# SIGNAL GENERATOR - high power

**Cat: LB3754-001 220/240V.AC. 50/60Hz. 0.1Hz - 100kHz. 0.5 amp**

**DESCRIPTION:** For low frequency and digital, see also LB3753-101

The IEC general purpose **Signal Generator** is a very useful instrument for the electronics laboratory because it provides the technician or student with a very convenient signal source. The IEC Signal Generator is a broad range, high current instrument and the output is selectable to be sine, triangular or square in shape and it will supply high currents up to 0.5amp directly to loads which makes the use of amplifiers unnecessary.

This instrument can directly feed a loud speaker, solenoid, vibrator or other electro-mechanical device requiring heavy current. Experiments on low frequency oscillations and waves can be devised using a loud speaker as the source of oscillations.

**The simple controls are:** Frequency adjustment, range selection, waveform selection, output amplitude from 0 to 10V, attenuation in dB to set the output as required. Output sockets are provided for both 600 ohm output impedance and very low output impedance supplying up to 500mA to the load.

The output current is limited to a maximum of 500mA even upon short circuit.

***NOTE:*** IEC produces also a triple function instrument that includes a +/- regulated DC power supply and a very useful audio amplifier with speaker all in the one compact housing. This instrument is named the 'TRI-MODE'. Cat: LB3758-001

**LB3754-001 signal generator (high power, 0.5 amp)**


**Physical size: 300x105x75mm LxWxH** **Weight: 1.5 kg.**

Frequency control by large knob with graduated markings.

**SPECIFICATIONS:**

**Range:** Very wide range: 0.1 Hz. to 100 kHz. over 6 ranges.

**Accuracy**: Within +/-5% of scale reading.

**Modes:** Sine, Triangular, Square (pos.& neg. excursions), Square (pos. only).

**Distortion:** Sine. Within 2% under 20 kHz.

Triangular. Linearity within 1% under 20 kHz.

Square. Rise time less than 1 microsecond at 5V. peak to peak.

**Outputs:** **Low Power:** Adjustable from 0 to 10 volt peak.

Output impedance 600 ohms.

**Attenuation:** 3 settings: -0dB (no attenuation, volts setting x 1.0)

-20dB (volts setting x 0.1)

-40dB (volts setting x 0.01)

**High Power:** Adjustable from 0 to 10 volts peak.

**High Power output current is limited to 500mA max. into any load or short circuit.**

***NOTE #1:*** Output voltage is controlled continuously from zero to 10 volt peak on the high power output. This current is limited to 0.5 amps max. and is current limited to prevent damage if the output is short circuited. If the load is such that it demands in excess of 0.5 amps, the current limiting feature will cause waveform distortion. When connecting the output to very low impedance loads (less than 20 ohms), be sure that the output voltage is set so as not to exceed 0.5 amps load current.

***NOTE #2:*** Peak to peak voltage is the addition of both the positive and the negative peak voltages of the AC waveform. Most waveforms have both positive and negative going voltage peaks but notice that the "Square Wave (pos.only)" selection has a positive direction only and there is no negative going voltage.

The output voltage can be controlled smoothly from zero to 10V peak on the output but since the output is automatically current limited, a short circuit on the output will draw 500mA but will not damage the instrument.

NOTE: If the impedance of the load is so low that it demands in excess of 0.5 Amp, the current limiting feature causes waveform distortion. Therefore, so the waveform remains valid, be sure when connecting to very low impedance loads like speakers etc., that the output voltage is set so that the output current does not exceed 0.5 Amp. peak.

**Mains Input:** 220/240V.AC. 50/60 Hz.. 0.5A max.

**Protection:** Internal mains fuse. 500mA.

**Designed and manufactured in Australia**