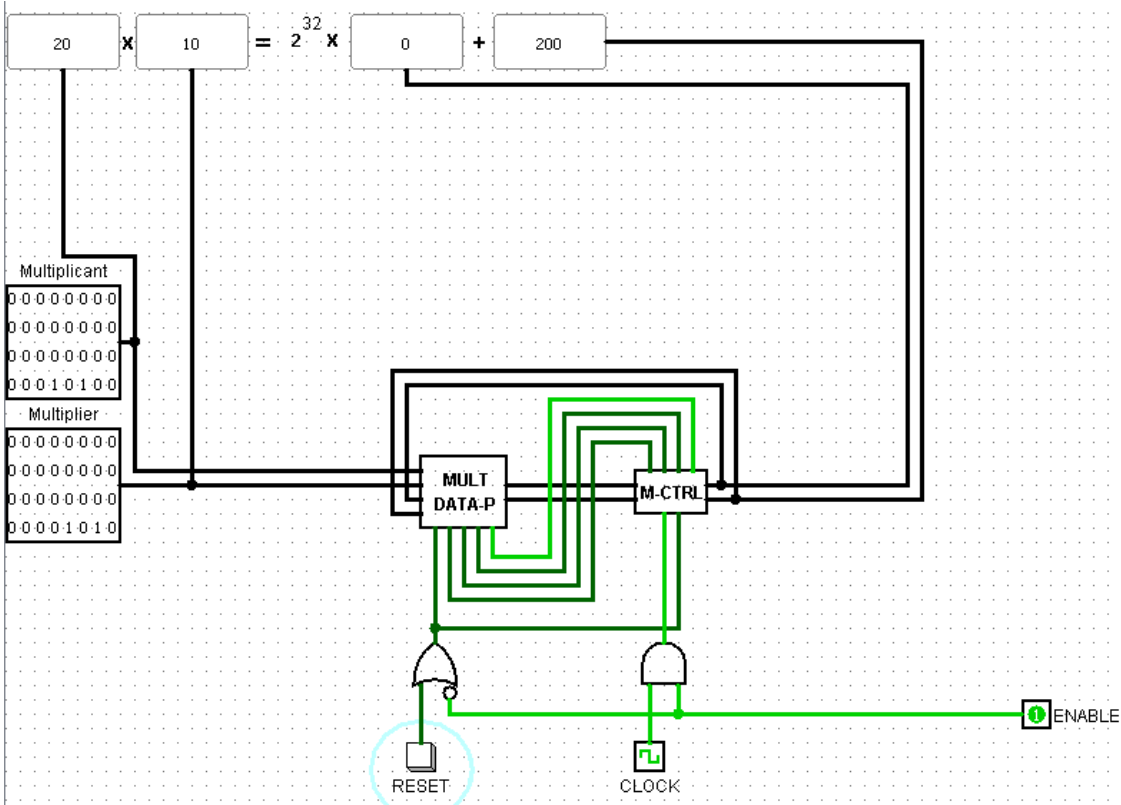


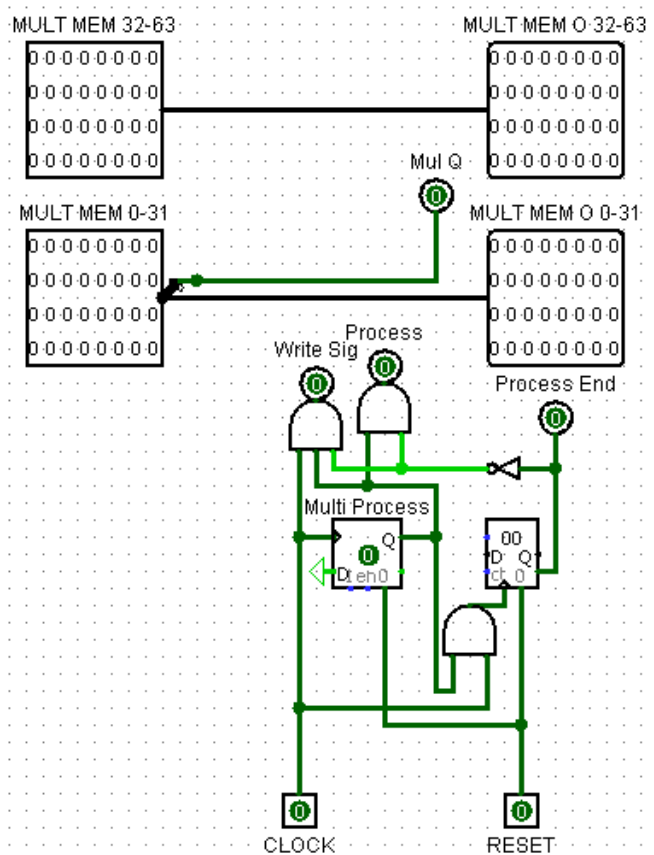
Mult 32



Mult32 consists of 2 sub circuits and two switches. Clock is send to every sub compoment when enable button is on. When enable button is off or the reset is pressed, reset signal is send to both compoments.

