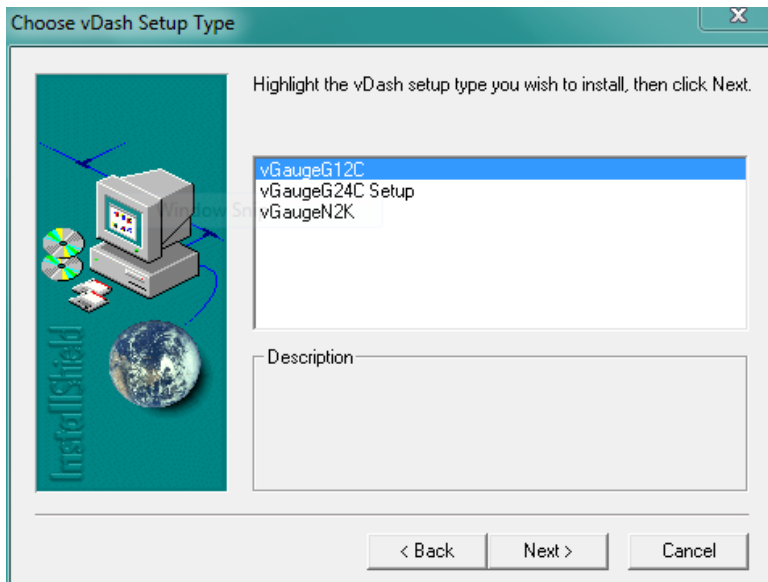


Windows XP

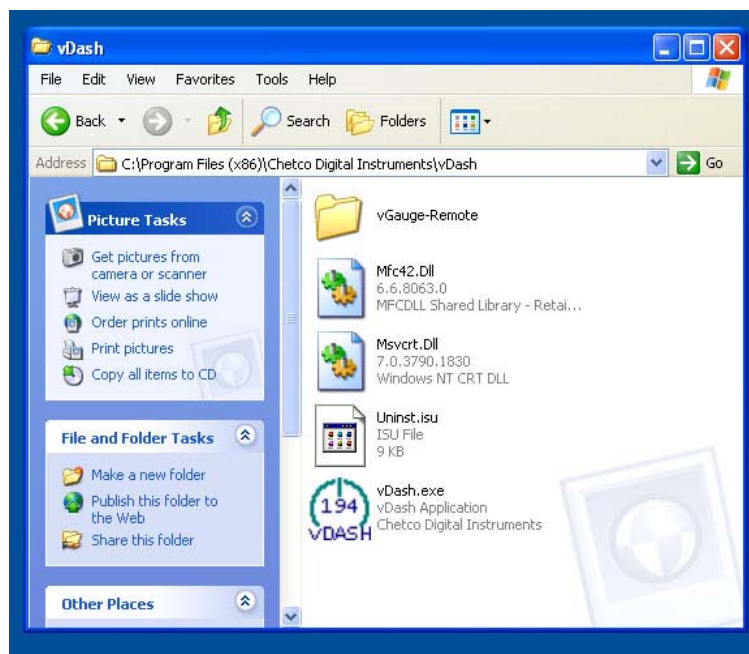
The PC/Laptop version of vDash™ is a complete installation script. Just uncompress the folder and start the "SETUP.EXE" program to install in the default program directory.



Follow the installation prompts. When you reach the SETUP TYPE screen, select the model of vGauge/SeaGauge unit you wish to install. This option will copy the necessary configuration files for the selected unit. If you do not have a vGauge/SeaGauge unit, you can still select any of the options to install demonstration files.

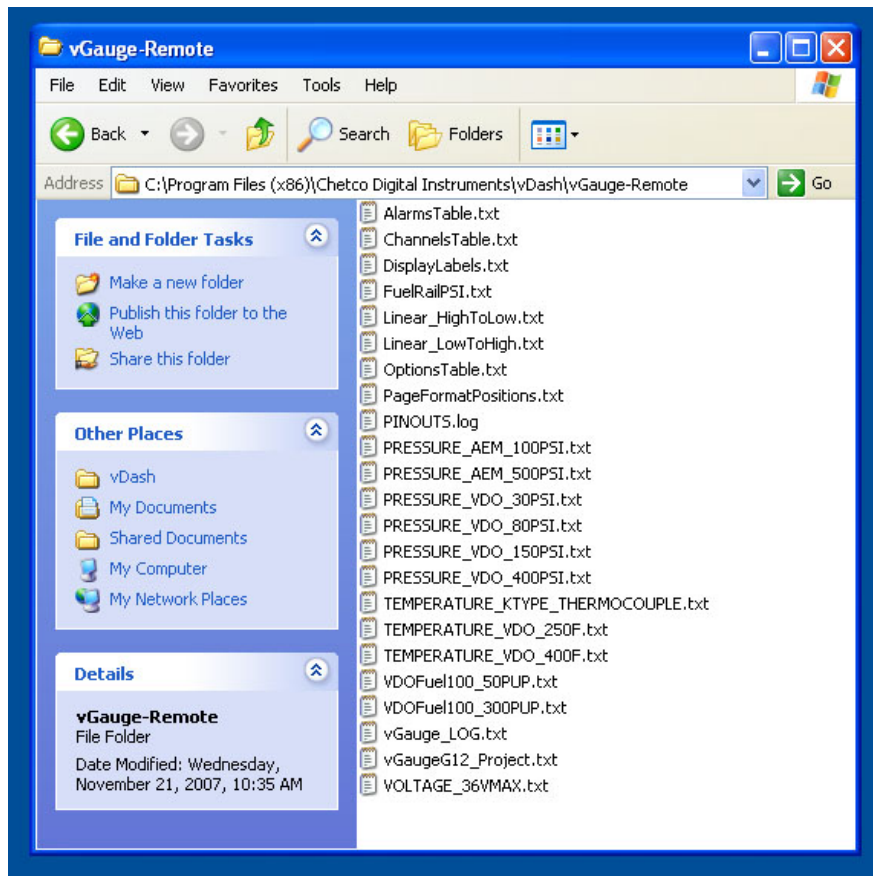


When installation of a project is completed, a new folder will be created in the target location with files required for configuration of the selected vGauge/SeaGauge unit



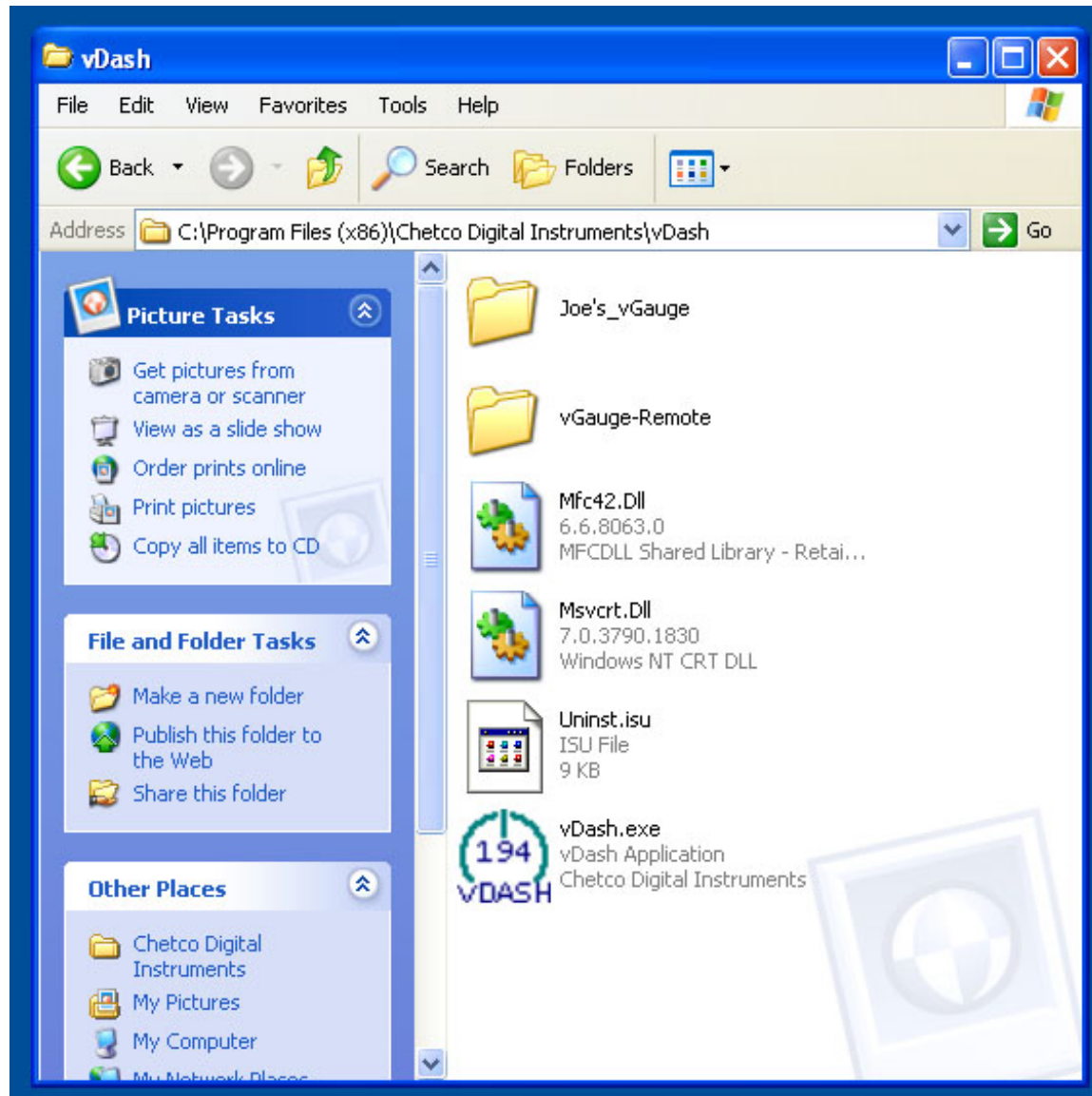
Additional default project folders can be installed by re-running the installation procedure and selecting different targets. The last project installed will become the current project the next time vDash is launched. Different project folders can be selected from within the vDash application.

