

Micromate™

Vibration and Air Overpressure Monitor for Regulatory Compliance

Range of Applications:

- Blast-monitoring for compliance
- Pile driving
- Compaction
- Construction activity
- Demolition activity
- Heavy transportation
- Remote monitoring

Value Redefined

Micromate™ is InstanTel's most cost effective vibration monitoring solution. Ideal for any budget, **Micromate** provides reliable regulatory compliance monitoring with an ISEE or DIN Triaxial geophone and ISEE Linear Microphone. With so many features at such a reasonable price, the **Micromate** redefines industry standards for value.

Communications

Micromate supports USB 2.0 on both the host and device ports, operating at 12 MB/s. External memory sticks, and InstanTel compatible printer, modem and a host of USB peripherals are supported. Supported peripherals are automatically identified when connected, and associated commands and functions are made available (in much the same manner that you are used to with your laptop and computer). **Micromate** supports InstanTel's **AutoCall Home™** feature; when an event occurs the event is immediately captured and is automatically transmitted to your computer (there is no need to prompt the unit to transmit data).

Easy to Use

With the use of a color touch screen and icon based user interface, InstanTel sets a new industry standard for efficiency and ease of use. A key pad compliments the user interface. Whether you prefer touch screens, key pads, or a combination of both, you'll find the **Micromate** intuitive to use and easy to learn. A full display touch screen keyboard makes entry of data and notes convenient and easy. Of course, the unit can be interfaced to a laptop or computer as well. Connectors are color coded for easy identification and installation.

Saving Events

Events and unit settings are saved in a reliable on-board, non-volatile memory with ample storage capacity for most applications and up to 1,000 events (with additional optional memory capacity available). Data can be transferred for off-unit storage or off-unit data manipulation to a computer or laptop via the convenient USB interface or via use of a compatible modem. Data retrieval can be as simple as copying events to an external USB memory stick (no laptop or computer is required).



Rugged and Reliable

Simply put, the **Micromate** is built to last. It's built to be reliable, every day and all day – for years! The base unit comes with a fully sealed top panel, non-corrosive industrial grade connectors and fully sealed electronics. The base unit housing and connectors provide a water resistant seal. The custom molded housings for the geophone and base unit are made of superior impact polycarbonate. Operating temperature range for electronics is -20°C to 60°C (-4°F to 140°F). An optional protective "boot" complete with faceplate provide the highest level of durability and ruggedness available in InstanTel's product line.

Battery Life

A standard lithium ion rechargeable battery pack supports 10 days of typical monitoring. An optional additional battery pack increases monitoring time to 15 days.

Key Features

- USB 2.0 with Host and Device support
- USB support for memory sticks, InstanTel compatible printer and modem,
- User Interface: touch screen (icon based), keypad, touch screen keyboard
- Supports InstanTel's **Auto Call Home** for remote automated data reporting/transmission
- Small enough to be hand-held
- Rugged and reliable
- Optional protective boot and faceplate
- Storage capacity for thousands of events (additional capacity optional)
- Optional printer for immediate in-field printing of reports
- 10 day battery life (standard), 15 days (optional)

General Specifications

Channels	Microphone and Triaxial Geophone (ISEE or DIN)
Vibration Monitoring	
Range	Up to 254 mm/s (10 in/s)
Resolution	0.00788 mm/s (0.00031 in/s)
Accuracy (ISEE/DIN)	+/- 5% or 0.5 mm/s (0.02 in/s), whichever is larger, between 4 and 125 Hz / DIN 45669-1 standard
Transducer Density	1.56 g/cc (97.5 lbs/ft ³)
Frequency Range (ISEE/DIN)	2 to 250 Hz, within zero to -3 dB of an ideal flat response / 1 to 315 Hz or 1 to 80 Hz
Air Overpressure Monitoring	
Weighting Scales	ISEE Linear Microphone
Response Standard	ISEE Seismograph Specification
Linear Range	88 to 148 dB (500 Pa [0.072 psi] Peak)
Linear Resolution	0.0156 Pa (2.2662x10 ⁻⁶ psi)
Linear Accuracy	+/- 10% or +/- 1dB, whichever is larger, between 4 and 125 Hz
Linear Frequency Response	2 to 250 Hz between -3 dB roll off points
Maximum Cable Length (ISEE/DIN)	75 m (250 ft)

Waveform Recording

Record Modes	Waveform, Waveform Manual
Seismic Trigger	0.13 to 254 mm/s (0.005 to 10 in/s)
Linear Acoustic Trigger	2.0 pa to 500 pa (100 dB to 148 dB)
Sample Rate	1,024, 2,048, 4,096 KHz S/s per channel (independent of record time)
Record Stop Mode	Fixed record time, InstanTel AutoRecord™ record stop mode
Record Time	1 to 90 seconds (programmable in one-second steps) plus a pre-trigger at .25, .50, .75, or 1 second
AutoRecord Time	Event is recorded until activity remains below trigger level for duration of auto window, or until available memory is filled
Cycle Time	Recording uninterrupted by event processing, monitoring, or communication - zero dead time
Storage Capacity	
Full Waveform Events	1000-plus 1 second events at 1,024 S/s sample rate

Histogram Recording

Record Modes	Histogram and InstanTel Histogram Combo™ (monitor captures triggered waveforms while recording in Histogram mode)
Recording Interval	1 to 30 seconds at 1 second intervals, and 30 seconds to 30 minutes at 30 second intervals
Histogram Storage Capacity	100,000 intervals. Examples: 2.5 days at 2 second intervals, or 75 days at 1 minute
Histogram Combo Storage Capacity	Example: 30 Days of Histogram recording at 1 minute intervals, and over 7500 1 second waveform events

Physical Specifications

Dimensions	101.6 x 135.1 x 44.5 mm (4.15 x 5.32 x 1.75 in)
Weight	.5 kg (1.1 lbs)
Battery	10 day rechargeable lithium ion
User Interface	10 domed tactile keys, colour touch screen, and full display keyboard with dedicated icons for common functions
Display	QVGA, 320 x 240 color touch screen
Printer	Precision high-resolution
PC Interface	USB
Auxillary Inputs and Outputs (Optional)	External trigger, Remote alarm
Environmental	
Printer/LCD Operating Temperature	-10 to 50°C (14 to 122°F)
Electronics Operating Temperature	-20 to 60°C (-4 to 140°F)
Remote Communications	Compatible with supported USB modem



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