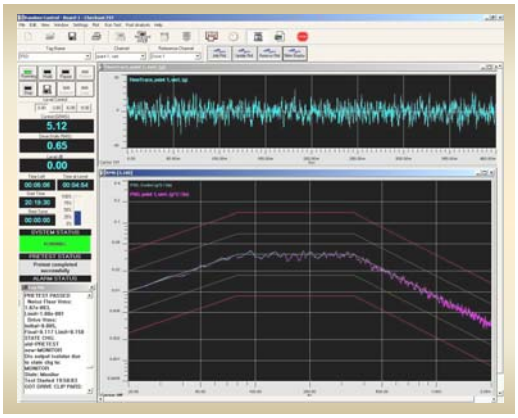
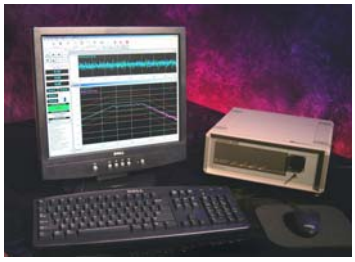
MB Win2K5

Vibration Control System

- ***All popular vibration control applications, including RANDOM, SINE, TRANSIENT TIME HISTORY, SHOCK***
- ***2, 4 and 8 input channels***
- ***Both single and dual-shaker control from one PC***
- ***DSP runs in peripheral connected via USB port***
- ***DSP does vibration control; PC handles graphics***
- ***Software on multiple PCs, move DSP from PC to PC***
- ***Built-in voltage and ICP-type signal conditioning***
- ***Easily integrates with new or legacy PCs***
- ***Runs under Windows 2000 and Windows XP***





The **Win2K5** is MB's latest in a series of controllers that provide reliable test, measurement, and processing for vibration and shock control of a wide range of single-shaker and dual-shaker test setups. All signal generation, acquisition, and calculations are performed on a dedicated Digital Signal Processing subsystem that employs a high-speed Texas Instruments 6711 processor. The DSP system is extremely powerful and integrated into a single board computer that facilitates test and measurement applications that previously required expensive and complex instrumentation. The PC host is completely removed from all aspects of the data acquisition and control processes and operates in parallel with the DSP system to produce an efficient multiprocessing environment.

Shaker control applications are available for the complete spectrum of vibration testing – sine; random; transient time history; classical shock; sine-on-random; random-on random; resonant search and tracking; and extended dwell. The Win2K5 system comes with a Universal Serial Bus (USB 1.1 and USB 2 compliant) DSP Module that houses the analog front-end electronics, ICP-type accelerometer conditioning and DSP. Application software may be installed on multiple PC's and the DSP module moved from PC to PC to support test requirements. The system comes complete with USB cable and a 1-year warranty.

Integration with your PC is easy. Simply install the application, attach the USB cable to the PC's port, and you are ready to test. MB's hardware and software comply with Windows Plug & Play standards. Alternatively, MB can provide a PC tailored to your specifications from DELL or the PC supplier of your choice.

KEY SYSTEM FEATURES

- Controls 1 or 2 shakers from one PC
- 2nd shaker control is separate from and independent of 1st shaker, with no loss of performance
- Versatile, flexible, very price attractive (one software license for two controllers)
- Improves productivity – one person can run two independent tests on one controller
- Frees up lab space – no need for a second computer
- Common Windows interface for all packages through GUI, mouse and function keys
- Up to 8 plots can be shown on each display
- Up to 16 displays can be viewed simultaneously
- Automatic test sequencing (mission profiles)
- User may adjust control parameters (amplitude) during operation
- Any input channel can be configured for control or measurement or disabled
- Continuous loop check for safety & protection
- User support via on-line HELP and phone back-up
- Cut/Copy/Paste run-time screens to standard Windows applications for easy report writing
- Import ASCII files of frequency/amplitude breakpoints and time histories; Export ASCII to Windows applications
- English or Metric units
- Data saved during and at the end of a test can be post-processed and plotted at any time
- Printing (grayscale or color) is easy with any output device supported under Windows.
- Hard copy and data reduction during test without interrupting control
- Report Generator for SINE and RANDOM uses Microsoft Word