The contents of this folder will contain files which can be loaded into a target vGauge/SeaGauge unit by using the vDash programming options.



These files contain user setup configurations and sensor calibration tables. All files are in simple text format and can be easily modified with any text editor application.

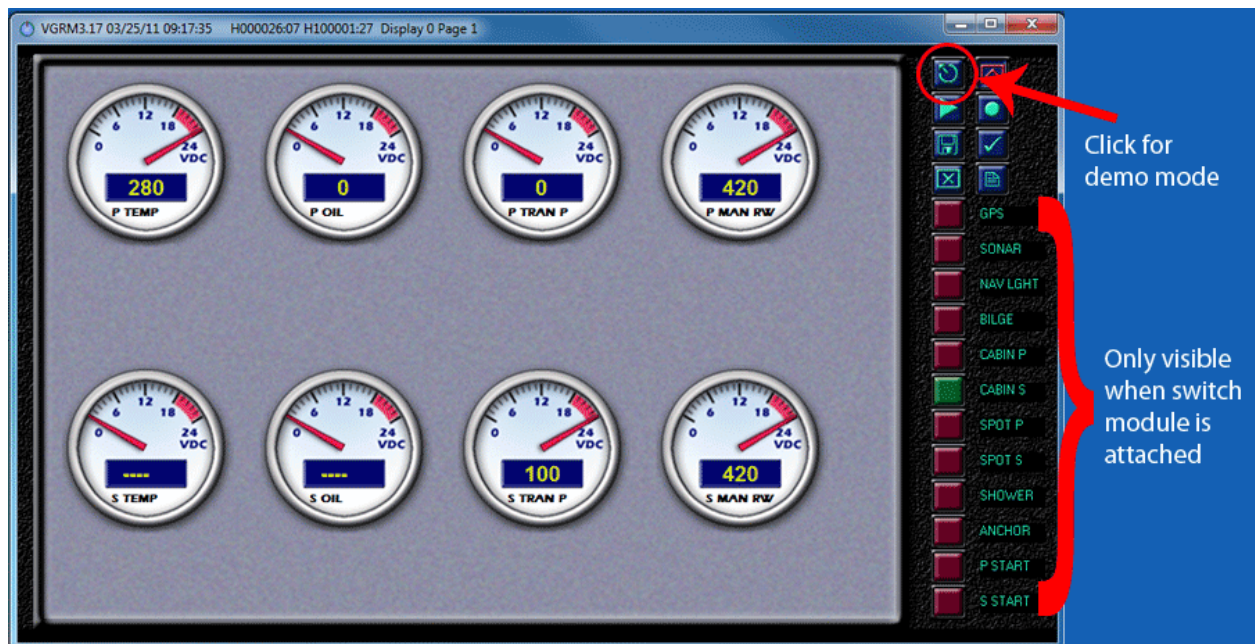
Custom vGauge/SeaGauge project folders can be added by simply copying them to the default directory or to any other desired location and then selecting them from within the vDash application.













vDash Layout

The vDash™ software application is a single screen with a data display area on the left and a toolbar in the upper right column. The lower right column can be used to activate switch relays if SeaSwitch or vSwitch module is installed with the vGauge/SeaGauge-Remote unit. Switches will only be visible if SeaSwitch or vSwitch module is attached.

When the application is started you must select the desired com port that NMEA data will be arriving on. Once selected, the com port setting is saved until changed. After the com port is configured, use the connect button to establish communications and start display of incoming NMEA data. The utility will decode the appropriate sentences and place the data on the display. If no NMEA data is received on the selected com port the display will remain blank and no updates will occur.



The following table describes the basic functions of the vDash toolbar:

Symbol	Function
	Data logging start/stop. A toggle button that turns on data logging of received NMEA sentences to memory. If enabled. Clicking again will disable. If no unit is attached to PC, pressing Data logging button will initiate playback of previously selected log file.
	Set function. Command the SeaGauge or vGauge/SeaGauge to set the current menu item. Performs same function as touch screen corner touch locations or bottom button on certain SeaGauge or vGauge/SeaGauge models.
	Save current page definitions. Saves the currently defined sensor labels and page format definitions to specified files
	Connect. Establishes a connection to SeaGauge or vGauge/SeaGauge through the currently select serial port. If the serial port is via Bluetooth module, it will prompt which visible module to use
	Update tables and firmware. Used to send new tables or firmware to connected SeaGauge or vGauge/SeaGauge units. Used to upload new Calibration and Display Label tables. User will be prompted for name and location of file to upload
	Select function. Used to scroll through display pages. Performs same function as top button on units
	Clear Page. Clears all display modes on the current page so new items can be assigned
	Setup Pages. Used to configure all of the settings and calibration tables for a attached SeaGauge or vGauge/SeaGauge unit.
	vSwitch Off. Used to indicate state of relay when vSwitch module is installed. Toggle button changes from Red to Green when left clicked with mouse button. Matching vSwitch label names are displayed on the right
	vSwitch On. Used to indicate state of relay when vSwitch module is installed. Toggle button changes from Red to Green when left clicked with mouse button


Basic vDash Functions

Connect

Before any data can be displayed, the vDash™ utility must connect to a device that transmits a compatible data stream. vDash™ uses built-in USB ports or built in com ports to listen for data.

vDash can use USB, physical com ports, and virtual com ports. Physical com ports are usually 1-2 and are wired with standard RS232 cables. Virtual com ports are 5-8 and are used by wireless Bluetooth modules.

Bluetooth support can be built-in as may be the case with smart phones or add-ons which is common for PC/Laptops. In either case – determine which virtual serial port the Bluetooth is using before trying to connect. Units are shipped with USB as the default.

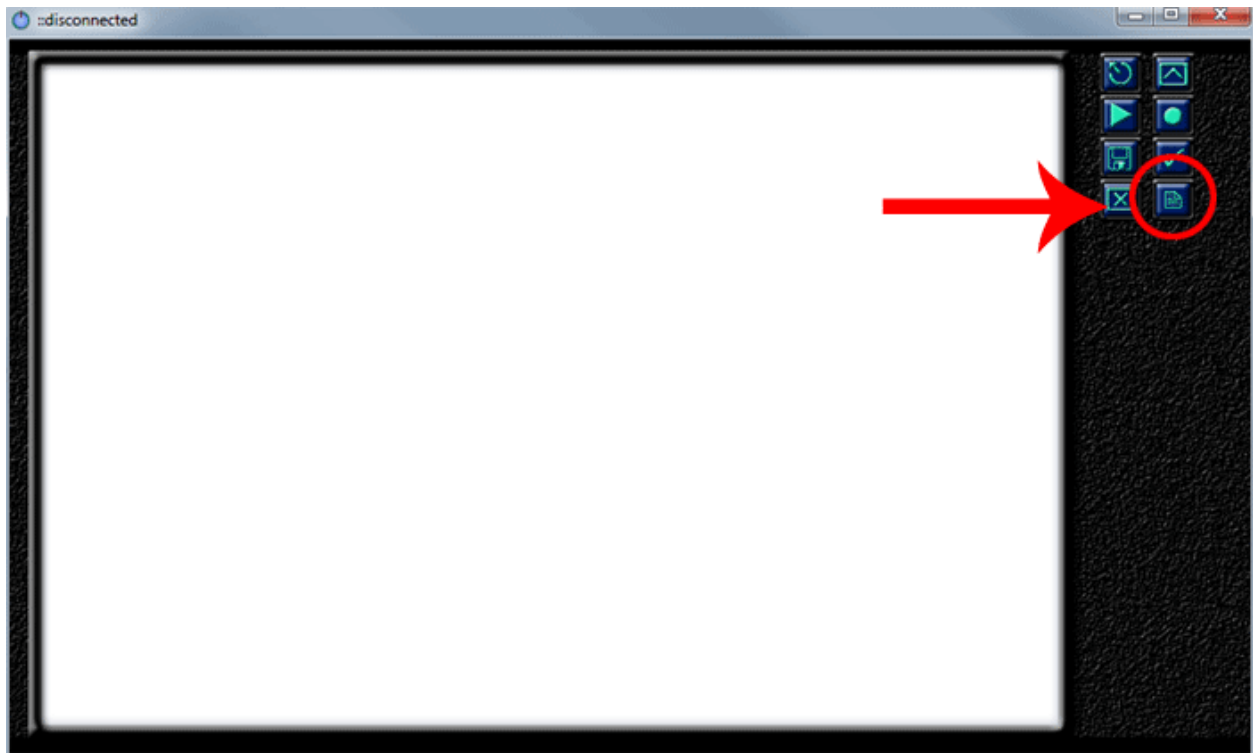
Once a proper port is selected, choosing the **CONNECT**  option will try to open the port and initialize listening for a proper data stream. If connection is through a physical port, data updates should start occurring if the device is transmitting a proper NMEA data stream. In the case of connecting through a virtual port (Bluetooth), a device selection dialog will appear asking to choose the appropriate Bluetooth device in range. If more than one device is in range you need to choose the correct device.

