

# DVC-8 VIBRATION CONTROLLER

## *Quick-Start Installation*

### *32 bit Version 2.40 and up*

**2.0 ) DESCRIPTION.** The DVC-8 is a vibration control system for use with IBM compatible personal computers; it is essentially a programmable digital waveform generator and data acquisition system with sophisticated control and analysis software. It is shipped along with a computer interface card, Windows Xp/Vista software on a CD and a 3' SCSI-3 cable, although a complete system would also have a shaker, amplifier, and an accelerometer at a minimum

The computer interface card installs in the computer in a PCI slot; it is a 16 bit 16 channel data acquisition card with two 16 bit analog outputs and has a 24 line 8255 type digital interface. Several vendor cards may be used, but all follow the I/O Tech DaqBoard1000 SCSI-3 connector interface. The PCI card is installed by the Windows plug-and-play software, and the board configuration must be checked after installation.

**2.1 ) SOFTWARE INSTALLATION.** The software should be installed on the computer before the hardware is installed. There are two programs to install on the computer: one for the PCI interface card installed inside the computer, and the DVC8DSC software for vibration control; each comes standard on CD's provided. The software installs for all versions of Windows; the Windows NT/2000/Xp/Vista driver is automatically installed.

The DVC8DSC.EXE software comes on a CD and requires about 20 mb of hard disk space. The disks also contains some sample profiles; using the program in the Demo mode is highly recommended as a training tool to get used to the software without risking possible damage to the equipment. Load by inserting the CD into the disk drive and follow the directions and it should automatically install on the hard drive; run SETUP.EXE on the CD if it doesn't automatically start. The default directory is C:\Program Files\DVC8, but it can be changed during the setup if desired.

The DVC8DSC program is 32 bit software intended for use on all Windows platforms; please read the CD QuickStart instructions or go to [www.vibrationworld.com](http://www.vibrationworld.com) for the latest help on operation with Windows Vista.

**2.2 ) HARDWARE INSTALLATION.** Turn of the computer and nstall the DVC-8 computer interface card in a PCI expansion card slot of an IBM compatible personal computer of Pentium grade or better with Windows software; next connect the SCSI-3 cable between the computer and DVC-8 box and connect the wall power supply to the DVC-8 and plug it in. A 1 Gb Pentium or better is recommended for superior performance. The PCI card is installed by the Windows plug-and-play software, and the board configuration must be checked after installation.

The DVC-8 Controller module connects to the computer interface card via a short SCSI-3 HD68 male- male cable, and all drive and feedback connections are made with the BNC connectors. A 6 pin Molex type connector is available for remote control of the System. The DVC-8 Controller can be configured for either 4 or 8 channel operation in Sine, Random, or Classical Shock modes; the software automatically detects the Controller configuration and enables the appropriate features. Remote control is accomplished by switch closures to ground by any of the

4 Remote Control pins on the Remote connector; refer to the connector pin-out diagram.

**2.3 SOFTWARE SETUP.** After the hardware installation above, turn on the computer and the system should detect a new PCI card. The Daq1000 must be initially configured according to the instructions in the I/O Tech instructions before it is ready for use.

**2.4 CONTROLLER INITIALIZATION.** Start the DVC-8 program and choose the Sine Controller function if purchased, or Random if Sine was not ordered. The Sine ( or Random ) program should be operational now. Choose ABOUT HARDWARE from the HELP menu and the serial number and enabled features should be displayed and match the purchase order; this also verifies that the system is operational. The box in the lower right corner should also read "Automatic" and the Ready light on the DVC-8 box should be lit, all confirming a successful installation

Click on the SERVO ON button and the level should come up to the profile line if a BNC cable has been connected from SERVO OUT to Ch#1 INPUT; click SWEEP RUN and observe the test proceed within tolerance. The system is now functional and ready for use. Review the default system setup choices such as Max Acceleration, Max Velocity and Max Displacement, change them to match those of your shaker system, click File|Save Profile, highlight DVCFiles.000 ( or DVCFileR.000 for Random ) and click OK to save the changes. At this time you may also enter information like Titles and Sub-Titles and accelerometer information, and save it the same way and all future profiles will start out with this information already inserted.

Repeat with the Random and Shock programs if those functions were also purchased to verify operation and setup system parameters. This installs the software for operation with all versions of Windows, for additional information please read the manual and application notes on the installation CD.

- 1) If this is a new installation, you are done and all of the DVC-8 software has been installed in the C: Program Files\DVC8 folder; future upgrades will require downloading new executables and copying them to this folder
- 2) If you get a printer error when trying to run the program, it is because no printer has been installed. Go to Control Panel|Printers and install any one to eliminate the problem. You can choose Generic Printer if none will be used.
- 3) If you encounter difficulty, re-start the computer a second time to register all the drivers. Carefully recheck the steps above and consult the TROUBLESHOOTING TIPS sheet; if the problem persists, contact the dealer that you purchased the system from or go to the [www.vibrationworld.com](http://www.vibrationworld.com) support site for help.
- 17) Serial numbers above 500 use V2.4x software. Click HELP|ABOUT SOFTWARE to verify that you have compatible software and driver for your system; the serial number can also be read in HELP|ABOUT HARDWARE or on the label on the back of the DVC-4 box.