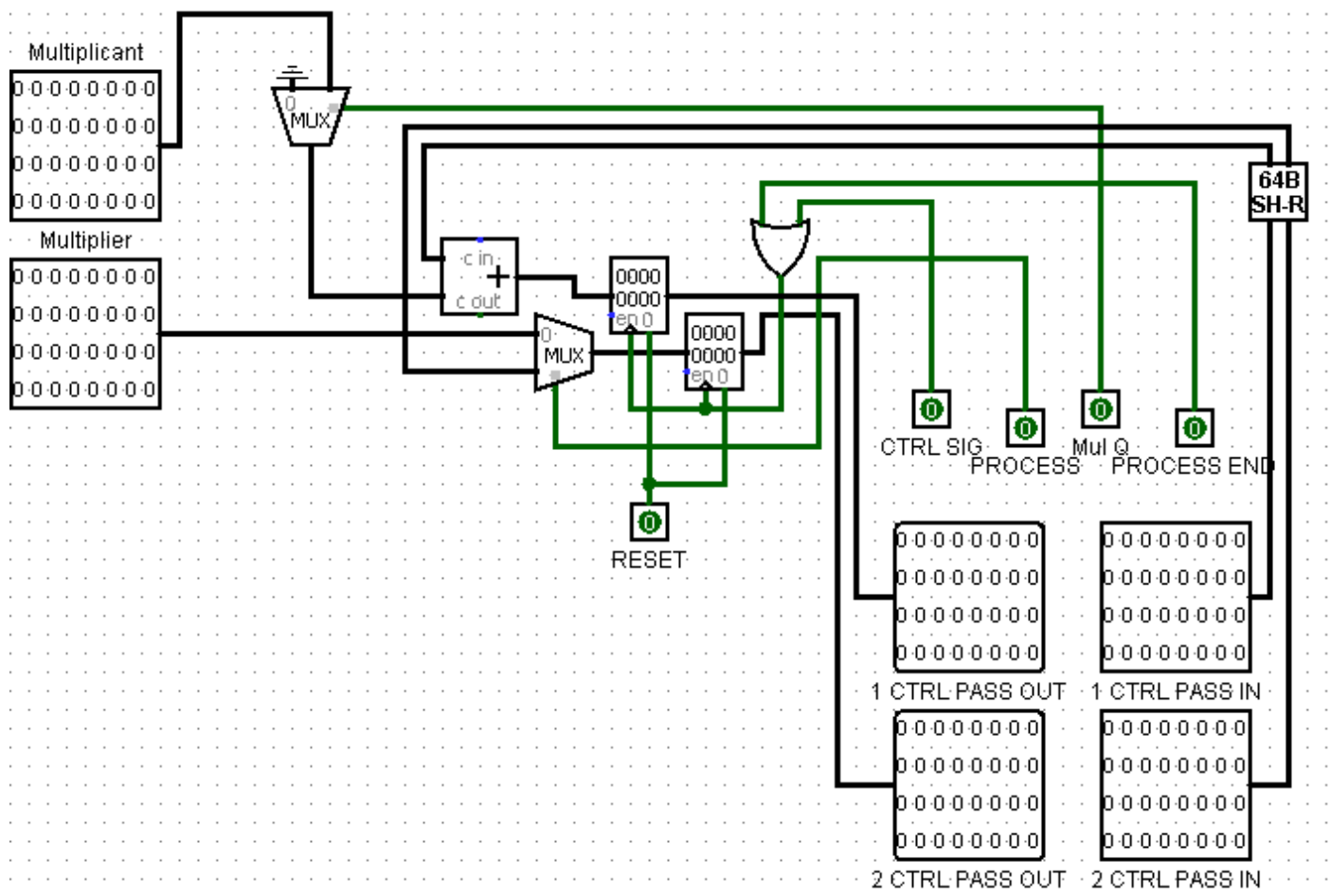
Calculation result is displayed as decimal with the addition of 2^{32} for other half of 32 bits.

Control



Control unit takes all the memory and feeds it back to datapath, just first bit is separated to indicate multiplication bit signal. There is a d-flip memory to indicate the counting has started. Clock should wait for that signal. Counter on the control is triggered with falling edge to counter latency. When the counter has reached 21, process end signal is send and other signals gets cut until another reset.

Datapath



Datapath includes 64 bit shifter. Shifter is fed with stored memory. First is send to adder. If multiplication signal is on, multiplicand is added. Second shifted memory output is send back to its related memory.

Mult32 (deprecated)

This circ includes custom made adders and shifters that didn't made into final cut after assignment rules have changed.

Test Cases

