

I-Track

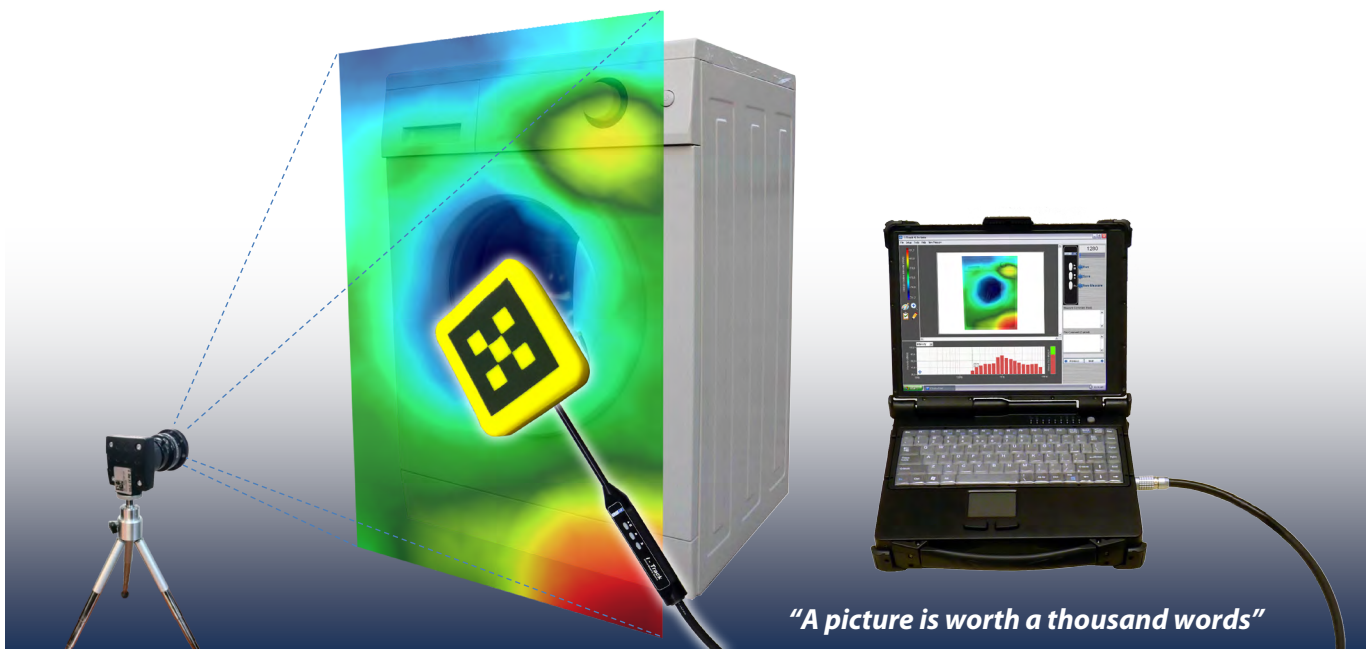
Sound Intensity Mapping System

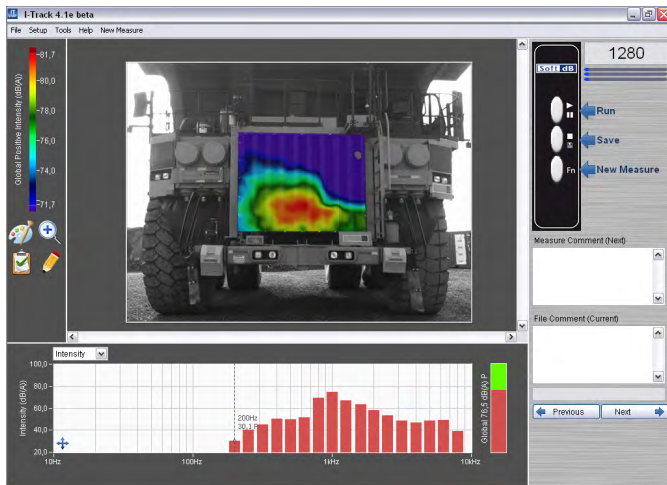
The adage “**A picture is worth a thousand words**” has never been truer in the field of acoustics. The translation of complex acoustical phenomena can be a hard task especially when it comes to informing non-technical clients. Wouldn't it be easier just to take a picture? The answer is YES!

The *I-Track* system is a powerful tool for fast, easy, and accurate sound mapping. The maps are created by combining in real-time the acoustic data from a sound intensity probe with its position data from a position tracking device. The result is high definition sound mapping performed in a few minutes and an automatic sound power calculation!

The *I-Track* system offers a complete solution to create sound mapping both in the field and in the laboratory. Its compact construction makes it easy to carry and fast to setup a measurement.

- ***Fast, Easy, and Accurate Sound Intensity Maps***
- ***Automatic Sound Power Evaluation***
- ***Precise Sound Source Identification***



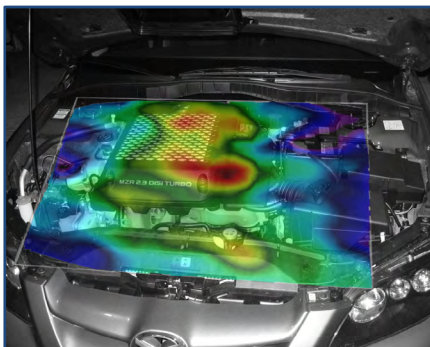


Mapping Mode

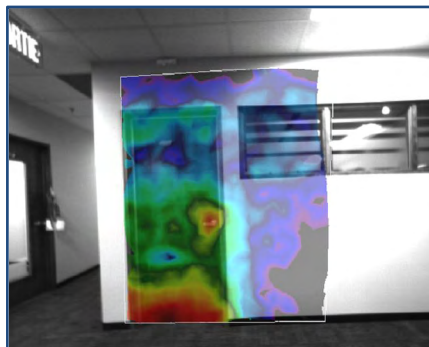


Standard Mode

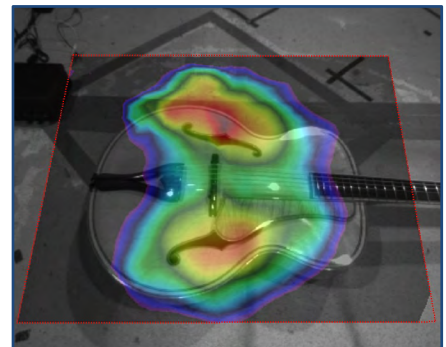
Applications:



Industrial...



