LAB WORK

DIGITAL SYSTEM

SEMESTER GENAP

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PROGRAM STUDI INFORMATIKA

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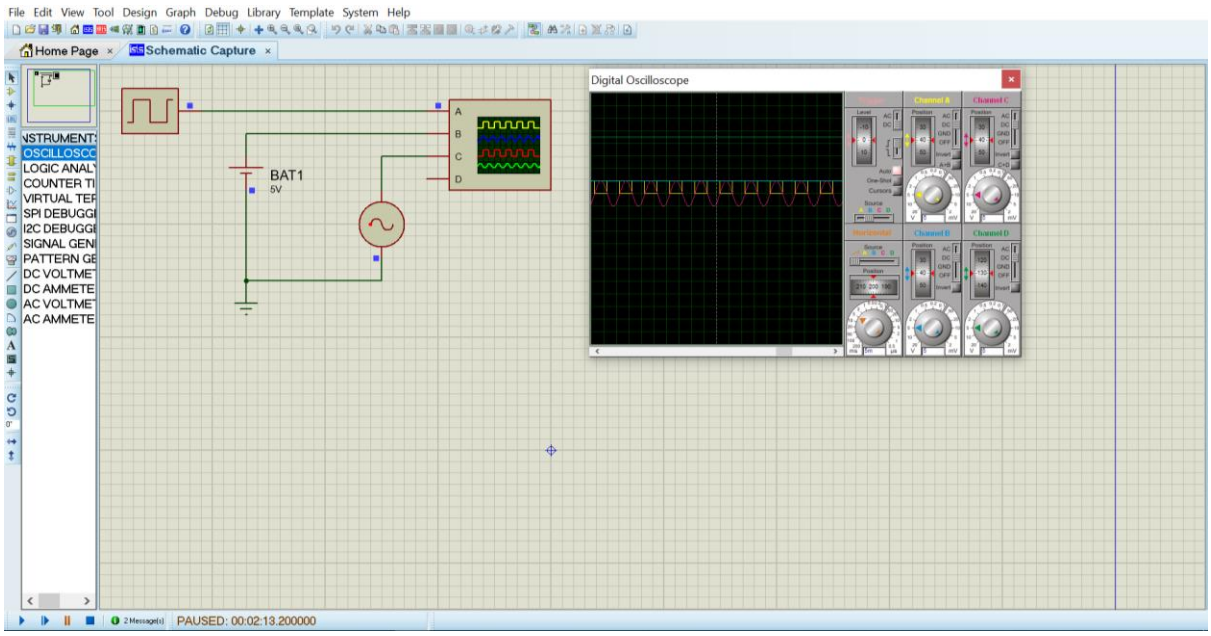
Practicum Activities

Exercise 1. Signal Type Exercises

No	Device	Information
1	Alternator	V= 5 Volt, F = 100Hz
2	Cell	V= 5 Volt
3	Clock	F =100Hz
4	Ground	Pick from the terminal
5	Osiloskop	Pick from instrumen



Vpp/div = 5mV

Time/div = 5m

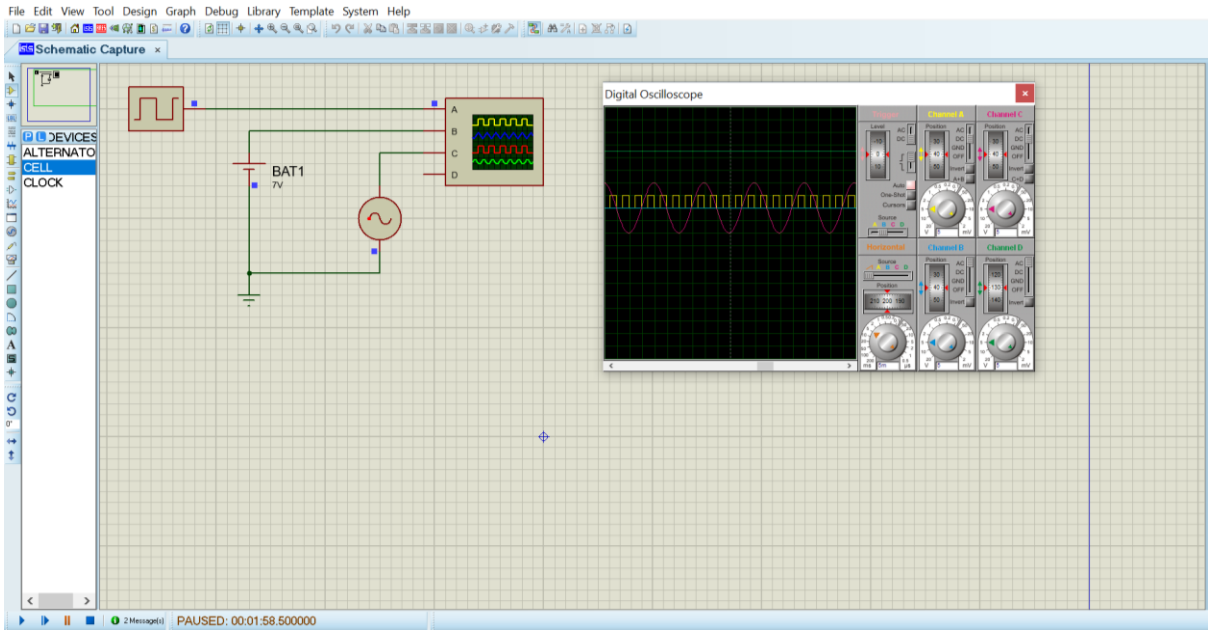
Explanation:

