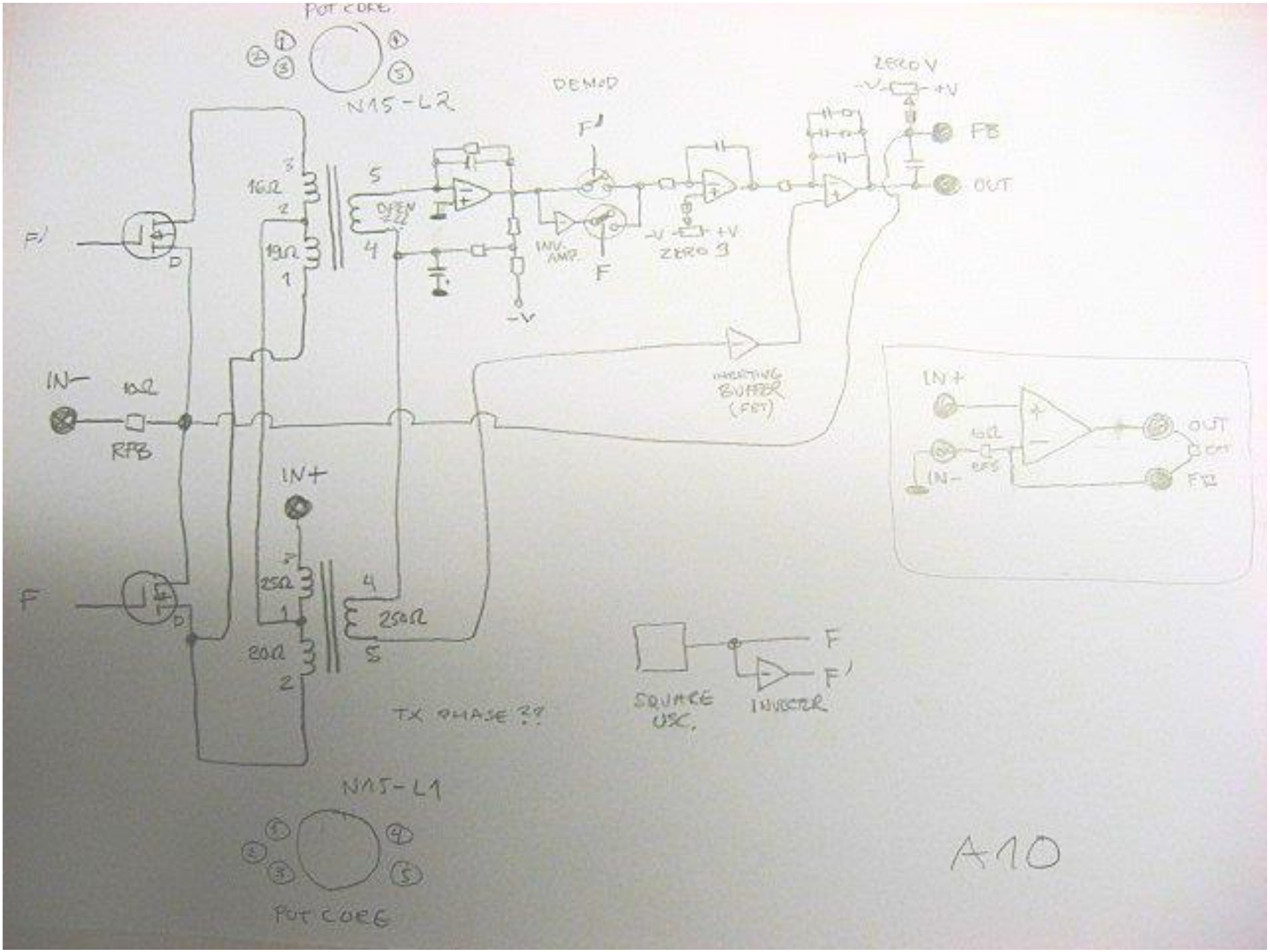
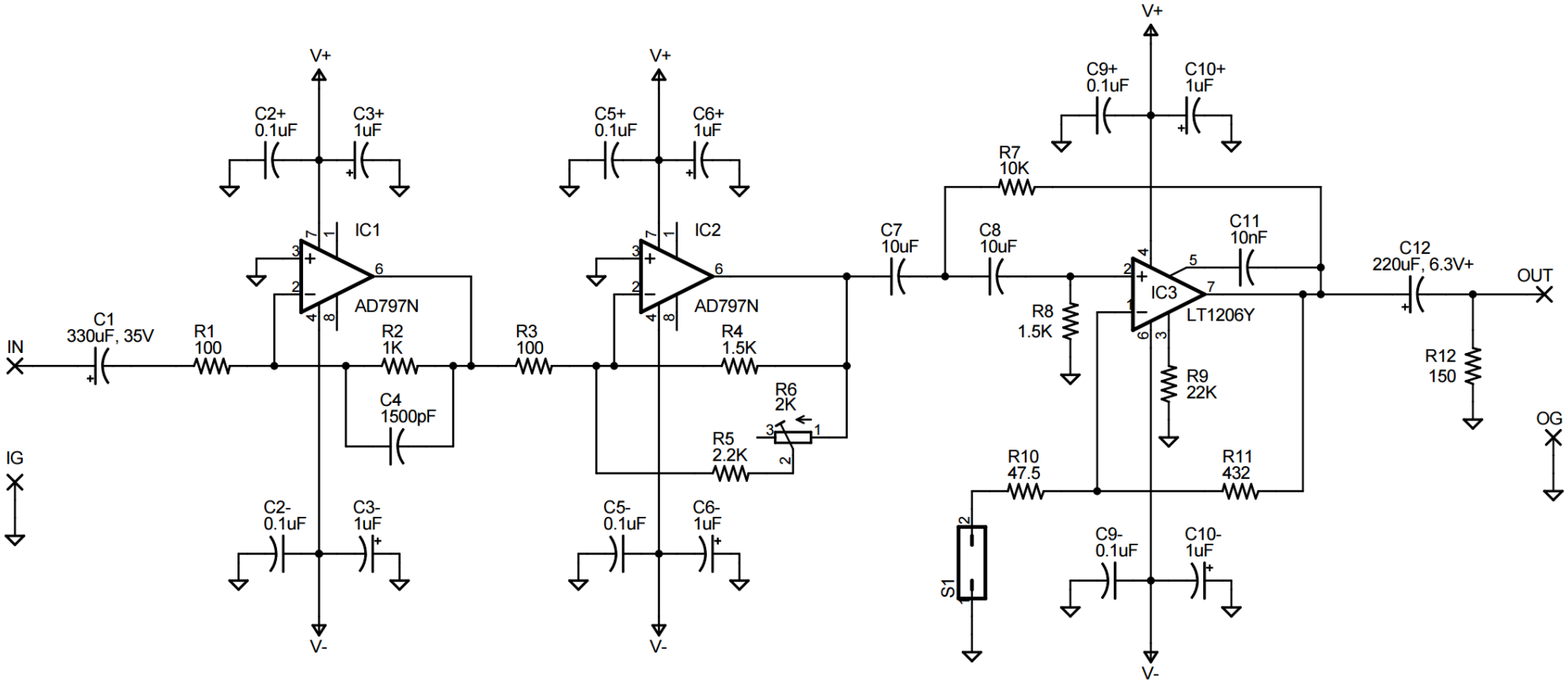
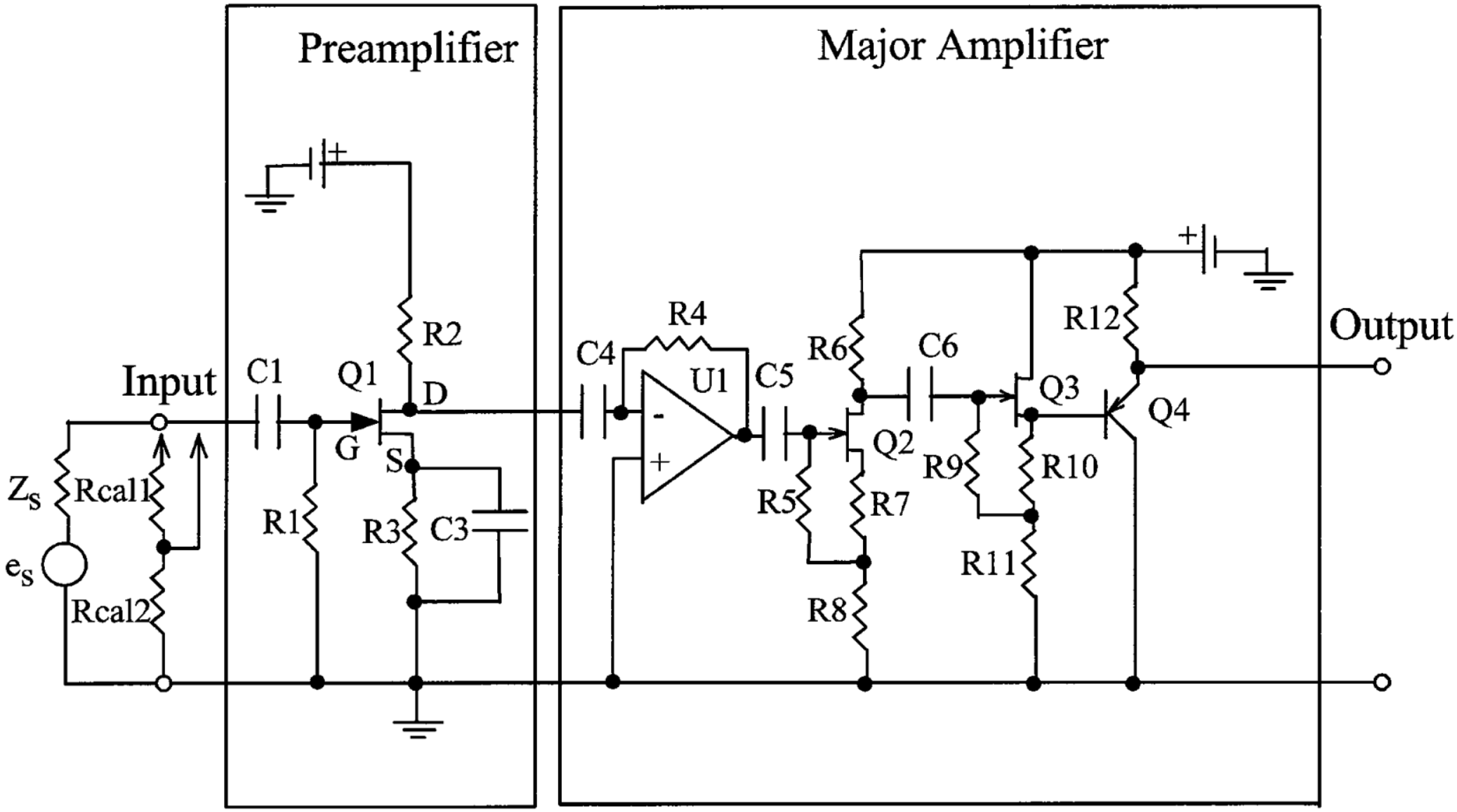
EM Electronics – ‘90s? – A10 –rough schematic by ltz2000