Architectural...



Laboratory...

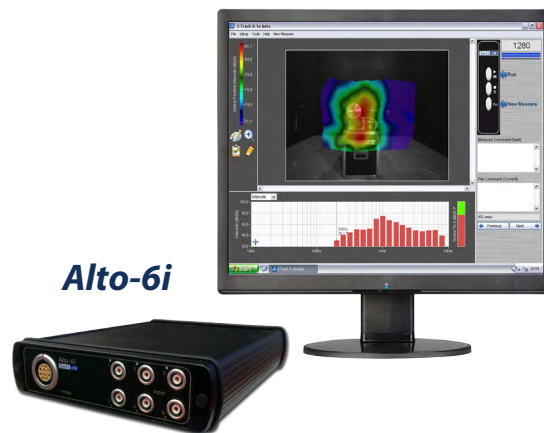
...And More!

I-Track Software	
Compatible Hardware	Conductor or Alto-6i
Standards	IEC 1043, ISO 9614-1, 2 and 3, IEC 1672
Spectra	1/1, 1/3 Octave (ANSI S1.11 – IEC 1260) and FFT (Hanning window, 66% overlap)
Freq Weight	A, C and Z (IEC 61672)
Measurement	Pressure, Intensity (Power and Field indicators are computed)
Freq. Range	16Hz to 8kHz 1/1 Octave, 12,5 Hz to 10 kHz 1/3 Octave, 10 Hz to 10 kHz FFT lines
PI Residual	IEC 1043 Class 1 for processor using Conductor or Alto DSP analyzers
Phase Matching	Can be enhanced using a PI residual calibrator (embedded function using GRAS 51AB)
Delta T	50 ms to 2 s (Instant data time interval)
Spacer Settings	6 to 200 mm (12, 25 and 50 mm spacers are provided with the I-Track system)
Environment	Measurements are normalized to ambient temperature, atmospheric pressure and humidity
Calibration	Pressure amplitude, Phase match, PI residual, Field Check
Generator Output	2 independent signal generators, White and Pink Noise, Sine waves, Filters can be applied on signals
Text Annotation	Text annotations can be added to each file for documentation
Audio Playback	Audio play-back of recorded file, Left is Mic A – Right is Mic B, Gain -30 to +30dB

Mapping Mode Specific	
Mapping Image	800 x 600 pixels
Mapping Area	3.5 x 3.0m (2m from camera) – 2.6 x 1.9m (1.5m from camera) – 1.4 x 1.0m (1m from camera)*
Tracking Precision	±15mm (2m from camera) - ±7mm (1.5m from camera) - ±5mm (1m from camera)*
Display	Pressure, Intensity and PI Index – Sound Map and Spatial Average Spectrum
Spatial Averaging	0 (no averaging) to 1 m – Single value or spectrum band specific
Geometric Thresholds	Max scanning speed (default 0.5m/s), Max angle to plane (default 10°), Max distance to plane (default 0.1m)
Plane Definition	0.005m to 0.1m (default 0.05m)
Displayed Layers	Measurement plane, Measurement points, Scanning tracks and Interpolation structure
Export	Excel compatible *.txt data file, *.png map image files

Using medium size Visual Tracking Device (150mm)

Standard Mode Specific	
Display	3 Custom Graphs – Pressure, Intensity and PI Index – Average and Instant – Spectrum or Time History
Export	Excel compatible *.txt spatial data file – End Average or Instant Spectrums



Inputs and Signal Processing (Conductor and Alto-6i)

DSP Processor	Texas Instrument TMS320C6424
Inputs	6
Outputs	2
Linear Input Range	6 × 30-119dBA (Using 50mV/Pa sensitivity)
Cross-talk	> 115 dB at 1 kHz
Bandwidth	24 kHz (12 kHz using I-Track software)
Digitization	Delta-Sigma 24 bit
Conditioning	AC, DC, ICP (4mA)

Sound Intensity Probe

Configuration	Pressure-Pressure (Face-to-Face)
Microphones	GRAS 40GI-26CB (IEC 1043 Class 1) or BSWA MPA201 (IEC 1043 Class 2) 12.5mm Matched Microphone Set
Remote Control	Run/Pause, Stop/Save, Function
Buttons Backlight	Green (Running), Cyan (Paused), Red (Probe position invalid – Mapping only)

Conductor Rugged Laptop Platform

Laptop Platform	Amrel RT9
Processor	Intel® Core 2Duo™ 2.26 GHz 3 MB L2 Cache
Storage	Standard 320 GB SATA HDD (Upgradeable)
OS	Windows 7
Display	338 mm (13.3 inches) XGA (1024 × 768) Anti-reflective TFT LCD
Dimensions	324 × 276 × 80 mm (12.8 × 10.9 × 3.1 inches)
Weight	4.3 kg (9.48 lb.)
Battery	11.1 V, 8400 mAh Li-ion battery
Operating Temp.	-20 to +50 °C (-4 to +122°F)
Certifications	MIL-STD 810G & IP-65