When making a connection if any other application is using the same com port, the connection attempt will fail. If this occurs close the application and retry the connection attempt.

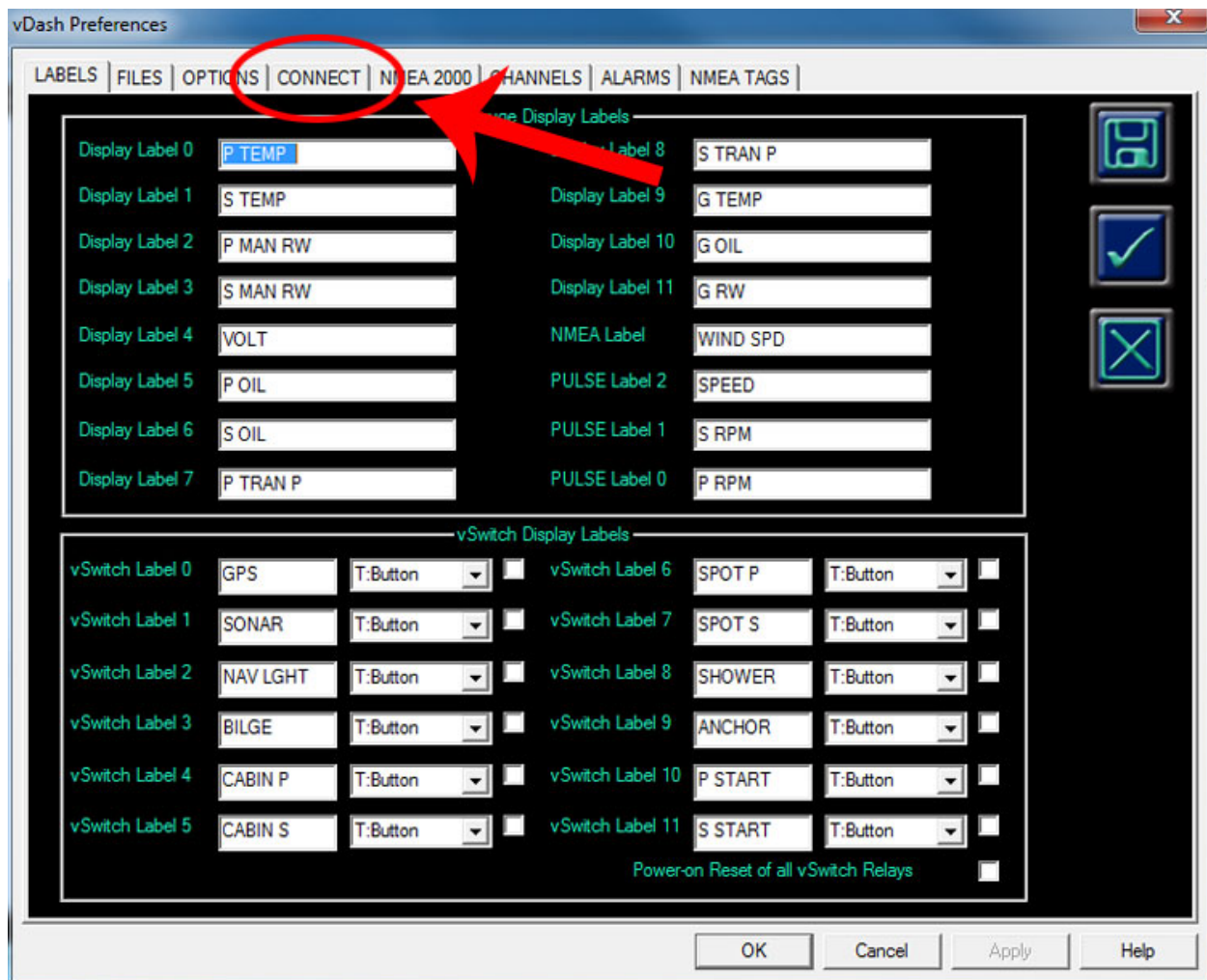
Connecting via USB:

Step 1: Open vDash Program. Home page will appear on your display.

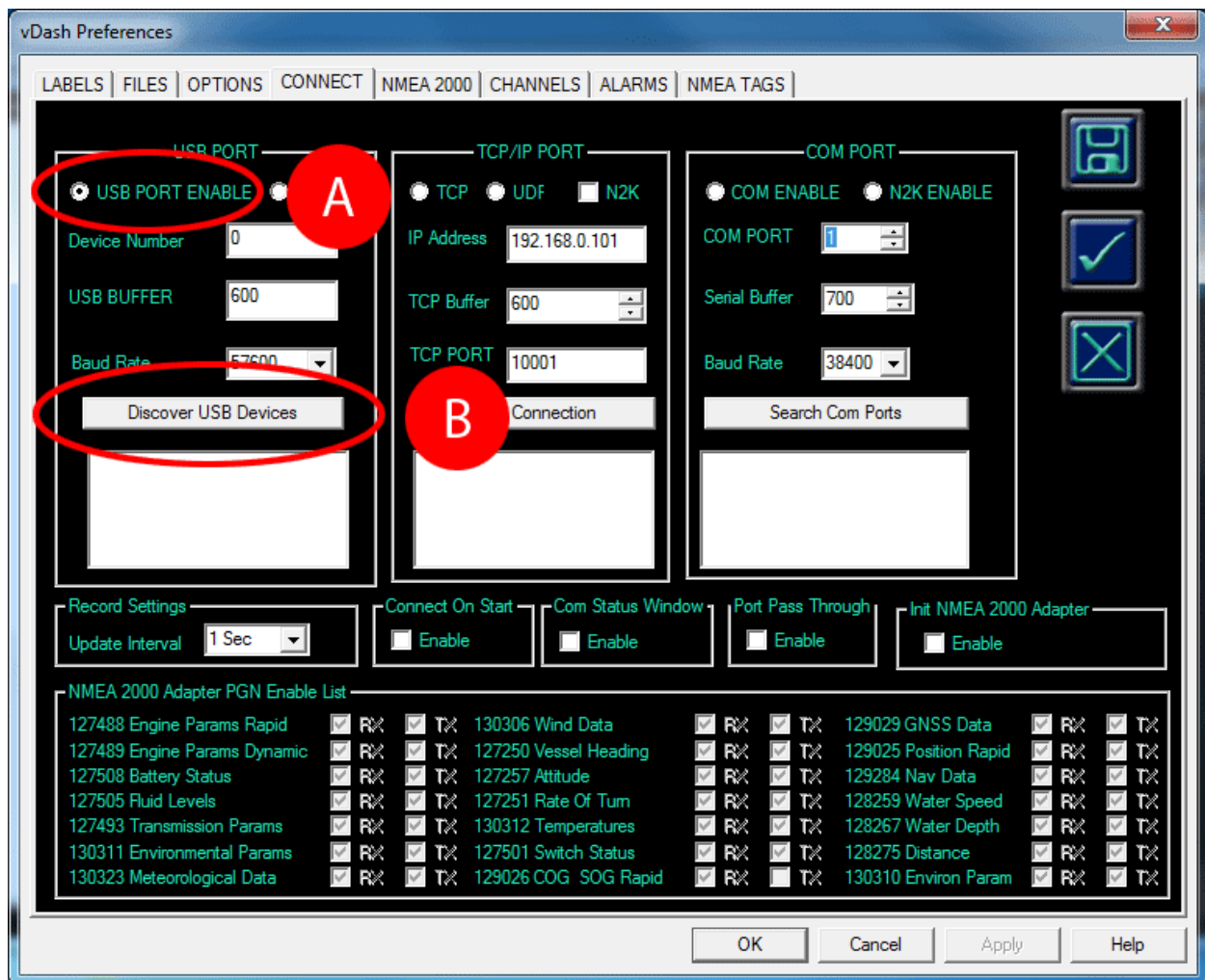
Step 2: Click on “Setup pages icon”



Step 3: vDash preferences page will appear. Click on 'Connect'



