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# vDash™

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## Version 3.0 – Firmware Update



**Chetco Digital Instruments**

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All rights reserved.

SeaGauge™ is a trademark of Chetco Digital Instruments, Inc.

vGauge™ is a trademark of Chetco Digital Instruments, Inc.

## **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 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 Home

Maximum Update Rate: ..... 2 per second

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

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## **vDash Firmware Update**

# **Introduction**

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## ***Welcome***

Thank you for purchasing a Chetco Digital Instruments product.

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

Once installed on your PC/Laptop, vDash™ accepts NMEA 0183 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 desired formats are configured, vDash™ provides real-time programming of any attached SeaGauge™ or vGauge™ product.

vDash can be used to backup and restore device firmware on vGauge Remote and vGauge integrated displays. Firmware updates are performed by erase the original file and loading a new file from selected local directory. New features and product improvements can be quickly achieved using this procedure

This Application Note covers the simple process of backing up the current firmware to a file and then loading a new version stored in the vDash Project Folder..

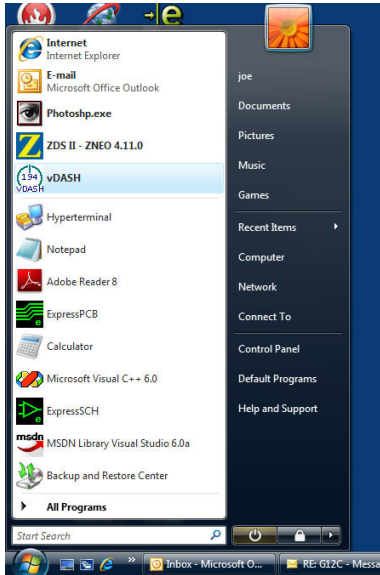
## vDash Firmware Update

# Firmware Update

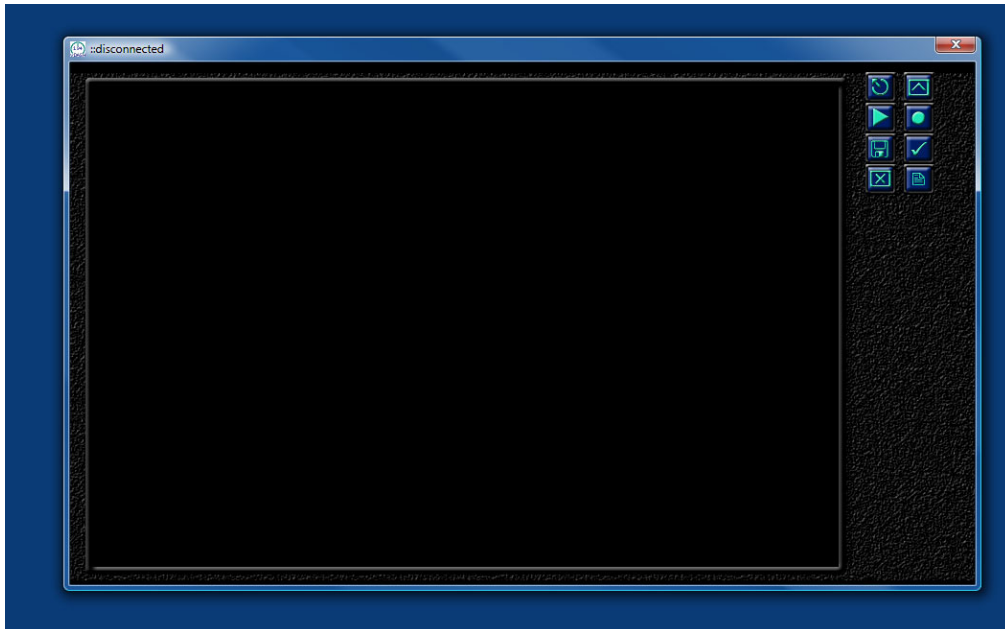
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### Connect to vGauge Unit

After installation, a vDash Icon will be located in the Start Menu. vDash can also be accessed from the ALL PROGRAMS section of the Start Menu.



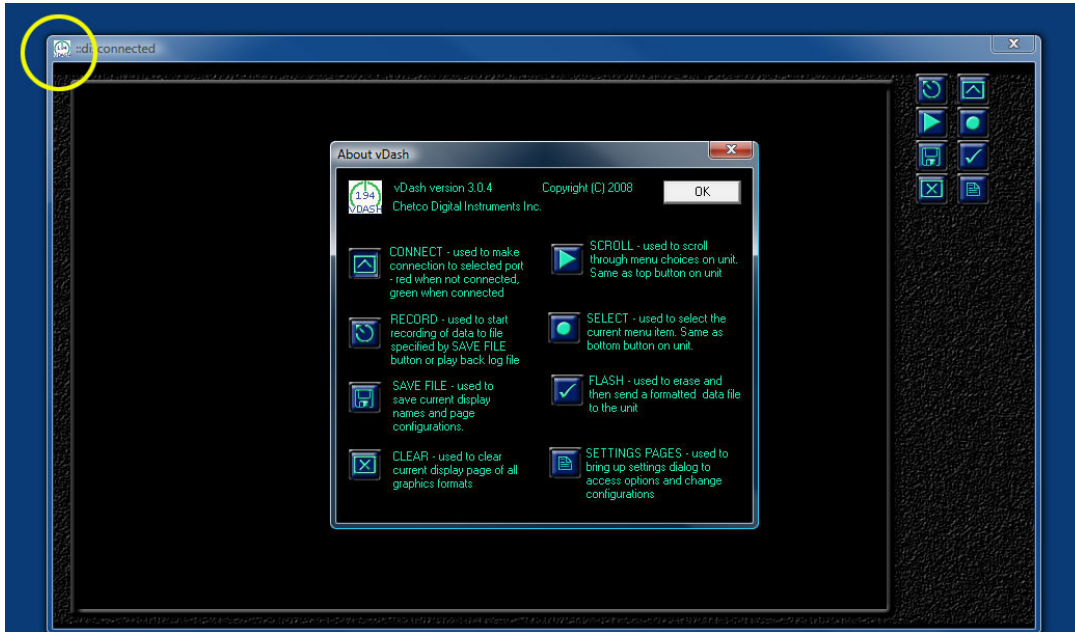
After selecting the vDash Icon from the Start Menu, a blank data screen will appear since connection to a vGauge Remote sensor unit has not yet been started



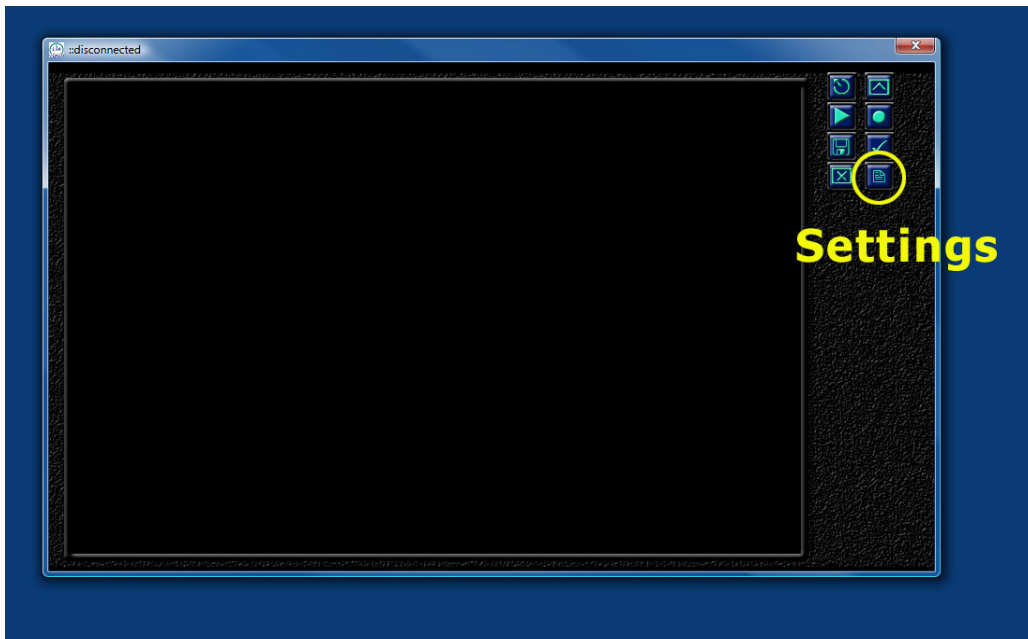


## vDash Firmware Update

The Upper Left corner of the Title Bar contains an About vDash Icon that brings up a help screen to summarize the functions of the eight tool icons on the right hand side of the display area

