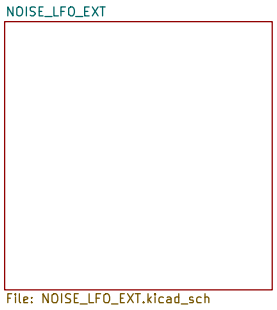
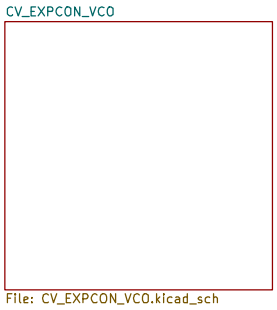
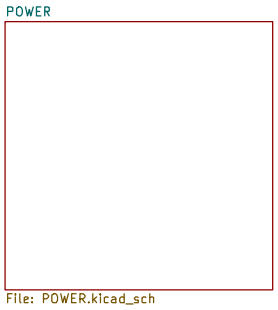
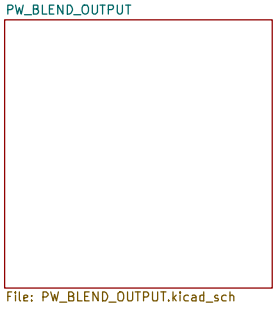
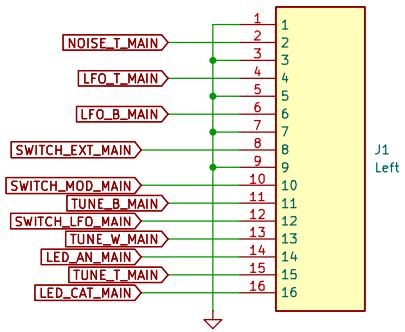
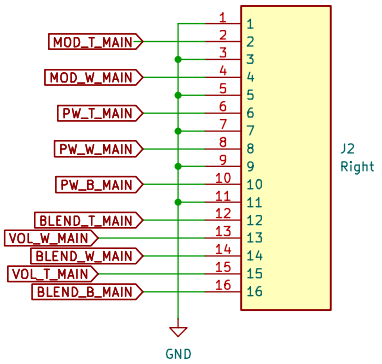

