



OBJECTIVE

1. STUDY of the dispersion relation for ' MONO-ATOMIC LATTICE . Determination of the cut-off frequency and Comparison with theory
2. Study of the Dispersion relation for the Di-atomic Lattice, Acoustical Model and Energy Gap. Comparison with Theory.

Lattice Dynamics is an essential Component of any postgraduate course In Physics, Engineering Physics, Electronic Engineering and Material Science . In particular it is essential to understanding the interaction of electromagnetic waves and crystalline solids. In general, students find it difficult to understand involved concepts like ACOUSTICAL MODE , OPTICAL MODE and ENERGY GAP etc, which they cannot see for themselves In the laboratory. Such a difficulty can be overcome by introducing a laboratory exercise in which the student follows a carefully prescribed procedure, which presents him with a simplified model of the system and allows him to verify well-established theories. In the process he gains an insight into the concepts. The Lattice Dynamic kit provides such an experience in the study of mono and di-atomic lattices.

SETUP:-

It consists of Oscillator with Amplitude Control and Facility to vary the Frequency from 1Hz. - 100KHz. It has inbuilt setup to match the Impedance of Simulated Lattice. Another Part of Lattice Dynamic setup Consists of Transmission Line, which simulated One-Dimensional Mono-atomic and Di-atomic Lattices.

Frequency :- 1 Hz. - 100KHz.

Display :- LCD INPUT :- 220v. 50Hz.

Optional Accessories Required :- CRO . (Not Included)

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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