Update 9/6/2015

1. Reverse Q40 Emitter and Collector, Modify schematic as well Transistor reversed causing bypass pops

Update 4/28/13

1. Increase resistance of Phantom Iso R Change R311 from 10K 5/w to ~~33k~~ 16K 3W

New Updates as of 04-13-13

1. Corrrect output stage power supply centering Add 4 18v zener diodes (1N4746A) across C181+C65
2. Change Output DC Servo parts values Change R21 and R87 to 200k
   Change C187 and C16 to u47/50-63v
   Change R436 and R437 to 1k0
   Change R31 and R33 from 1meg to 255k
3. Hook up missing ground from C114/C152 to CTL_GndX Add jumper from C116/C133 to C114/C152
4. Change Fan Type to Noctua NF-R8
5. Correct Gain Cell bypass mute delay Change Q40 from 2n5401 to MPSA77
   Replace R205 with two 8k6 resistors
   Change C7 from 22n to u47 and move top to midpoing between two 8.k resistors
6. Eliminate redundant parts from output stage PS Remove C150,R435,C173,R314 (Temp)
7. Correct meter TempCo Change D79 and D509 from 1N270 to SD101(Low drift Shottkey)
   Change D22 from 1N270 to 1N4148
   Add 1n5819(High drift shottky in series with R225

Updates and changes to be done to ALL BA-660's

1. Correct Gain Cell Drive: Install 25k pot and 20k0 Resistor From -24v to Cathode constant current driver of V3
2. Correct Output Metering: Change R107 from 4k99 to 4k23/12 ? (Choose by measurement.)
3. Correct Attack Current source gain: Change R284 from 22k1 to 2k21
4. Correct heat sensitivity: Replace D20, D25, D59 with 1n4148
5. Correct Clip light levels: 1st stage-Change R344 and R345 from 11k to 3k24
   2nd Stage- Change R402 & R419 from 11k to 4k99
   Add missing ground from Q36-3/Q38-2/Q37-2/Q39-2 to C113 minus
6. Verify bias point of 2nd stage@ U15-1 >-22&+22< Set with R38 249-255
7. Set Insert detect K7 to reliable switch New: Replace Q2 with 2n5401
   Old: Find appropriate value for R56 to reliably turn on Q2 and NOT light LED!
8. Correct GC HF Rolloff Add 47pf in parallel with R236 and R237
9. LF Roll Off Add 100u/63v in parallel with C36 & C37
10. Reduce GC Meter non linearity Change R278 from 2k4 to 1k3
11. Add GC Meter trim Replace R225 with 100r0 25 turn pot

OLD UNITS ONLY

0 Remove Humidity induced distortions CONFORMALLY COAT MOTHER PCB TOP and BOTTOM
1. Improve GR Cathode pullup zener reliability Replace R160 with 100k 2 watt
2. Reduce GR Noise Add 1u/35v Tant across Z13