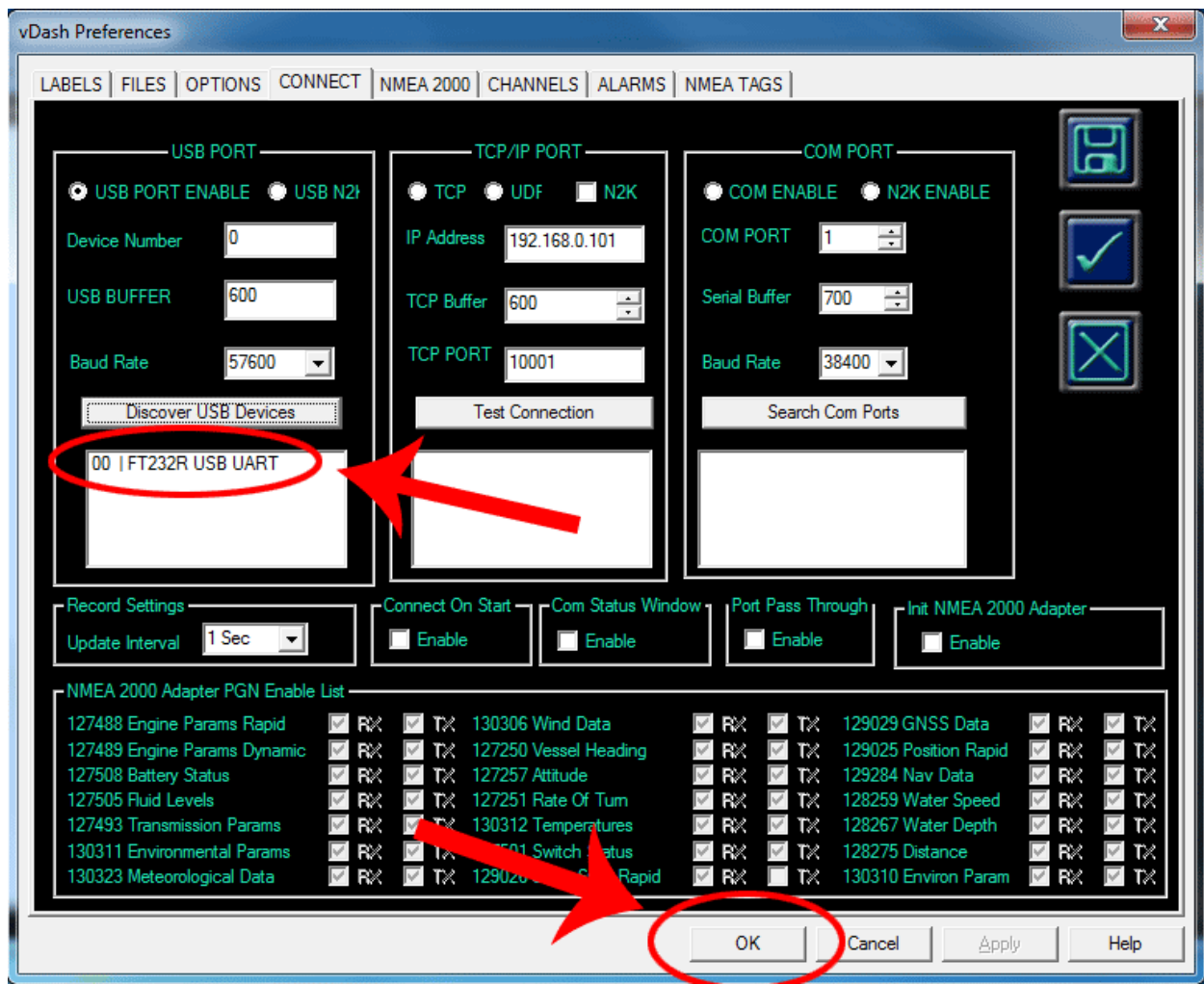
vDash preferences screen will change and new preference screen will appear as below:



First click “USB port enable” as in **Step A** above.

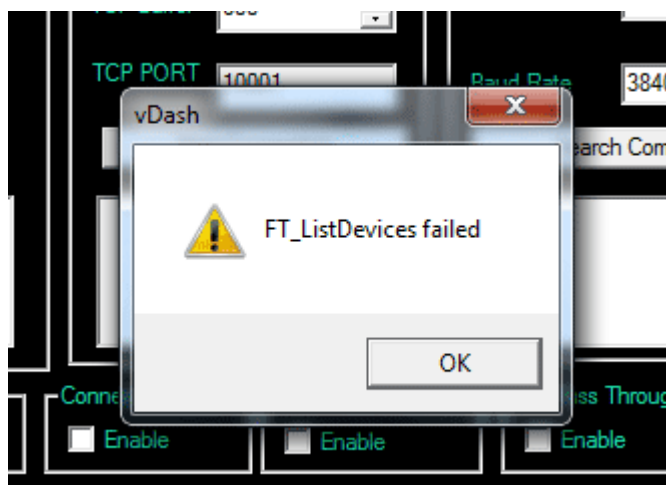
Second click Discover USB device as in **Step B** above.

New preference screen will appear identifying USB interface.



If your USB device is recognized, as shown above, please skip down to **CONNECTING CONT.**

