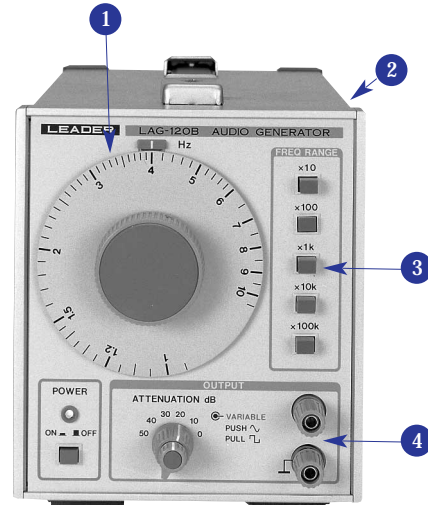


# Audio Sine/Square wave Generator

- Low Distortion < 0.05%
- Wide Band 10 Hz to 1 MHz
- 50 dB Step Attenuator
- 20 dB Variable Attenuator
- Rear Panel Sync Input

The LAG-120B precision wide band audio sine/square wave generator is used for testing and servicing audio equipment. Frequency dial accuracy is  $\pm 3\%$  across the 10 Hz to 1 MHz range. The rotary 10 dB step attenuator and the 20 dB variable control offer an attenuation range of 70 dB. The rated output is 3 V rms into a 600  $\Omega$  load and approximately 25 V p-p open circuit. A terminator is provided as an accessory for 600  $\Omega$  source impedance requirements.



LAG-120B

- 1 Double-gear frequency dial provides smooth, backlash-free operation covering 10 Hz to 1 MHz.
- 2 SYNC IN terminals are provided on rear panel to synchronize the output to an external frequency source.
- 3 The frequency range is selected by 5 decade switches making it convenient to check frequency response quickly without the need to reset the dial.
- 4 The outputs are 3 V rms max for sine wave and 3 V p-p for square wave into 600  $\Omega$ . The 6-step attenuator controls output levels in 10 dB steps over a range greater than 50 dB.

## KEY SPECIFICATIONS

### FREQUENCY

Range  
10 Hz - 1 MHz in 5 decade ranges  
Accuracy  
 $\pm (3\% + 1 \text{ Hz})$

### SINE WAVE OUTPUT

Level  
3 V rms into 600  $\Omega$  termination  
(+ 12 dBm)

### Distortion

$\leq 0.05\%$ : 500 Hz - 20 kHz  
 $\leq 0.4\%$ : 50 Hz - 200 kHz  
 $\leq 0.8\%$ : 20 Hz - 500 kHz  
 $\leq 1.5\%$ : 10 Hz - 1 MHz

### SQUARE WAVE OUTPUT

Level  
3 V p-p, 600  $\Omega$  termination

### Rise Time

200 ns

### Sag

5% or less

### Overshoot

2% or less at maximum output

### EXTERNAL SYNCHRONIZATION

#### Lock Range

$\pm 1\%$  of dial frequency per volt rms of input signal

#### Maximum Input

10 V rms

### GENERAL OUTPUT CHARACTERISTICS

#### Impedance

600  $\Omega \pm 10\%$ , unbalanced

### Frequency Response

$\pm 0.5 \text{ dB}$  into 600  $\Omega$  load (1 kHz ref)

### Amplitude Control

Output attenuator provides up to 50 dB of attenuation in 10 dB steps; a continuously variable control (20 dB approx.) is also provided

### POWER REQUIREMENTS

100, 120, 220, 240 V ac  
50/60 Hz, 6.5 VA

### PHYSICAL

#### Size (W x H x D)

5 $\frac{1}{4}$  x 6 x 9 $\frac{7}{8}$  in.  
132 x 150 x 250 mm

#### Weight

6.5 lbs., 3 kg

### SUPPLIED ACCESSORIES

600  $\Omega$  Terminator (LT-2040)  
Spare Fuse

Although dBm is loosely called *dB*, the correct designation specifies the impedance and is 600  $\Omega$  dBm.

The unit that has come into general use in the broadcast industry is the dBu. The u is not the Greek letter  $\mu$  used for micro but is a lower case U and stands for *unterminated*. This system uses the same voltage reference, 0.775 V but works on the principle that all loads have a high input impedance and do not load the source. Zero dBu stands for 0.775 V from a voltage source with much lower impedance than the loads. VU (volume unit) meters are also calibrated in dB and indicate the 0.775 V reference at zero dBu and dBm.