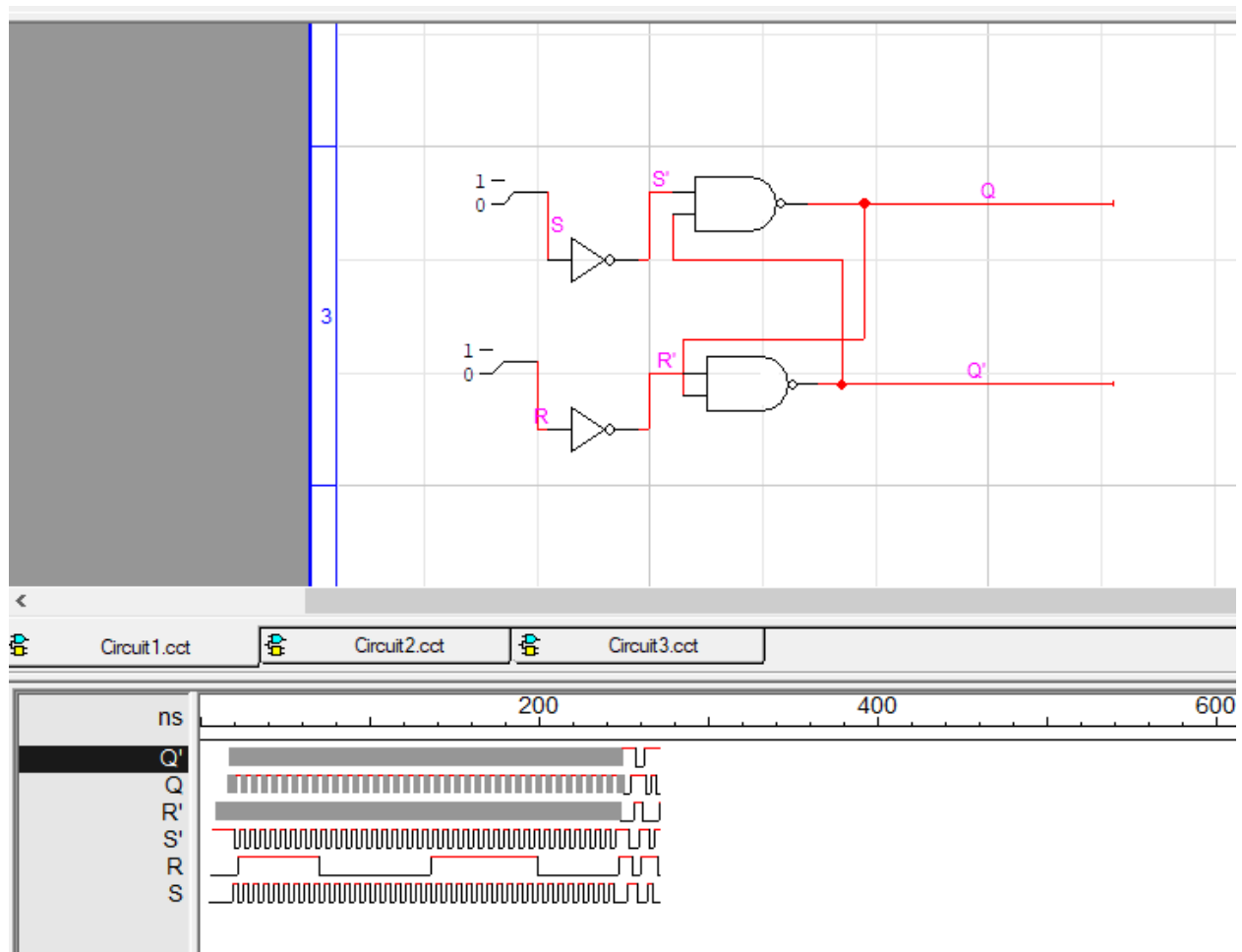
