The PBS-3300

A modular data acquisition system designed to meet your specific machinery monitoring needs

The PBS-3300 is a state-of-the-art data acquisition system used to acquire vibration and other data from rotating machinery such as gas turbine engines, pumps, gearboxes, generators, and APUs. It is a rugged, rack-mountable instrument that can be installed in engine test cells and similar industrial environments. The PBS-3300 continuously samples, conditions and converts incoming signals according to parameters stored in the unit. Operating as a data server, the PBS-3300 provides conditioned and filtered data to one or more client computers over a standard Ethernet network. If monitoring is required for several machines spread out over a large area, multiple PBS-3300s can be installed and controlled from one or more clients.

Collect PBS-3300 data three different ways

PBS-3300 Support Software Package

The PBS-3300 Support Software package has been specifically developed to aid in the setup, configuration, and operation of PBS-3300 systems. It also includes functions to view live data and to automatically calibrate the PBS-3300 system.

PBS-3300 Digital Data Interface

The PBS-3300 Digital Data Interface provides an efficient command and control link between your host computer and the PBS-3300 system. Using the DDI command set, users may configure the PBS-3300, control test parameters and retrieve data over high speed Ethernet links.

Digital Data Interface Function List

Standard Functions		
Connect	GetEngineNames	RequestControl *
Disconnect	FindEngineByNumber	ReleaseControl *
Login	FindEngineByName	SetLocalEngine
GetStatus		GetLocalEngine
GetVersion	GetFirstEngine	SetLocalFunctions
GetVersionAsString	GetNextEngine	GetLocalFunctions
Vibration Data Functions		
Start	StartDataAcquisition	GetSpectrum
Stop	GetVibration	GetWaveform

PBS-3300 Display Option

COMING SOON

The PBS-3300 Display option features a full color touch screen interface for controlling data acquisition functions and viewing the data from a PBS-3300 system.

Designed to provide users with local control of the system, the display option allows users to review vibration data including readings, signal spectrums and waveforms on the front panel of the unit.

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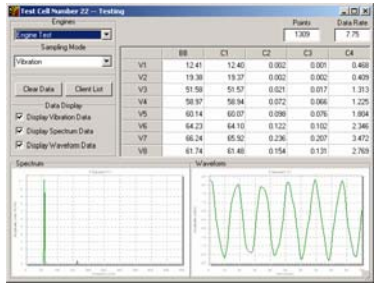
A complete set of features with every PBS-3300 system

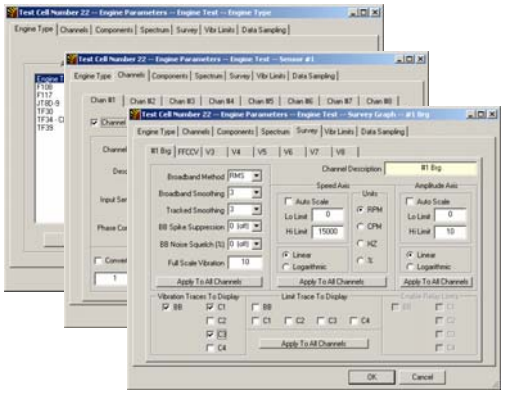
Dynamic Data Acquisition

The PBS-3300 system collects continuous real-time vibration data from machinery. From the moment power is applied and the system "boots-up," the PBS-3300 starts to acquire data from up to eight channels at more than 300,000 samples per second. The PBS-3300 conditions, filters and processes the data, and makes it available to clients more than 10 times a second.

Advanced data acquisition and signal processing techniques ensure phase continuous data across all vibration input channels plus full frequency spectrum and raw signal waveform data for advanced analysis. Clients may subscribe to receive some or all of the extensive data provided by the PBS-3300.



Simultaneous digital, spectrum and waveform data from eight channels



Parameters are displayed in easy-to-use tabular format and can be edited by authorized personnel.

Pre-programmed parameters

The PBS-3300 system can store data acquisition parameters for several different machines, which allows clients to quickly select and reconfigure the PBS-3300 for the desired machine at test time. Parameters are password protected to ensure configuration control, and new engine types can be added at any time by qualified operators. 100's of pre-programmed and validated parameter sets are available from MTI Instruments to make set-up fast and easy.

