

# DIGITAL GAUGE SOFTWARE SETUP AND OPERATION INSTRUCTIONS

( Digital Gauge.exe Version 2:0:1 )

\*\*\* THIS PROGRAM HAS NO WARRANTY EXPRESSED OR IMPLIED \*\*\*

## Setup:

- 1) Create the directory "c:\Program Files\Perma-Cal\Digital Gauge". Note: For the software to function properly you must install only into this directory.
- 2) Unzip DG.zip to the newly created directory.
- 3) Create a shortcut to 'Digital Gauge.exe' on the Desktop and/or the 'Programs' subdirectory of the 'Start Menu' if desired.
- 4) Within System Properties, go to the Hardware Tab and select the Device Manager. Expand the Ports area and review the Port Settings. Verify that the RS232 Port being used is set @ 9600 Baud, No Parity, 8 Data Bits, 1 Stop Bit with no flow control. Note: This is the standard system default for Windows.

## Operation:

- 1) The first time the program starts, it assumes the Model 800 Digital Gauge is connected to the Com 1 serial port and that the Gauge is using PSI units. If this port is not found, the following error dialog will result:  
  
"The Com port specified within c:\Program Files\Perma-Cal\Digital Gauge\DG.cfg is invalid.  
Correct the settings then restart the program."  
  
2) If the above dialog is displayed continue with step 3. If no dialog, go to step 4.
- 3) Click 'OK' and then click the settings button (the button on the left side of the Gauge Window with 3 vertical bars [|||]). Select the correct Com Port and then click 'SAVE'. A dialog will appear instructing you to restart the program. Click 'Yes' and the program will end. Restart the program and the new settings will take effect.
- 4) Inspect the Gauge Window upon opening. The heading will indicate the Com Port in use, and to the right of the numeric display will be the Native Units which must agree with the Model 800 Gauge for proper pressure translation. If either of these indicate incorrectly, repeat step 3.
- 5) 'Units' Button ... By repeatedly clicking this button the numeric display will cycle through PSI / kPa / BAR / inH<sub>2</sub>O / inHg / mmHg / FSW / kg/cm<sup>2</sup> / ATM units (regardless of the status of the 'Run/Hold' button).
- 6) 'Run/Hold' Button ... Clicking this button will freeze the numeric display with the data displayed at the time of the click. The status indicator to the right of the button will turn red. Click the button again and the numeric display will again follow the Model 800 Gauge output in real time. The status indicator will be green. Note: When in the 'Hold' mode, clicking the 'Units' button will translate the frozen value to the selected units.
- 7) [|||] Button ... This Settings button allows you to select the Com port (1-4) and the Native pressure of the Gauge (PSI, kPa, BAR, inH<sub>2</sub>O). Make sure you select "SAVE" to lock in your choices.

#### Other Information:

- 1) This program simply monitors the RS232 serial port of a Perma-Cal Model 800 Digital Gauge and acts upon the data. It in no way controls the operation of the Gauge or communicates to the outside world (internet).
- 2) The inH<sub>2</sub>O, inHg and mmHg conversion factors are based on 60°F.
- 3) The conversion factor used for FSW is per USN and ASME B40.100 guidelines. Other conversion factors exist.
- 4) You may edit the DG.cfg file with any text editor such as Notepad. However, only character 5 should be manipulated. At this time, 1,2,3 & 4 (indicating the Com Port), are the only valid characters for that position.

#### Known Issues:

- 1) This software has been tested with Windows 2000 sp4 and Windows XP sp3. It has yet to be tested with Windows Vista or 7.
- 2) If upon running the software for the first time you get an error message stating that a module has not been found, you will have to load and register the missing module. Here's how ...
  - 2a) Copy the required module ... mscomm32.ocx or msstdfmt.dll or richtx32.ocx (which are included in the DG.zip file) to the system32 directory.

For Windows 2000, the path is c:\winnt\system32\[module]

For Windows XP and Vista the path is c:\windows\system32\[module]

- 2b) After you copy a module to the system32 directory you must register it. To do this, from the Windows Start menu, select Run and in the window type "regsvr32 c:\{winnt or windows} \ system32\[module]" (without the quotes & spaces) then select the "OK" button.
- 3) This program is a work in progress. It has been written to give increased functionality to our line of Digital Gauges. If you find any bugs or have suggestions on how to improve its operation, please email your thoughts to [customerservice@perma-cal.com](mailto:customerservice@perma-cal.com).