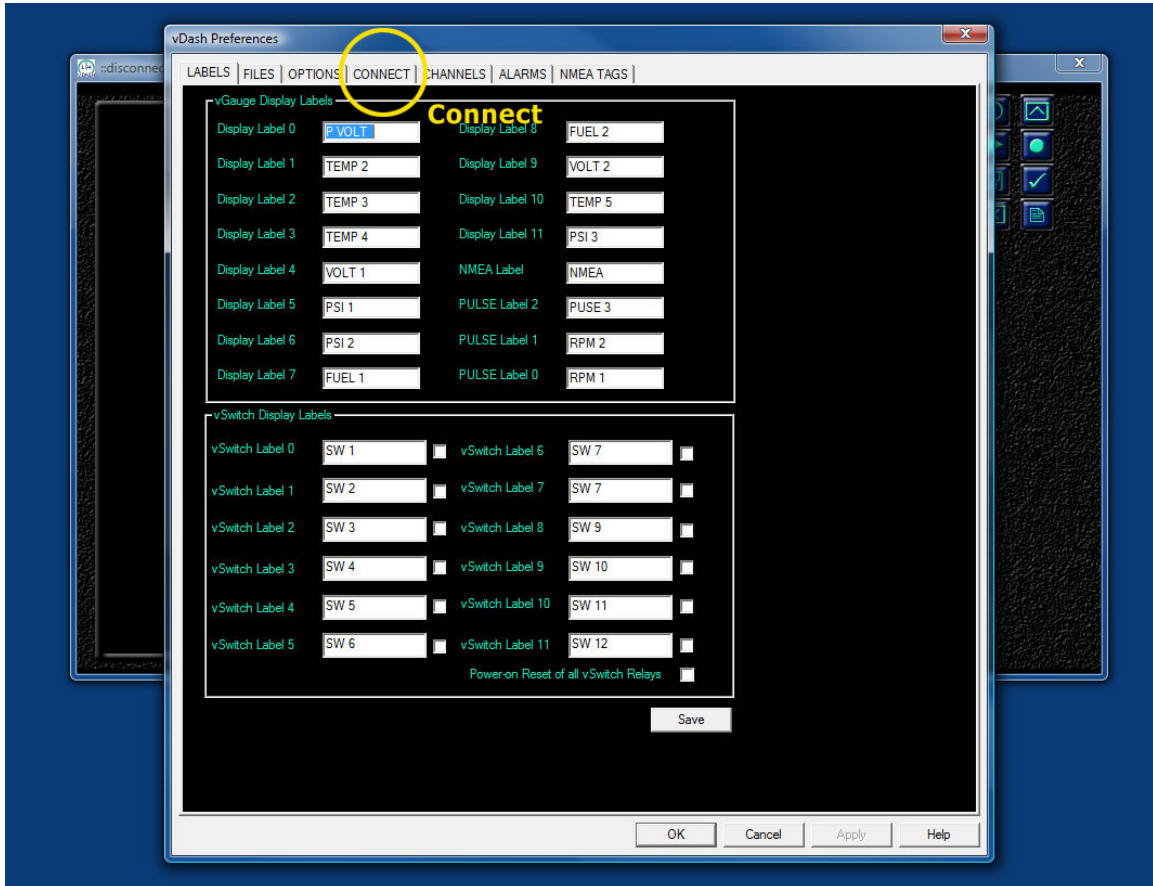


The Settings Icon can be selected to bring up the Preferences Dialog to select the connection options



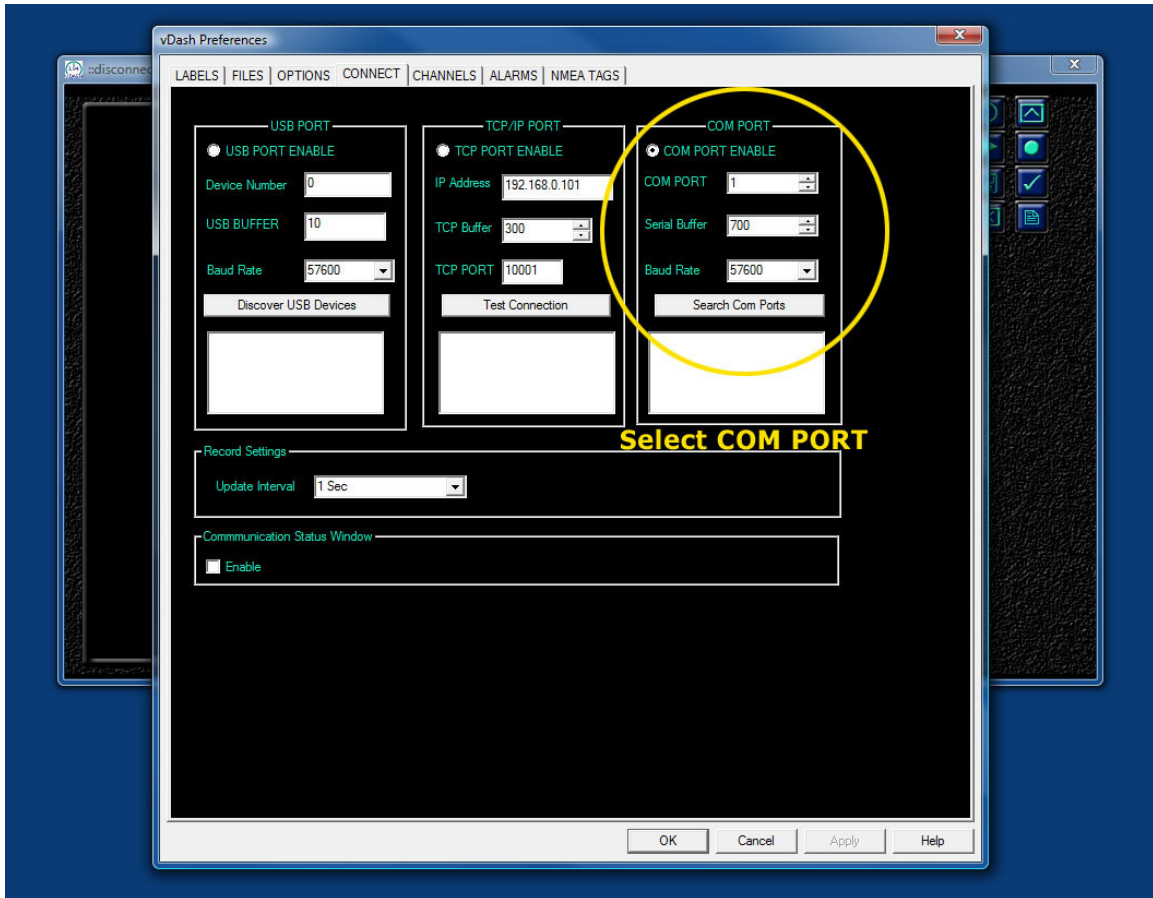
## vDash Firmware Update

Once the Preferences Dialog is enabled, several tabs can be viewed at the top of the dialog. The CONNECT tab allows selection of which method is used to communicate with an attached vGauge Unit. To perform firmware updates, all connections need to be via the Virtual Serial Port option. Use of a USB to Serial Converter is supported by choosing the Virtual COM Port Number assigned to the USB adapter.