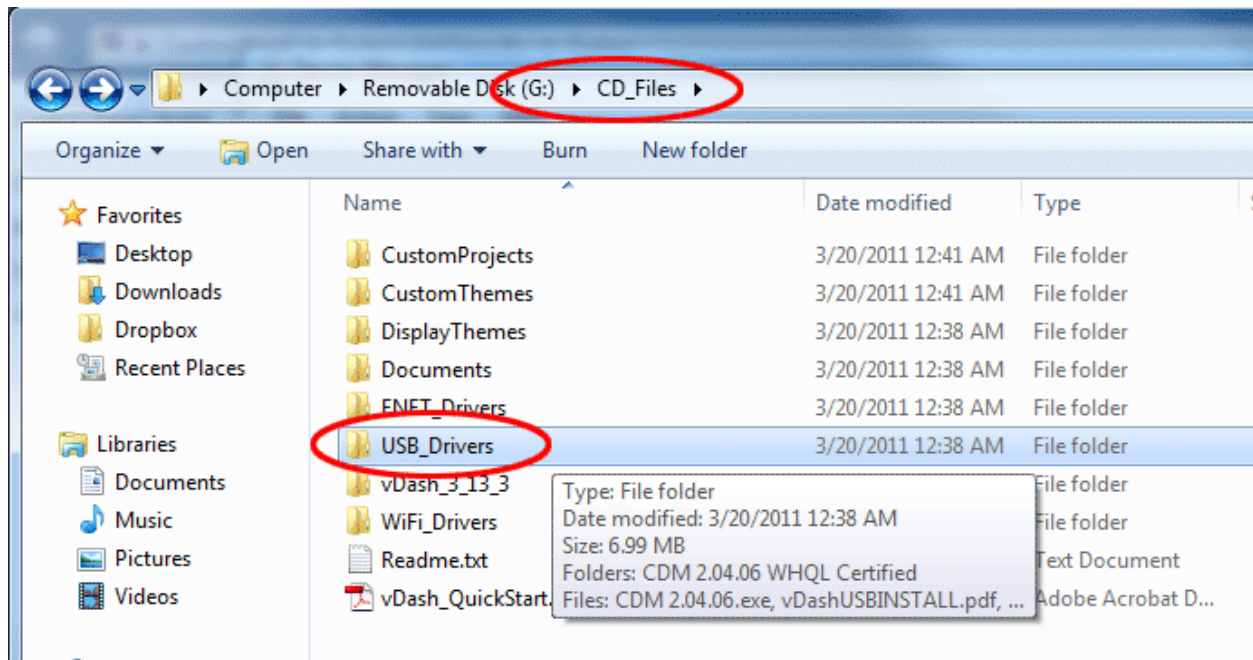
IMPORTANT: If USB Device Not Recognized



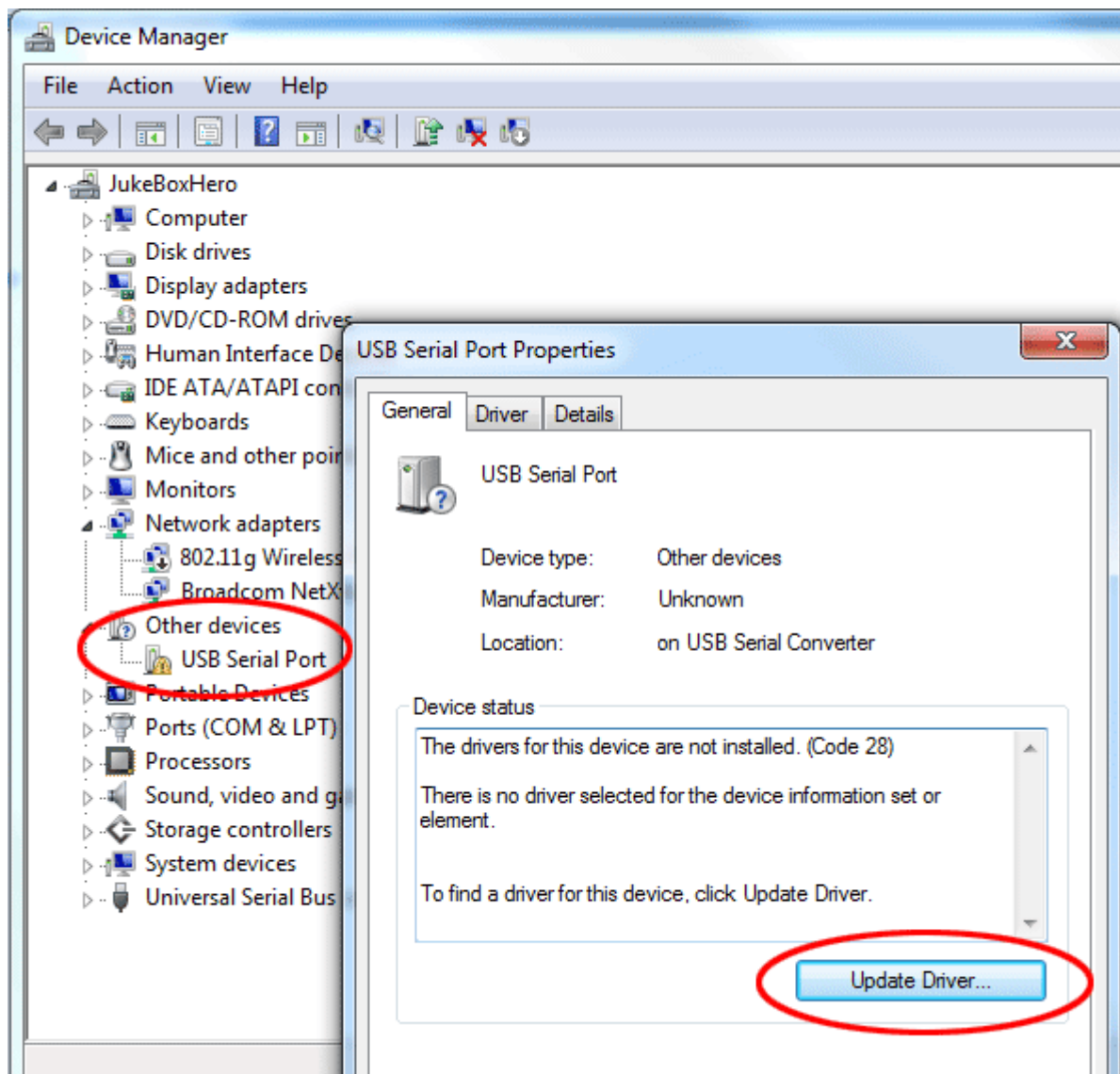
If you receive a “List Devices Failed” error after clicking on “Discover USB Devices,” then your computer does not automatically recognize the Sensor Interface Unit as a USB connection.

You will need to install the USB drivers included with your software package, and update the driver settings in your Windows Device Manager:

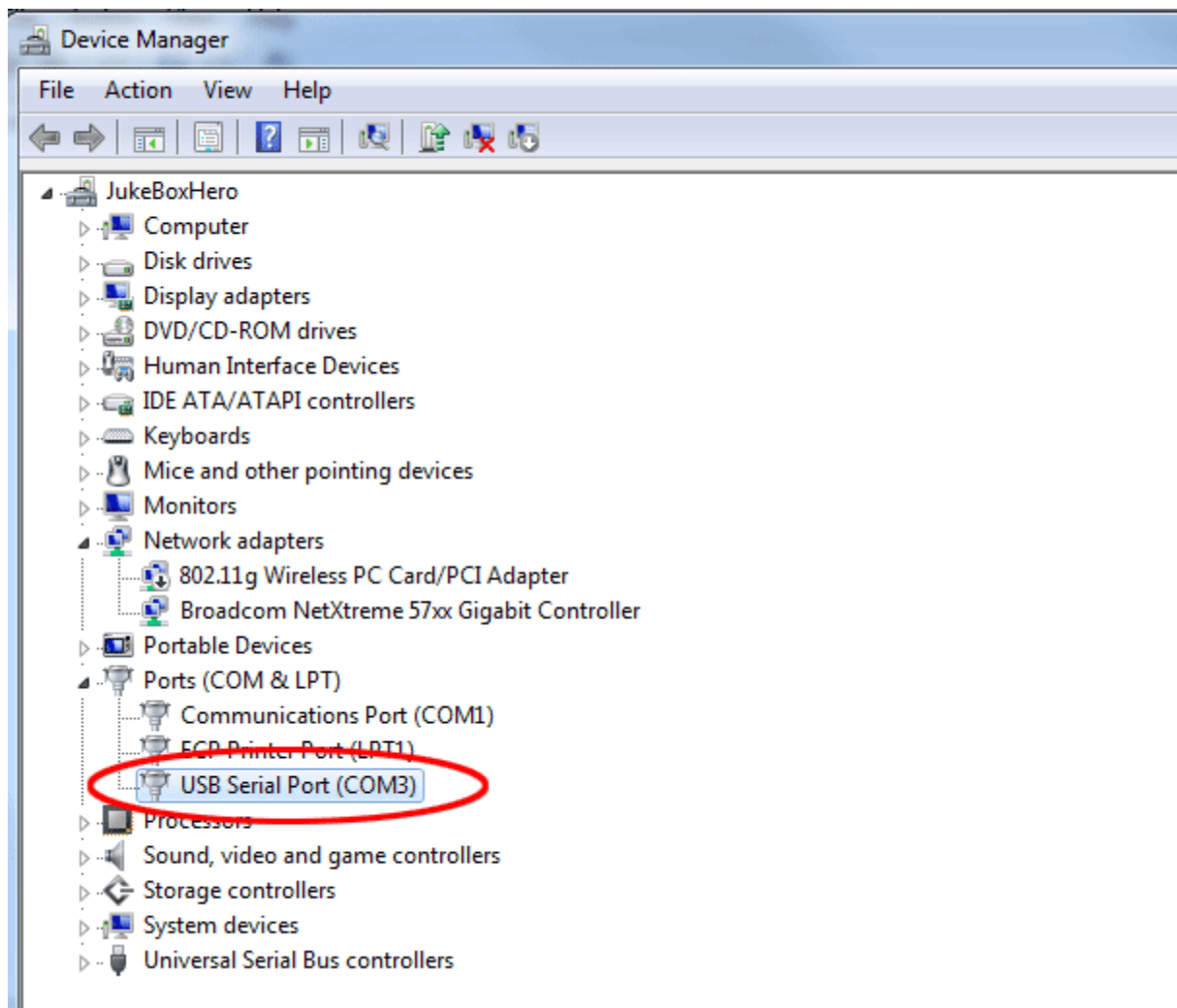
1. Navigate to the “CD FILES” folder in your vDash package (the file bundle that was “unzipped” after downloaded, on your vDash Installation CD, or on your vDash flash USB drive).
2. Within the CD FILES folder is a USB DRIVERS folder: Copy the entire USB drivers folder to your local computer (desktop or documents).



3. Go to START MENU → Right click on COMPUTER → PROPERTIES
4. Open the DEVICE MANAGER (top left link)
5. Find the device not recognized by your system. It will be listed by expanding “Other Devices” and have an explanation point icon over it.
6. Right click on the unknown device and click PROPERTIES, and then click UPDATE DRIVER



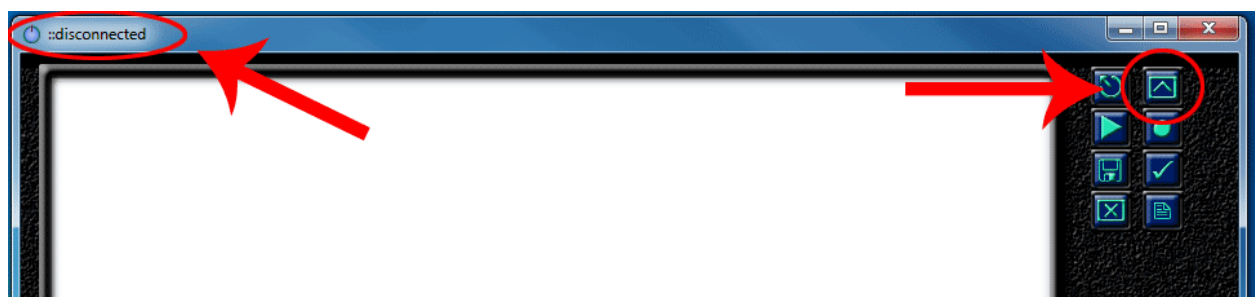
7. Tell Windows to "Browse my computer for the driver software"
8. Browse to the USB Drivers folder you copied to your computer in step 2 above.
9. Open the CDM 2.xx.xx WHQL Certified folder and click NEXT
10. Windows will install the drivers, and then list the Remote Sensor Unit as a USB Serial Port in the Device Manager:



Please refer to the USB Drivers folder in your install package for a detailed tutorial (PDF).

Connecting Cont.