NOISE_LFO_EXT
File: NOISE_LFO_EXT.kicad_sch

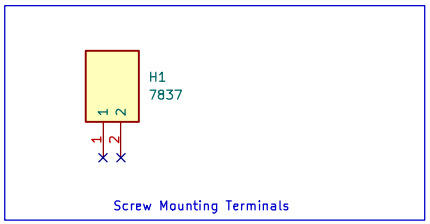

CV_EXPCON_VCO
File: CV_EXPCON_VCO.kicad_sch

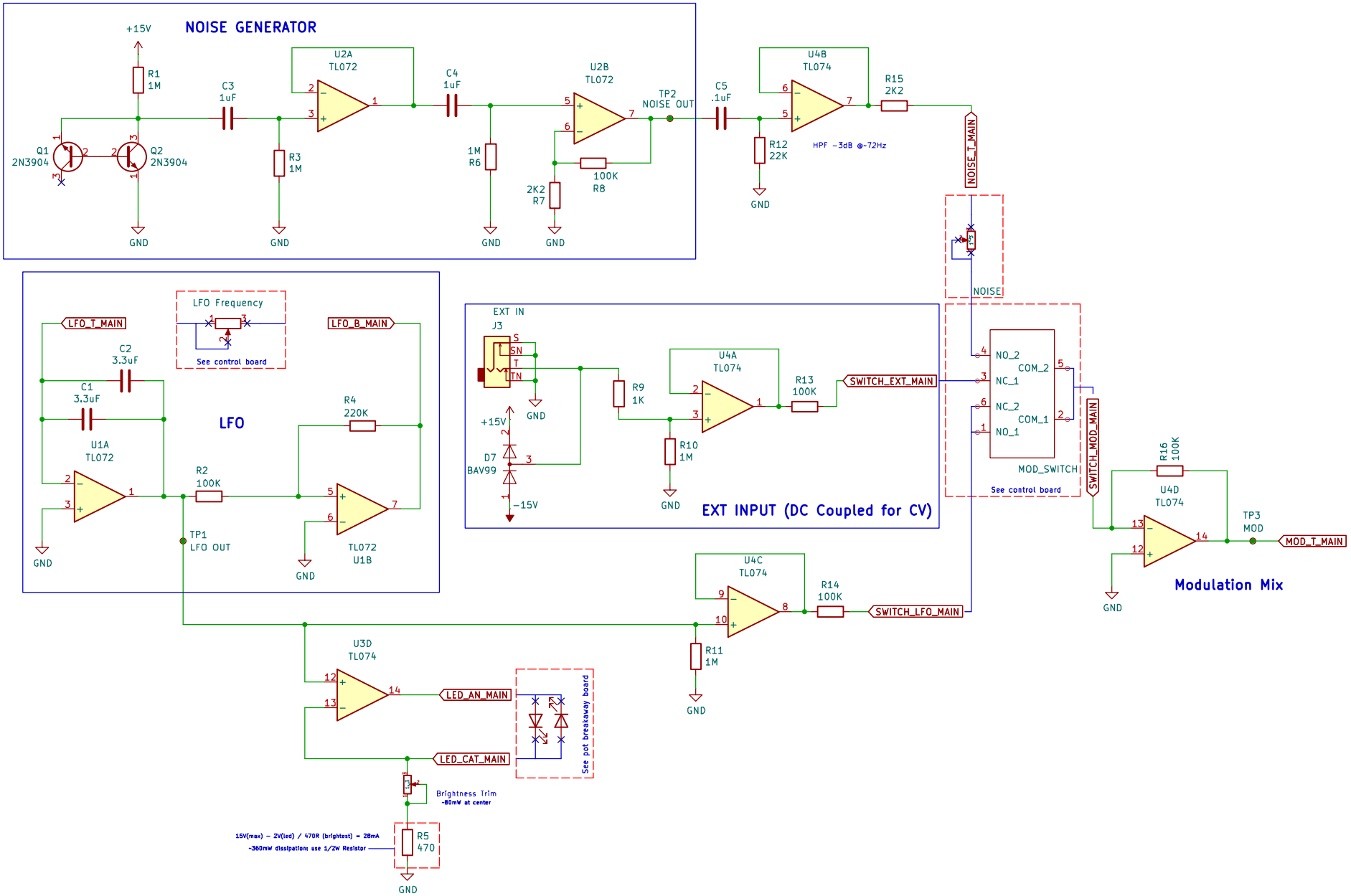

POWER
File: POWER.kicad_sch

