

# **Loud Speaker**

Small, in Housing



LB2064-010 56mm Diameter Speaker

#### **Description:**

The IEC Loud Speaker (small) in Housing is a strong and compact unit designed for general laboratory use. It is suitable for most laboratory experiments where signals must be converted to sound. It is useful also as an extension speaker for other equipment.

The front grille is expanded metal for protective strength and it is complete with 4mm sockets for connection by banana plugs.

## **Specifications:**

D.C. Resistance of Speaker Coil:

approx. 7 ohms

Impedance of Speaker:

approx. 8 ohms (at 400 Hz).

## The Meaning of 'Impedance':

A loud speaker consists of a semi-rigid cone bonded to a coil of many turns of fine copper wire. This coil rests in a small air gap of very strong magnetic field that is usually the circular poles of a specially shaped permanent magnet. As a current passes through the copper winding, the coil is physically deflected within the magnetic field and the cone is moved. The cone then pushes a pulse of air towards the listener's ear drum. When this occurs hundreds of times per second, we hear the sound that was originally created by the current passing through the coil.

Since the coil of wire is resting in a magnetic field, there is inductance and therefore reactance as well as the DC resistance of the coil. These two types of resistance combine to create a resulting IMPEDANCE, the value of which is about 8 ohms when the signal is a sine wave at about 400 Hz. The impedance is always a higher value than the resistance.

Length: 75mm Width: 75mm Thickness: 45mm Weight: 260g

Designed and manufactured in Australia

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