Dragon
vision

Video Deflection Technology

The Future Of
Vibration
Analysis
has arrived

DragonVision™ Video Deflection Technology is a Vibration Analysis software that tracks very small movements within ordinary video recordings.

Through complex algorithms, DragonVision™ compares each one of the frames of the video looking for microscopic movements of specific points.

Video Deflection Technology

DragonVision™ can detect thousands of vibration points in a single video. Thus, making it an ideal tool for various types of vibration analysis that would otherwise take a long time to complete.

*(Product not available in the US)

"Do I need a special video camera?"

Video Deflection Technology

Any camera works for **DragonVision™** although, the better the quality of the recording, the better the results. In fact, tests made with a camera of an iPhone XS with slow motion recordings at 1 meter of distance showed a resolution in amplitude of 0.1 thousandhts of an inch (2.54 microns) and 120 Hz frequency (7,200 CPM). Which is very useful for 95% of common machines.

The Looking Glass Technique

Incredible as it may seem, machine and structural vibration (or at least a large part of it) can be detected in a video recording with incredible resolution. And with this technique you can do it.

Our unique video analysis algorithms make it possible to detect and convert micro-movements into thousands of reliable vibration signals from just one video.

This new technique, named **The Looking Glass** Technique, saves a huge amount of man-hours in studies that were even impossible before.

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What kind of failures can I detect using
The Looking Glass Technique?

There are many failures that can be detected with this technique. Mainly those relate to low frequencies and phase.

For example:
~Imbalance
~Misalignment
~Mechanical Looseness
~Bent Shaft
~Eccentricity
~Resonance
~Natural Frequencies (by Bump Test)
~Electrical Noise
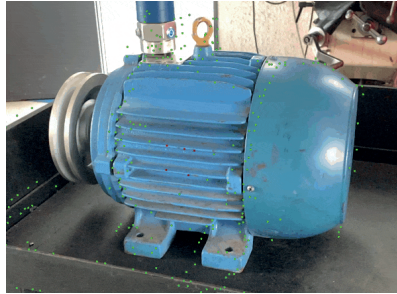
DragonVision™ incorporates an anti-aliasing filter that uses cross-channel comparison. In this way, nonexistent frequencies produced by the Aliasing phenomenon due to the low sampling rate of video cameras are eliminated from the FFT.

Dragon Vision incorporates a calibration method that relies on a traditional accelerometer, where it analyzes the spectra and eliminates the frequencies caused by the Aliasing effect.

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Where can I find
DragonVision™?

Available on Windows   **Download on the App Store**

Technical Specifications

Sample Rate	**As Defined by Camera Selection:** Resolution Resolution	
Frequency Range	**As Defined by Camera Selection:** Full HD Resolution	**iPhone 8** & **above** 240fps at Full HD **Phantom v2640** 12500fps at Full HD
Minimum Displacement	0.1 Mils at 3.3ft / 2.54 Microns at 1 Meter	**iPhone 8** & **above** 7200RPM fMax
Video Deflection Factor	1X to Infinite Maximum	**Phantom v2640** 350,000RPM fMax
Background Vibration Isolation	Cross Channel Anti-Aliasing Filter & Frame/Region Stabilization	
Calibration Methods	Embedded FFT Using DigivibeMX or WiSER Vibe ANL file (Highest Accuracy NIST Traceable). RMS Value using any Accelerometer output (3rd Party Calibration). Distance Method measures the distance between any two points within the video frame (Distance Calibration).	
Export Type	MP4 HD - Animated GIF	
Annotation Methods	Labeled Balloons with Custom Text	
Playback & Export Speeds	1/10th to Infinite Maximum	
Export Options	Export Amplified, Motion Detection and Target Points, and Full Export Capabilities following Import to DigivibeMX.	
Supported Languages	Spanish, English, German, Italian, French, Portuguese, Russian and Chinese.	
Analysis Tools	Bandpass, Highpass, LowPass, & Bandstop of Time Waveform and Video, Time Waveform, FFT, Orbits, Phase Analysis, Harmonics, Sidebands, Decibels and Full Analysis Integration with DigivibeMX Analysis Software through Export/Import.	

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OPTICAL VIBRATIONS®

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