



55715 Experimental Set Up has been designed specifically to study series and parallel resonance in an LCR circuit (air core Inductance, Two Decade condensers and resistance) and damping effect by using resistances and air core Inductance with metal (ferromagnetic) plate (i) at fixed frequency by varying condenser (C) and (ii) by varying frequency.

Practical experience on this set up carries great educative value for Science and Engineering Students.

OBJECT

- 01 Study of series and parallel resonance in LCR circuit.
- 02 Observe damping effect by using air core Inductance with metal (ferromagnetic) plate.
 - 2.1 At fixed frequency by varying C.
 - 2.2 By varying frequency.
- 03 Observe damping effect by using resistances.

OBJECTS:

- 01 To plot the series resonance curve in LCR circuit (air core inductance, two decade condensers and circuit resistance) at fixed frequency by varying condenser (C). Observe damping by a metal (ferromagnetic) plate along with air core Inductance, find out new resonance curve by varying condenser (C)
- 02 To plot the series resonance curve in LCR circuit by varying frequency. Observe damping by a metal plate along with air core Inductance, find out new resonance curve by varying frequency (f).
- 03 To plot the parallel resonance curve in LCR circuit (air core Inductance, two decade condensers and circuit resistance) at fixed frequency by varying condenser (C). Observe damping by a metal (ferromagnetic) plate along with air core Inductance, find out new resonance curve by varying condenser (C).
- 04 To plot the parallel resonance curve in LCR circuit by varying frequency. Observe damping by a metal plate along with air core Inductance, find out new resonance curve by varying frequency (f).
- 05 To plot the series resonance curve in LCR circuit by varying frequency. Observe damping effect by using resistances.

FEATURES

The Set up consists of the following :

- 01 One board consists of following Build in Parts.
 - 1.1 Two decades in steps of 10pF & 100pF total steps are 20 and total capacitance is 1100 pF.
 - 1.2 Audio frequency milliammeter having three steps of 1mA, 2mA and 5mA.
 - 1.3 Four resistances are provided for observing damping effect by resistances.
- 02 Heavy duty air core inductance coil of 6" diameter with metal (ferromagnetic) plate fitted in sunmica polished wooden box with terminals.
- 03 Weight : 4.2 Kg. (Approx.)
- 04 Dimension : W 340 x H 125 x D 210
- 05 Adequate no. of patch cords stackable 4mm spring loaded plug length ½ metre.

OTHER APPARATUS REQUIRED :

- 01 Decade Audio Frequency Generator 1Hz to 110KHz Output 0-15V r.m.s.

Note: Specifications are subject to change.

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