

FREQUENCY RANGE

60 to 600,000 cpm (1 to 10,000 Hz).

TUNABLE FILTER RANGE

60 to 600,000 cpm in two ranges 60 to 60,000 cpm and 600 to 600,000 cpm.

TUNABLE FILTER CHARACTERISTICS

Broad filter: 10% BW ($Q = 10$) for fast plotting.
Sharp filter: 5% BW ($Q = 20$) for high resolution.
Balance filter: 2.8% (two cascaded $Q = 20$ filters) for balancing.
Automatic filter sweep: 60 to 600,000; 600 to 600,000 cpm.
Manual filter tune: 60 to 60,000; 600 to 600,000 cpm.

INTERNAL OSCILLATOR RANGE

60 to 600,000 cpm in two ranges; 60 to 60,000 cpm; 600 to 600,000 cpm.

STROBOSCOPIC LIGHT

High intensity strobe.
One flash per cycle up to 15,000 cpm: submultiple firing up to 600,000 cpm.

DISPLACEMENT RANGES (see note*)

English: 0 to 100 mils in eight full-scale overlapping ranges; 0 to .03; 0 to .1; 0 to .3; 0 to 1; 0 to 3; 0 to 10; 0 to 30; 0 to 100 mils pk-pk.
Metric: 0 to 3,000 μm in eight full-scale overlapping ranges: 0 to 1; 0 to 3; 0 to 10; 0 to 30; 0 to 100; 0 to 300; 0 to 1,000; 0 to 3,000 μm pk-pk.

VELOCITY RANGES (see note*)

English: 0 to 100 in/s in eight full-scale overlapping ranges; 0 to .03; 0 to .1; 0 to .3; 0 to 1; 0 to 3; 0 to 10; 0 to 30; 0 to 100 in/s peak.
Metric: 0 to 3,000 mm/s in eight full-scale overlapping ranges: 0 to 1; 0 to 3; 0 to 10; 0 to 30; 0 to 100; 0 to 300; 0 to 1000; 0 to 3000 mm/s peak (or rms factory option).

ACCELERATION RANGE (with Model 970)

English and metric: 0 to 100 g in eight full scale overlapping ranges: 0 to .03; 0 to .1; 0 to .3; 0 to 1; 0 to 3; 0 to 10; 0 to 30; 0 to 100 g peak ($1g = 386 \text{ in/s}^2$, or 9.8 m/s^2).

SPIKE ENERGY UNITS RANGE

English and metric: 0 to 100 g in eight full-scale overlapping ranges: 0 to .03; 0 to .1; 0 to .3; 0 to 1; 0 to 3; 0 to 10; 0 to 30; 0 to 100 g with special circuits designed to detect and analyze Spike Energy units.

TEST SIGNAL

Internally generated test signal operates on AC or battery power to check circuit operation in test. Test signal is synchronous to and in phase with the line power when switched to AC power.

BATTERY CHECK

Digital LO BATT indicator; analog meter display of battery voltage to indicate remaining battery operating time in BATT CK; analog meter of battery voltage when charging power switch off to indicate charge condition.

OUTPUTS

Built-in XY printer/plotter with annotated frequency and time plots.
Diagnostic tabular print-out to aid data interpretation.
Harmonic markers on spectrum plots to aid identification of harmonic vibrations.

Display and printout of rpm.

Printout of overall amplitude: average, maximum and minimum levels over six-second sample period at start of frequency plots.

Printout of overall amplitude average, minimum and maximum levels at the end of amplitude vs. time plot.

Event marker.

Spike Energy (8-sample average) signature in broad high-band mode
Printout of prompting messages to guide operator through single-plane and two-plane balancing.

DC power output (-24 V) to drive non-contact signal sensors.

Analog amplitude meter and analog frequency meter.

Digital amplitude meters; covers range 3-1/2 digits (.0000-1500 English, or .0000 - 15 k metric).

Digital frequency meter; covers range of 60-600,000 cpm.

Digital display of measurement units:

English: mils pk-pk, in/s pk, (or rms factory option), g pk.

Metric: μm pk-pk, mm/s pk, (or rms factory option), g pk.