V+
C2+
0.1uF
C3+
1uF
IC1
AD797N
C1
330uF, 35V
IN
IG
R1
100
R2
1K
C4
1500pF
C2-
0.1uF
C3-
1uF
V-
R3
100
C5+
0.1uF
C6+
1uF
IC2
AD797N
R4
1.5K
R6
2K
R5
2.2K
C5-
0.1uF
C6-
1uF
V-
C7
10uF
C8
10uF
C9+
0.1uF
C10+
1uF
R7
10K
IC3
LT1206Y
C11
10nF
R8
1.5K
R9
22K
R10
47.5
R11
432
S1
C9-
0.1uF
C10-
1uF
V-
C12
220uF, 6.3V+
OUT
R12
150
OG


Preamplifier
Major Amplifier
Input
Output
C1
Q1
D
G
S
R2
R1
R3
C3
Rcal1
Rcal2
Z_S
e_S
C4
R4
U1
C5
R6
C6
Q2
Q3
Q4
R12
R5
R7
R8
R9
R10
R11

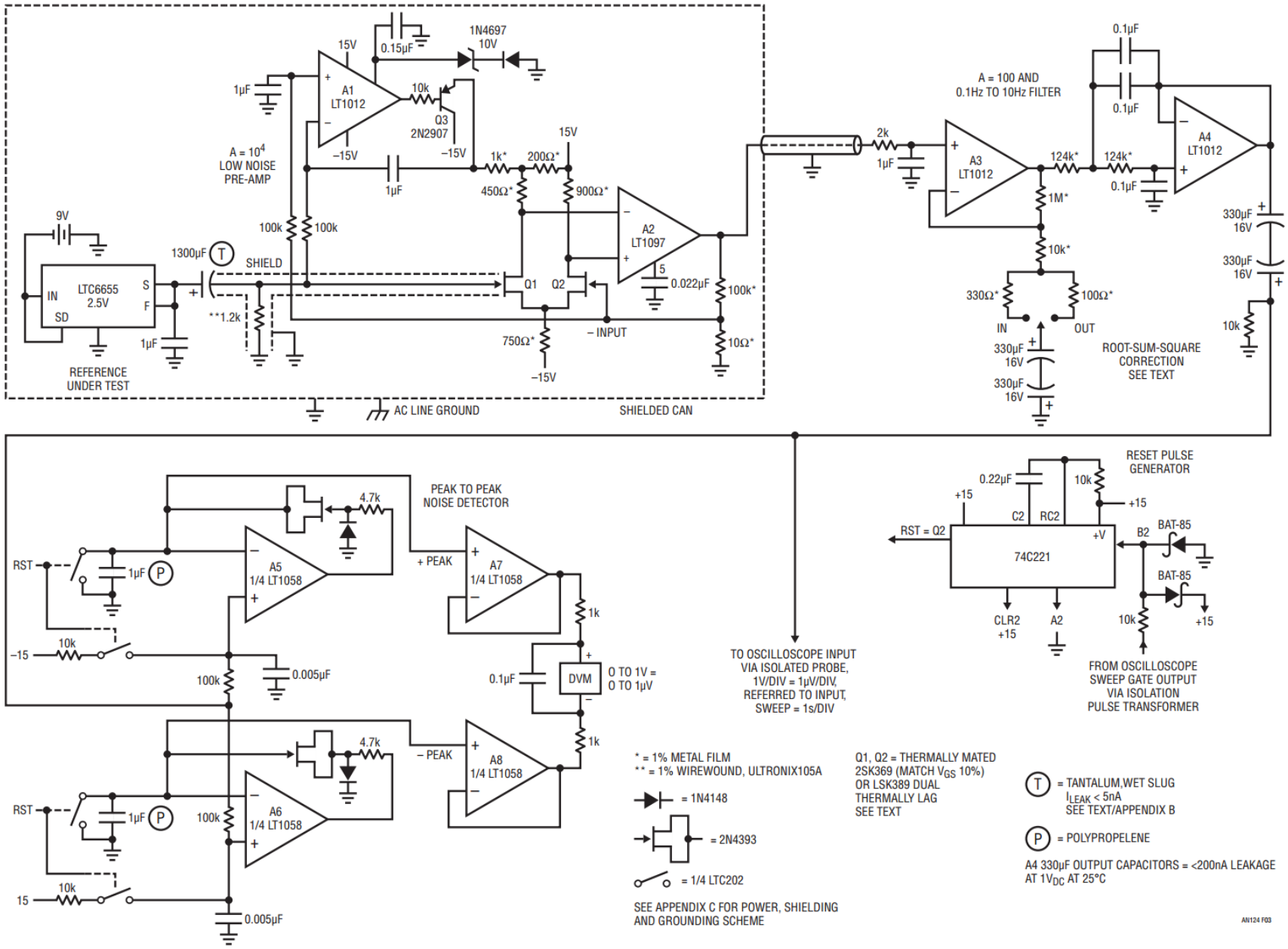
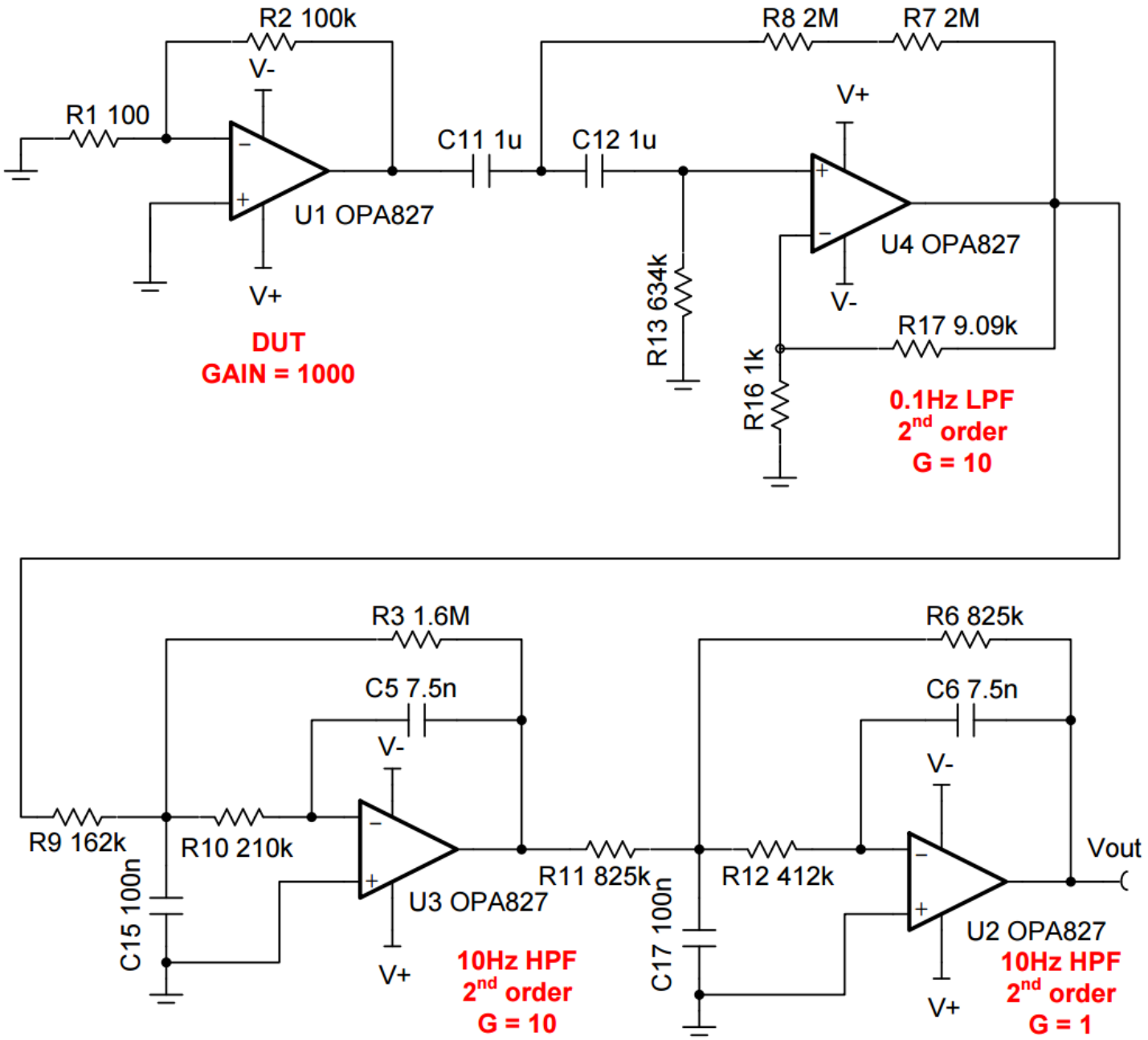
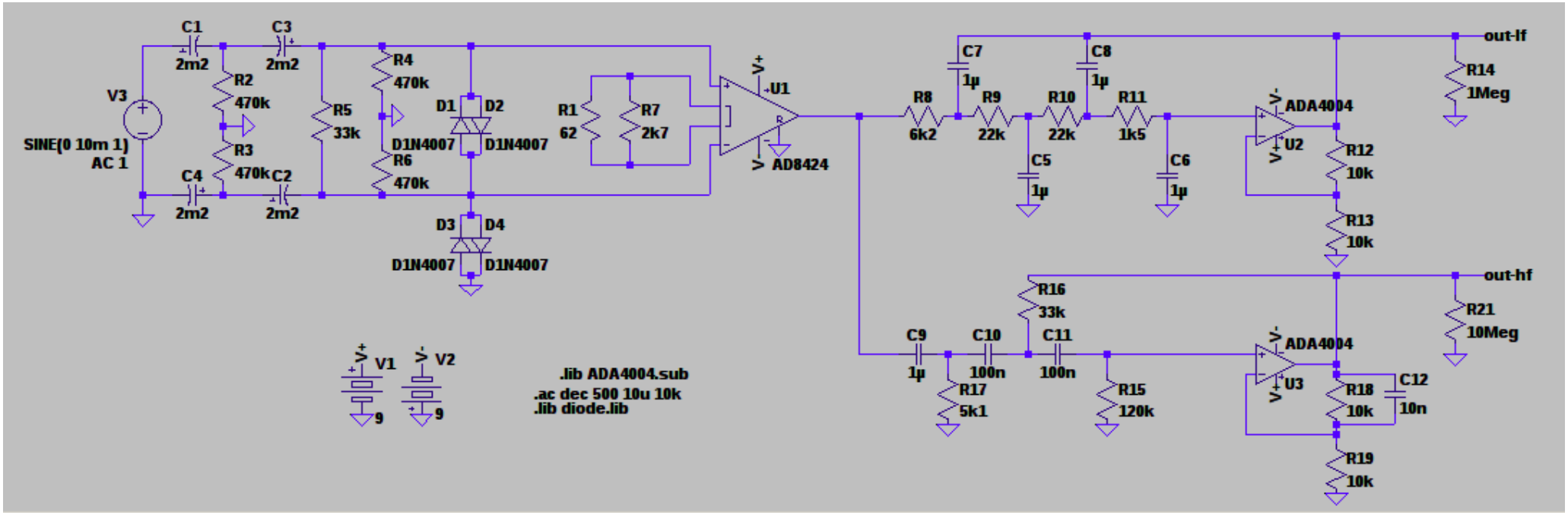