Full function support software

The PBS-3300 system includes a support package that runs on a separate computer and assists users in configuring, operating, maintaining, and collecting data from their PBS-3300 system.

Configure the system – Establish accounts and passwords for different users to ensure data security.

Manage parameters – Edit parameters such as sensor sensitivities and frequency analysis ranges for your testing needs. Also define new test parameters for new machines.

Archive settings – Maintain configuration control by saving critical settings to a separate computer and later restore them to the PBS-3300 if necessary.

Test measurements – Monitor input signal voltage levels for quick and accurate system testing.

Calibration Support – Use one of the automatic calibration programs for instant system checks and re-calibration.

Monitor Signals – Monitor input signals and display vibration and other readings in real-time using actual engineering units. Also display real-time frequency spectrums of dynamic signals.

Support Software and signal test displays

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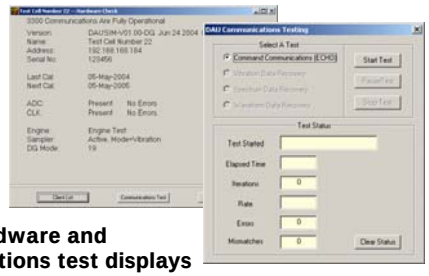
The PBS-3300 is easy to configure and maintain

Hardware Test Function

The PBS-3300 tests itself to ensure that all hardware and software components are functioning properly. Tests are performed at power-up and can be commanded from the support software package at any time. Communications tests are also included to verify communications rates and data reliability.



Hardware and Communications test displays

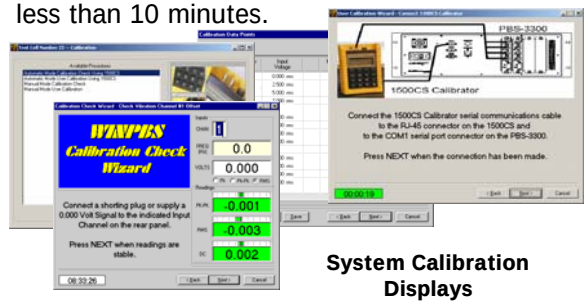
Input Signal Flexibility

The modular PBS-3300 system design permits monitoring of a wide array of machinery signals. Input Modules configured for different input signals are the key to the versatility of the PBS-3300. Each channel can be configured for AC or DC coupling, single-ended or differential inputs and for standard or ICP powered sensors.

Input Module

Calibration Function

The PBS-3300 support package includes several different calibration check and system re-calibration routines. A fully automated set of procedures utilizes the MTI Instruments 1500CS portable calibrator. Full system re-calibration can be accomplished while installed and requires less than 10 minutes.



System Calibration Displays

PBS-3300 System Capabilities

System Capacities:
Vibration inputs – 8 maximum

Vibration Sensor Types – The PBS-3300 accepts a wide range of vibration signals including conditioned accelerometers, velocity, displacement transducers and ICP type sensors. The PBS-3300 can integrate or differentiate vibration signals (acceleration, velocity or displacement) to display any other desired unit of measurement.

Autoranging inputs – Vibration signal inputs can be set up for discrete signal ranges or for autoranging on a channel-by-channel basis. Maximum signal input value is 10 volts peak, single ended or differential, AC or DC coupled.

Analysis Filters – For each enabled vibration channel, the PBS-3300 will compute Broadband vibration levels and up to four additional "engine components". These components may be defined as Low Pass, High Pass, band-pass, or discrete frequencies. Frequency break points for each filter are user programmable.

Spectrum Analysis – The PBS-3300 computes real time spectra for all enabled vibration channels. Resolution (400, 800, or 1600 lines), and frequency range (up to 10,000Hz) are all user selectable. Resolution enhancement software provides 0.1 Hz resolution in a 10,000 Hz spectrum with no data acquisition time penalty.

Digital Data Interface – The PBS-3300 provides data via a high-speed Ethernet interface. This data can be received by the PBS-3300 Display Processor or by other processors using TCP/IP protocols and special PBS-3300 communications software. All acquired vibration data (including spectra and waveforms) are available on a real-time basis.

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