Scope/tape recorder.

Strobe light output receptacle.

Signal overscale indication.

INPUTS

Two input channels, switch selectable for analysis and balancing with four transducers (544, 560, 970 or non-contact inputs of 200 mV/mil 8 mV/ μm), or acoustic input from Model 308 vibration/sound level meter.

WEIGHT

Analyzer (built-in battery): 32 lb (14.5 kg).

Analyzer (built-in battery and standard accessories): 36 lb (16.4 kg).

TEMPERATURE RANGE

5° - +122°F (-15° - +50°C)

OVERALL DIMENSIONS

Analyzer: 17 in x 14 in x 6-1/2 in (432 mm x 356 mm x 165 mm).

POWER REQUIREMENTS

AC power: 50-400 Hz; 90-250 V, 25 W.

Battery power: Built-in, replaceable, sealed, rechargeable Gel Cel battery pack; 10-hour operation capacity; 2-hour minimum continuous operation of strobe at maximum flash rate.

Battery charger: Automatic charge whenever on AC power with circuit to prevent overcharge. Maximum charging rate available when power switch is turned off.

STANDARD ACCESSORIES

- 1 Model 970 accelerometer - P/N 19697
- 1 Straight probe - P/N 1103
- 1 12 ft (3.7 m) pickup cable for Model 970 - P/N 20431
- 1 Model 571 stroboscopic light - P/N 28830
- 1 12 ft (3.7 m) strobe cable for Model 571 strobe - P/N 28836
- 1 Power cable - P/N 19643
- 8 Rolls thermal printer paper - P/N 24444
- 2 Fuses for 220 V AC operation - P/N 28578
- 1 Self training module - P/N 29177
- 1 Operating instructions manual - P/N 28838

OPTIONAL ACCESSORIES

- Model 544 vibration velocity pickup - P/N 4526
 - 12 ft (3.7 m) pickup cable for Model 544 - P/N 20433
 - Magnetic pickup holder for Model 544 and Model 970 - P/N 4332
 - Magnetic shield for Model 544 transducer - P/N 10449
 - Non-contact displacement accessories:
 - Single channel - P/N 29093
 - Dual channel - P/N 29094
 - 12 ft (5.7 m) extension cable for strobe light - P/N 28836
 - 25 ft (7.6 m) extension pickup cable for Model 970 accelerometer - P/N 21044
 - 25 ft (7.6 m) extension pickup cable for Model 544 transducer - P/N 21045
 - 50 ft (15.2 m) extension pickup cable for Model 970 accelerometer - P/N 21048
 - 50 ft (15.2 m) extension pickup cable for Model 544 transducer - P/N 21049
 - 12 ft (3.7 m) non-contact monitor pickup cable with BNC connector for non-contact monitor output with sensitivity of 200 mV/mil (8 mV/ μm) - P/N 24809
 - 12 ft (3.7 m) non-contact signal sensor pickup cable with spade lugs for connect to non-contact signal sensors with sensitivity of 200 mV/mil (8 mV/ μm) - P/N 22874
 - 12 ft (3.7 m) non-contact signal sensor pickup cable with spade lugs for non-contact signal sensor - P/N 29030. Similar to P/N 22874 but with an added wire and spade lug to apply power (-24V) to the signal sensor.
 - Model 560 low frequency velocity transducer - P/N 24957
 - 12 ft (3.7 m) pickup cable for Model 560 - P/N 25136
 - 25 ft (7.6 m) extension pickup cable for Model 560 - P/N 25137
 - 50 ft (15.2 m) extension pickup cable for Model 560 - P/N 25138
 - Model 308 vibration/sound level meter
 - Chart paper (sold in lots of 48 rolls) - P/N 24444
 - Calibrator - P/N 21073
 - Vibration chart storage notebook with 50 filler sheets - P/N 25864
 - Notebook filler sheets (package of 100) - P/N 25865
 - Accessory case - P/N 25345
 - Service instruction manual - P/N 29359
- * NOTE: For displacement or velocity readings below 200 cpm, optional low-frequency pickup (Model 560) is recommended.



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