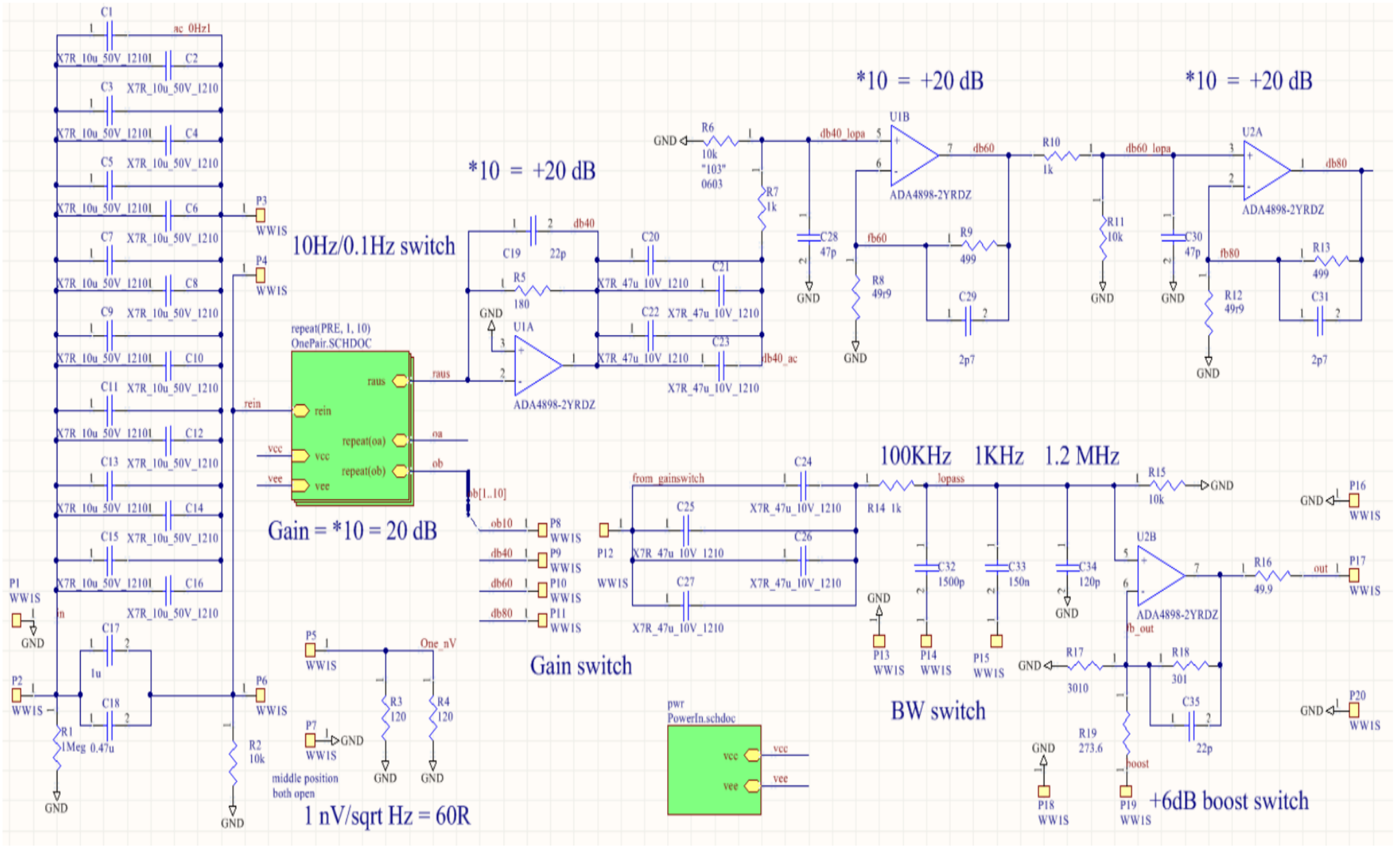
Figure 3. Detailed Noise Test Circuitry. Thermally Lagged Q1-Q2 Low Noise J-FET Pair Is DC Stabilized by A1-Q3; A2 Delivers A = 10,000 Pre-Amplifier Output. A3-A4 form 0.1Hz to 10Hz ,A = 100, Bandpass Filter; Total Gain Referred to Pre-Amplifier Input Is 10^6. Peak to Peak Noise Detector, Reset by Monitoring Oscilloscope Sweep Gate, Supplies DVM Output