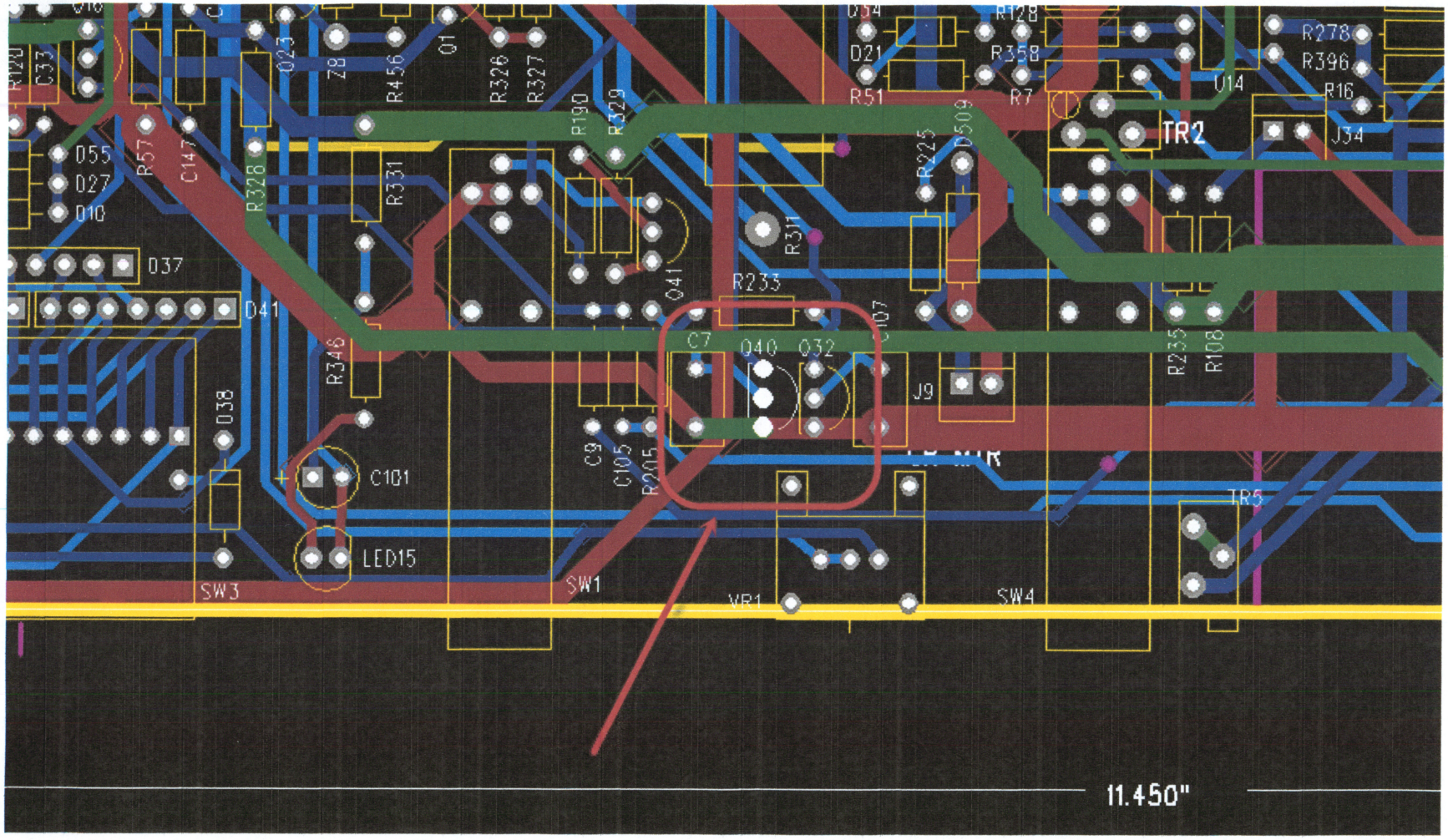
3. Improve tip in adjustment range Change R6 from 15K to 33k, R453 from 15k to 39k, R18 from 10k to 15k

4. Center Gain Control DC Ranges Change R270 from 137k to 150k, Change R333 from 10k to 27k

5. Remove OP Balance switch and Replace with Xformer Remove Sw12, K11 and K12, U1 and Install Jensen JT-11BM in at place of R26 and R32

MUCH older units

16. Improve GR Meter Zero Add R89, R457, D30, D22 and change R280 to 20k


E
B
C
VIEW FROM TOP
R328
C33
D23
Z8
R456
Q1
R326
R327
R190
R329
D54
D21
R51
R128
R358
R7
U14
TR2
R278
R396
R16
J34
D55
D27
D10
R57
C147
R328
R331
R225
D509
R311
D37
D41
R233
Q41
C7
Q40
Q32
J9
R235
R108
R346
D38
C101
C9
C105
R205
LED15
SW3
SW1
VR1
SW4
TR3
11.450"

Q40 Fix

UPDATES_12-1-2012.txt

Updates and changes to be done to ALL BA-660's

1. Correct Gain Cell Drive: Install 25k pot and 20k0 Resistor From -24v to Cathode constant current driver of V3
2. Correct Output Level trim: Change R107 from 4k99 to 4k23/12 ? (Choose by measurement.)
3. Correct Attack Current source gain: Change R284 from 221k to 22k1
4. Correct extreme heat sensitivity: Replace D20, D59 with 1n4148
5. Correct Clip light levels: 1st stage-Change R344 and R345 from 11k to 3k24

