

# User's Manual

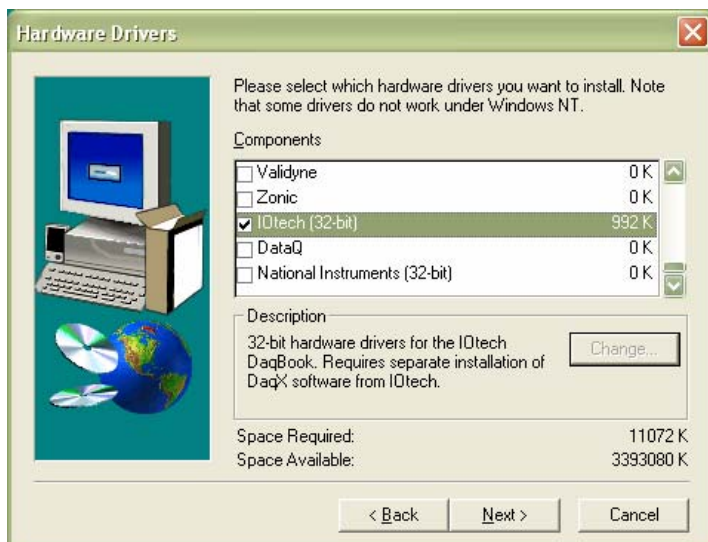
## Snap-Master with IOtech 32 Bit Drivers

This user's manual describes the following:

1. How to install the software to support IOtech's 32 bit drivers
2. Summary of features that have been implemented
3. Changes in the User Interface
4. IOtech's DaqX software

### 1. Installation

1. The Snap-Master installer will install the following files: Start the install by selecting typing *setup*.
  - a. *c:\sm\iotech32.dll*
  - b. *c:\sm\HDIcfg32.dll*
  - c. *c:\sm\sysdata\iotech32.ini*
  - d. *c:\defuser\sm.ini*
  - e. *c:\sm\defuser\iotech32.cnf*
2. Make sure you select IOtech 32 bit (near the end of the list). There are two driver models. The 16 bit version is entitled IOtech and is listed first.



3. Install Iotech's DaqX from the Snap-Master CD, if it is not already installed on your computer. It will automatically install in the directory *c:\program files\DaqX*. Start the install by selecting Disk 1 from the CD and typing *setup*.
4. Use DaqX to set up the hardware. Set up your DaqBook model. Run the test in DaqX to ensure the hardware passes the test. Details on using DaqX are provided later in this document in Section 4.

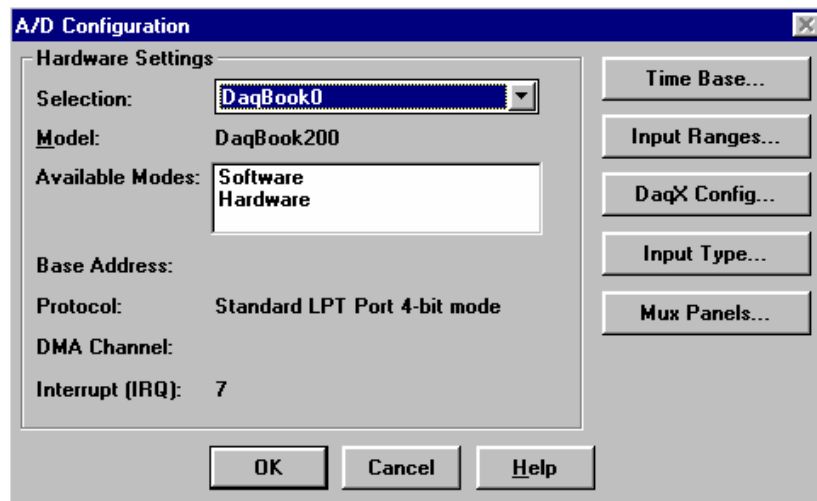
## 2. Feature Summary

The new driver support includes:

- Support for DaqBooks and DaqBoards including most DBK signal conditioning modules.
- The ability to acquire data with Snap-Master and Windows 98/Me/NT/2000/XP.
- The ability to run both the old and new drivers on a Windows 98 or Me machine to compare them.
- Sample rates to approximately 32,000 samples/sec aggregate, which is a typical limit of the parallel port.
- DBK mux panels are supported.
- The unipolar/bipolar setting works.
- Single-ended / differential channels work.
- Individual channel gains work.
- Supports multiple hardware input devices.
- Software triggers are implemented.

## 3. Changes in the User Interface

The A/D Configuration dialog has been modified to reflect that the IOtech drivers work directly with the computer's operating system so there is no longer a need for Snap-Master to be involved with the set-up of the hardware. This is done in IOtech's DaqX software. A button in the Snap-Master A/D configuration dialog provides easy access to DaqX. Note that the left side of the Configuration dialog mainly reports the settings made in DaqX. In previous Snap-Master versions changes were made directly in the Snap-Master Configuration dialog. The buttons on the right are the same with the addition of the DaqX button.

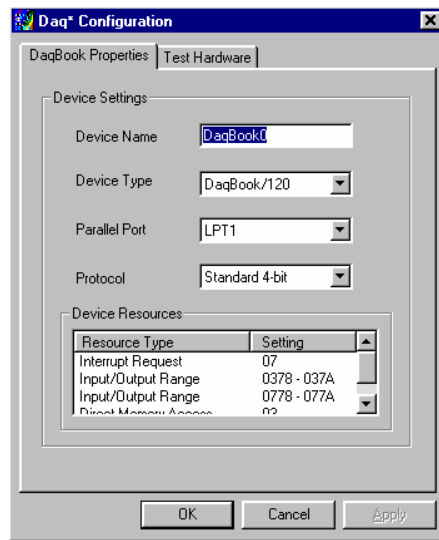


The Device Overview dialog is only used if there were multiple A/D hardware either from the same manufacturer or from multiple vendors.

#### 4. DaqX Software

DaqX handles the Device Name (Use DaqBook0), Device Type (model number), type of interface to the computer (Parallel Port), and the Protocol of the interface. 4-bit protocol is the safest protocol or whatever port you are currently using with the 16 bit driver should still work. You can try faster protocols with DaqX and determine which is the fastest that is compatible between the IOtech product and your computer.

The Device Resources that were assigned by the operating system are shown (if plug and play hardware) or what was set in hardware (DaqBook is hardware settable). The Resources include: the interrupt (IRQ), base address (input/output range), and DMA (direct memory access) channel's number.



Test the hardware by selecting the Test Hardware tab. Click on OK and Yes to confirm that you do have the hardware installed correctly and powered on. You will see Test Results as shown below. Windows 2000 does not assign an interrupt level to the parallel port, therefore the Interrupt Level test line will fail when using Windows 2000, which is standard, as long as the other items are reported successfully.



*This test was run under Windows 98 where the interrupt Level Test passed. The Interrupt Level will fail under Windows 2000, which is OK.*

If the hardware is not working correctly with Snap-Master, please redo this DaqX test to help define the problem. If the hardware is not working in Snap-Master, then ensure that power is on for the hardware, and if necessary change the settings in DaqX (especially the Protocol) to solve the problem.