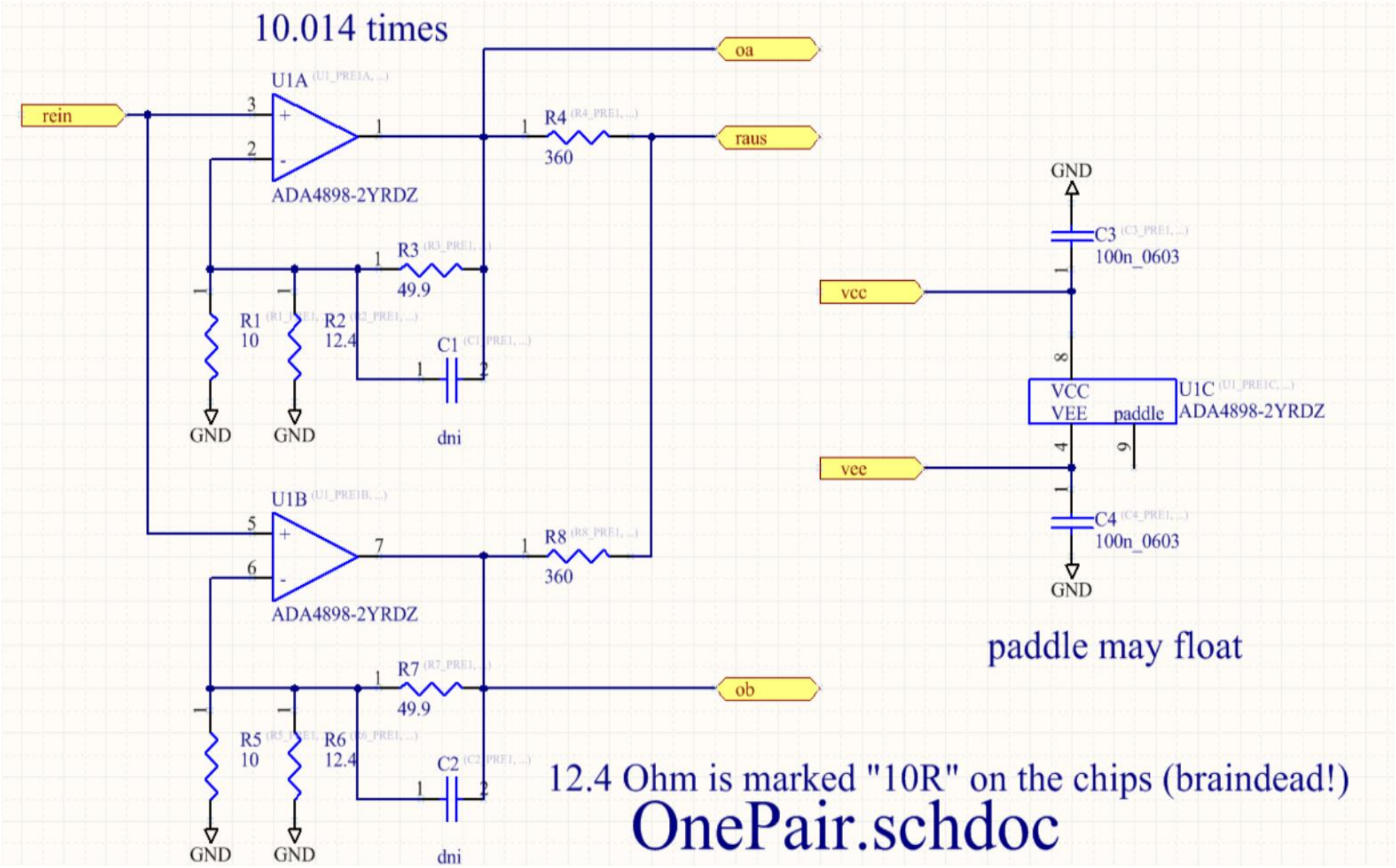

R2 100k
R8 2M
R7 2M
V-
V+
R1 100
C11 1u
C12 1u
U1 OPA827
U4 OPA827
R13 634k
R17 9.09k
R16 1k
DUT
GAIN = 1000
0.1Hz LPF
2nd order
G = 10
R3 1.6M
R6 825k
C5 7.5n
C6 7.5n
R9 162k
R10 210k
R11 825k
R12 412k
Vout
C15 100n
C17 100n
U3 OPA827
U2 OPA827
10Hz HPF
2nd order
G = 10
10Hz HPF
2nd order
G = 1

