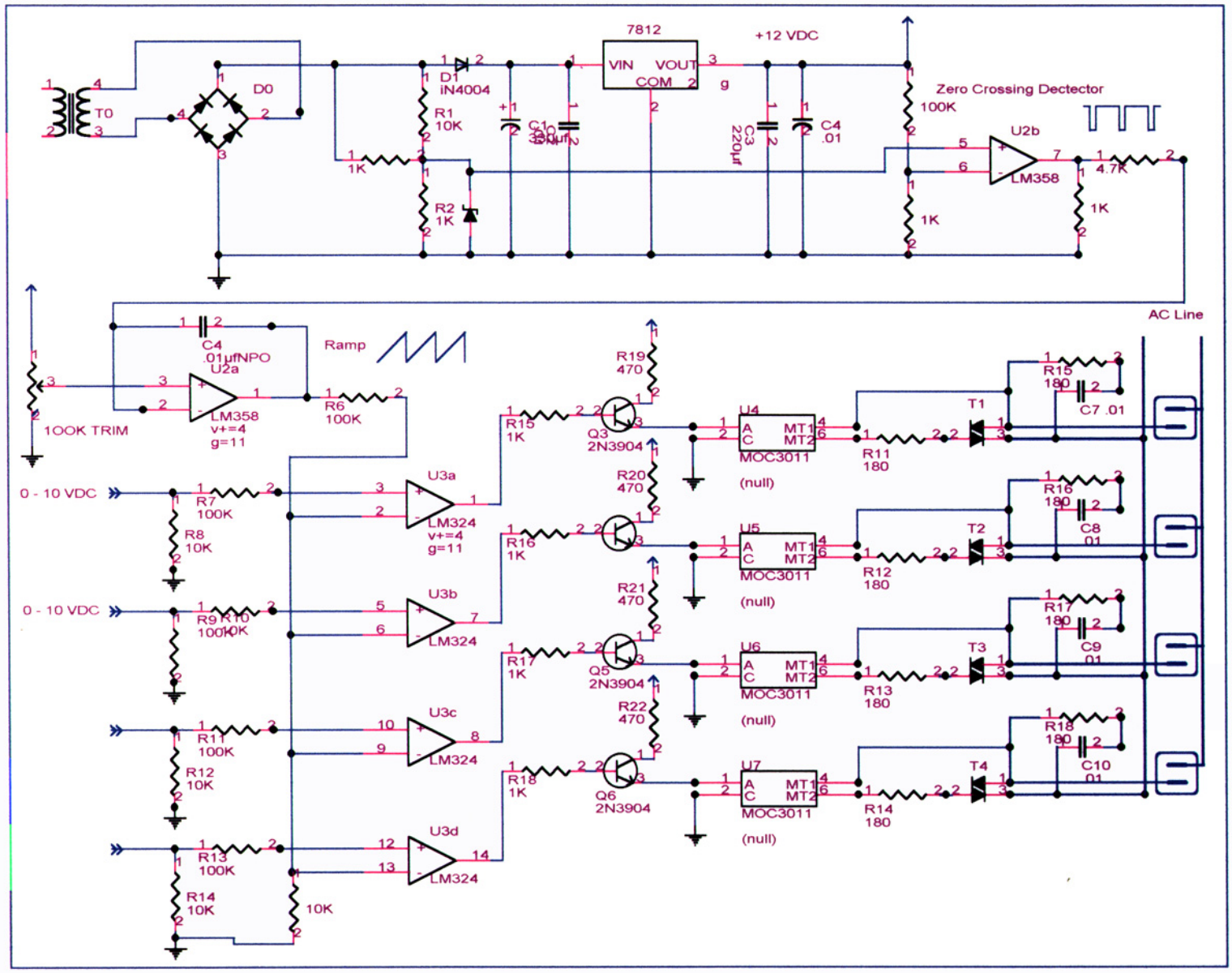
7812
VIN
VOUT
COM
+12 VDC
T0
D0
D1
IN4004
R1
10K
R2
1K
1K
C1
C3
220µf
C4
.01
Zero Crossing Dectector
100K
U2b
LM358
4.7K
1K
AC Line
C4
.01µfNPO
U2a
LM358
v+=4
g=11
Ramp
R6
100K
100K TRIM
0 - 10 VDC
R7
100K
R8
10K
0 - 10 VDC
R9
100K
R10
10K
R11
100K
R12
10K
R13
100K
R14
10K
10K
U3a
U3b
U3c
U3d
LM324
v+=4
g=11
R15
1K
R16
1K
R17
1K
R18
1K
R19
470
R20
470
R21
470
R22
470
Q3
2N3904
Q5
2N3904
Q6
2N3904
U4
U5
U6
U7
MOC3011
(null)
R11
180
R12
180
R13
180
R14
180
T1
T2
T3
T4
R15
180
R16
180
R17
180
R18
180
C7 .01
C8
01
C9
01
C10
01