## vDash Firmware Update

After selecting the CONNECT tab, choose the correct COM Port Number and enable connection via COM PORT MODE.



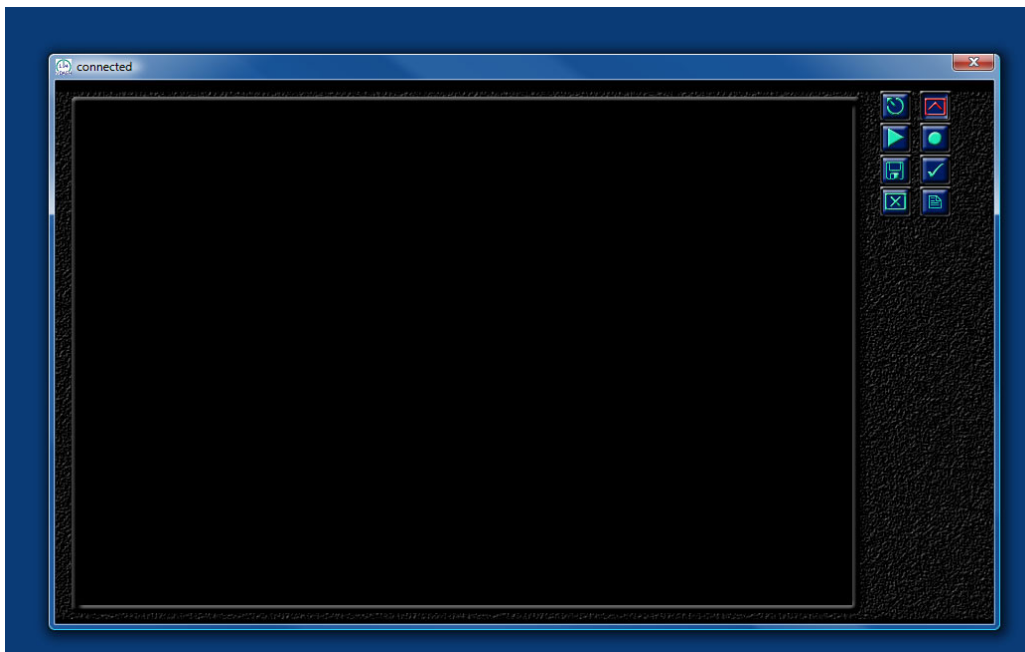
Firmware updates are not currently supported via direct USB or TCP modes due to latency problems with these Protocols.

## vDash Firmware Update

Once the connection mode is selected, connect to the unit with the CONNECT Icon from the tool palette. Because the target unit has been placed in Firmware Update Mode, no gauge data will appear on the screen – it will remain blank.



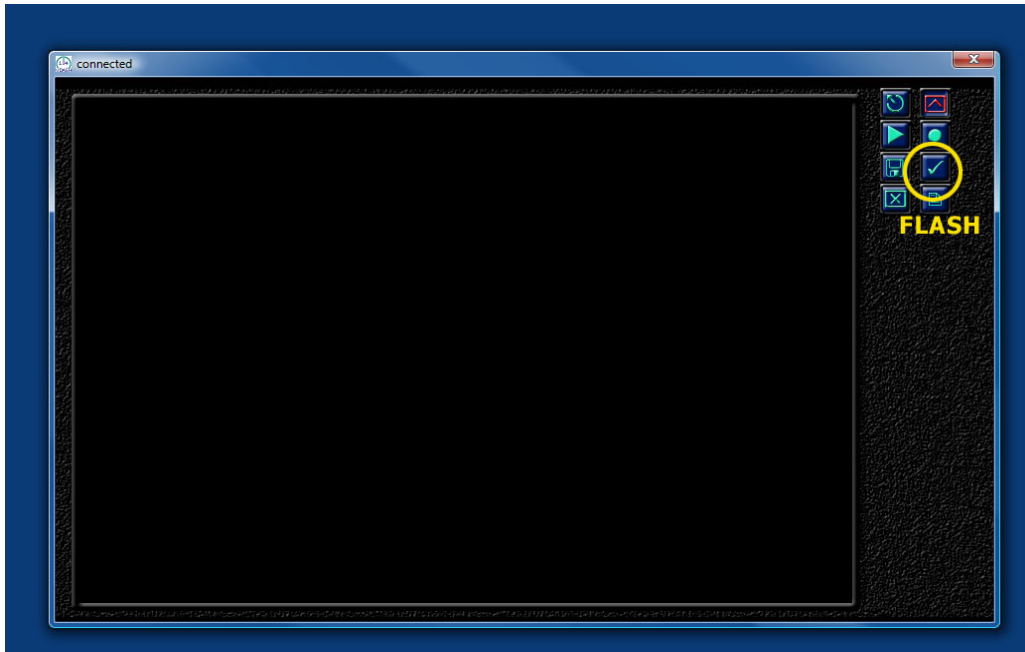
The Status message in the Title Bar will show CONNECTED.



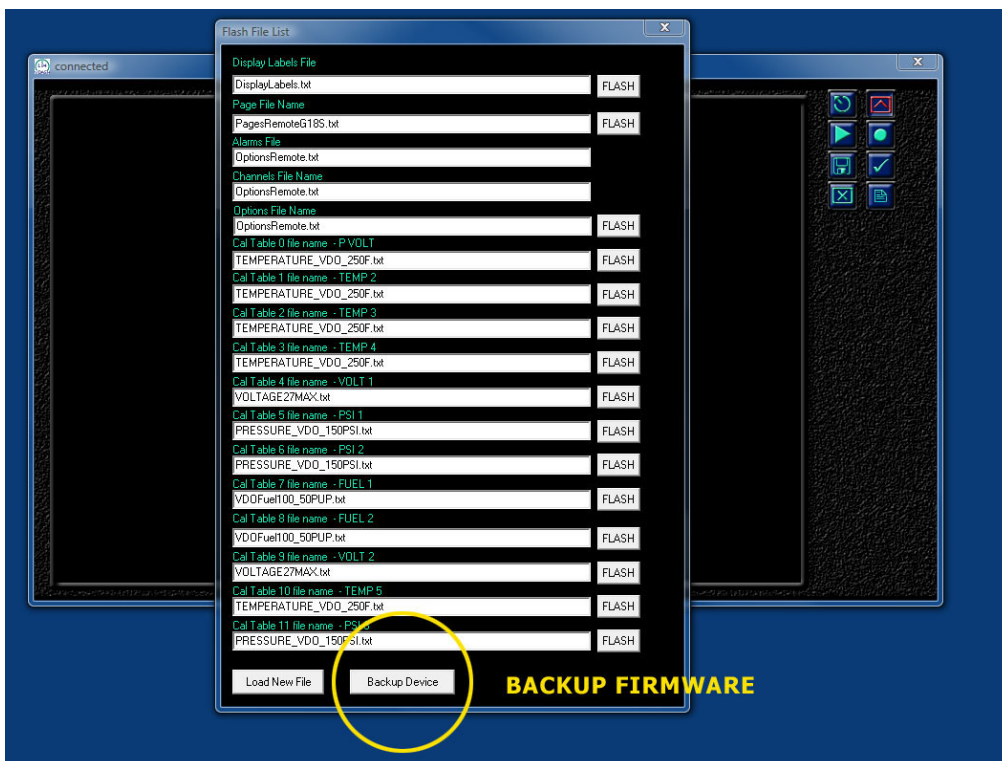
## vDash Firmware Update

### Backup of vGauge Unit

Once connected to target, select the FLAS Icon from the tool palette.

