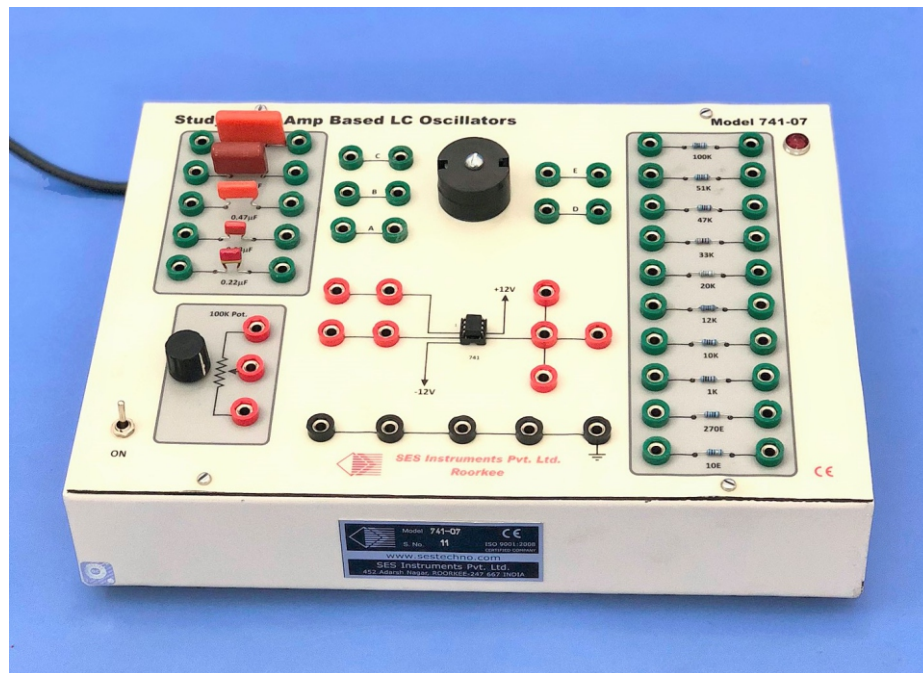


741-07

Study of OP AMP based LC Oscillators



Features

- Study of different LC oscillator circuits using operational amplifiers type-741
 - Hartley Oscillator
 - Tuned Output Oscillator
 - Colpitts Oscillator
 - Clapps Oscillator
- All necessary components are available on the panel
- Built-in power supply
- Patch cords and user manual included
- Accessory require – a dual trace oscilloscope

component variation by the user and study their effects. The user manual covers a description of the basic theory of oscillations, viz., the Barkhausen criterion, and discusses various oscillator circuits and their mode of working. Of special interest are the mechanism of amplitude stabilization and the loop phase.

The experimental board comprises of an operational amplifiers and some 17 passive components carefully arranged on it to be suitably connected with patchcords. Only a dual trace oscilloscope would be required as an accessory. The user manual supplied with the unit covers all technical details for conducting the experiments.

Introduction

Sine wave signals at different frequencies find application in the frequency response studies of various electronic circuits and systems. Historically these sine wave signals have been generated using LC tuned circuits and RC circuits, although digitally synthesized signals are now becoming more common. Basic signal generation is therefore an important task that needs to be introduced to a student of electronics at an early stage. Particularly important are the medium to low frequency signals in the audio ranges. Our experimental unit type 741-05 covers RC oscillators while the present unit is designed to explore the operational amplifier based inductance-capacitor type circuits of various kinds in the lower kHz region. The unit has the possibility of a range of

