IRD Mechanalysis

HANDHELD VIBRATION METER

IRD301 handheld vibration meter

The new IRD301 replaces the IRD301 Lite: acceleration, velocity and displacement, route logging and USB-C upload to IRD 1View.



IRD Mechanalysis Limited

THE PROBLEM IT SOLVES

Catch machine faults early

Imbalance, misalignment, looseness and bearing wear show up first as rising vibration. Without a quick, repeatable reading, they are found late.

IRD301 takes an overall reading at each point in seconds and logs it against a simple route, so trends are easy to follow in IRD 1View.

WHO IT IS FOR

Maintenance engineers

Quick overall checks on motors, pumps, fans and gearboxes

Reliability engineers

Route readings trended over time in IRD 1View

Dealers

A simple entry meter for the IRD 1View family

NEW

Replaces the **IRD301 Lite**



IRD301 front view

IRD301 AT A GLANCE

A single-axis handheld meter for fast overall vibration readings, from spot checks to simple routes.

01 **Three quantities, three detectors**
Acceleration, velocity, displacement; RMS, peak, pk-pk

02 **IEPE or velometer input**
Works with an IEPE accelerometer or a velometer

03 **Route and logging**
Up to 64 route points and 1000+ readings stored

04 **USB-C to IRD 1View**
Load routes and upload readings on your PC

05 **Simple to use**
Backlit segment LCD, 6-key keypad, 2 × AA cells

WHAT IT MEASURES

Press UNIT to step through the three quantities. Each one reads as true RMS, true peak or true peak-to-peak.

RMS • PEAK • PK-PK

on every quantity

ACCELERATION
Unit: g

0.01–60 g peak, 2 Hz – 4.5 kHz

Responds to high-frequency content such as bearing and gear defects.

VELOCITY
Unit: mm/s

0.1–500 mm/s RMS, ISO 2954 band 10 Hz – 1 kHz

The standard overall measure of machine condition.

DISPLACEMENT
Unit: µm

1–2000 µm pk-pk, 10 Hz – 1 kHz

Shows large, slow movement on low-speed machines.

Figures are design targets.

KEY SPECS

Entry model of the IRD 1View family

Single-axis handheld meter for overall vibration values, with route readings and logging.

Parameter	IRD301
Velocity	0.1–500 mm/s RMS; ISO 2954 band 10 Hz – 1 kHz (LF 2 Hz option)
Acceleration	0.01–60 g peak; 2 Hz – 4.5 kHz with IEPE sensor
Displacement	1–2000 µm pk-pk; 10 Hz – 1 kHz
Detectors	True RMS, true peak, true peak-to-peak
Accuracy	±(2 % of reading + 1 digit) at 159.2 Hz
Sensor input	IEPE accelerometer (100 mV/g) or velometer
Route and memory	Up to 64 route points; 1000+ readings
Display and keys	Segment LCD with backlight; 6-key membrane keypad
PC link	USB-C to IRD 1View software
Power	2 × AA cells; auto power-off

Figures are design targets.

SENSOR OPTIONS

IEPE accelerometer

100 mV/g, powered by the meter

Velometer

4 mV/(mm/s)

One input, two sensor types

Pick the sensor in the settings menu. With an IEPE accelerometer, IRD301 reads acceleration from 2 Hz to 4.5 kHz, plus velocity and displacement.

With a velometer, it reads velocity directly from 10 Hz to 1 kHz. Both plug into the same 2-pin GX12 socket.

ROUTE AND LOGGING

Load a route from IRD 1View, walk the plant point by point and save each reading where it was taken. Off-route readings are saved too.

64

route points per route

1000+

readings stored

01

Load a route

Up to 64 points, sent from IRD 1View

02

Step and save

UP/DOWN picks the point; SAVE stores it

03

Upload and trend

1000+ readings kept until upload

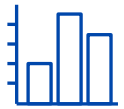
USB-C TO IRD 1VIEW

Connect, load, upload

Plug IRD301 into a PC with a USB-C cable. IRD 1View sends routes to the meter and collects the saved readings, so trends build up over time.

Route load

Send a route of up to 64 points to the meter.



Record upload

Move saved readings into IRD 1View for trending.

Runs from USB power

While connected, the meter runs from USB without draining the AA cells.



One standard cable

USB-C carries both data and power.

IRD 1VIEW FAMILY

IRD301 is the entry point to the IRD 1View range.

IRD202

Vibration plus strobe and IR temperature, with a colour display.

IRD301 · ENTRY MODEL

Single axis, overall values, route and logging, segment LCD, 2 × AA.

IRD 3V

Triaxial, with spectra, waveforms and routes.

dataPAC2040

Full data collector and analyser.

BUILD AND USABILITY

01

Segment LCD with backlight

Large digits with icons for quantity, detector and route point. The backlight helps in dim plant rooms.

02

6-key membrane keypad

POWER, UNIT, HOLD, SAVE, UP and DOWN cover every task. Settings sit under a long press of HOLD.

03

2 × AA cells

User-replaceable alkaline or NiMH cells. Auto power-off saves charge when the meter is idle.

BUILT TO BE TRUSTED

National Traceable calibration

IRD301 comes with a National Traceable calibration certificate, made against a reference accelerometer on a shaker.

1-year warranty

Every IRD301 is covered by a one-year warranty from IRD Mechanalysis.

TALK TO IRD

IRD301 handheld vibration meter

The new entry model of the IRD 1View family, replacing the IRD301 Lite.

Ask us for a demonstration or a quote.

IRD Mechanalysis Limited

irdmech.com

Contact us through our website.