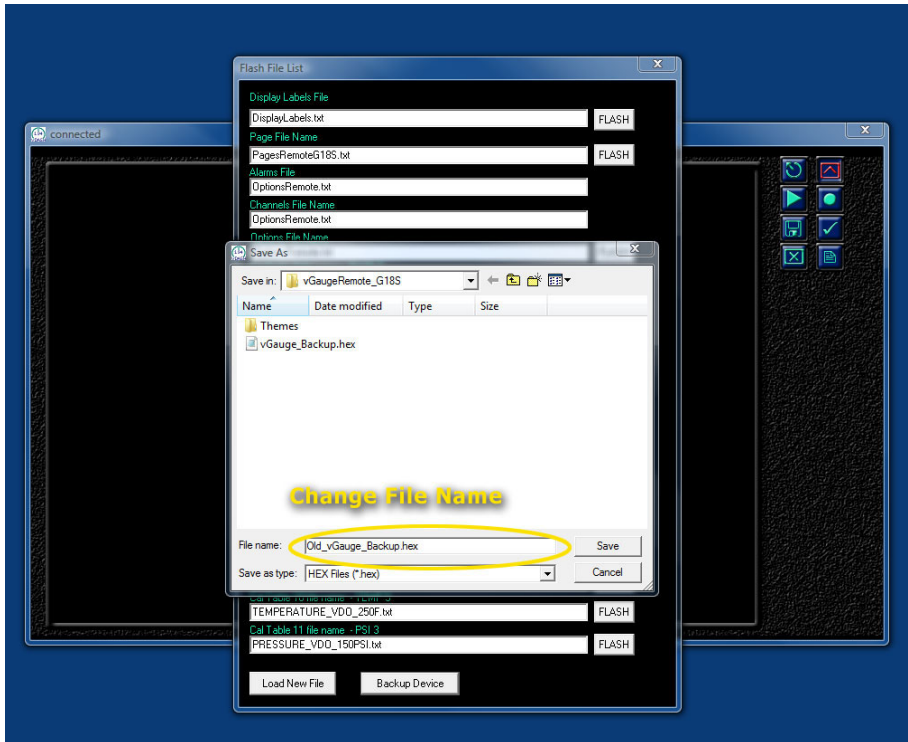


Always perform a Backup of the current firmware before loading a new file. Select the Backup Device button at the bottom of the dialog.

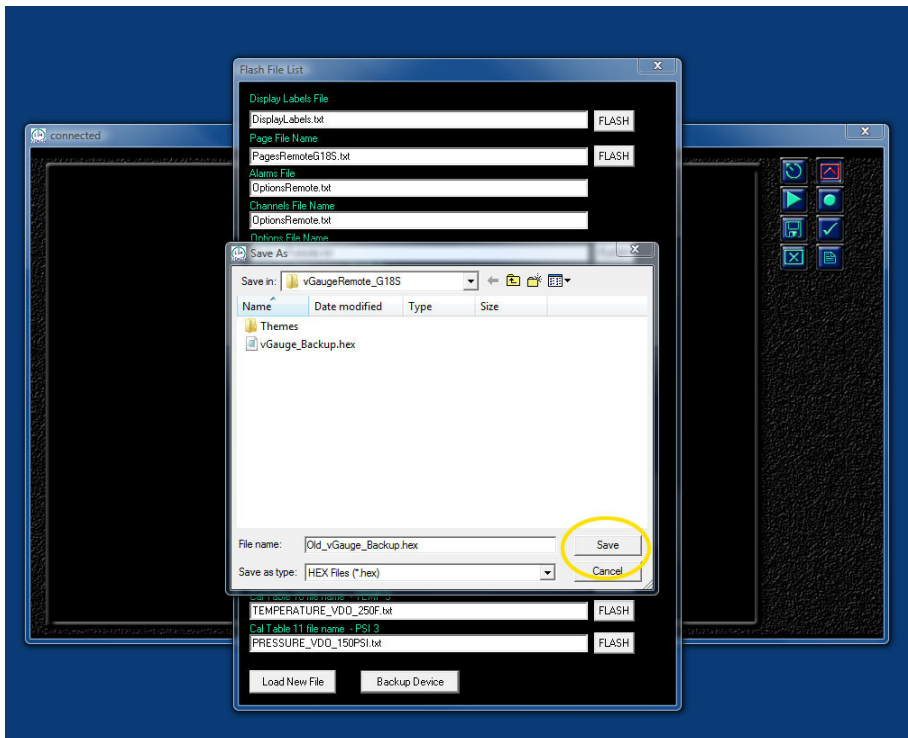


## vDash Firmware Update

You will be prompted for the location and name of the file to create. Be careful not to overwrite any existing file. Enter a new File Name.



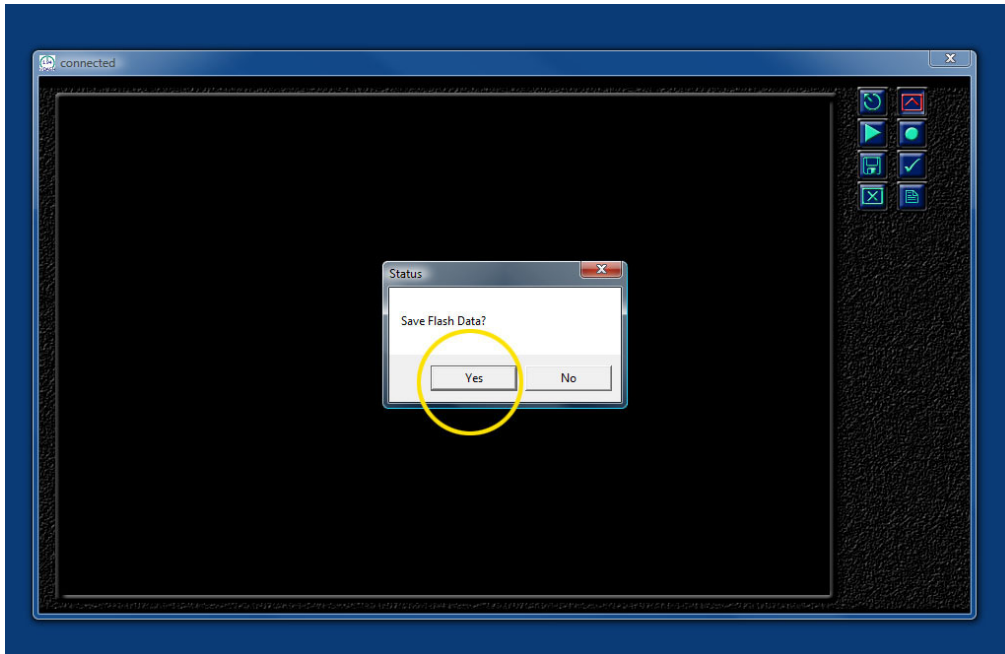
When completed enter file name, select SAVE to create it.