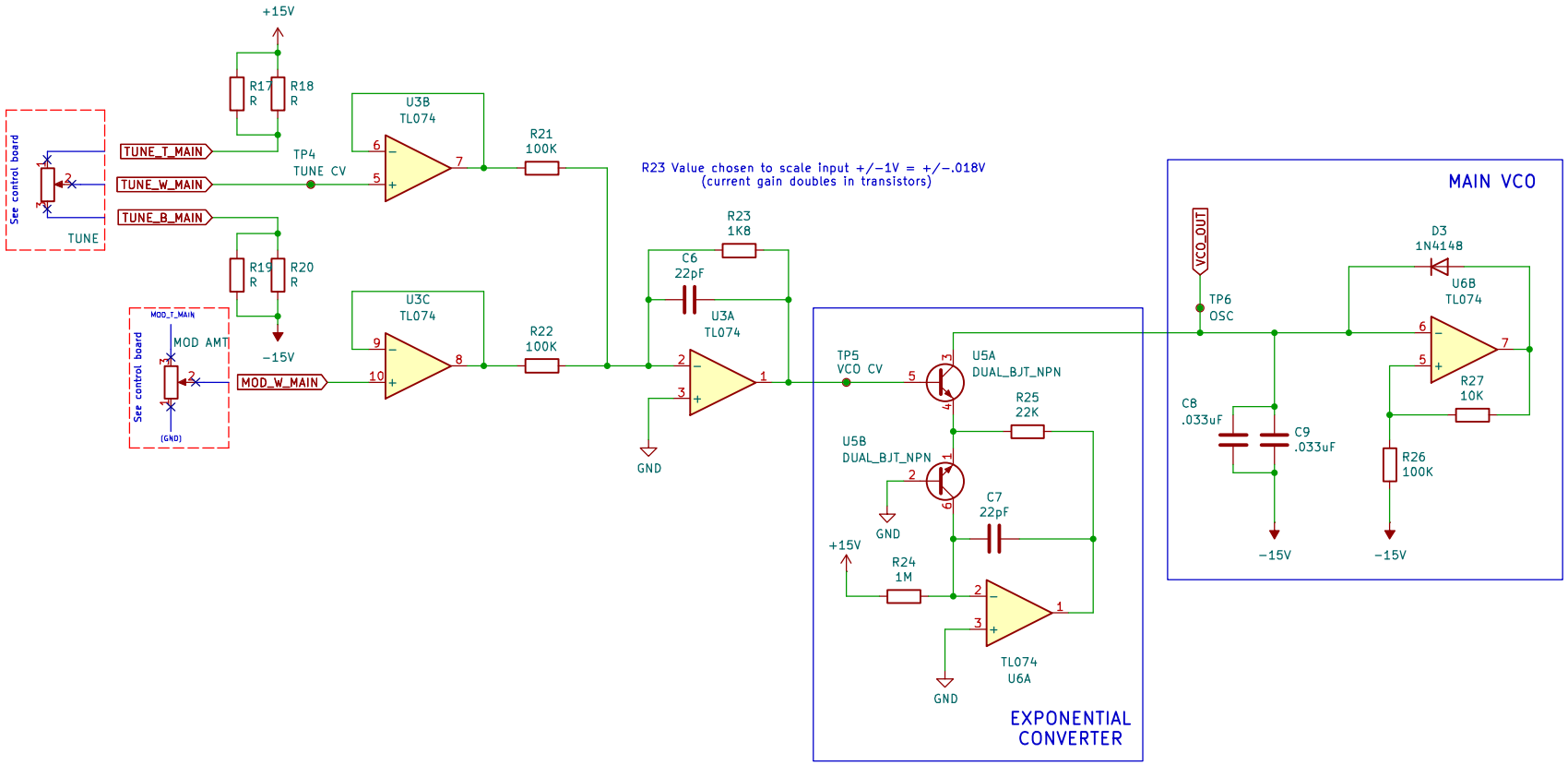

PW_BLEND_OUTPUT
File: PW_BLEND_OUTPUT.kicad_sch

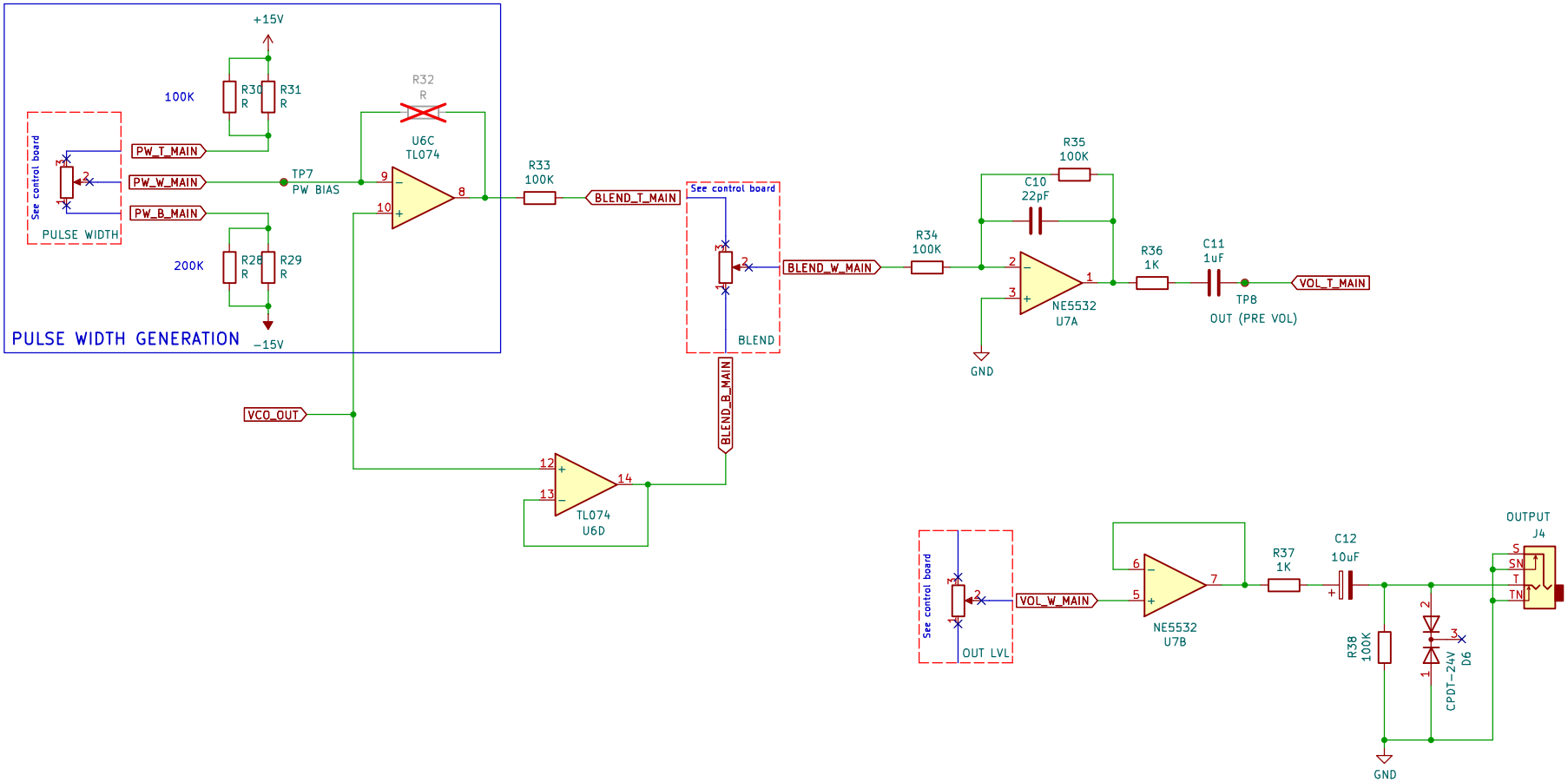

NOISE_T_MAIN
LFO_T_MAIN
LFO_B_MAIN
SWITCH_EXT_MAIN
SWITCH_MOD_MAIN
TUNE_B_MAIN
SWITCH_LFO_MAIN
TUNE_W_MAIN
