



Model 510 & 520 Digital Trim Kit Installation Manual

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DIGITAL TRIM

Viatran Instruments are factory calibrated. However, because of mounting or other effects, you may wish to “re-trim” the transmitter. For this reason, 510 & 520 transmitters are equipped with digital potentiometers which allow the user to adjust the zero and span. A pc with a parallel port running Windows 2000, NT, or XP and loaded with the “Viatran Calibration Software” is needed to perform a digital trim. The software is available from Viatran. You will also need a power supply and ammeter to set up a current loop and read the transmitter output as you adjust the zero and span.

SOFTWARE INSTALLATION

The “Viatran Calibration” installation disk includes the setup application, SETUP list file, and an additional zip file. If your computer is running Windows XP, you must have administrative rights to install this software. You do not need administrative rights to run the application after it is installed.

Insert the installation CD in the computer. Select “run” from the “Start” menu and browse for the “setup” application on the drive holding the installation CD. Click “ok” to begin the installation process. Follow the prompts. NOTE: Abort the procedure if you are asked to overwrite any files. Do not overwrite old versions! Contact the factory for assistance. You must reboot the computer before using the software. The software is accessible from the Start menu “Programs” directory as “510 Calibration Software”.

PC TO TRANSMITTER CONNECTIONS

Remove the adapter and secure it to the sensor housing using one screw as shown below:



Insert the 5-pin serial connector cable as shown below. The white mark on the cable must be positioned closest to the outer edge of the PC board for proper operation.



Connect the other end of the serial interface cable to the parallel port of your PC.

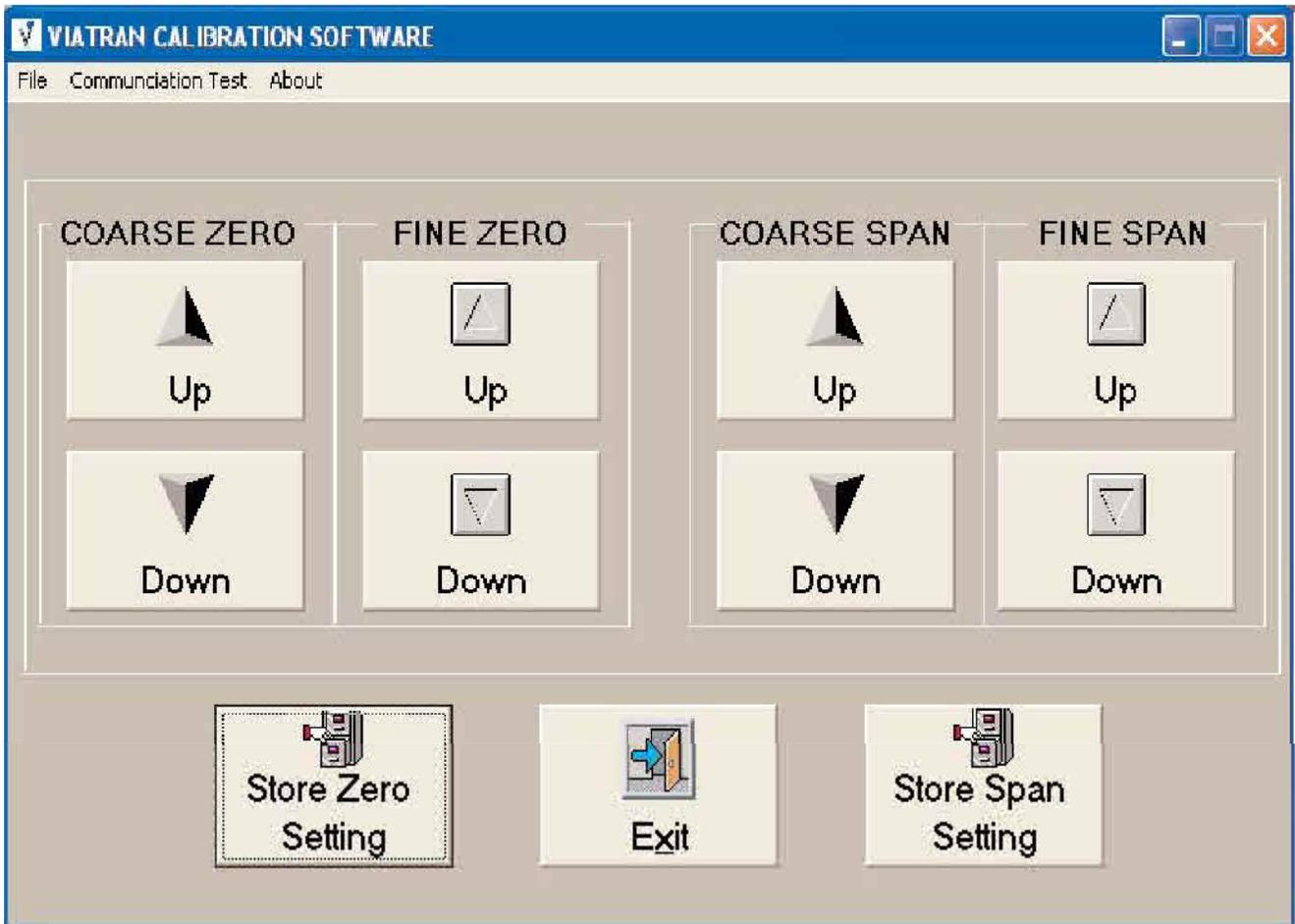
SETTING UP THE CURRENT LOOP

The transmitter must be powered on to perform a digital trim. Power is applied to the Model 510 & 520 through the connector on the adapter assembly. The current loop is demonstrated below.



COMMUNICATION TEST

The calibration software may be started by clicking the program link. The link is accessible from the Start menu "Programs" directory as "Viatran Calibration Software". The following screen will appear when the software is started.



The software must be able to send signals to and receive signals from the transmitter to perform a digital trim. The menu item "Communication Test" should be clicked to verify that the software is able to establish communications with the transmitter. A text box with a "Pass" or "Failed" message will be displayed. If the unit failed, the software cannot communicate with the transmitter. The transmitter to pc and current loop setups should be checked. Make sure that the power supply is on! The transmitter must be powered when performing a digital trim. If the unit still fails the communication test, the software installation may require additional steps for your computer. Check the "ReadMe" file that came with the software.

FULL SCALE TRIM

The buttons labeled “up” and “Down”, located on the right side of the screen below the text “COARSE SPAN” and “FINE SPAN”, are used to adjust the transmitter’s span. Full scale is the pressure at which the transmitter generates a 20 milliamp output. The span is the difference between the full scale and zero values. Setting the full scale output adjust the span.

PLEASE NOTE: A “SPAN” adjustment should only be performed with the full scale pressure applied to the sensor. When full scale pressure is applied to the unit, the “Up” and “Down” buttons may be used to increase and decrease the output, respectively. The output will step up or down in increments as the buttons are pressed and, as such, it may not be possible to set exactly 20.00 milliamps. The output should be adjusted to be as close to 20 milliamps as possible, using the coarse and fine span adjust buttons. When this is achieved, the “Store Settings” button must be pressed. If the settings are not stored, the unit will not remember the new settings when the power is cycled. If the unit does not adjust, the software installation may require additional steps for your computer. Check the “ReadMe” file that came with the software.

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