

DESIGN, CONSTRUCTION AND DEMONSTRATION  
OF A  
"LOW FREQUENCY OSCILLOSCOPE"

Project Report  
Submitted by

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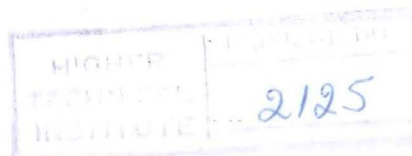
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## ABSTRACT

The project deals with the research design, construction, calibration and testing of a low frequency oscilloscope.

The oscilloscope can be used for displaying waveforms of different voltages. It can be used as a measuring instrument to measure voltage, frequency or period.

The oscilloscope gives the time domain of an electrical signal i.e. voltage against time. In contrast with the spectrum analyzer which gives the frequency domain of an electrical signal i.e voltage or amplitude against frequency. The oscilloscope can be convert to a spectrum analyzer with the use of an external spectrum analyzer unit able to convert frequency domain to time domain. An investigation of the various types of oscilloscopes is carried out including also reference and comparison to professional standards.

In the following chapters explanation and analysis of the circuits used is done. Also testing and calibration results are presented. At the end of the report conclusions, test specifications, and demonstration informations are included.

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