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www.mbdynamics.com Specifications subject to change without notice (091503)

INPUTS

- Simultaneous data inputs in 2-, 4- and 8-channels; any may be control, monitor, or disabled
- ICP (4mA, 24V open circuit; user-adjustable from 1 to 12mA for longer cable runs) and voltage inputs; all BNC connectors
- 90 dB dynamic range
- Anti-aliasing via multi-pole analog filters, oversampled ADC, and digital filters
- 3kHz frequency range
- ±10V input voltage range
- 0.5dB control accuracy
- Two (2) digital inputs are available for remote start/stop (including remote E-Stop) control

OUTPUTS

- One analog drive channel and one COLA output standard per control unit
- Output protection system disconnects DAC from output until test start commanded by DSP
- Digital reconstruction filter provides >80dB of rejection of frequencies above max output frequency
- ±10V output range with analog isolation to help suppress ground loops
- > 90dB dynamic range
- Two (2) digital outputs are available for remote start/stop of external devices

DSP MODULE – DATA ACQUISITION SUBSYSTEM

- DSP board incorporated into external independent ruggedized enclosure
- Texas Instruments 6711 Single Board DSP
- DSP performs real-time shaker control without using PC's CPU
- Incorporates analog front end electronics, USB communications hardware, and DSP board
- Rear panel mounted BNC's for each channel – Voltage and ICP Signal IN; DAC and COLA OUT
- Input Power: 85/264 VAC, 47/63 Hz
- Can be powered from vehicle's 12VDC supply system via power inverter
- Power consumption < 120 watts
- Physicals for 2, 4 and 8 channel systems – enclosure 4.75"H x 12.6"W x 11.8"D, 9 lbs. (120mm x 320mm x 300mm; 4kg)
- Operating temperature range 0 < Temp < 55 °C
- Operating humidity range 10% < RH < 90%, non-condensing

SAFETY

- Manual abort via ESC key, software button on GUI, or facility E-STOP can be connected
- Pre-test controlled and limited to maximum pretest level, assures drive waveform is compared to response
- Continuous loop check for safety and protection
- Shutdown on open loop, loss of control signal, exceedance of abort and RMS level

SOFTWARE

- RANDOM Vibration Control
- SINE-ON-RANDOM (with up to 12 sine tones)
- RANDOM-ON-RANDOM
- RANDOM Response Profile Limiting
- SINE Vibration Control
- SINE Resonant Search and Tracking
- SINE Extended Dwell
- SINE Response Profile Limiting
- Transient Time History and Classical SHOCK Control
- SRS Synthesis and Analysis
- 2nd Shaker Control (using software for 1st Shaker)
- Report Generator for SINE & RANDOM, uses Microsoft Word

PC CONFIGURATIONS

OPERATING SYSTEMS SUPPORTED

- Windows 2000, 2000 Professional
- Windows XP, XP Professional

DESKTOP PC – RECOMMENDED SYSTEM CONFIGURATION

- Intel P4 2.4GHz or faster; 256 MB RAM; 80 GB; 17" flat panel display w/8MB video RAM; FDD; CD/RW; keyboard; mouse; Network Interface Card
- At least 2 Universal Serial Bus (USB) connectors (1 for printer, 1 for DSP Module); 3 USB connectors for dual shaker configurations

NOTEBOOK PC – RECOMMENDED SYSTEM CONFIGURATION

- Intel Pentium M 1.6GHz or faster; 256 MB RAM; 60 GB; 14.1" XGA TFT display, 1024x768 (minimum acceptable) w/ 8MB video RAM (1280x1024 recommended); FDD; CD/RW; Network Interface Card
- 2 Universal Serial Bus (USB) connectors for DSP Module and USB printer; for notebooks with 1 USB connector, a USB printer can be powered from the parallel port using a parallel-to-USB adapter