

Signal Generator and Amplifier IPC-4885-W

Introduction.

The IPC-4885-W is designed for use in the study of A.C. Circuits, Amplification and General Electronics. Its uses include driving a Loudspeaker or Vibration Generator as well as many other electronic based experiments upto a maximum of 4W (see below).

Signal Generator Mode.

The IPC-4885-W can be set to provide Sine, Square or Triangle output waveforms using the three-position 'Waveform' switch.

The output frequency ranges from 0.1Hz to 100kHz and is adjusted using both the six-position 'Range Hz' switch and the multi-turn rotary 'Frequency' control. The actual output frequency is continuously monitored and shown on the LED Display.

The output amplitude of the waveform ranges from zero to a maximum of 10V peak to peak using the rotary 'Gain' control.

The output signal can be taken between either the 4 Ω or 600 Ω white (4mm) sockets and the common green (4mm) socket. The 600 Ω signal output can be attenuated by a factor of x1, x0.1 or x0.01 using the three-position 'Attenuator' switch. **Note:** the common green (4mm) socket is connected to the case earth of the unit.

The maximum output signal power is 4W (rms) using the 4 Ω output socket, this is sufficient to drive a loudspeaker or other suitable devices. **Note:** do not connect a load which **exceeds 4W** as damage may occur to the drive circuit.

Amplifier Mode.

The IPC-4885-W can also be used as a stand-alone Amplifier with a Voltage Gain (A_v) ranging from zero to 100 (+40dB) via the rotary 'Gain' control and a frequency response of 1Hz to 100kHz (-3dB bandwidth). **Note:** the Amplifier has an input impedance of 1M Ω and a maximum input voltage of 200mV peak to peak (irrespective of the Gain setting).

To operate the IPC-4885-W in the Amplifier Mode simply turn the 'Waveform' switch to the \rightarrow position, confirmation of this mode will be indicated by the LED Display showing 1 on the left-hand digit.

The amplifier's input signal is connected between the blue (4mm) socket and the common green (4mm) socket, while the output signal can be taken between either the 4 Ω or 600 Ω white (4mm) sockets and the common green (4mm) socket. **Note:** the amplifier output has all the same parameters and functions as the Signal Generator Mode, as detailed above.