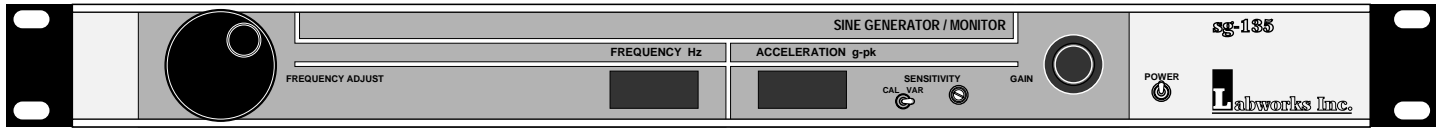


# SG-135 *MANUAL SINE CONTROLLER*



## *Vibration testing just got more economical.*

The SG-135 is a high quality sine signal source which provides simultaneous manual control of both frequency and amplitude. There are two digital readouts. One indicates the frequency of the output signal and the other displays acceleration in g's peak from a feedback accelerometer. It's an ideal choice for manual investigation of vibration response or control of electrodynamic shakers of all sizes.

### *Low cost control for the smaller shaker system.*

- Digital meters for frequency and acceleration.
- Built in acceleration monitoring up to 100 g-pk.
- Small size 1.8" H x 19" W x 6" D (Rack Mount).
- Low cost unit with manual operation and control.
- Wide continuous frequency range: 1.0 to 10 kHz.
- Built in accelerometer power supply, 100 or 10 mV/g  $\pm$  30%.
- Fuzzy logic frequency control gives wide frequency range with maximum resolution.

**L**abworks Inc.

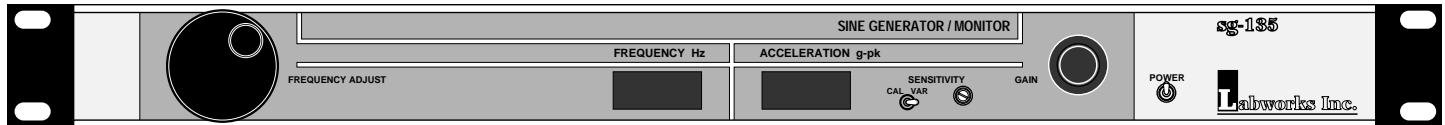
## DESCRIPTION

The Labworks SG-135 Sine Generator/Monitor is a low cost, single-channel, manual sine controller that's adaptable to many test situations. It's perfect for controlling modal shaker systems, manual calibration stations, or for engineering evaluation and general sine testing applications requiring sinusoidal vibration between 1.0 and 10,000 Hz with acceleration levels ranging from 0.1 to 99.9 g peak.

An acceleration input channel is provided to facilitate tests that require testing to specific acceleration levels. Full manual control is enhanced by separate front panel frequency and signal gain controls. Frequency adjustment is logarithmic from 1.0 Hz to 10 kHz in one continuous

range with an automatic linear fine adjustment mode. There is a locking 60+ dB output signal amplitude control. Two independent meters display both frequency and acceleration at all times allowing instantaneous assessment of the test status with just a glance. The four digit frequency meter shows output frequency with 0.2 Hz resolution below 1,000 Hz and 1.0 Hz resolution above 1,000 Hz..

The built in acceleration monitor accepts either voltage calibrated acceleration signals or integral electronics accelerometers directly and displays the monitored acceleration up to 100 g pk. Both meters are large and bright to allow reading at a distance from the instrument.



## SG-135 SPECIFICATIONS

### Frequency

<b>Range @ Resolution:</b>	1.0 to 10,000 Hz @ 0.2 Hz
<b>Accuracy:</b>	±0.004%
<b>Temperature Stability:</b>	±100 pm/ °C
<b>Display:</b>	4 digit LED

### Acceleration Analysis

<b>Range:</b>	0 to 99.9 g pk
<b>Frequency Range:</b>	2.0 to 10,000 Hz
<b>Accuracy:</b>	0.2 dB ±1 LSD/5 to 7,000 Hz 1.0 dB ±1 LSD/2 to 10,000 Hz
<b>Display:</b>	3 digit LED
<b>Input Connector:</b>	BNC
<b>Calibrated Input:</b>	10 or 100 mV/g
<b>Variable Input:</b>	10 or 100 mV/g ±30%
<b>Accelerometer Bias</b>	3 mA nominal (on-off)

### Outputs

<b>Variable Out Voltage @ Impedance:</b>	0 to 3.0 V rms @ 50Ω
<b>Variable Out Sine Distortion (1.0 V Out):</b>	<0.1% THD, 5 to 5,000 Hz <0.3% THD, 1 to 10,000 Hz 3rd harmonic <-50 dB typical
<b>Constant Sine Voltage @ Impedance:</b>	1.3 V rms @ 2 KΩ
<b>Normalized Acceleration:</b>	10 mV/g @ 50Ω

### Physical/Environmental

<b>Power:</b>	110 ±15 VAC or 220 ±30 Vac, 50/60 Hz
<b>Dimensions:</b>	1.8" H x 19" W x 6" D (Rack Mount)
<b>Weight:</b>	5 lbs
<b>Temperature:</b>	
<b>Operating:</b>	±60 to +100° F
<b>Storage:</b>	±40 to +130° F
<b>Humidity:</b>	5 to 90% RH