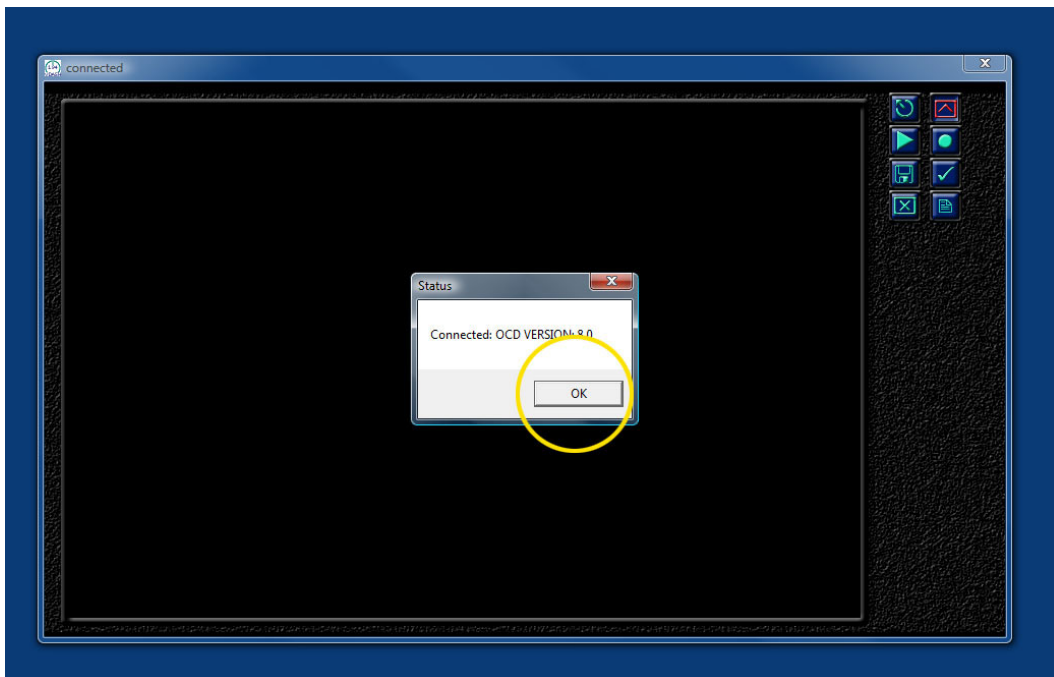


## vDash Firmware Update

The Next screen will prompt to save current firmware to new file. Select YES to continue or NO to cancel operation.

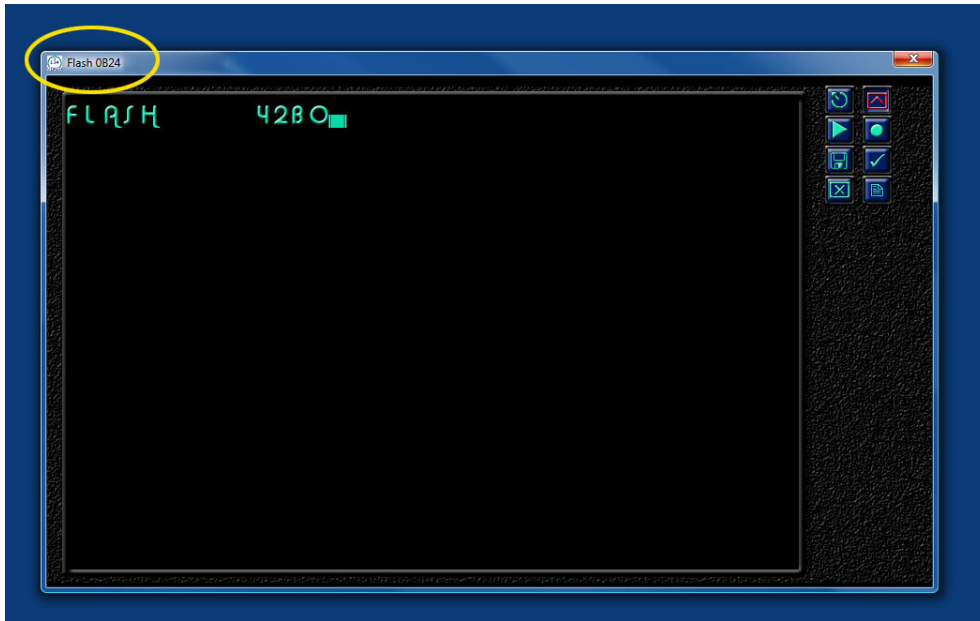


vDash will query the connected unit to determine the correct H/W version and report the status. If invalid H/W version is found, the Backup operation will terminate. It is important to note the version numbers reported for troubleshooting purposes.

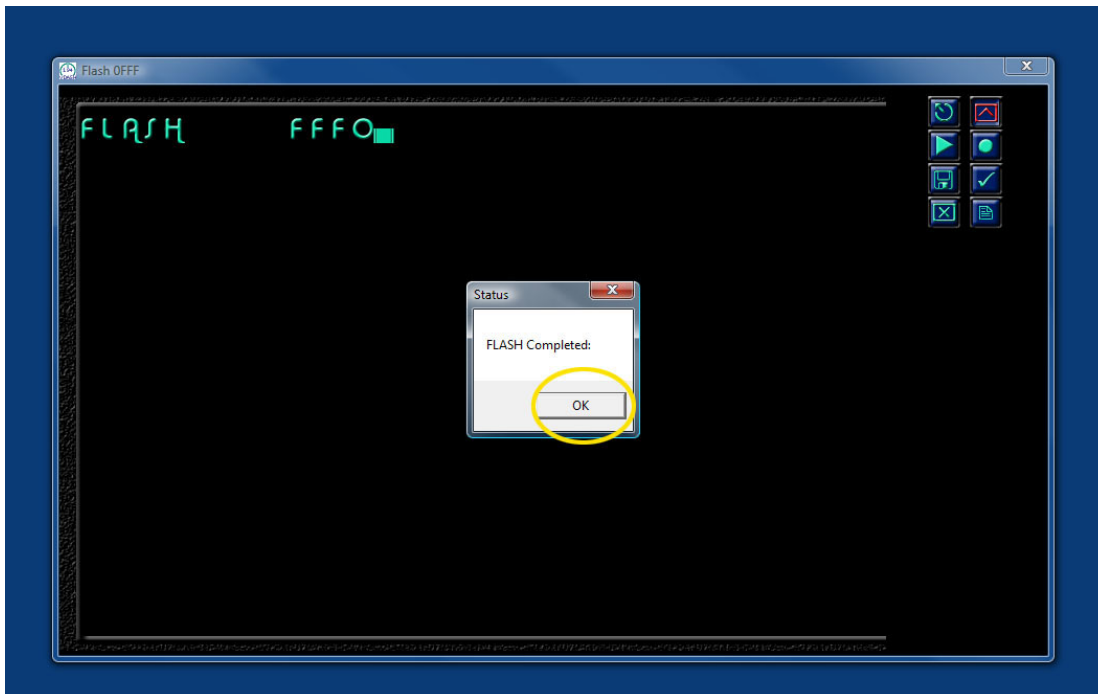


## vDash Firmware Update

Once the Status dialog is confirmed, vDash will start copying the target firmware to the selected file. A status indicator will count up during the transfer with the Hexadecimal address until reaching 1FFFF.



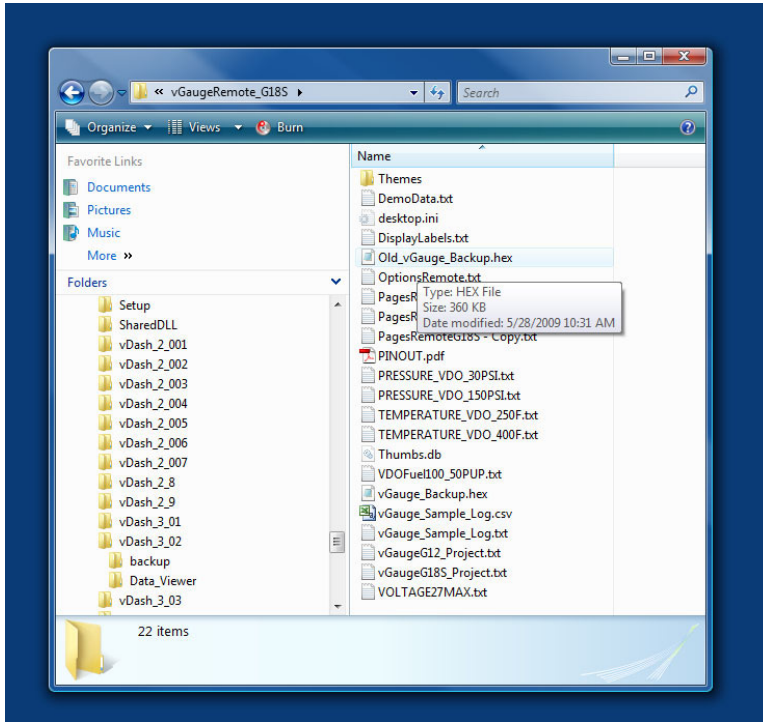
Once successful transfer of all data is completed, a status dialog will appear. The transfer process may take 1-4 minutes depending on the speed of the PC. Do not attempt any other operations during this time as it may interrupt the process and have to be restarted.



