CGS Boolean logic

+12V
GND
−12V

INV1 In

INV2 In

Or Out

AND Out
INV2 out

Q7

Dead
10uF
100nF
100K
D
100nF
100K
D
5
1K
XI1
100K
3
Dead
5
1K
XI1
100K
1K
1.5K
Q6
1K
1.5K
Rled
JL
100K
10K
AI2
100K
Q4
100K
B
E
10K
AI1
100K
10K
B
E
Rled
IL
1K
10uF

1K
XI2
NO
1.5K
1K
RLED
NL
100nF
D
5
100nF
10K
RLED
XL
8
1.5K
RL
RLED
XO
1.5K
1K
Q3
B
E
1K
B
E
10K
1K

RI1
10K
100K
9
100K
1K
1.5K
10K
Q2
1K
1.5K
Q5
E
B
10K
B
1.5K
1K
1K
RLED

RI2
10K
Q1
100K
C
E
LedC
E

AL
RLED

JO = INV1 Out   JL = Led A Inv1
                       IL = Led A Inv2

RI1 = OR In1
RI2 = OR In2   RL = Led A OR

AI1 = AND In1
AI2 = AND In2   AL = And A AND

XI1 = XNOR/XOR IN1
XI2 = XNOR/XOR IN2
XO = XOR OUT   XL = Led A XOR
NO = XNOR OUT   NL = Led A XNOR

Q1,Q3,Q4,Q6 --> 2N3904
Q2,Q5 --> 2N3906