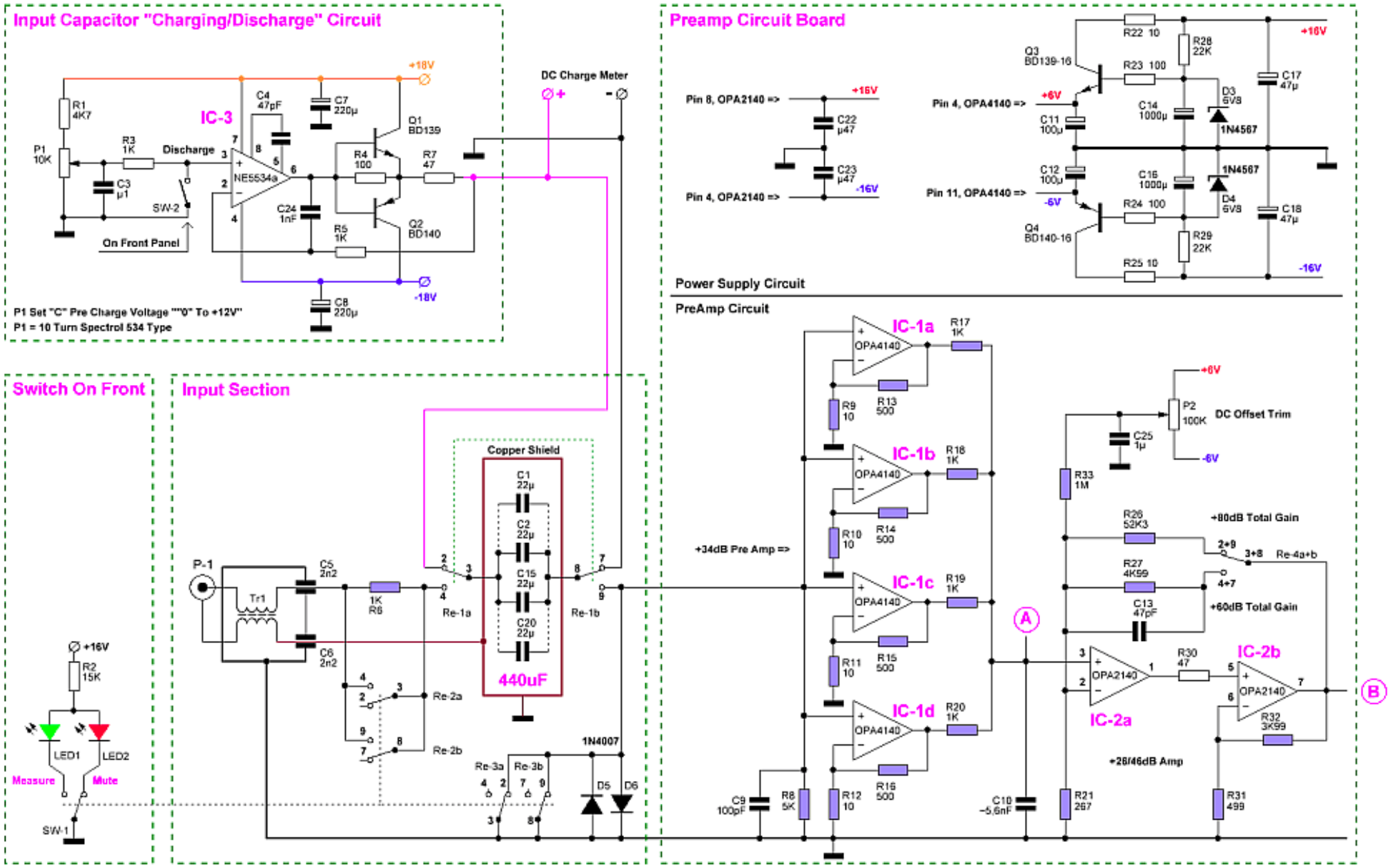
c4757p – Jan 2014 – Op amp for amplifying 5uV of noise to 200uV