LED_AN_MAIN
TUNE_T_MAIN
LED_CAT_MAIN
J1
Left

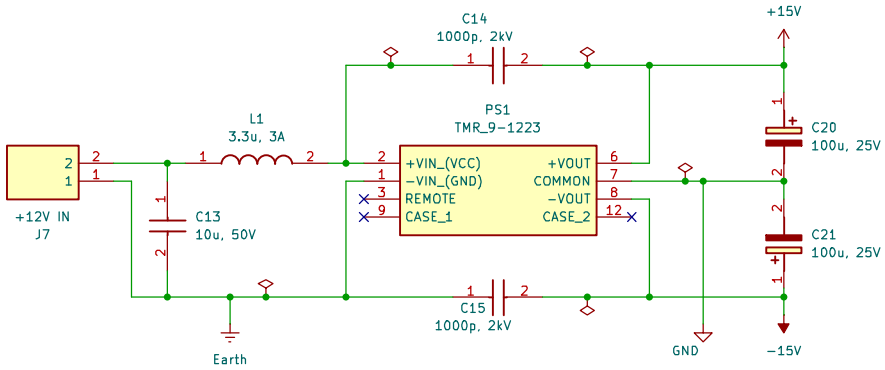

MOD_T_MAIN
MOD_W_MAIN
PW_T_MAIN
PW_W_MAIN
PW_B_MAIN
BLEND_T_MAIN
VOL_W_MAIN
BLEND_W_MAIN
VOL_T_MAIN
BLEND_B_MAIN
GND
J2
Right