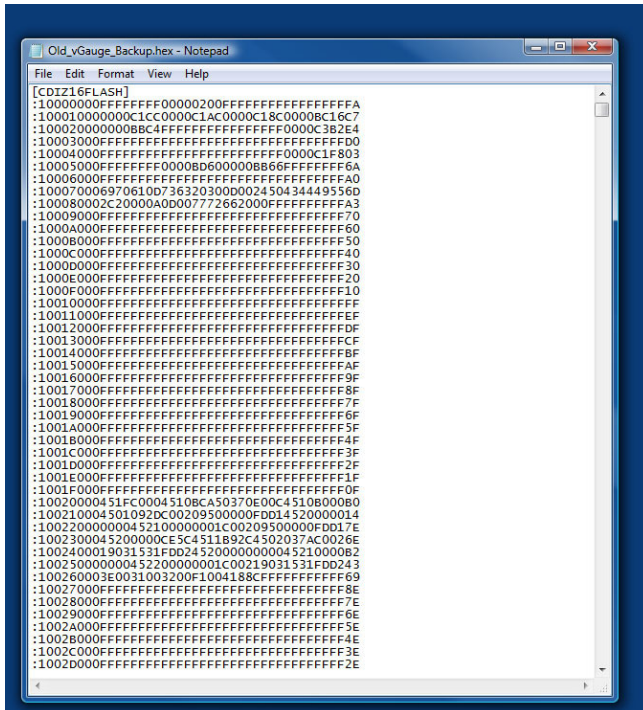


## vDash Firmware Update

Verify the new file was created in the target directory and confirm the file size is 360 KB in size. Any smaller file size may indicate a incomplete or interrupted data transfer any the Backup operation will need to be repeated..



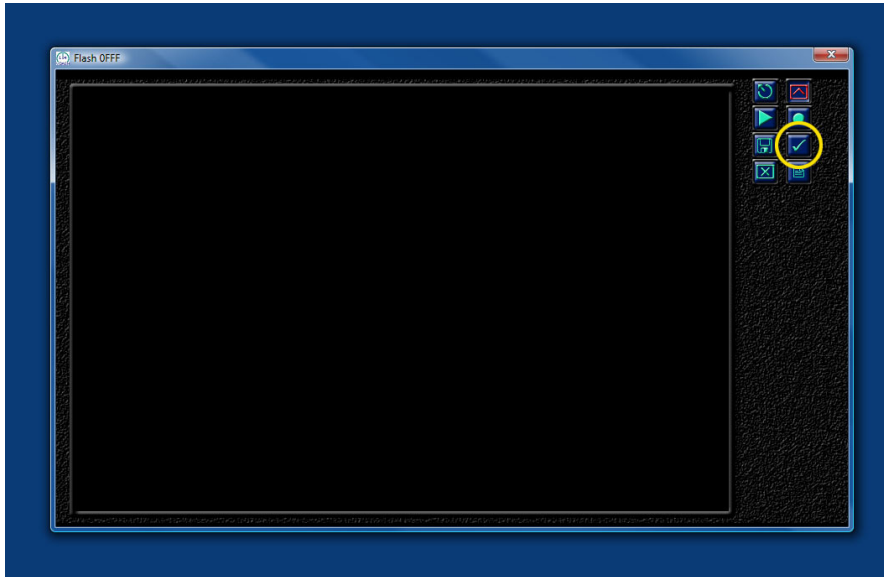
The new file can be opened in NOTEPAD to verify its contents.



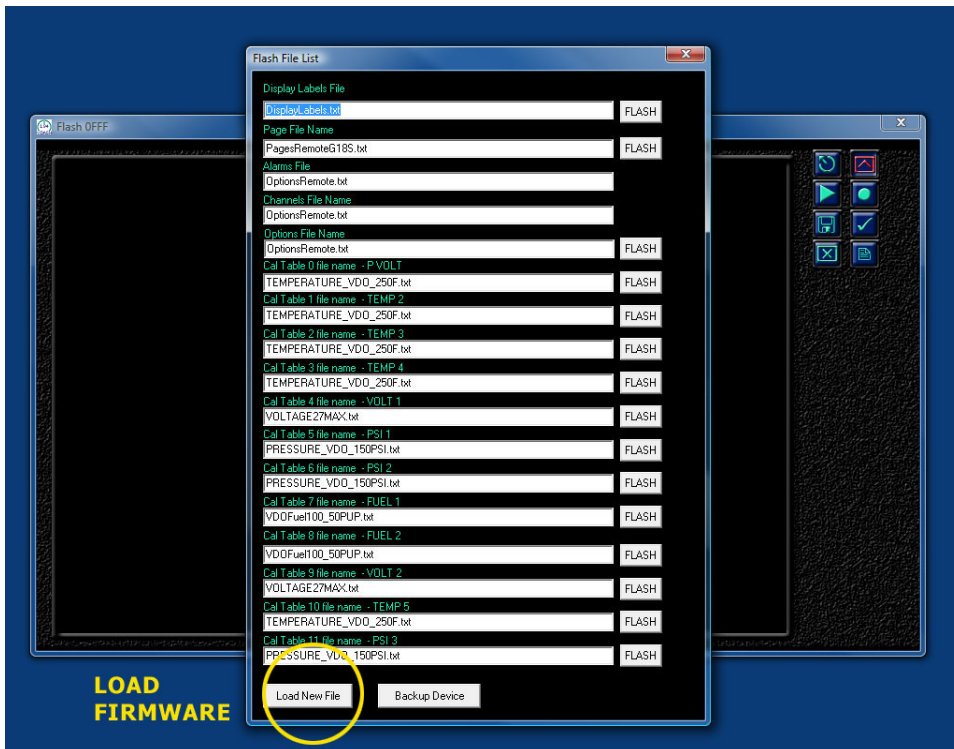
## vDash Firmware Update

### Load New Firmware File

Once the firmware backup operation is completed, the unit can be loaded with new firmware file. Choose the FLASH Icon from the tool pallet.

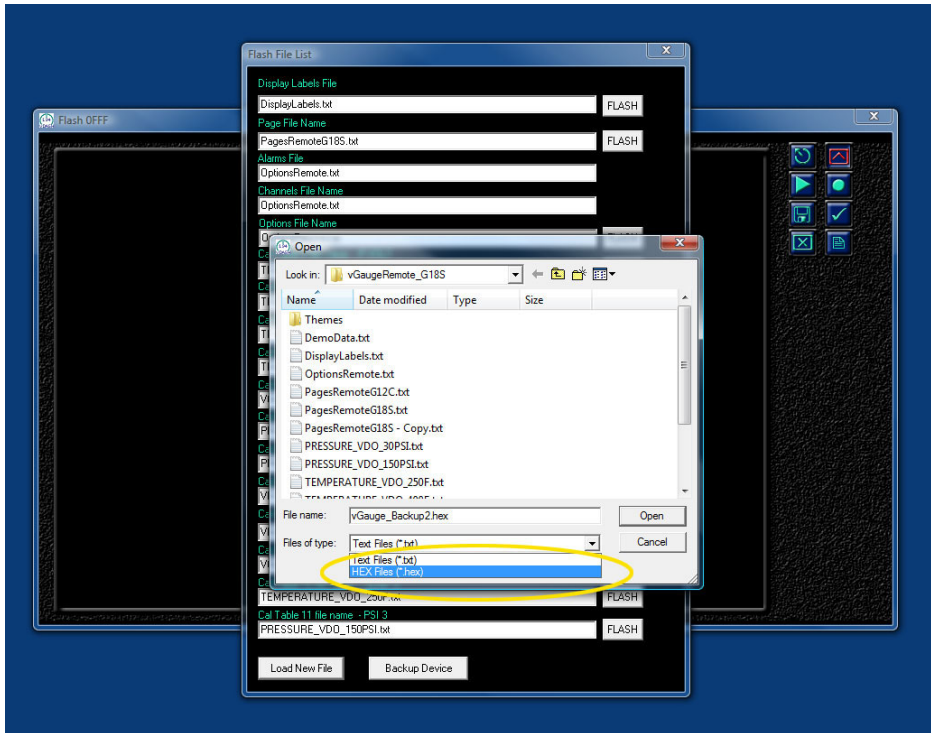


Choose Load New File from bottom of dialog.