   2nd Stage- Change R402 & R419 from 11k to 4k99
6. Verify bias point of 2nd stage@ U15-1 >-22&+22< Set with R38 249-255
7. Set Insert detect K7 to reliable switch New: Replace Q2 with 2n5401
   Old: Find appropriate value for R56 to reliably turn on Q2 and NOT light LED!
8. Correct GC HF Rolloff Add 47pf in parallel with R236 and R237
9. Reduce Threshold adjustment drift Replace D25 with 1n4148

OLD UNITS ONLY

10. Remove Humidity induced distortions CONFORMALLY COAT MOTHER PCB TOP and BOTTOM
11. Improve GR Cathode pullup zener reliability Replace R160 with 100k 2 watt
12. Reduce GR Noise Add 1u/35v Tant across Z13
13. Improve tip in adjustment range Change R6 from 15K to 33k, R453 from 15k to 39k, R18 from 10k to 15k
14. Center Gain Control DC Ranges Change R270 from 137k to 150k, Change R333 from 10k to 27k
15. Remove OP Balance switch and Replace with Xformer Remove Sw12, K11 and K12, U1 and Install Jensen JT-11BM in at place of R26 and R32

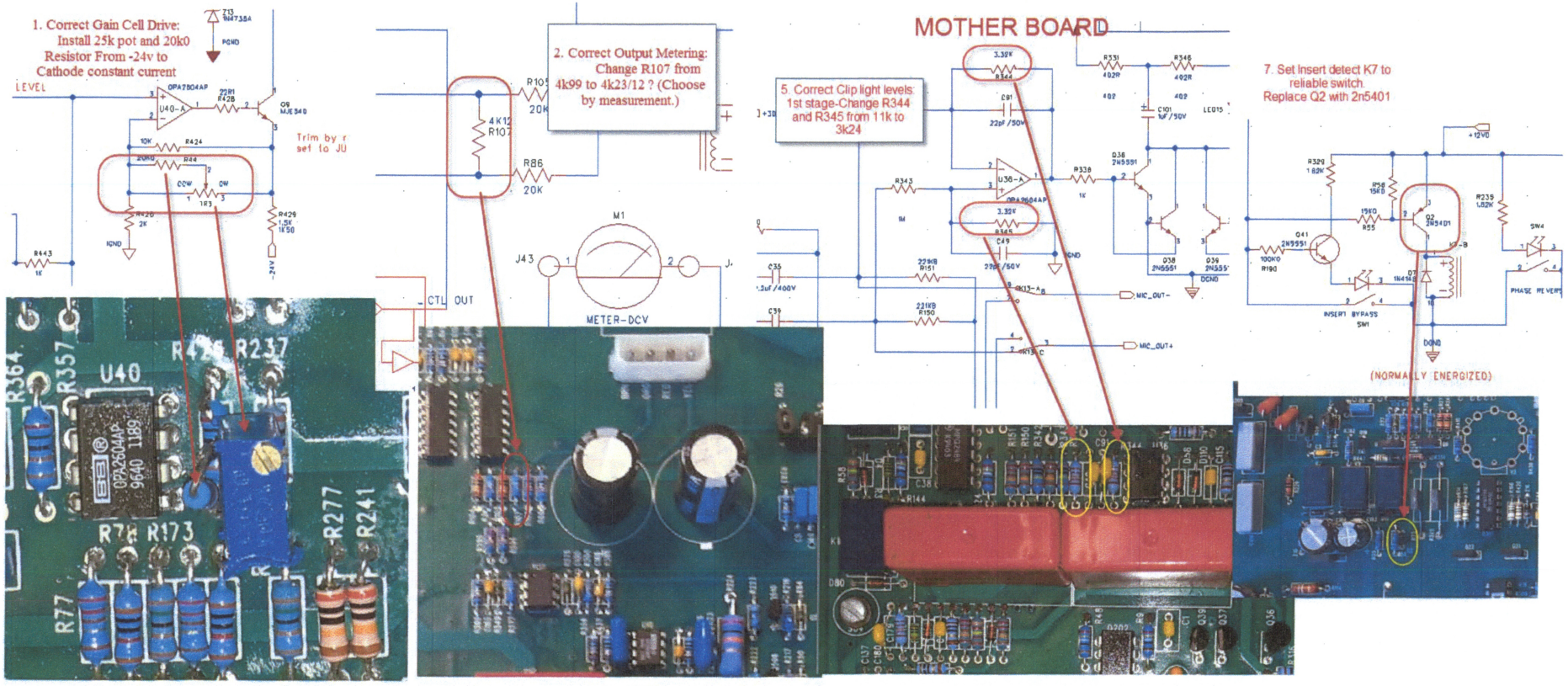
MUCH older units

16. Improve GR Meter Zero Add R89, R457, D30, D22 and change R280 to 20k


25k pot and 20k
Resistor

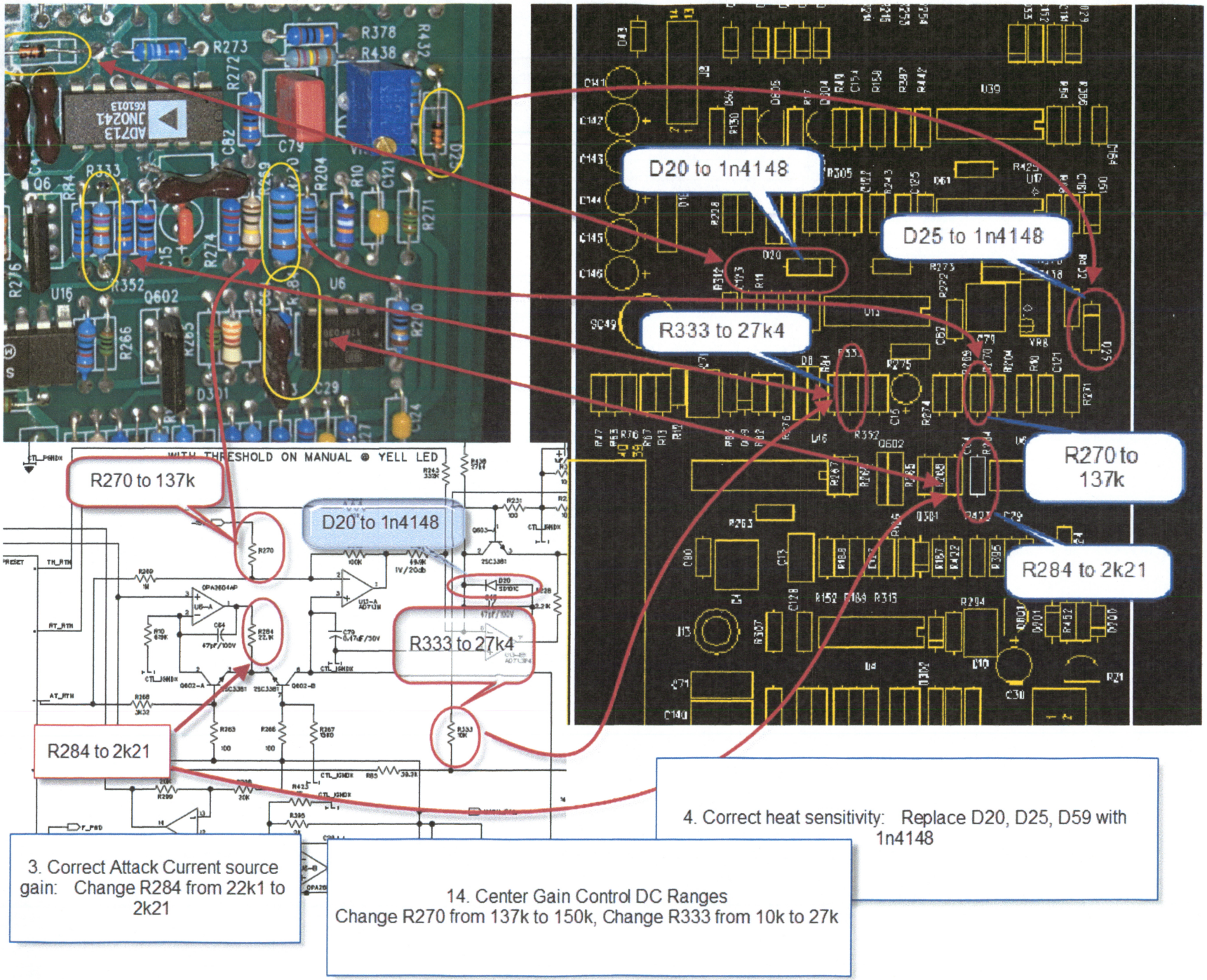