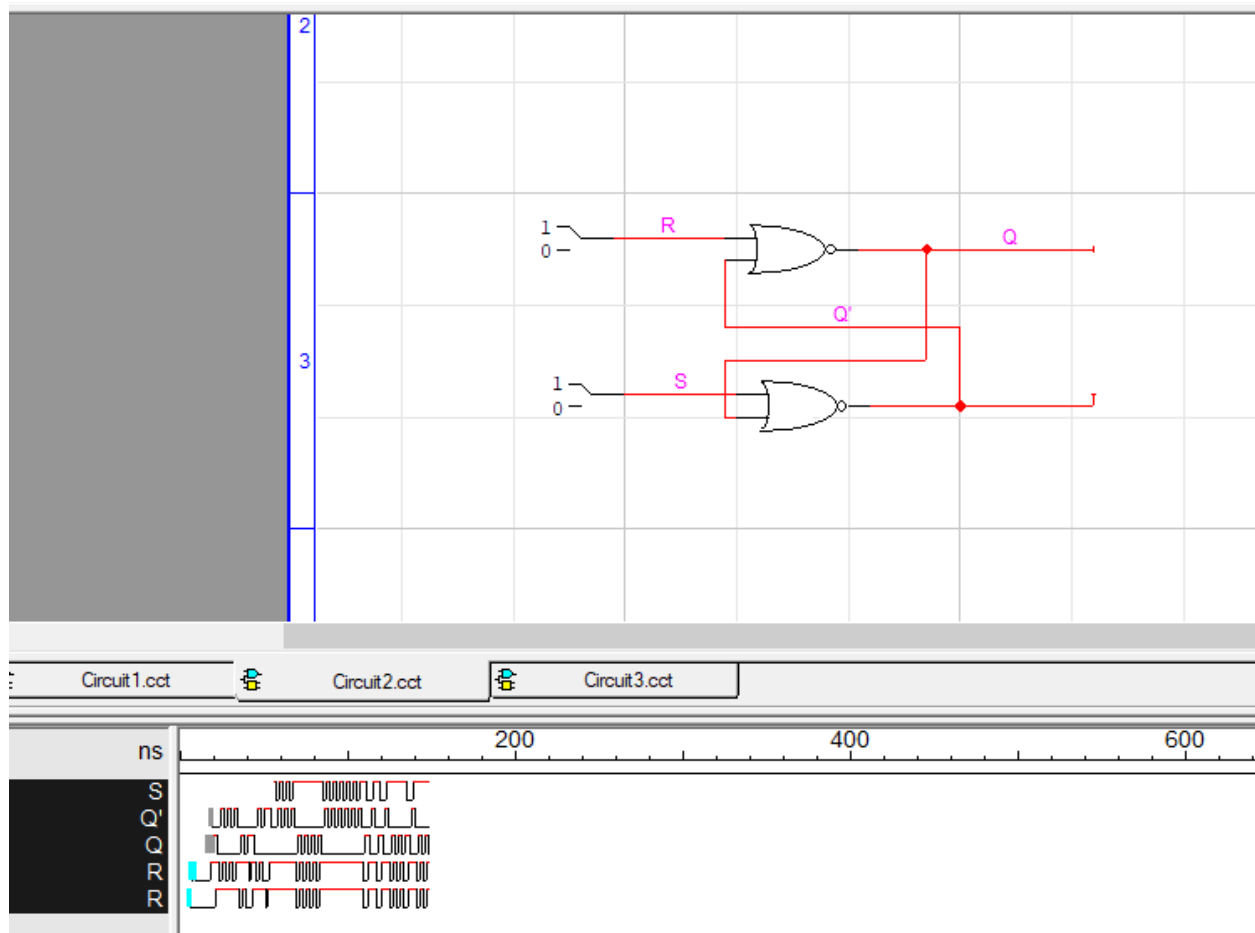