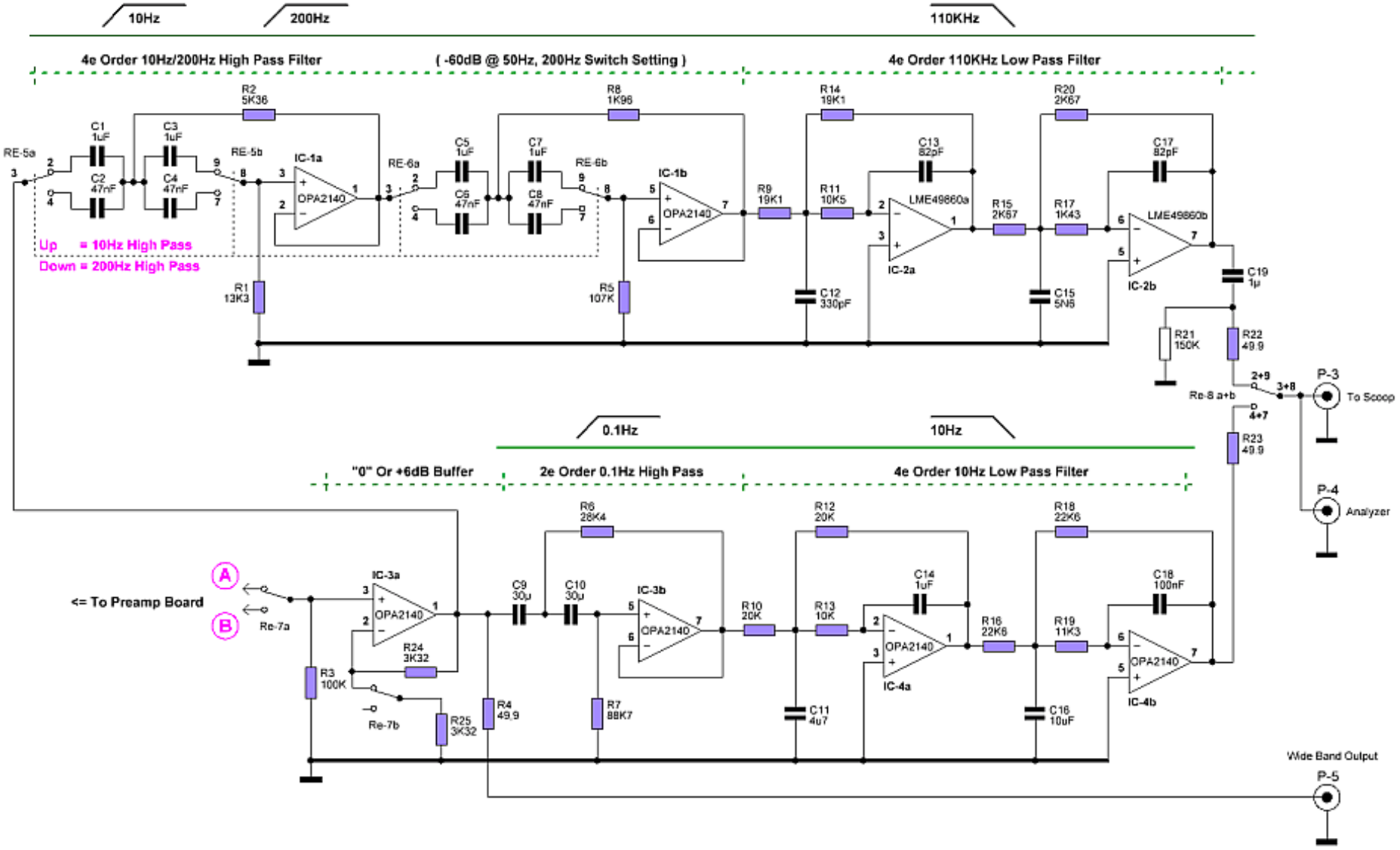


Gerhard Hoffmann – Sep 2014 – A 220 pV/sqrt(Hz) low noise preamplifier

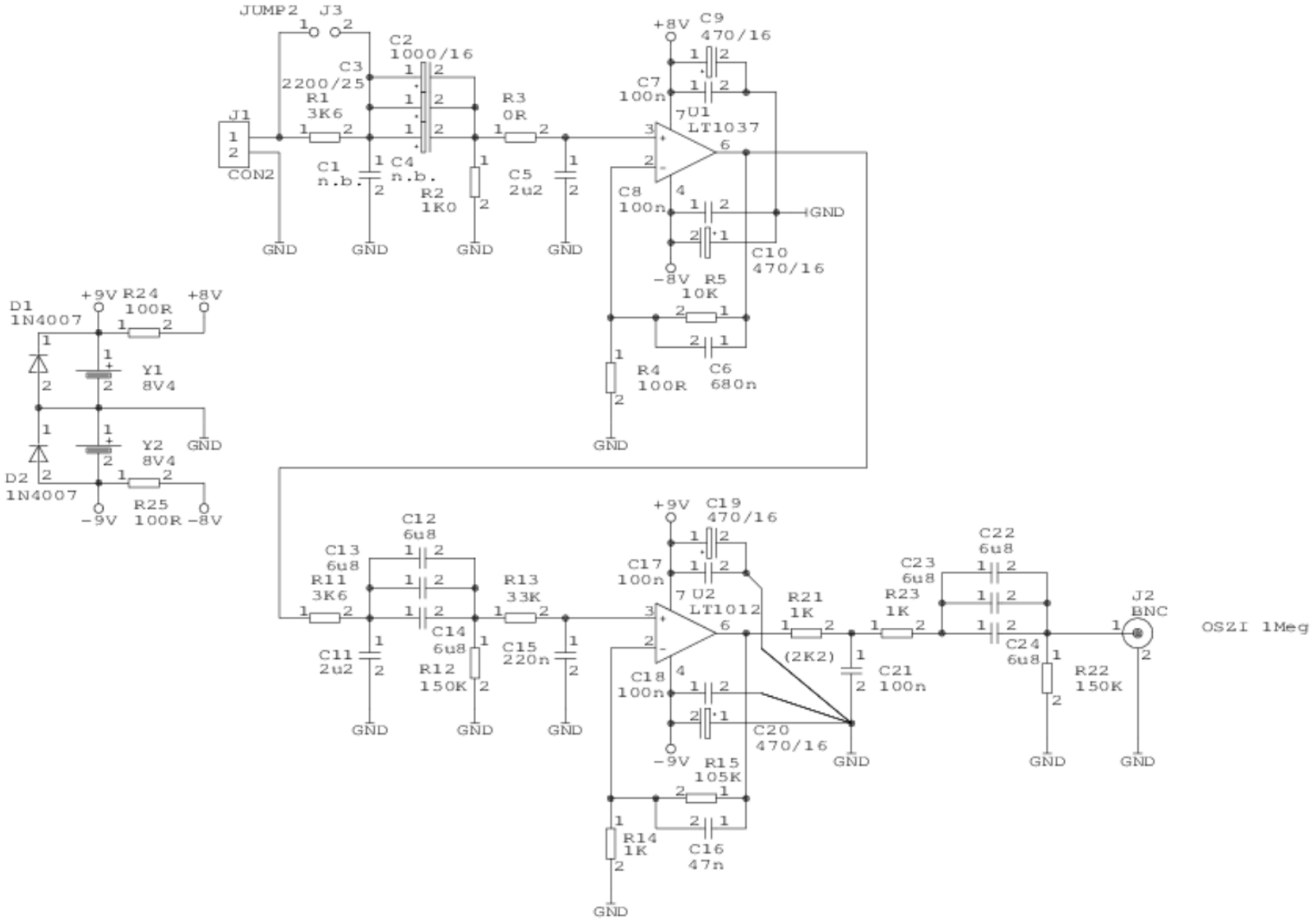



10.014 times
oa
raus
rein
U1A
ADA4898-2YRDZ
R4
360
R3
49.9
R1
10
R2
12.4
C1
dni
GND
GND
U1B
ADA4898-2YRDZ
R8
360
R7
49.9
R5
10
R6
12.4
C2
dni
GND
GND
ob
GND
C3
100n_0603
vcc
VCC
VEE
paddle
U1C
ADA4898-2YRDZ
vee
C4
100n_0603
GND
paddle may float
12.4 Ohm is marked "10R" on the chips (braindead!)
OnePair.schdoc

