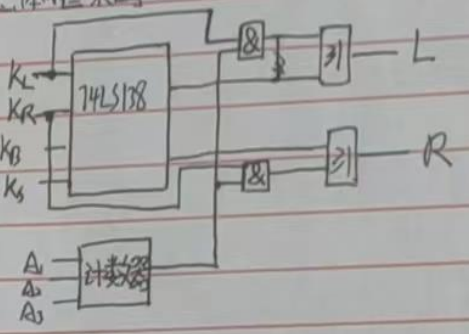
总体框架图：



思路：K_S作为Y底控制是否片选
使能端
K_L K_R K_B输入相应编码以对应车的不同状态，计数器控制车灯亮

组合电路状态真值表

输入	输入				输出			输出		
K_S	K_B	K_L	K_R	K_B	L_3	L_2	L_1	R_3	R_2	R_1
0	d	d	d		d	d	灭	d	d	d ⇒ 1 1 1 1 1 1
1	0	0	1		1	1	1	1	1	1
1	0	1	0		1	1	1	按顺序亮		
1	0	1	1		d	d	d	d	d	d
1	1	0	0		按顺序亮			1	1	1
1	1	0	1		d	d	d	d	d	d
1	1	1	0		按顺序亮			按顺序亮		
1	1	1	1		1	1	1	1	1	1
1	0	0	0		0	0	0	0	0	0

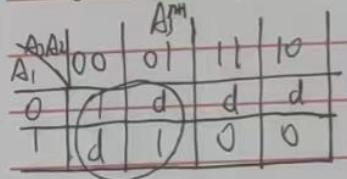
设为按顺序亮

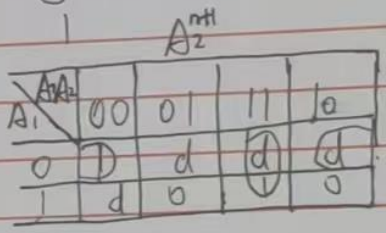
$L_3=L_2=L_1=\overline{K_S}+K_S\overline{K_L}\,\overline{K_R}K_B+K_S\overline{K_L}K_R\overline{K_B}+K_SK_L\overline{K_R}K_B+K_SK_L\overline{K_R}\,\overline{K_B}S+K_SK_L$

$R_3=R_2=R_1=\overline{K_S}+K_S\overline{K_L}\,\overline{K_R}K_B+K_SK_L\overline{K_R}\,\overline{K_B}+K_SK_RK_LK_B+K_S\overline{K_L}K_R\overline{K_B}S+K_SK_L$

时序电路

A_3	A_2	A_1	A_3^{n+1}	A_2^{n+1}	A_1^{n+1}
1	1	1	0	1	1
0	1	1	1	0	1
1	0	1	0	0	0
0	0	0	1	1	1