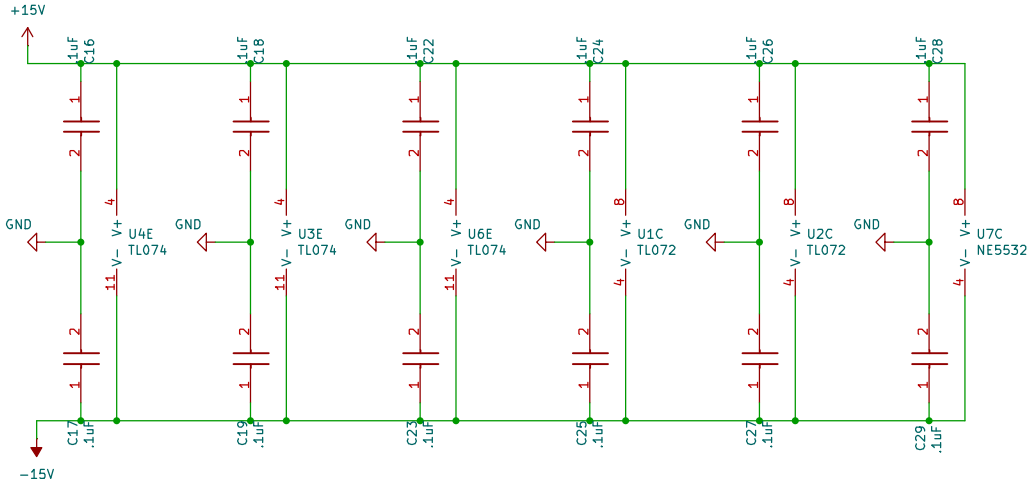

H1
7837
Screw Mounting Terminals


NOISE GENERATOR
+15V
R1
1M
C3
1uF
U2A
TL072
C4
1uF
U2B
TL072
TP2
NOISE OUT
C5
.1uF
U4B
TL074
R15
2K2
Q1
2N3904
Q2
2N3904
R3
1M
1M
R6
2K2
R7
100K
R8
R12
22K
HPF -3dB @~72Hz
GND
NOISE_T_MAIN
NOISE
LFO
LFO_T_MAIN
LFO_B_MAIN
LFO Frequency
See control board
C2
3.3uF
C1
3.3uF
U1A
TL072
R2
100K
R4
220K
TL072
U1B
TP1
LFO OUT
EXT IN
J3
EXT INPUT (DC Coupled for CV)
U4A
TL074
R9
1K
R10
1M
R13
100K
SWITCH_EXT_MAIN
D7
BAV99
+15V
-15V
NO_2
COM_2
NC_1
NC_2
COM_1
NO_1
MOD_SWITCH
See control board
SWITCH_MOD_MAIN
R16
100K
U4D
TL074
TP3
MOD
MOD_T_MAIN
Modulation Mix
U4C
TL074
R14
100K
SWITCH_LFO_MAIN
R11
1M
U3D
TL074
LED_AN_MAIN
LED_CAT_MAIN
See pot breakaway board
Brightness Trim
~80mW at center
15V(max) - 2V(led) / 470R (brightest) = 28mA
~360mW dissipation: use 1/2W Resistor
R5
470


+15V
R17
R
R18
R
U3B
TL074
See control board
TUNE
TUNE_T_MAIN
TUNE_W_MAIN
TUNE_B_MAIN
TP4
TUNE CV
R21
100K
R23 Value chosen to scale input +/−1V = +/−.018V
(current gain doubles in transistors)
R23
1K8
C6
22pF
U3A
TL074
R19
R
R20
R
U3C
TL074
MOD_T_MAIN
MOD AMT
See control board
(GND)
−15V
MOD_W_MAIN
R22
100K
GND
TP5
VCO CV
U5A
DUAL_BJT_NPN
R25
22K
U5B
DUAL_BJT_NPN
GND
C7
22pF
+15V
R24
1M
TL074
U6A
GND
EXPONENTIAL
CONVERTER
MAIN VCO
VCO_OUT
TP6
OSC
D3
1N4148
U6B
TL074
R27
10K
C8
.033uF
C9
.033uF
R26
100K
−15V
−15V


PULSE WIDTH GENERATION
+15V
−15V
100K
R30
R
R31
R
R32
R
U6C
TL074
See control board
PULSE WIDTH
PW_T_MAIN
PW_W_MAIN
PW_B_MAIN
TP7
PW BIAS
200K
R28
R
R29
R
R33
100K
BLEND_T_MAIN
See control board
BLEND
BLEND_B_MAIN
BLEND_W_MAIN
R34
100K
R35
100K
C10
22pF
NE5532
U7A
R36
1K
C11
1uF
TP8
OUT (PRE VOL)
VOL_T_MAIN
GND
VCO_OUT
TL074
U6D
See control board
OUT LVL
VOL_W_MAIN
NE5532
U7B
R37
1K
C12
10uF
OUTPUT
J4
S
SN
T
TN
R38
100K
CPDT-24V
D6
GND


C14
1000p, 2kV
+15V
PS1
TMR_9-1223
L1
3.3u, 3A
C20
100u, 25V
+VIN_(VCC)
−VIN_(GND)
REMOTE
CASE_1
+VOUT
COMMON
−VOUT
CASE_2
+12V IN
J7
C13
10u, 50V
C21
100u, 25V
C15
1000p, 2kV
Earth
GND
−15V


+15V
C16 1uF
C18 1uF
C22 1uF
C24 1uF
C26 1uF
C28 1uF
GND
U4E
TL074
U3E
TL074
U6E
TL074
U1C
TL072
U2C
TL072
U7C
NE5532
V+
V−
C17 .1uF
C19 .1uF
C23 .1uF
C25 .1uF
C27 .1uF
C29 .1uF
−15V