



电子科技大学
格拉斯哥学院
Glasgow College, UESTC

Physics Experiment 03

Prelab Report

Experiment Title: The Oscilloscope

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Final Mark:

Score

Answers to Questions (20 points)

(1) Firstly, the electron gun produces the electron flow which will pass through two amplifiers, respectively. One is the vertical amplifier which amplifies the input signal to the vertical deflection plates. And other one is the horizontal amplifier which amplifies the input signal before being applied to the horizontal deflection plates. Besides, the sawtooth voltage generator provides the sawtooth voltage causing the electron beam move from left to right at a constant speed so that we can observe the display easily.

(2) The horizontal axis of the oscilloscope screen represents the scanning time, while the vertical axis represents the value of the input voltage.

(3) On the oscilloscope, the voltage source connected to CH1 or CH2 is applied to the horizontal deflection by using X-Y working mode. When the directions are vertical reciprocally and the frequencies of the two signals have an integral rate, there will be a stable closed figure which is called Lissajous pattern.