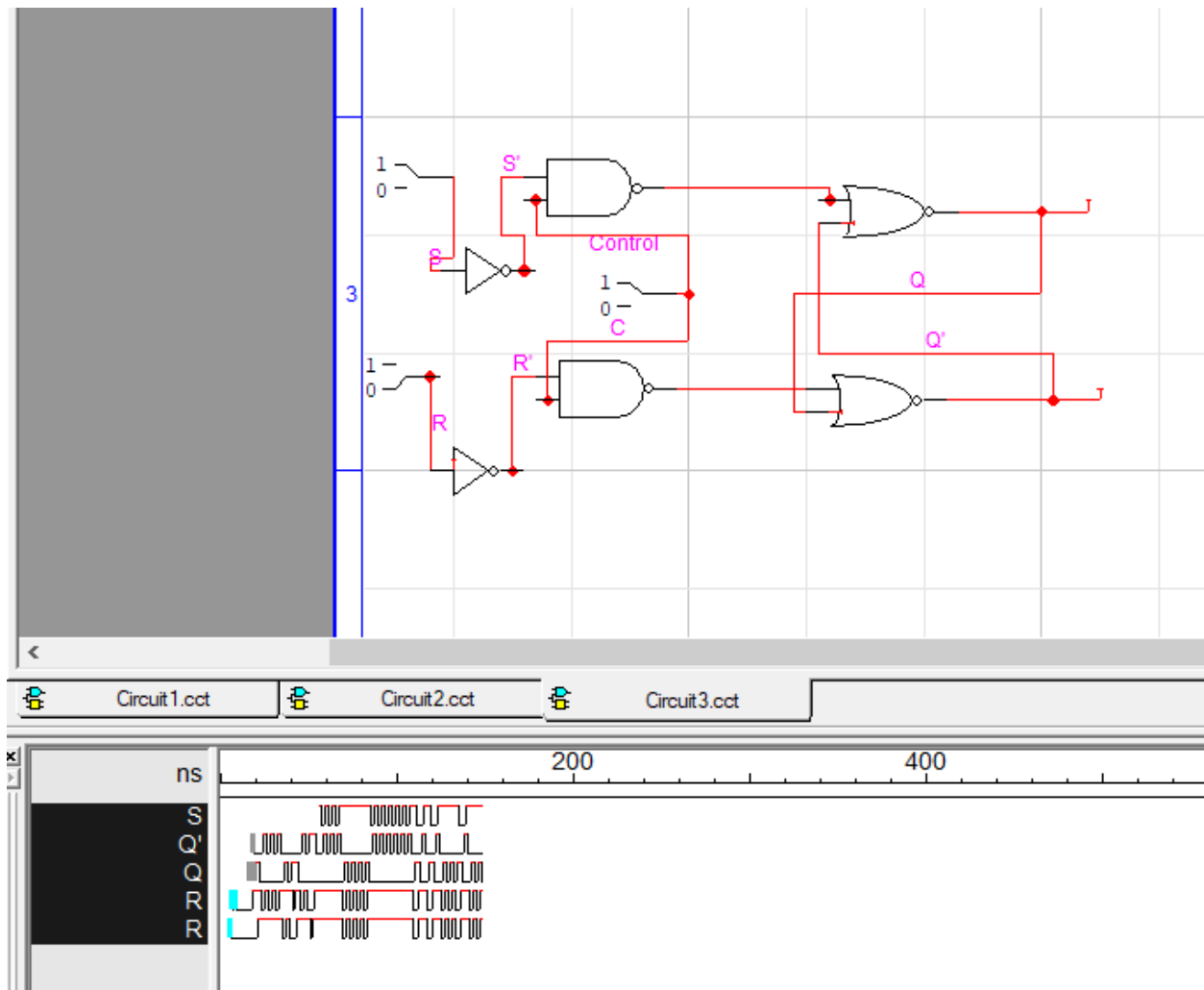
Task 1:



Task 2:



Task 3:



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MANUAL 10

Task 1

truth table

$Q \rightarrow S$
 $\bar{Q} \rightarrow R$

S	R	Q	\bar{Q}
0	0	Undefined	
0	1	1	0
1	0	0	1
1	1	memory	

Task 2

truth table

$Q \rightarrow S$
 $\bar{Q} \rightarrow R$

S	R	Q	\bar{Q}
0	0	memory	
0	1	0	1
1	0	1	0
1	1	Undefined	

Task 3

truth table

C	S	R	next state of Q
0	x	x	no change
1	0	0	undefined
1	0	1	$Q=0, \bar{Q}=1$; set state
1	1	0	$\bar{Q}=0$; reset state $R=1$
1	1	1	No change