This screen appears:

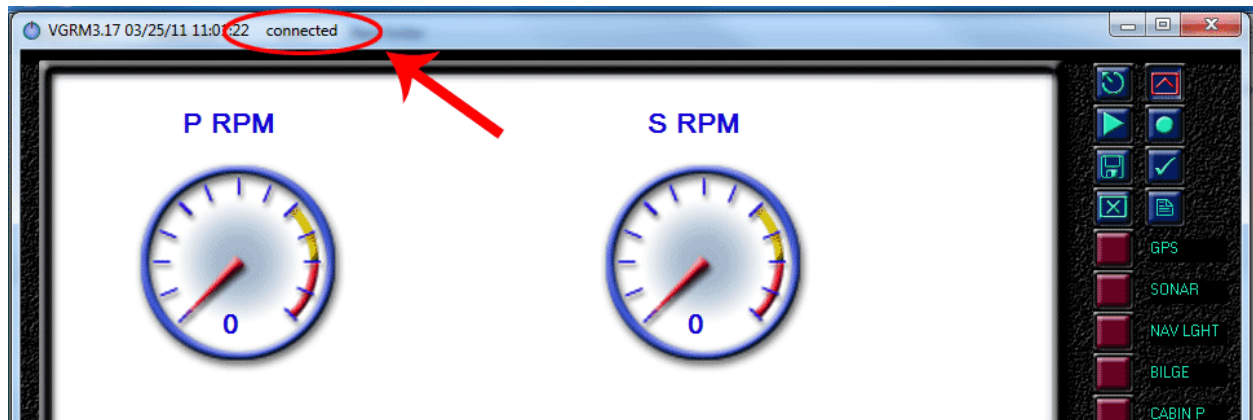


Next Click 'Connect' icon in upper right corner



After successful connection the TITLE BAR will display "Connected". When NMEA data starts arriving the TITLE BAR will display the name of the device sending data. vDash will decode compatible NMEA data

and display the device labels on the left and sensor data on the right. vDash will display the first 8 characters of device labels and the first 6 characters of sensor data.



If after connecting, no data is received – verify that NMEA data is arriving at the selected com port. This can be done by using a serial port application such as HyperTerminal to listen on the selected port. The default settings are 57600 BAUD 8-N-1.



The Connect function is a toggle operation. Selecting Connect again after a successful connection will break the connection and stop data display.

If no compatible vGauge/SeaGauge™ product is available, vDash™ can play back data from a previously



recorded log file. To perform this function, simply select the data logging icon without connecting to a device. The application will load the specified log file and playback data at the selected capture interval rate. **BE SURE THE LOG FILE IS READ ONLY** All virtual screen configuration operations are enabled during log file playback to simulate an attached vGauge/SeaGauge™ unit.

Virtual Data Screens

vDash is capable of displaying incoming data in a set of user configurable virtual screens using a variety of graphic display formats. The type of graphic formats available depends on the model of vGauge/SeaGauge™ being configured. From 1 to 8 pages can be configured by using drop-down menu selections via **right click** of the mouse button.



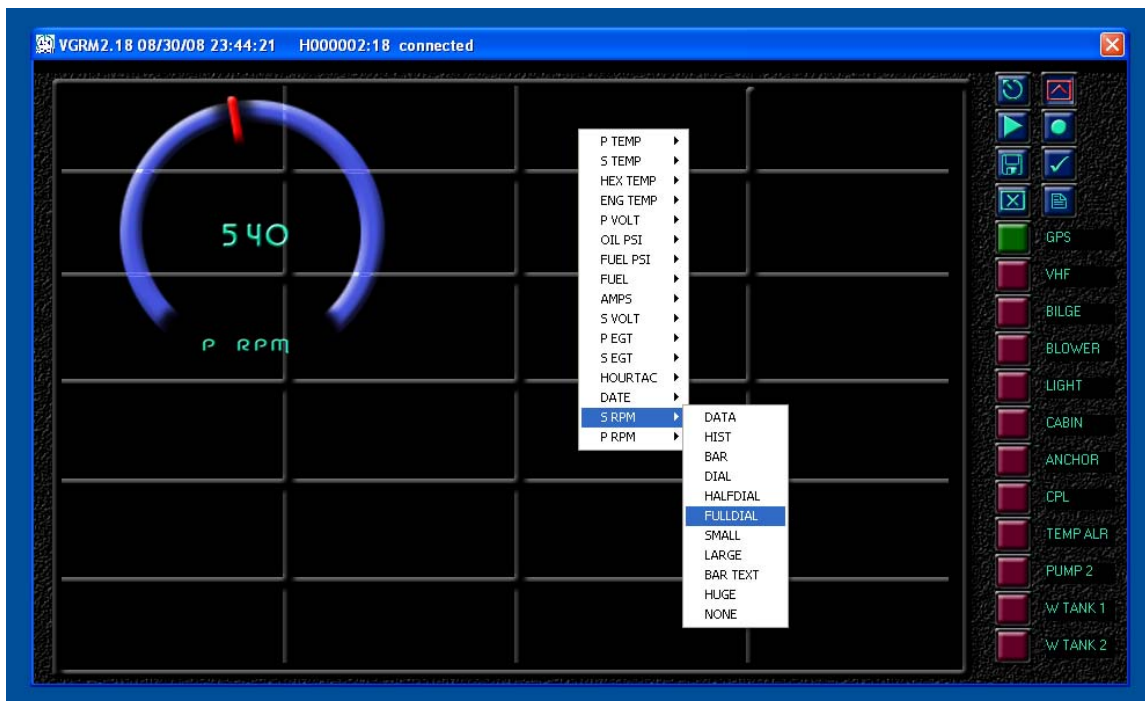
A grid pattern can be enabled by double-clicking the left mouse button to assist in locating the screen position to place a desired graphic display element. This grid can be toggled off by double click of the left mouse button.

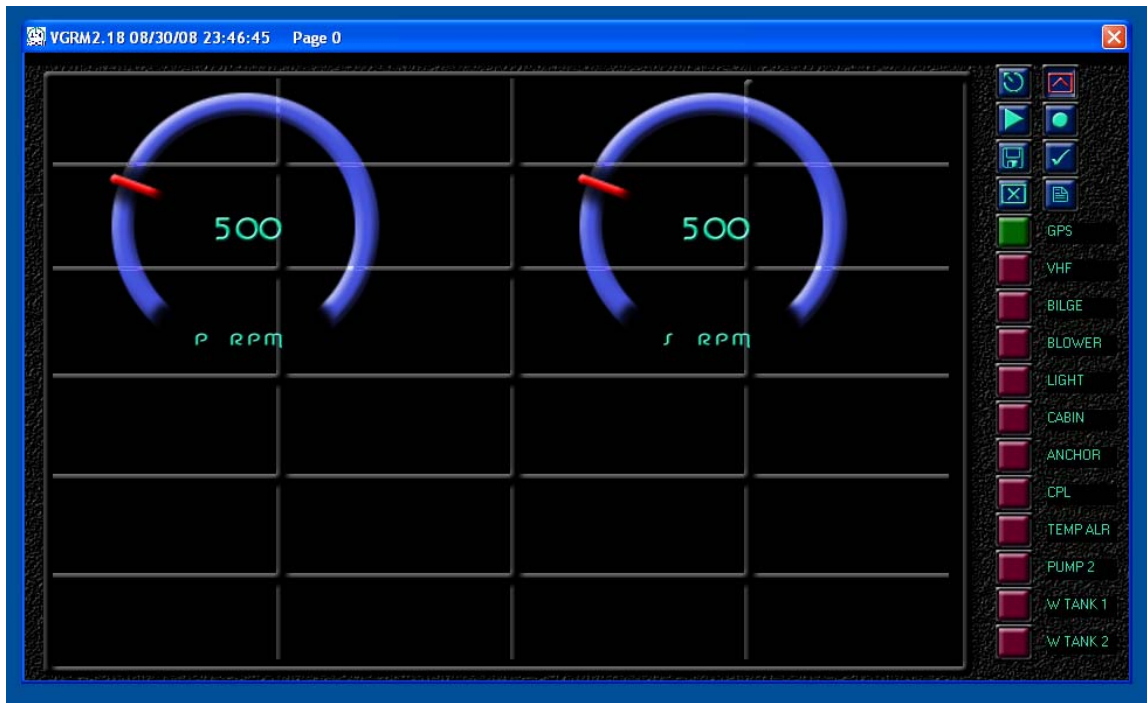
Once the cursor is placed in the desired location, a right click will enable a drop-down menu with available graphic display formats for the chosen sensor label. Place mouse pointer in the upper left corner of where you wish the graphic to be placed. The graphics are only bmp pictures and are actually square with the dial centered inside the square. SO be sure to locate the curser in desired drop point.

In this example a Digital Dial was chosen to display RPM in the upper right position.