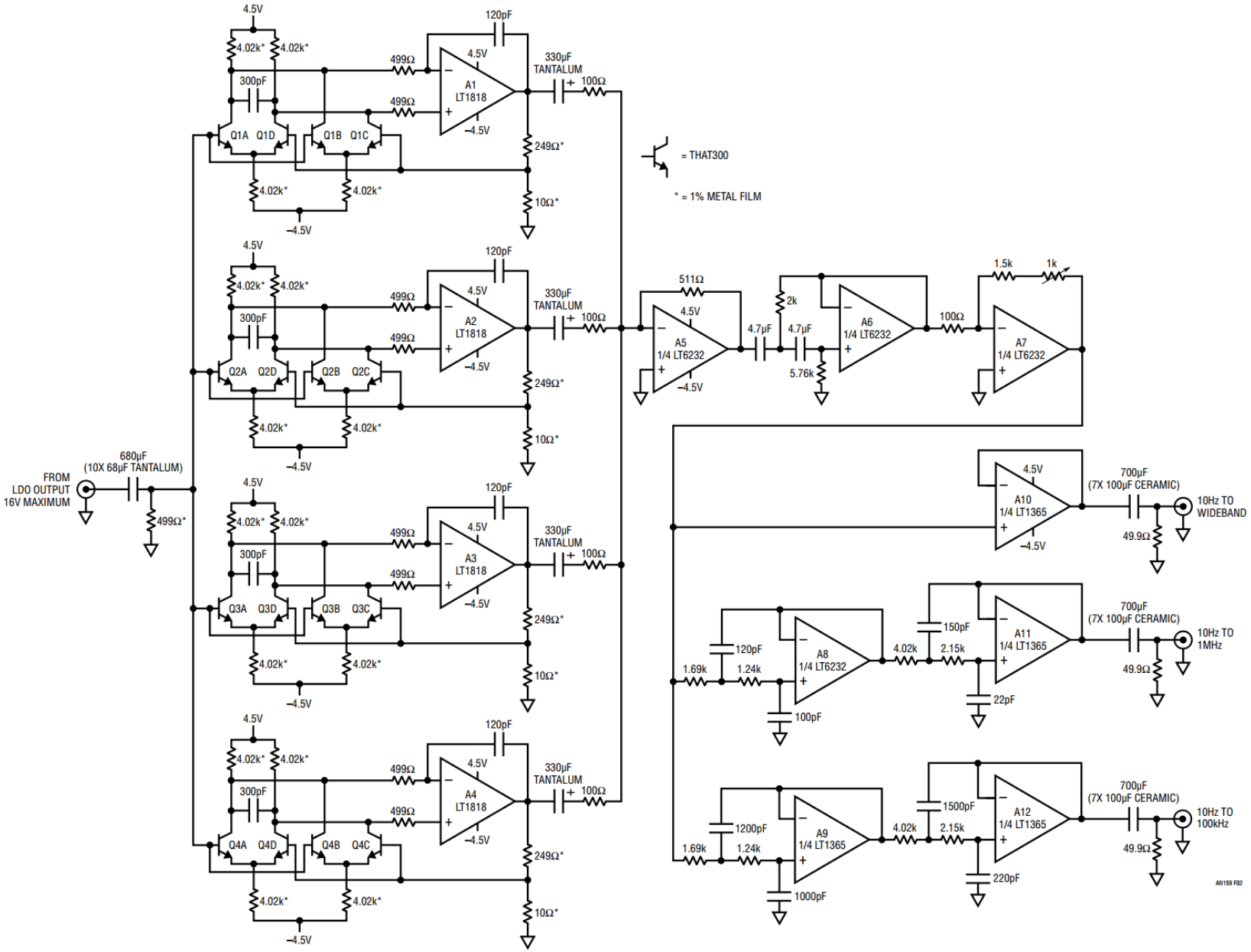

Input Capacitor "Charging/Discharge" Circuit
IC-3
NE5534a
Discharge
On Front Panel
SW-2
DC Charge Meter
P1 Set "C" Pre Charge Voltage ""0" To +12V"
P1 = 10 Turn Spectrol 534 Type
Preamp Circuit Board
Power Supply Circuit
PreAmp Circuit
Pin 8, OPA2140 =>
Pin 4, OPA2140 =>
Pin 4, OPA4140 =>
Pin 11, OPA4140 =>
Switch On Front
Input Section
Copper Shield
440uF
1N4007
LED1
LED2
Measure
Mute
IC-1a
IC-1b
IC-1c
IC-1d
IC-2a
IC-2b
OPA4140
OPA2140
DC Offset Trim
+80dB Total Gain
+60dB Total Gain
+34dB Pre Amp =>
+26/46dB Amp
Re-4a+b


10Hz
200Hz
110KHz
4e Order 10Hz/200Hz High Pass Filter
(-60dB @ 50Hz, 200Hz Switch Setting)
4e Order 110KHz Low Pass Filter
Up = 10Hz High Pass
Down = 200Hz High Pass
0.1Hz
10Hz
"0" Or +6dB Buffer
2e Order 0.1Hz High Pass
4e Order 10Hz Low Pass Filter
<= To Preamp Board
To Scoop
Analyzer
Wide Band Output
OPA2140
LME49860a
LME49860b

Andreas – Jan 2016 – Noise Amplifier



Todd Owen and Amit Patel – Feb 2016 – AN159 - Measuring 2nV/√Hz Noise and 120dB Supply Rejection on Linear Regulators (single input)



Todd Owen and Amit Patel – Feb 2016 – AN159 - Measuring 2nV/√Hz Noise and 120dB Supply Rejection on Linear Regulators (differential input)