

States	Definition	R0	R1
State 1	Red Light	0	0
State 2	3 second wait	0	1
State 3	4 seconds of orange light	1	0
State 4	30 seconds of green light	1	1

N0 and N1 are Register inputs. Input and Output's are only noteworthy inputs.

States	R0	R1	Input	Output	N0	N1
State 1	0	0	req'	redL	0	0
	0	0	req	redL	0	1
State 2	0	1	p3s'	redL	0	1
	0	1	p3s	redL	1	0
State 3	1	0	p7s'	orangeL	1	0
	1	0	p7s	orangeL	1	1
State 4	1	1	p37s'	greenL	1	1
	1	1	p37s	greenL	0	0

$$\text{redL} = R0'$$

$$\text{orangeL} = R0R1'$$

$$\text{greenL} = R0R1$$

$$N0 = R0'.R1.p3s. + R0.R1'.p7s' + R0.R1'.p7s + R0.R1.p37s'$$

$$\rightarrow N0 = R0'.R1.p3s + R0.R1' + R0.R1.p37s$$

$$N1 = R0'.R1'.req + R0'.R1.p3s' + R0.R1'.p7s + R0.R1.p37s'$$

$$resetT = p3s'.p7s'.p37s'$$