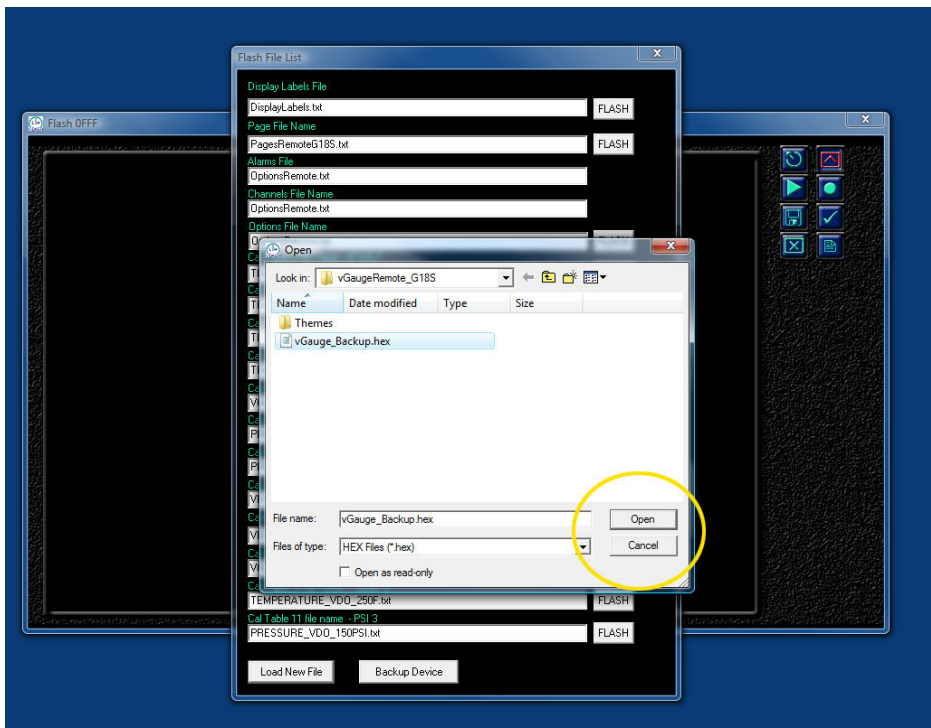


## vDash Firmware Update

Change the File type to HEX to view Firmware Files in the selected directory

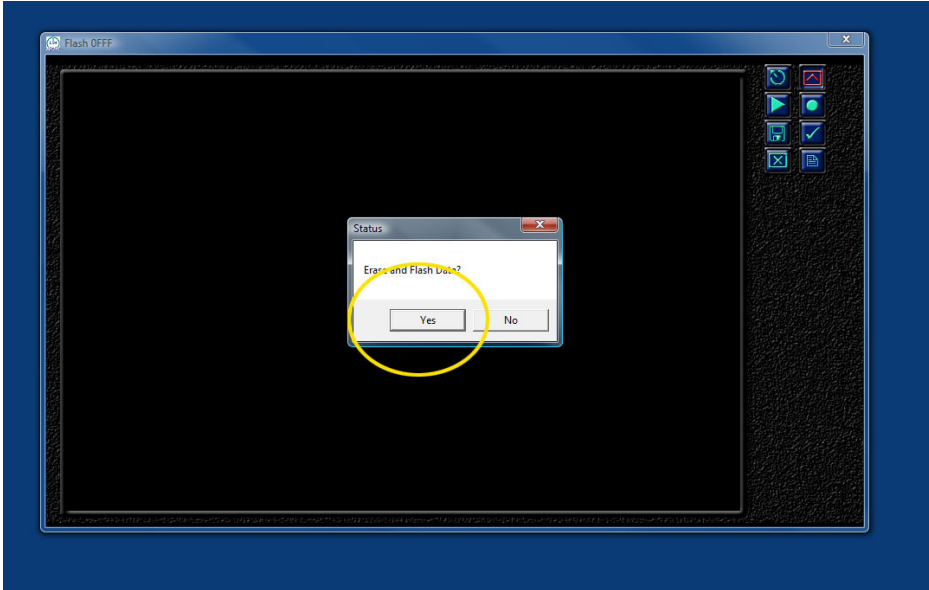


Choose the correct firmware file from the list and select OPEN.

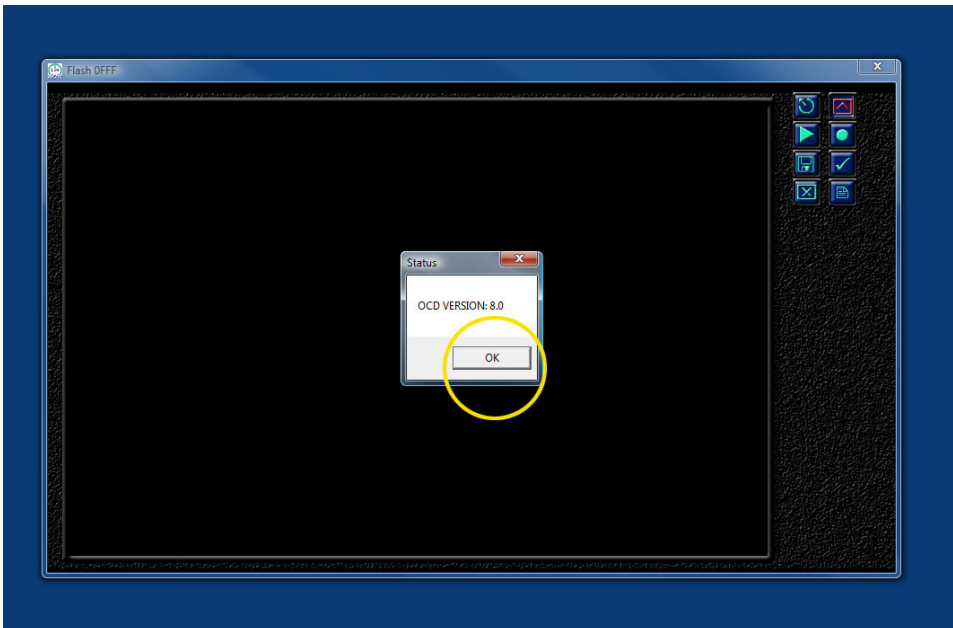


## vDash Firmware Update

At this point all firmware will be erased in preparation of loading new data. Confirm the operation by selecting YES.

