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**Product Name :**

A.C. Generator

**Product Code :**

SLE/EAM/38



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## Description :

The **A.C. Generator** (Product Code: SLE/EAM/38) is a transparent, hand-held generator in which a permanent magnet spins inside a coil of wire, producing an alternating voltage at two 4mm sockets. This physics lab equipment in India lets students investigate the same principle that powers a bicycle dynamo, with every moving part in view. Made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, it is a straightforward piece of electromagnetic induction kit for India's secondary schools and for physics departments abroad.

### Specifications

| Parameter | Detail |
|---|---|
| Principle | Permanent magnet rotating inside a coil of wire |
| Drive | Hand-held, direct drive to the rotating magnet (no gearing) |
| Housing | Transparent, showing all the inner workings |
| Output | About 0.5V peak to peak, swinging from + to – each revolution; magnitude varies with speed |
| Waveform | Not a simple sine wave, because of the geometry of the mechanism |
| Output terminals | Two 4mm sockets |
| Display options | Centre-zero moving coil voltmeter or oscilloscope |
| Weight | 120g |
| Dimensions (L x W x H) | 150 x 55 x 55 |

### Typical Use

Connected to a centre-zero moving coil voltmeter and turned slowly, the generator makes the needle swing one way and then the other on every revolution — a direct, visible answer to the question of what "alternating" means. Turning faster makes the swings larger, so students can link output magnitude to speed of rotation. Because the drive has no gearing, the magnet turns exactly as fast as the hand, which keeps that cause-and-effect relationship easy to follow.

For a more advanced physics demonstration kit, connect the sockets to an oscilloscope instead. The trace is not a textbook sine wave, and that is a teaching opportunity: with a PC oscilloscope the waveform can be stored and examined in detail, prompting discussion of how magnet and coil geometry shape the output of real generators. Since the peak-to-peak output is about 0.5V, choose a sensitive range on the meter or scope.

### Manufacturer

This generator comes from Jain Scientific Equipments Private Limited, an apparatus maker in Ambala, Haryana, that uses ScienceLab as its trading name. The company produces electricity and m
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