

Name: Ta Quang Tung

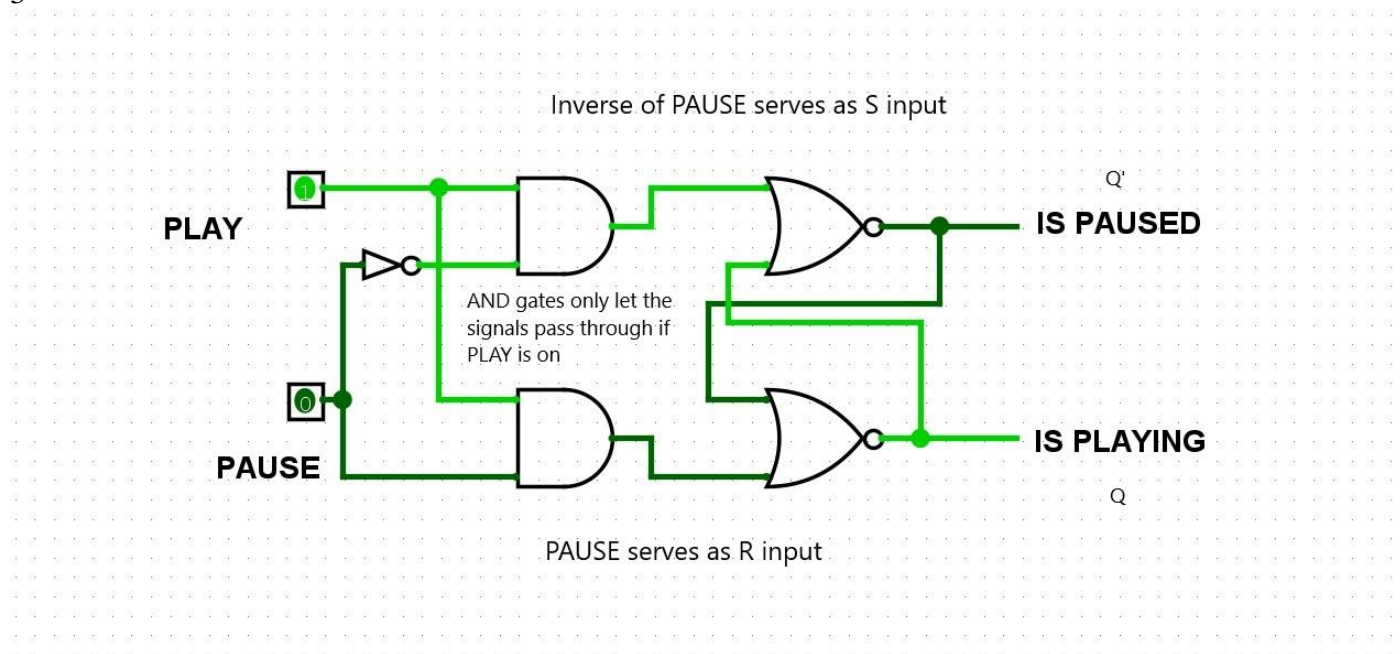
Class: Computer Systems (Thursday afternoon)

Title: Lab 5

2.1 – For the first stage of the assignment, I will construct an RS flip-flop since the circuit needs to switch between one of two states: PLAY and PAUSE. I will modify the flip-flop with a couple of AND gates so that the PLAY input acts as an enable signal while the PAUSE input and its inverse act as the R and S inputs to the flip-flop respectively.

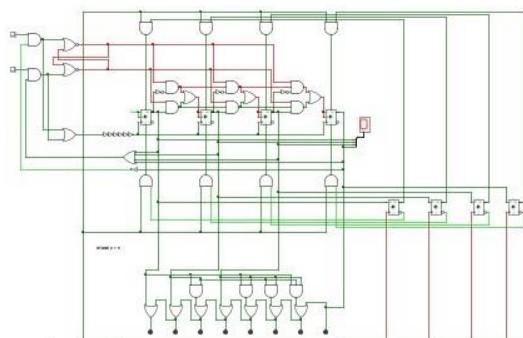
2.2 – Week 2's lecture on RS flip-flops and the application of AND gates as controlled buffers will be relevant to constructing the circuit.

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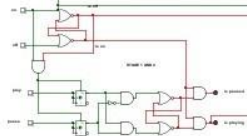


*Stage 1*

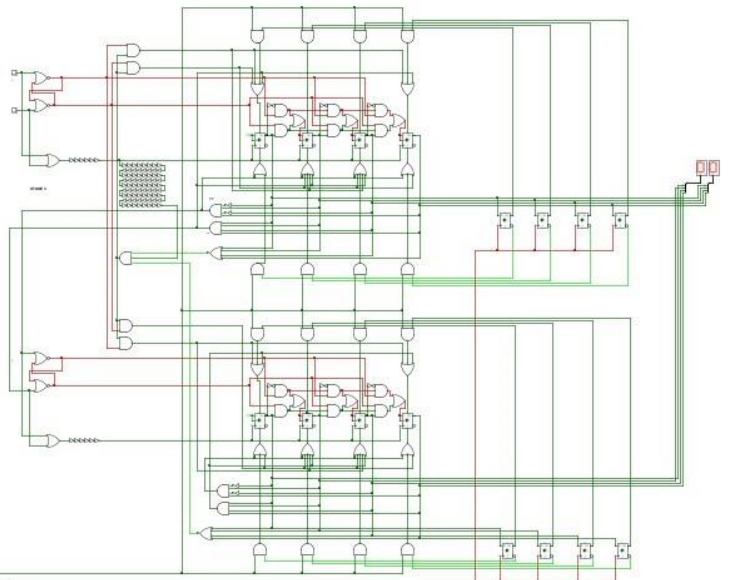
Volume control with  
bidirectional counter



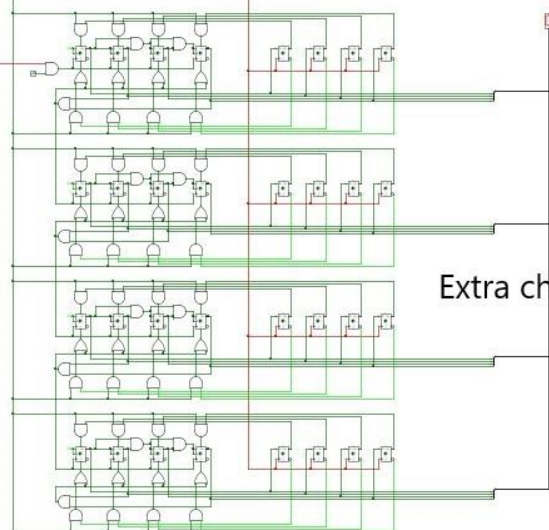
ON/OFF and  
PLAY/PAUSE  
control



Track counter (made from 2  
bidirectional counters)



Extra challenge (memory included)



*Full music player*