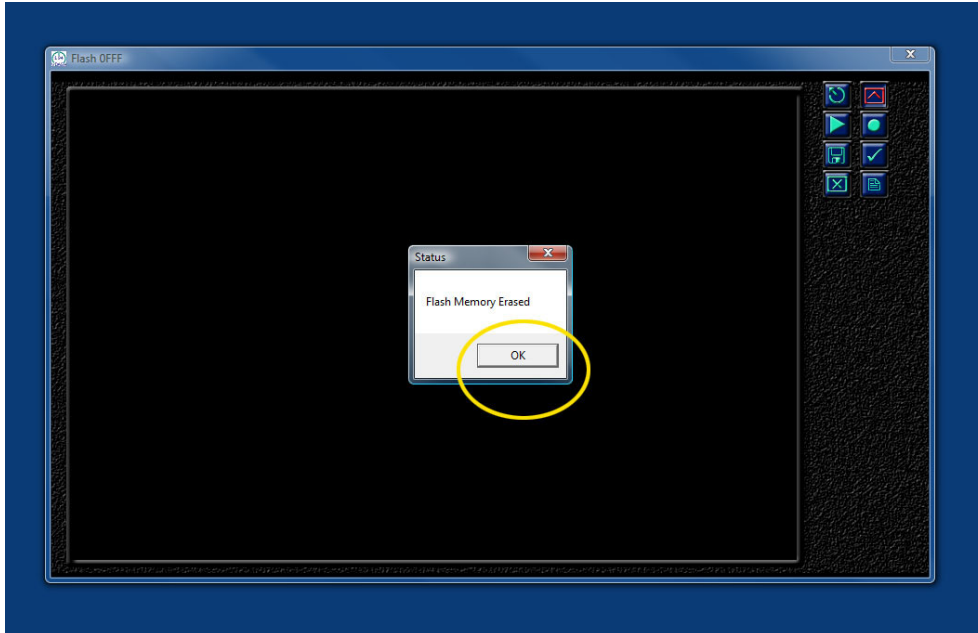


The H/W version will be checked to determine if it is valid. The operation will be aborted if incompatible H/W version is found. Note the version information for troubleshooting purposes.

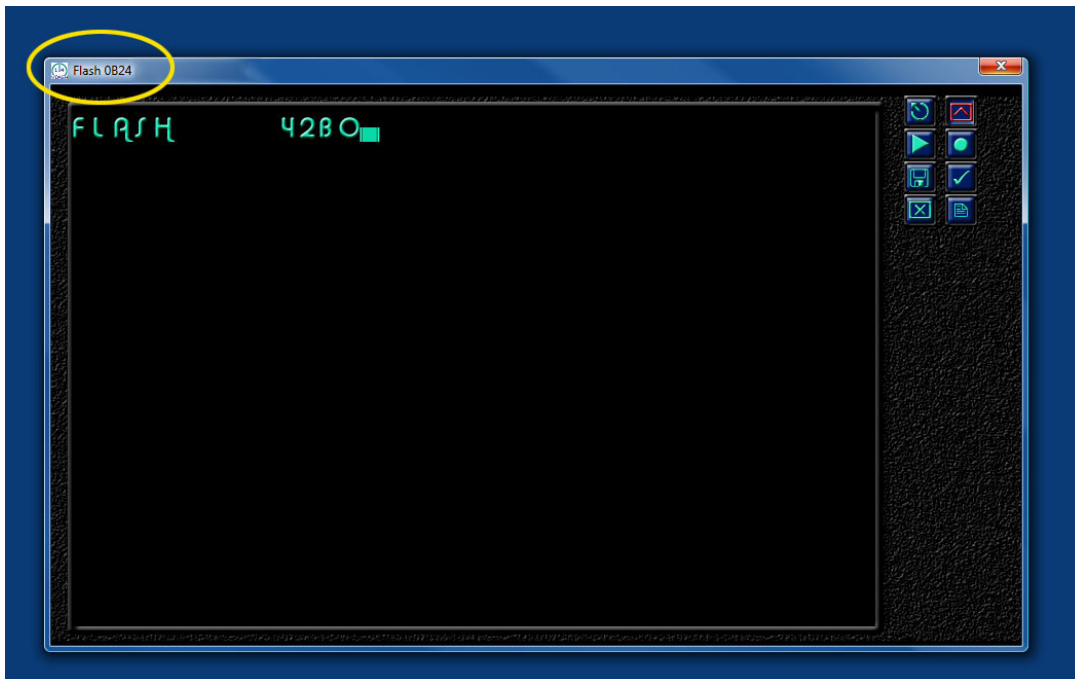


## vDash Firmware Update

After Flash Memory is erased you will be prompted to continue with copying new firmware to the unit

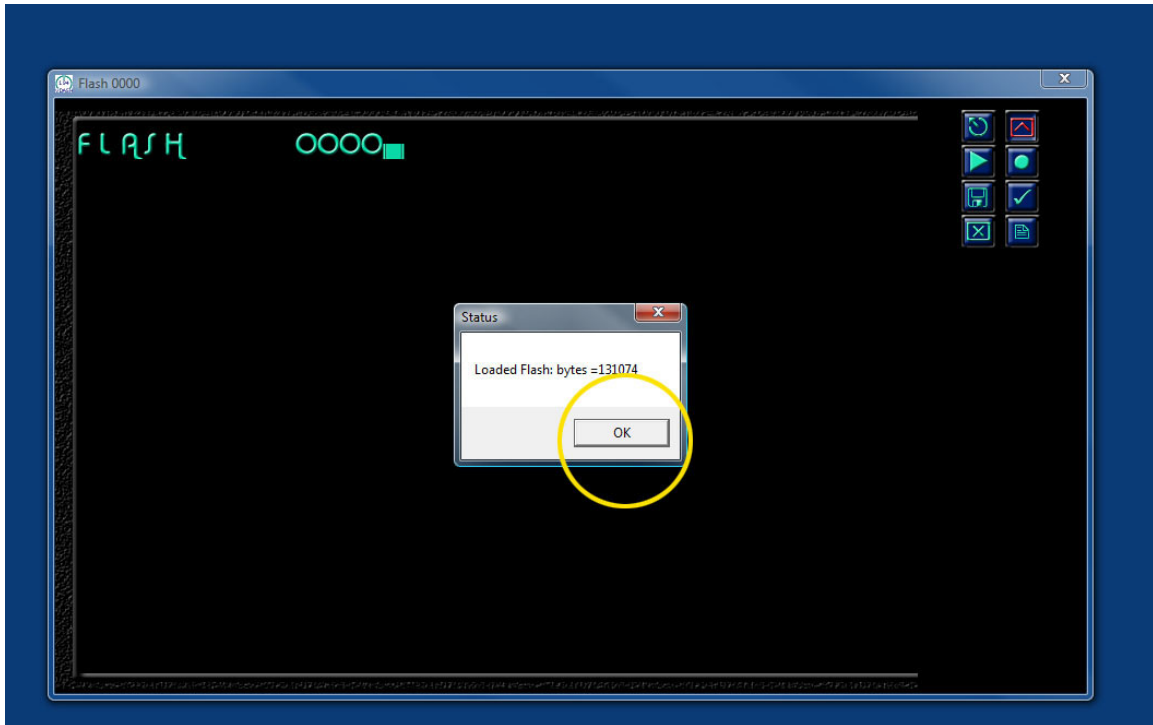


The Title Bar will update with a Hexadecimal count of the copied data until it reaches 1FFF. This process may take from 1 to 4 minutes depending on the speed of the PC/Laptop. Do not attempt any other operation during this time or interruption may result and the process need to be restarted.



## vDash Firmware Update

Once completed, a status dialog will appear with the total amount of data transferred. Note this value for trouble shooting purposes.



Once the Firmware update is completed, Quit vDash and power-down the attached unit. Be sure to disconnect the Flash Update Cable and/or return the programming jumpers to the normal operation positions.

Once the vGauge unit is re-powered – normal operation will resume

## **One Year Warranty**

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“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 one year (1) 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 one year 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.**  
**14377 Highway 101 South Unit C**  
**Harbor, OREGON 97415**  
**541-661-2051**



## **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.



## **vDash Firmware Update**

### **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 one-year 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 180-day warranty on all non-warranty repairs from the factory, which is similar to the original warranty, but is for 180 days rather than one year. 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 180-day warranty.

CHETCO DIGITAL INSTRUMENTS, INC

BOX 5359

Brookings, OR 97415

541-661-2051

<http://www.chetcodigital.com>