

Model 346B SYNTHESIZED CALIBRATOR

**A TECHNICIAN'S DREAM COME TRUE. A CALIBRATOR THAT OUTPUTS
PRECISE FREQUENCY AND AMPLITUDE AT THE TOUCH OF A BUTTON!**



FREQUENCY

0.1 Hz to 100,000 Hz

AMPLITUDE

0.010 mV to 10,000 mV
(and picocoulombs)*

MODES

Sine, Square, Triangle

UNITS

RMS, Peak, Peak-to-Peak
and DC

FRONT PANEL

PROGRAMMABLE

24 Storable programs
31 Steps each with
frequency, amplitude
and dwell time.

OPTIONAL

Remote BUS control
(IEEE 488 or RS232)

Picocoulomb output lets you simulate
Piezoelectric pressure and vibration transducer
outputs.

The Model 346B Synthesized Calibrator features amplitude units in PEAK, PEAK-PEAK, RMS and DC. AC modes include SINE, SQUARE and TRIANGLE waveforms. Units and Mode are indicated by front panel LED's.

Large front panel digital meters display frequency and amplitude settings. Frequencies range from 0.1Hz to 100,000Hz in 0.1Hz increments. Amplitudes can be set from .01mV to 9999mV in .01mV increments.

The 346B can store and recall up to 24 programs of 31 segments each in non-volatile files. Frequency and amplitude can be set for each segment as well as the time to dwell between segments.

Phase continuous operation merely changes the slope of the wave as the frequency changes so there is no discontinuity in the waveform. Millivolts and picocoulomb outputs are made available on both front and rear panels. A square wave output is also featured.

All settings and features can be performed from the front panel keypad or via optional bus interface (IEEE 488 or RS232). Bench or rack mount configurations are available.

Specifications

Millivolt and Picocoulomb Outputs

Impedance Less than 20 ohms

Connectors Millivolts BNC (front and rear)
Picocoulomb (10-32 Coaxial)

Waveform: *Sine Wave*

Level 9.999, 99.99, 999.9 or 9999 mV
FS with RMS, peak or pk-pk units.

Freq. Range 0.1 Hz-99999.9 Hz

Distortion 0.1 Hz to 10 kHz 0.25%
10 kHz to 100 kHz 0.75%

Accuracy
Frequency Set..... ± 20 ppm

Level Set..... 0.5% of settings $\pm 0.2\%$ FS from
0.1Hz to 100 kHz.

Resolution 9999 mV Range, 10.0 mV
999.9 mV Range, 1.0 mV
99.99 mV Range, 0.1 mV
9.999 mV Range, 0.01 mV

Waveform: *Square Wave*

Rise/Fall Time (10% - 90%) ± 1.5 μ sec.

Assymetry Less than 5% at 10 kHz

Overshoot Less than 5%
(full scale output)

Level 9.999, 99.99, 999.9 or 9999 mV
FS with peak or pk-pk units.

Level Set Accuracy 2% of setting $\pm 0.3\%$ FS

Waveform: *Triangle Wave*

Level 9.999, 99.99, 999.9 or 9999 mV
FS with peak or pk-pk units.

Level Set Accuracy 2% of settings $\pm 0.3\%$ FS from
0.1 Hz to 100 kHz.

DC Output (Millivolts)

Impedance Less than 10 ohms

Level 9.999, 99.99, 999.9 or 9999 mV
DC full scale

Level Set Accuracy $\pm 0.5\%$ of setting $\pm 0.2\%$ FS

Resolution 9999 mV Range, 10.0 mV
999.9 mV Range, 1.0 mV
99.99 mV Range, 0.1 mV
9.999 mV Range, 0.01 mV

Square Wave Output

Impedance Less than 1K ohm (5 mA max)

Level 0 to 4 ± 1 Volt

Waveform Square Wave

Connector BNC (front panel and rear panel)

Sweep Input

Wave Shape Square wave 0 to 5 Volt level

Frequency Frequency equals 0.1 Hz/sec.
(10 Hz input is 1 Hz/sec).

Connector BNC on rear panel

Controls

On/Off SPDT locking switch.

Key Pad 10 key and functions plus up and
(flush mounted) down arrow keys.

Key Pad Functions

Numbers 0 through 9

Frequency Six digit frequency selection

Level Four digit amplitude selection

Sweep Set segment dwell time, 1 to 9 sec

Mode/Unit Select Mode (Sine, Square or
Triangle waves) and Units
(Peak, PK-PK, RMS or DC)

Start/Stop Start, Pause or Stop current program

Save Save program setups

File Recall saved programs

Segment/Total Segment selection from 1 to 31

Displays (2) 6 digit LED display (frequency)
4 digit LED display (amplitude)

LED's 5 LED's indicate segment number
4 LED's indicate functions
4 LED's indicate units
2 LED's indicate program or remote

Dimensions 3.5"H, 19"W, 13"D

Power Operates from either 115 or 230
VAC 50 - 400 Hz, at approximately
25 watts.

The MILLIVOLT output is converted to picocoulombs at the PICOCOULOMBS output. The frequency is the same; the picocoulomb level is the same as the millivolts $\pm 0.3\%$. The PICOCOULOMB output connector is a 10-32 coaxial on the front panel and a BNC on the rear panel.