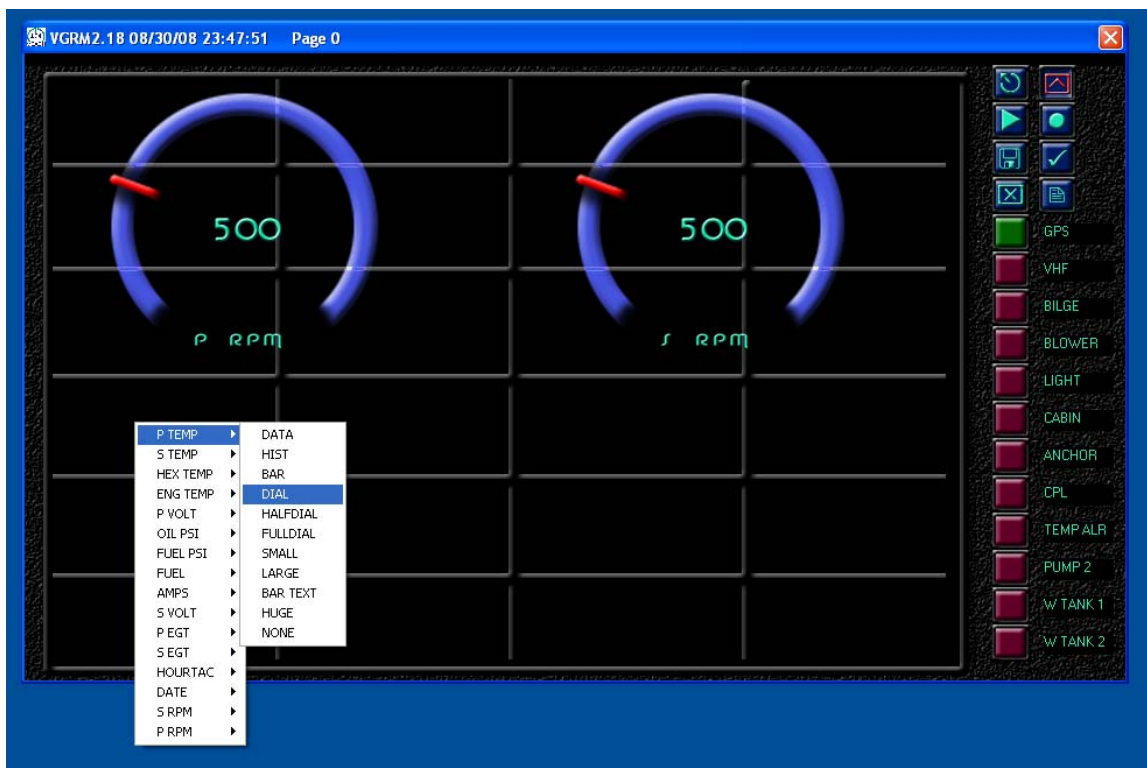
To place other elements, simply right-click in additional locations to choose the next sensor taking care not to place display elements on top of each other.



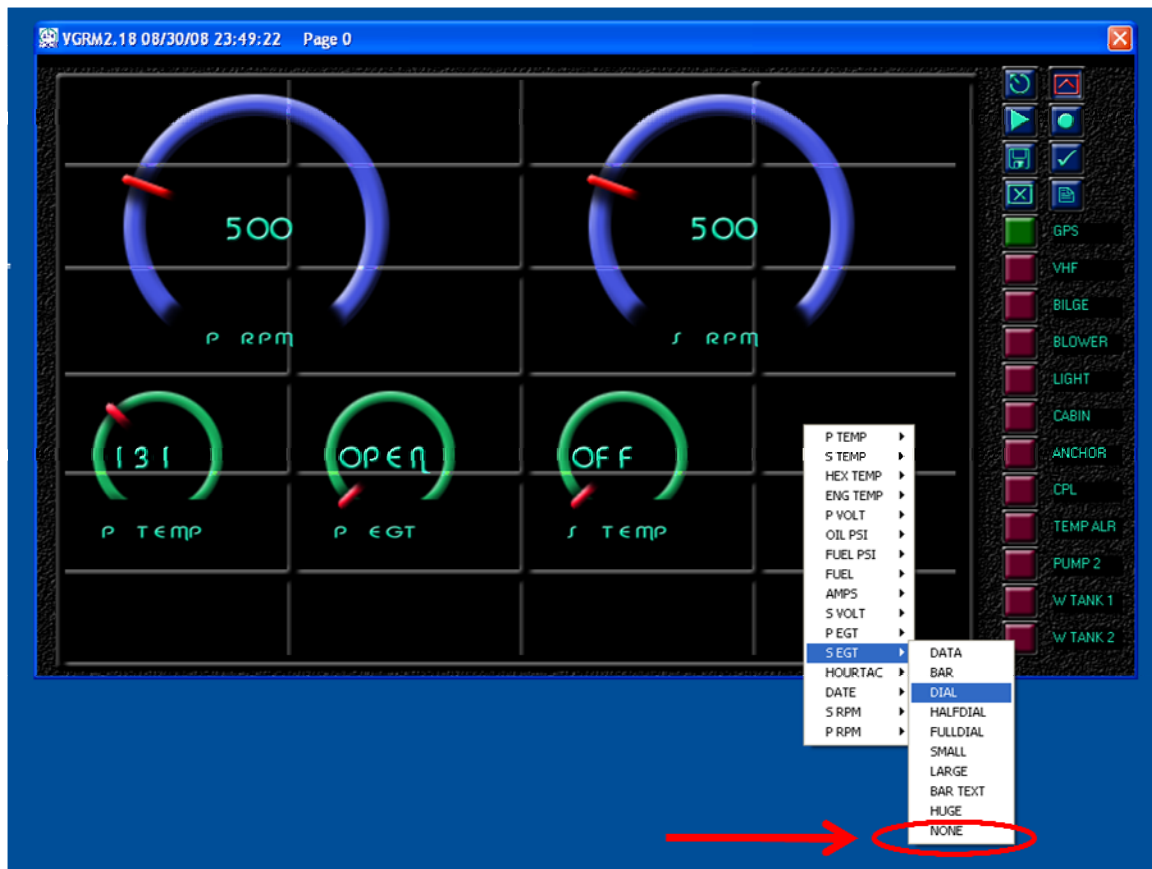


Multiple display elements of different display types can be mixed on the same page.

In this example a single page is constructed with a combination of large and small dials.



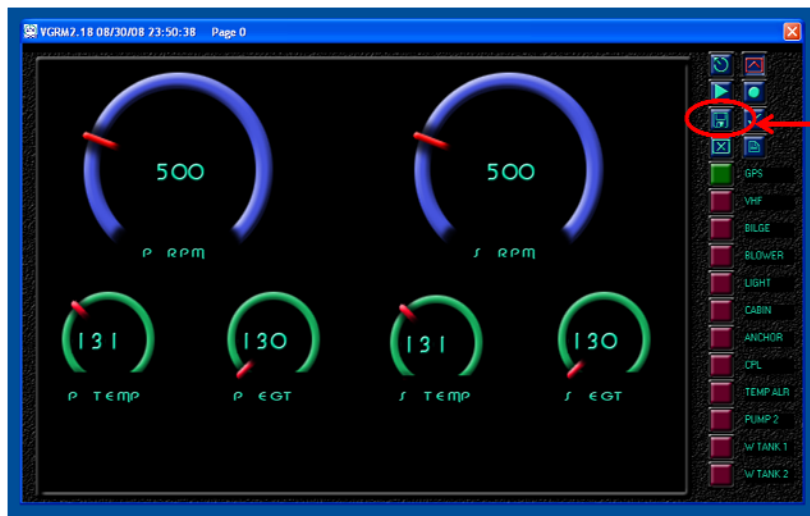
To remove a graphic element, right click and select **NONE** from the drop down list for the desired value.



Once all elements are placed, the grid can be disabled by double-clicking in an empty area of the screen.

As items are assigned to selected pages, they are not permanently saved and will be lost if the application is closed. To save current sensor label definitions and display page assignments, select the

SAVE FILE icon (diskette symbol) and answer the prompts to overwrite the specified files.



To construct another page, click the



SCROLL PAGE symbol (green arrow) and continue placement of desired elements.

If the next page contains unwanted elements simply



CLEAR PAGE (green X) and start over.