Channel A and C the trigger is B(auto) and have position 40.

Channel B and C horizontal position 200, channel B = 40 Channel D = 130.

A, B ,C , D have signal DC

No	Device	Information
1	Alternator	V= 10 Volt, F = 50Hz
2	Cell	V= 7 Volt
3	Clock	F =200Hz



Vpp/div = 5mV

Time/div = 5m

Explanation :

Signal A boxed unstable up and down.

Signal B stable , Signal D stable are above the other signals.

Signal C frequency is bumpy.

Question :

a. What is the difference between analog and digital signals?
   - Signal analog is stable
   - Signal digital is unstable

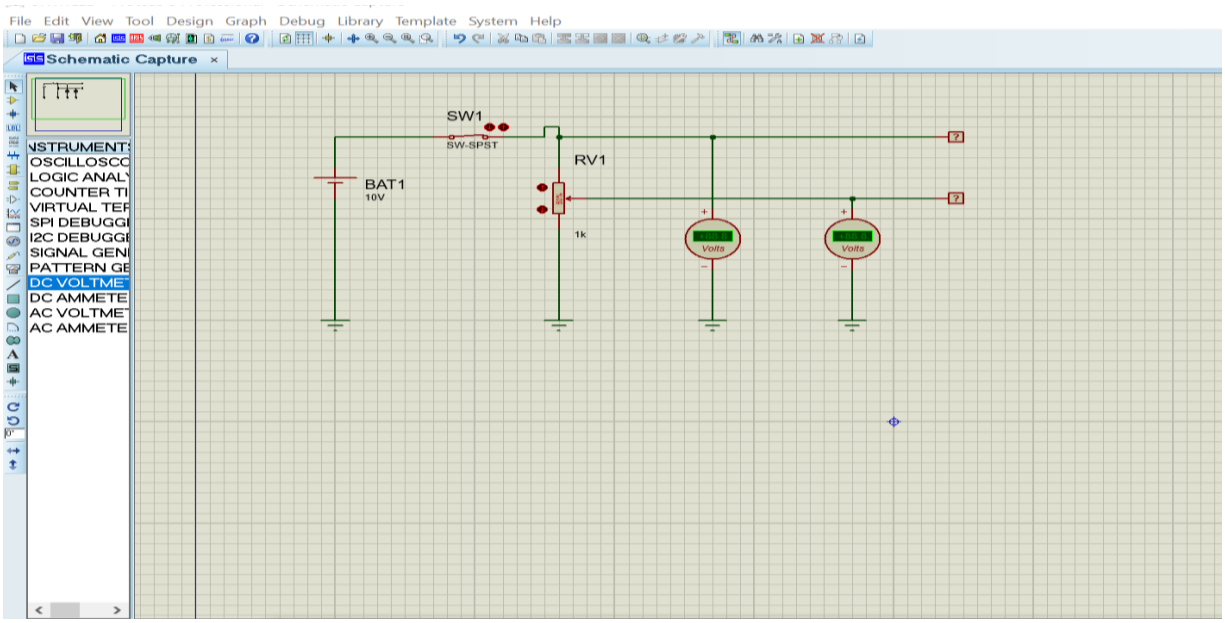
b. How the signal character in each component?
   - Signal from the alternator (Analog) Because can not be measured on / off can only be the highest and lowest voltage
   - Sinya from the battery (Analog) Because stable and unstable
   - Sinyal from the clock source (Digital) Because can be seen on / off in and out

Conclusion :

Digital signals can be seen in and out or the power is off and the analog signal is stable and continues to be uninterrupted.

Exercise 2. Digital Signal Range Exercise

No	Device	Information
1	Cell	Edit to 10V
2	SW-SPST	
3	POT-HG	
4	Logicprobe	
5	Ground	Pick from the terminals
6	DC Voltmater	Pick from instrument



a. Voltmeter DC 1 : +10.00 Volt
b. Voltmeter DC 2 : +5.00 Volt
c. Logicprobe 1 : on
d. Logicprobe 2 : on

Conclusion :

If the RV rises then the DC volt 2 will rise to a maximum like DC volt 1, logicprobe 2 stays on if the RV drops DC Volt 2 will drop to 0 and logicprobe 2 off