

Troubleshooting DASyLab Buffer Underflow/Overflow (96) errors

Application Note #218, 1/16/2003

* DasyLab error 96 refers to "buffer underflow", which means DasyLab is not able to get enough time to output a value. Increasing the # of blocks delay in the instruNet output icon sometimes helps.

* The DasyLab instruNet Analog Output icon runs in either High-Speed or Low-Speed mode, as described at www.instruNet.com/#109

* Analog High-Speed mode - There was a bug in the older \leq v1.40.1.1 iNet32.dll (kept in the System32 folder) that caused the Analog Output icon to produce an err 96 when running in High Speed mode. The work-around for this older dll was to go to Low Speed mode (see app note #109), or install the newer \geq v1.40.1.2 iNet32.dll. To install v1.40.1.2, download "iNet32_dll_1_40_1_2.uue" from "www.instruNet.com/download-latest-software/", decompress the uue file (similar to a zip file) with a program such as WinZip, and then copy iNet32.dll and iNet32_WinXp.dll to "Windows \ System32 \" if on Windows Nt/2k/Xp or "Windows \ System \" if on Windows 95/98/Me.

* Low Speed mode - When running Low Speed i/o, the computer must be able to get instruNet i2x0 processor time to do it's output when this processor is not busy with integration. If the sample period is close to the aggregate integration time, then DL has trouble getting instruNet processor time to do low speed i/o. Decreasing total integration time helps. For details, see www.instruNet.com/#58.

* The DasyLab digital input and output icons operate in Low Speed mode only. To run them in High Speed mode, you need to use an Analog output channel set to .2V (0) or 4V (1), or use an analog input channel and test for $> 2V$ (1); and run these analog channels in High Speed mode. This eliminates the need to interrupt the i2x0 processor since in High Speed mode, the i2x0 has already allocated time for the High Speed i/o.