DigivibeMX®
Vibration Analyzer, Data Collector &
Dynamic Balancer
The most complete, reliable and productive Dynamic Balancing and Vibration Analysis Device

Overview

The DigivibeMX platform is the most complete, reliable and productive device for dynamic balancing, vibration analysis and portable data collection. Digivibe allows you to do simple and complex analysis in both on and off route modes. The Balancing functions can be used in the field and on balancing machines. The intuitive interface is perfect for novice and expert users alike.

Functions

- 3D ODS Analysis
- FFT Spectra 3D Waterfall
- Dual Channel Functions
- FFT Spectra with 2 million lines of resolution
- Lines and columns tendency (octaves)
- Statistical machinery condition
- Code Bar generator
- Easy-to-use and understand color coding
- Intelligent Analysis
- Large Bearing Database
- Synchronize with other users easily
- Export to ASCII, WAV, UFF-58
- Gear calculator
- 4 Channel, Trial Capable Option
- Analysis and Balancing Reports (CSS, Word, Excel)
- Balancing in the field in 1 or 2 planes
- Automatic Balancing Reports
- 12 functions in the balancing calculator
- Balancing without trial weights
**Advanced, but simple**

With a single click you can easily analyze machine defects and correct machine imbalance.

<table>
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<tr>
<th>DigivibeMX M30</th>
<th>DigivibeMX M20</th>
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<tbody>
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<td>Vibrations Analyzer, Data Collector and Dynamic Balancer</td>
<td>Vibrations Analyzer and Data Collector</td>
<td>Balancer for 1 or 2 planes</td>
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Advanced Analysis

Advanced features allow you to diagnose complex problems in machinery and structures avoiding high costs of downtime, collateral damage, and unplanned repairs.

The most common tool are:

- Signal in time FFT
- FFT Pointers
- CPM, Hz, Orders
- FRF & Bump Test
- Waveform Analysis-

Dual Channels

The Dual Channel functions offers advantages, because it save time for the data collection and obtains information that can’t be achieved with one channel analysis.

Machinery Data Bases

- Name, area & company.
- Measure points
- Kind of coupling
- Iso Class

Compatibility

- ASCII* Format
- UFF58 Files
- ANL BAL
- WAV
  (stethoscope)

DigivibeMX can easily identify your machines using our embedded barcode generator and reader.

DigivibeMX has a expandable data base with failures frequencies of more than 20,000 bearings. Also includes functions for frequencies calculation and analysis of gears.
Predictive Analysis Tools

DigivibeMX allows the users to complete analysis of all kinds of machinery in the data base with tools like:

- Machinery database and routes
- Database with more than 20,000 bearings & a gear calculator
- Speeds Interpretation tools and diagnostics
- Cascade Spectra
- 3D ODS

FFT Spectra

The spectral analysis tools in DigivibeMX are based on the FFT algorithm, able to measure very low frequencies (0.4 Hz) and up to 30kHz. The precision of the spectra adjust based upon the point definition and can reach several million lines of resolution.

Dynamic balancing in 1 and 2 planes

- Balancing without trial weights
- 2 Polar graph
- Calculator with 12 functions:
  - Add or remove weight
  - Separate or combine weights
  - Trial weights
  - Balancing in series (without trial weights)
  - Drills calculation
  - Residual Imbalance
  - Degree of quality
  - Intelligent Machine Wizard
  - Balancing Report

Functions and Tools

that allows you to diagnose the real status of your machines.
ODS Functions

ODS analysis is now an easy task. Create your 3D model in 3D design software (3DS Max, Blender, Solid Works, Windows 3D Builder that comes free with Windows 10 etc.) import the model to the DigivibeMX to generate a customized ODS analysis. The phase analysis also calculates the coherence between signals, the cross power and the transference to ensure that all of the recorded signals are consistent. Also all the 3D simulations can be exported to AVI video or to an animated graphic GIF.

3D Cascade

One FFT graphic in cascade (waterfall) is a spectral representation variable in time (creating a 3D drawing) that shows how the density of a signal vary as time passes. DigivibeMX includes a tool that generates this graph easily with the ability to rotate and zoom in with the mouse or your finger like in other 3D software.

System requirements

Requirements of the laptop/tablet where Digivibe is going to be installed:

- Processor 1.6 GHz or superior
- 1 GB RAM or superior
- Windows 7 or superior (supports Windows 8.1 Windows 10*)
- SVGA Monitor or superior
- “Touch” mode for touch screen
- 300 MB free disk space
- 1 USB 2.0 port

* Does not work with Windows RT.
**DigivibeMX** includes:

- **2-Channel Interface**
  - 4-pin connectors (1-A, 1-B, 2) for 24V accelerometers
  - 5-pin connector (Op) for Optical Sensor
  - Selector button (Ch 1 / Ch 2)
  - Cable with USB connector (15cm)
  - Weight 230g
  - Dimensions (mm): 60(d) x 90(w) x 30(h)

- **Accelerometer**
  - **Dinamyc Impact Shock**: 50g peak (max shock 5000g)
  - **Freq. response (+/- 3dB)**: 0.32 - 13000 Hz
  - **Freq. response (+/- 5%)**: 2 - 10000 Hz
  - **Sensitivity**: 100 mV/g +/- 10%
  - **Transverse sensitivity**: < 5%
  - **Power supply**: 18-30 V / 3-8 mA
  - **Short-circuit protection**
  - **Operation temp.**: ~10 - 50 °C
  - **Protection grade**: IP 67, III
  - **Impact resistance**: IEC 60028-27
  - **Standard 2-Pin MIL connector**

- **Laser Optical Sensor**
  - **Analogic output / Range**: 1 - 5000 Hz
  - **Power and current supply**: 5V, 20 - 30 mA.
  - **Voltage drop**: <0.4 V
  - **Short circuit, Reverse Voltage and Over-Voltage**: (15V for 1min)
  - **Protection grade**: IP 67, III
  - **Impact Resistance**: IEC 60028-27
  - **Weight**: 60 g

- **Software highlights**
  - **Displacement**: 0.5 um to 30 mm (0.02 to 1200 mils)
  - **Velocity**: 0.002 to 3000 mm/s (0.0001 to 120 in/s)
  - **Acceleration**: 0.0001 to 100 G’s PP
  - **Lines of resolution**: > 1,000,000
  - **FFT windows**: Rectangular, Hanning, Hamming, Flaptop, Blackman, CosSum, Bartlett, Kaiser
  - **Measures**: Peak, Peak to Peak, RMS

- **Accessories**
  - **Triaxial Accelerometer**
    - Is the ideal sensor to measure simultaneously the X, Y, Z axis for 3D analysis, dual functions and data collector in routes.
    - *Requires a 4 channel interface*

- **Digital Scale**
  - **Magnetic base**
  - **for accelerometer**
  - **200 g, 500 g, 1000 g**

- **4 Channel Interface**
  - **4 Channel Interface** measures with a max sample of 44100 Hz.
  - Supports 4 accelerometers monaxials or 1 triaxial accelerometer and 1 optical sensor
  - **Weight**: 220 g.
  - **Dimensions**: 129 x 84 x 19 mm.