Department of Electrical and Computer Engineering
University of Victoria
ELEC 300 - Linear Circuits II

Laboratory Report

Experiment No.:	1
Title:	Dependent Sources
Date of experiment:	29 January, 2016
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1 Objective

Short summary of the experiment and results obtained.

2 Introduction

Short section on the background and motivation i.e. what the experiment is about and what is being measured. References are appreciated [1].

3 Results

Describe the apparatus and measurement technique(s). Present the data.

4 Discussion

4.1 Voltage controlled voltage source

The output of an op amp may be modeled as an internal voltage source V_{int} and series resistor R_{int}. When the circuit is open the output voltage is given by (1) and by (2) when it is loaded.

$$V_o = V_{int} \tag{1}$$

$$V_o = \frac{R_L}{R_{int} + R_L} V_{int} \tag{2}$$

Combining (1) and (2) gives the internal resistance of the op amp as:

$$R_{int} = R_L \left(\frac{V_{int}}{V_o} - 1 \right) \tag{3}$$

5 Conclusion

Justify conclusions and results.

References

[1] P. So and A. Zielinski, *Laboratory Manual for ELEC 300 - Linear Circuits II*, University of Victoria.