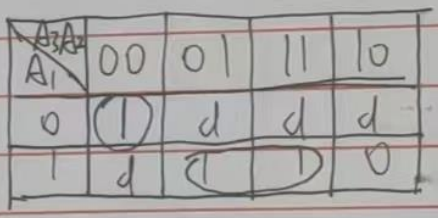




$A_3^{n+1} = \bar{A}_3\bar{A}_2\bar{A}_1 + \bar{A}_3A_2A_1$

$= \bar{A}_3$

$A_2^{n+1} = \bar{A}_2\bar{A}_1 + A_3A_2$



$A_1^{n+1} = A_2A_1 + \bar{A}_3\bar{A}_2\bar{A}_1$

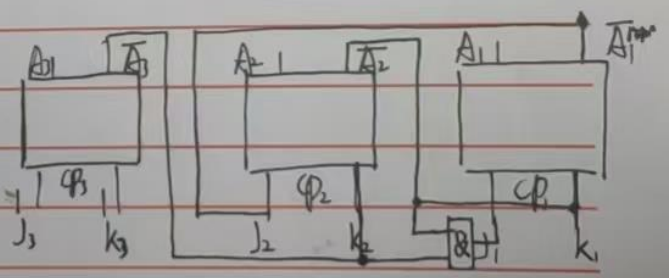
使用JK触发器

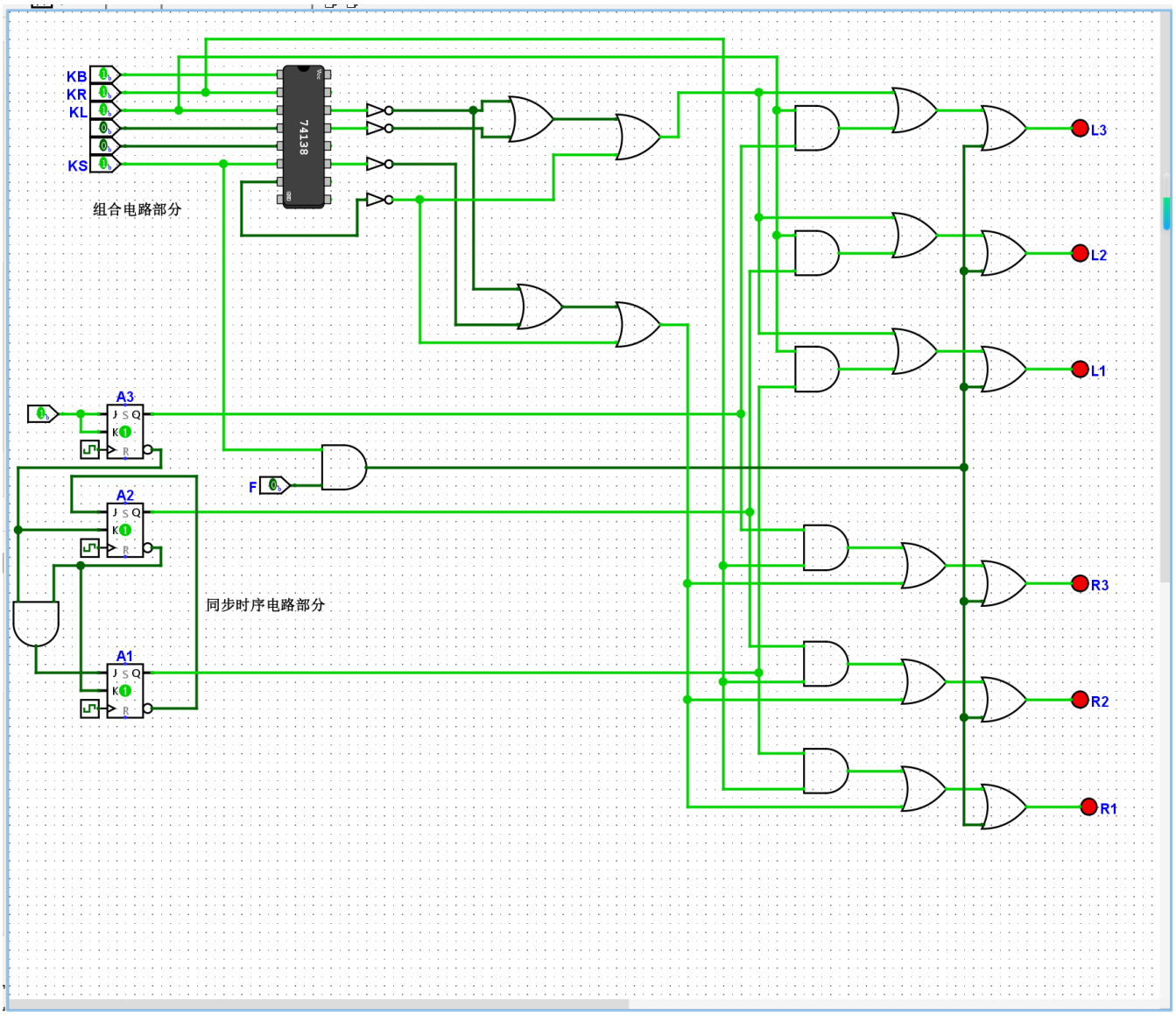
$J_1 = \bar{A}_3\bar{A}_2\bar{A}_1$ $K_1 = \bar{A}_2$

$J_2 = \bar{A}_1$ $K_2 = \bar{A}_3$

$J_3 = 1$ $K_3 = 1$

$CP_3 = CP_2 = CP_1 = 1$




KB
KR
KL
KS
74138
组合电路部分
A3
A2
A1
F
同步时序电路部分
L3
L2
L1
R3
R2
R1