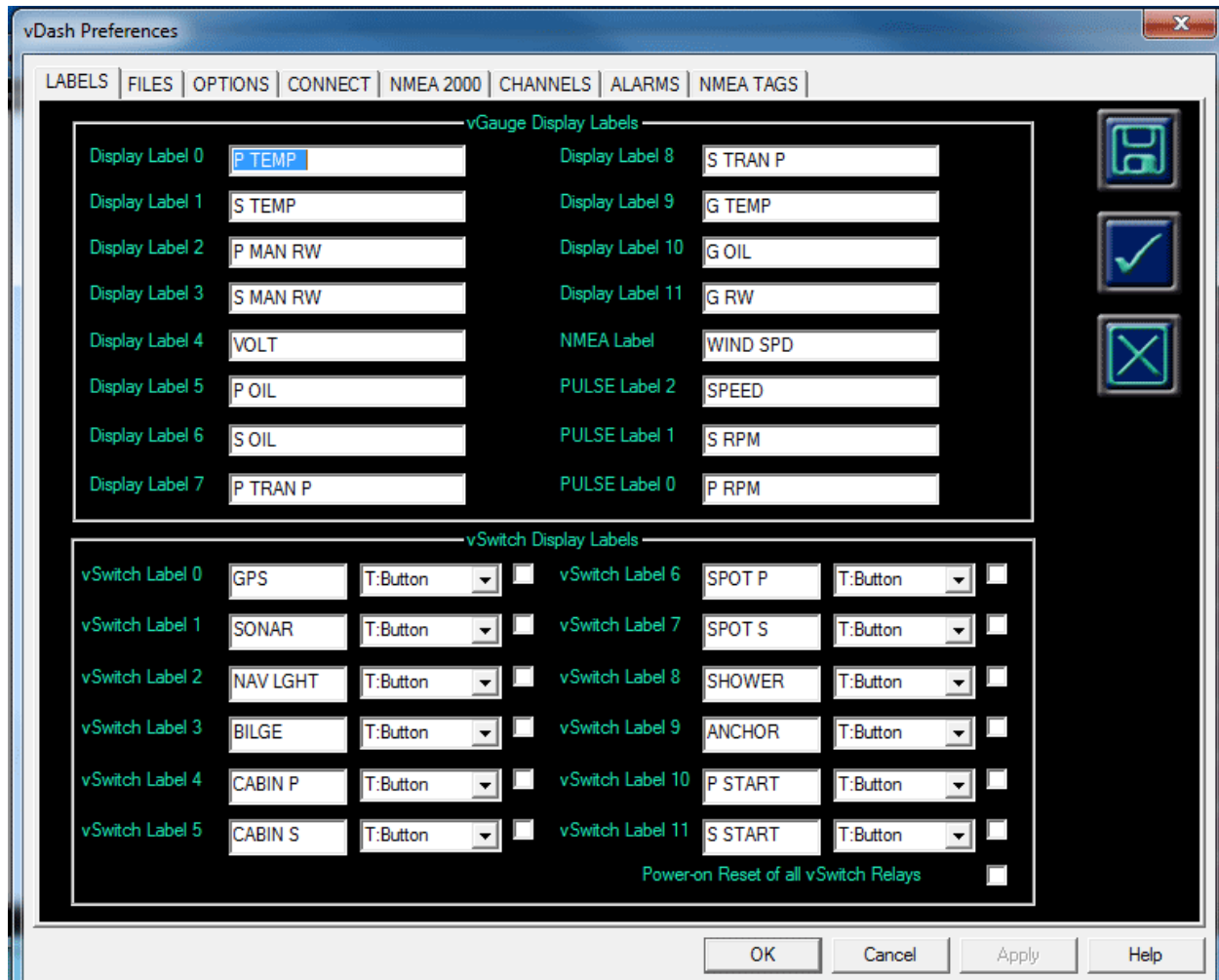


Configuration Screens

vDash will allow for complete configuration and programming of vGauge/SeaGauge™ units. A series of configuration screens can be accessed via the



SETTINGS icon in the lower right corner of the tools palette.

A screenshot of the vDash Preferences dialog box. The dialog has a title bar 'vDash Preferences' and a close button. It features a tabbed interface with tabs: LABELS, FILES, OPTIONS, CONNECT, NMEA 2000, CHANNELS, ALARMS, and NMEA TAGS. The 'LABELS' tab is active. It is divided into two main sections: 'vGauge Display Labels' and 'vSwitch Display Labels'. The 'vGauge Display Labels' section contains two columns of text boxes for labels 0 through 11, with 'P TEMP' selected in the first box. The 'vSwitch Display Labels' section contains two columns of text boxes for labels 0 through 11, each followed by a 'T:Button' dropdown and a checkbox. At the bottom of this section is a checkbox for 'Power-on Reset of all vSwitch Relays'. On the right side of the dialog, there are three large icons: a save icon, a checkmark icon, and an 'X' icon. At the bottom of the dialog are four buttons: 'OK', 'Cancel', 'Apply', and 'Help'.

After selecting the SETTINGS icon, a tabbed property sheet allows selection of the desired settings to view or modify.

The following preference sheets are available.

The following table describes the basic functions of the vDash Utility.

Sheet	Function
Labels	Allows for choosing custom sensor labels up to 8 characters
Files	Allows choosing file locations and names for various configuration files and calibration tables used by vGauge/SeaGauge
Options	Creates an options file used by vGauge/SeaGauge and allows for choosing a file location and name of existing file
Connect	Configures the type of connection used to communicate with vGauge/SeaGauge-Remote or vGauge/SeaGauge display heads. It is important to select correct matching communication speeds (BAUD) between devices.
NMEA 2000	Configures the Remote Sensor Unit to source (output) or accept (input) NMEA 2000 data by assigning a PGN number to each channel.
Channels	Creates an channels file used by vGauge/SeaGauge and allows for choosing a file location and name of existing file
Alarms	Creates an alarms file used by vGauge/SeaGauge and allows for choosing a file location and name of existing file
NMEA Tags	Allows configuration of NMEA tags to search for and parsing information for data fields. Also provides for initialization of hour meters and date/time functions. Information is stored in Display Labels file.

****Please see vDash Manual Part II – Configuration Screens, for further details.***

90 Day Warranty

“We”, “our”, or “us” refers to Chetco Digital Instruments, the manufacturer of this product. “You” or “your” refers to the first person who purchases this product as a consumer item for personal, family, or household use.

We warrant this product against defects or malfunctions in materials and workmanship, and against failure to conform to this product’s written specifications, all for Ninety (90) days from the date of original purchase by you. WE MAKE NO OTHER EXPRESS WARRANTY OR REPRESENTATION OF ANY KIND WHATSOEVER CONCERNING THIS PRODUCT. Your remedies under this warranty will be available so long as you can show in a reasonable manner that any defect or malfunction in materials or workmanship, or any nonconformity with the product’s written specifications, occurred within one year from the date of your original purchase, which must be substantiated by a dated sales receipt or sales slip. Any such defect, malfunction, or non-conformity which occurs within 90 days from your original purchase date will either be repaired without charge or be replaced with a new product identical or reasonably equivalent to this product, at our option, within a reasonable time after our receipt of the product. If such defect, malfunction, or non-conformity remains after a reasonable number of attempts to repair by us, you may elect to obtain without charge a replacement of the product or a refund for the product. THIS REPAIR, REPLACEMENT, OR REFUND (AS JUST DESCRIBED) IS THE EXCLUSIVE REMEDY AVAILABLE TO YOU AGAINST US FOR ANY DEFECT, MALFUNCTION, OR NON-CONFORMITY CONCERNING THE PRODUCT OR FOR ANY LOSS OR DAMAGE RESULTING FROM ANY OTHER CAUSE WHATSOEVER. WE WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO ANYONE FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR OTHER INDIRECT DAMAGE OF ANY KIND.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This warranty does NOT apply in the following circumstances: (1) when the product has been serviced or repaired by anyone other than us, (2) when the product has been connected, installed, combined, altered, adjusted, or handled in a manner other than according to the instructions furnished with the product, (3) when any serial number has been effaced, altered, or removed, or (4) when any defect, problem, loss, or damage has resulted from any accident, misuse, negligence, or carelessness, or from any failure to provide reasonable and necessary maintenance in accordance with the instructions of the owner’s manual for the product.

We reserve the right to make changes or improvements in our products from time to time without incurring the obligation to install such improvements or changes on equipment or items previously manufactured.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

REMINDER: You must retain the sales slip or sales receipt proving the date of your original purchase in case warranty service is ever required.

Chetco Digital Instruments, Inc.
Box 5359 - Brookings, Oregon 97415 USA
541-469-4783

VDASH SOFTWARE LICENSE AGREEMENT

THIS IS A LEGAL AGREEMENT BETWEEN THE END-USER WHO FIRST PURCHASES THIS PRODUCT AS A CONSUMER ITEM FOR PERSONAL, FAMILY, OR HOUSEHOLD USE ("YOU") AND CHETCO DIGITAL INSTRUMENTS, INC., THE MANUFACTURER OF THIS PRODUCT. ("WE", "OUR", OR "US"). USING THE PRODUCT ACCOMPANIED BY THIS LICENSE AGREEMENT CONSTITUTES ACCEPTANCE OF THESE TERMS AND CONDITIONS.

1. This License Agreement applies to the microcode and one or more lookup tables that your product may contain. We refer to these singly as a "SOFTWARE".
2. The SOFTWARE that your product may contain are licensed, not sold. We grant to you the nonexclusive, non-assignable right to use these SOFTWARE for monitoring sensor/sender data, but only as long as you comply with the terms and conditions of this License Agreement. We reserve the right to terminate this license if you violate any aspect of this License Agreement.
3. The SOFTWARE housed in your product are protected by the copyright notices appearing on the product or its screen(s). You may NOT modify, adapt, translate, reverse engineer, decompile, disassemble, rent, lease, or resell any SOFTWARE, and you may NOT create derivative works based upon any SOFTWARE or its contents.. Any unauthorized reproduction, use, or transfer of a SOFTWARE may be a crime and may subject you to damages and attorney fees.
4. This License Agreement will terminate immediately without prior notice from us if you fail to comply with or violate any of the provisions of this Agreement. Upon termination, you will promptly return all products containing one or more SOFTWARE to us.
5. Prices and programs are subject to change without notice.
6. This License Agreement shall be governed by the laws of the State of Oregon and comprises the complete and exclusive understanding between you and us concerning the above subject matter.

How to Obtain Service

We back your investment in quality products with quick, expert service and genuine replacement parts. If you're in the United States and you have questions, please contact the Factory Customer Service Department using our number listed below. You must send the unit to the factory for warranty service or repair. Please call the factory before sending the unit. You will be asked for your unit's serial number (shown above). Use the following number:

541-661-2051

U.S.A. only. Monday through Friday, except holidays.

Your unit is covered by a full 90 day warranty. (See inside for complete warranty details.) If your unit fails and the failure is not covered by the original warranty, Chetco Digital Instruments has a flat-rate repair policy that covers your unit and accessories packed with the unit at the factory. There is a 30-day warranty on all non-warranty repairs from the factory, which is similar to the original warranty, but is for 30 days rather than 90 days. For further details, please call us at the above number.

Remember, non-warranty repairs are subject to Chetco Digital Instruments published flat rate charges and 30-day warranty.

CHETCO DIGITAL INSTRUMENTS, INC

BOX 5359

Brookings, OR 97415

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<http://www.chetcodigital.com>