100/-3

MotherBoard P1

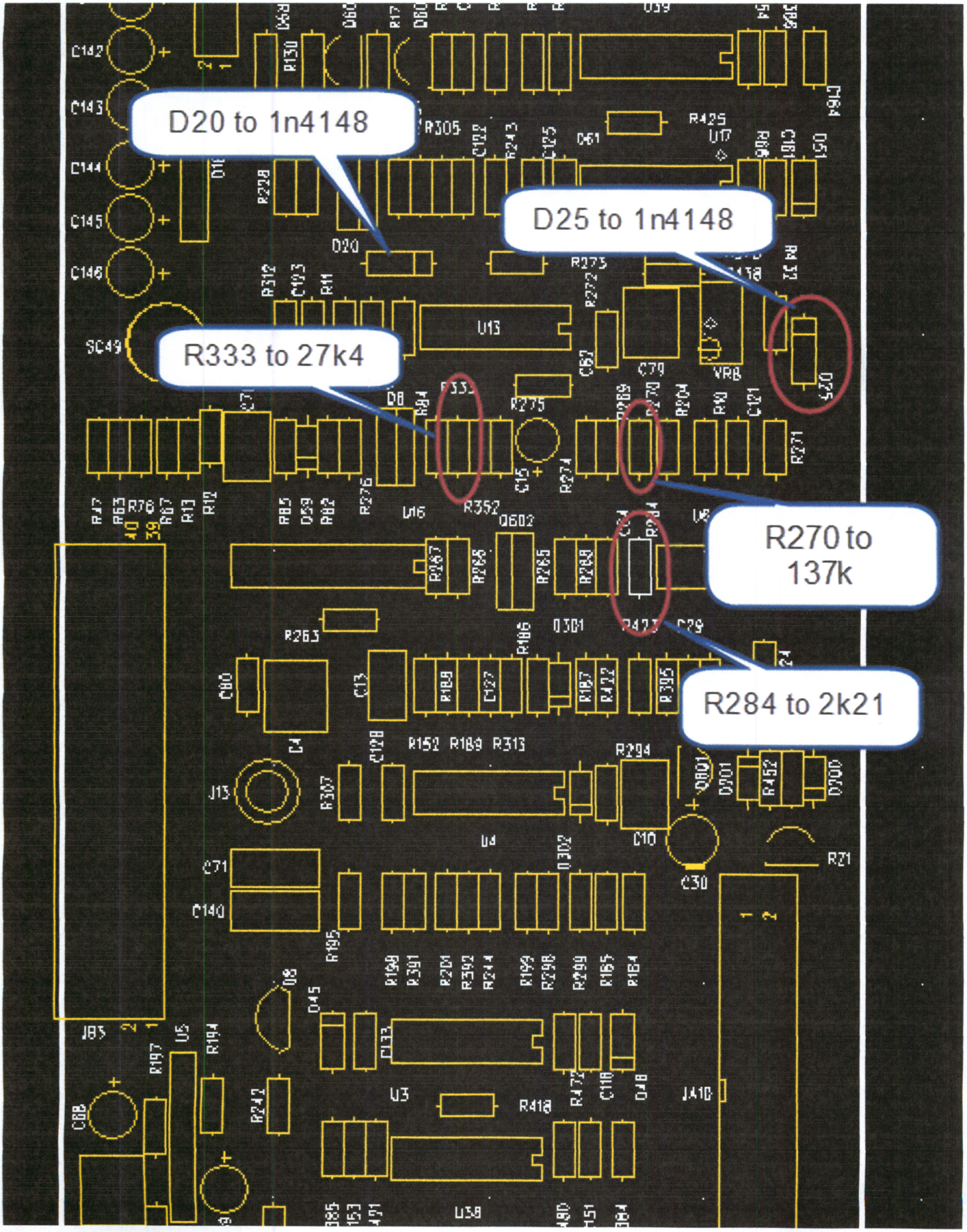


1001-3

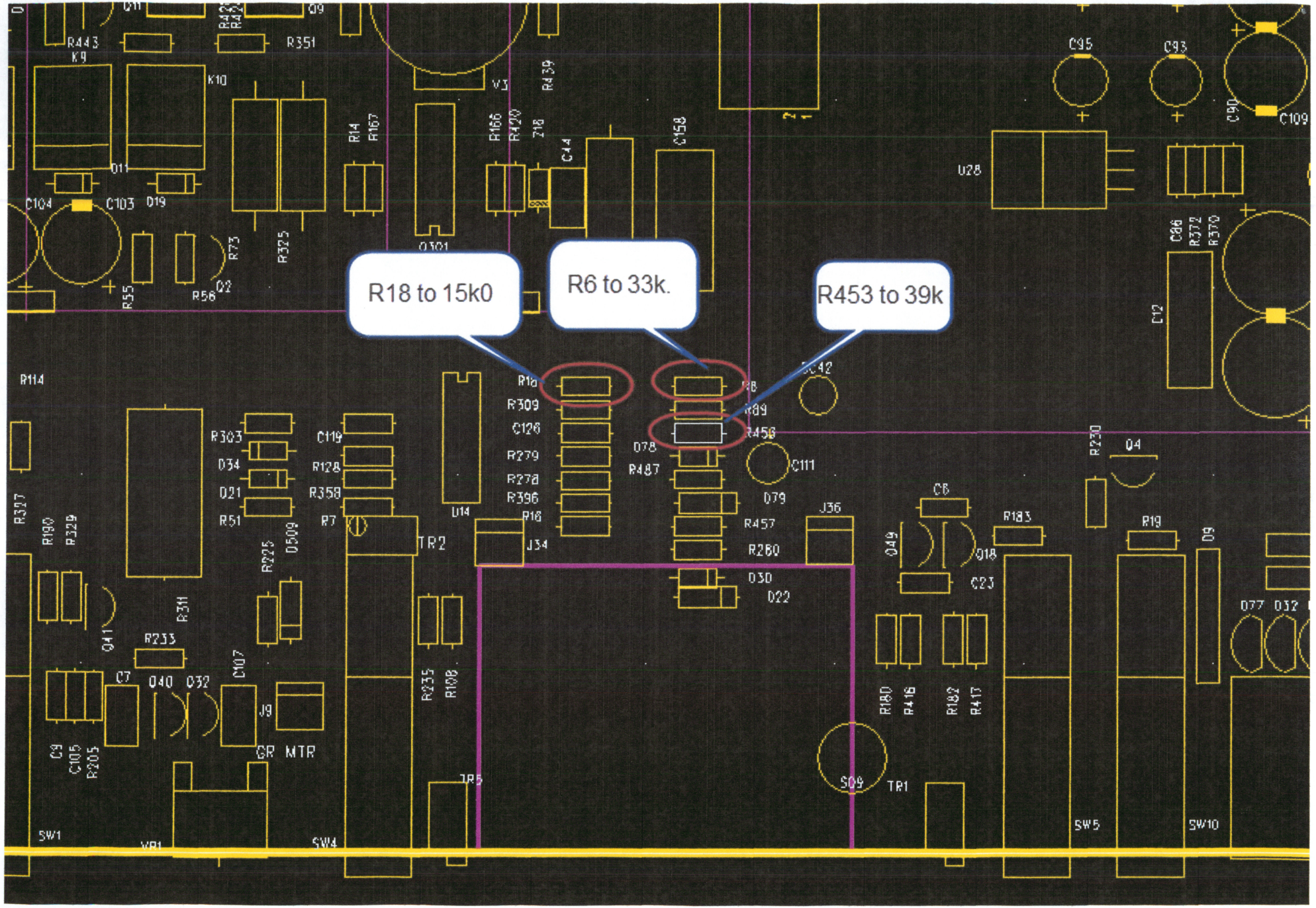
Gain Control PCB

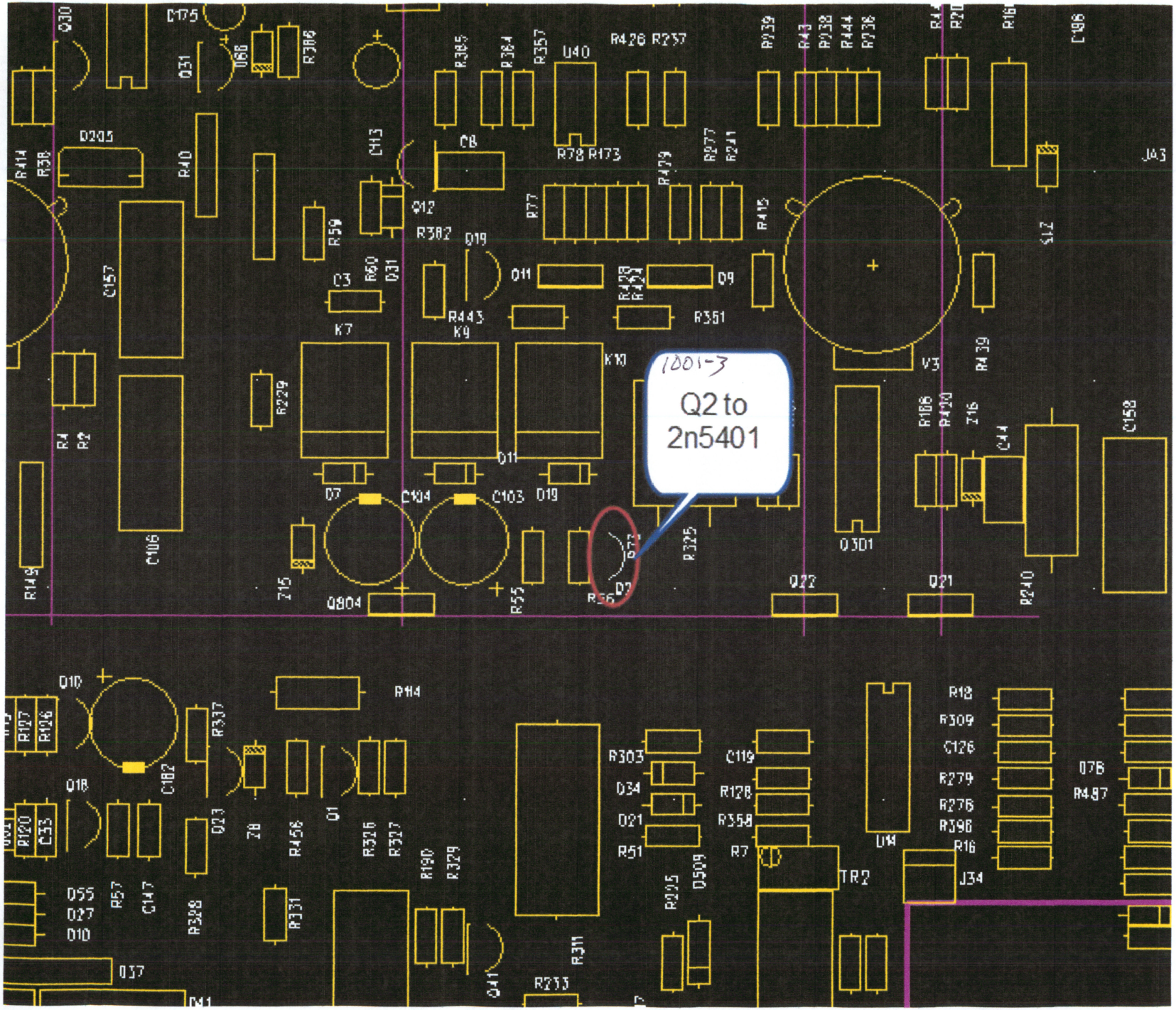


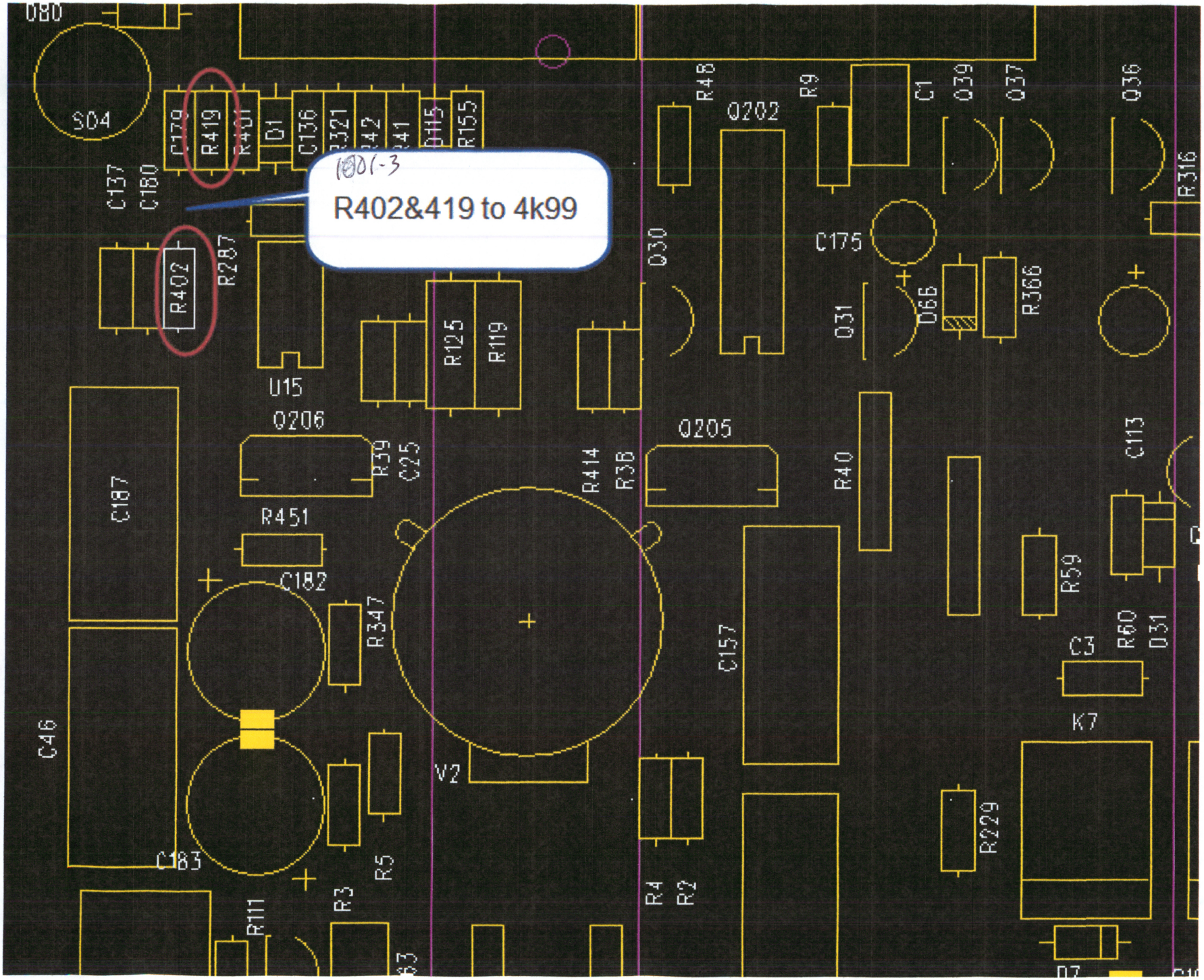
1001-3

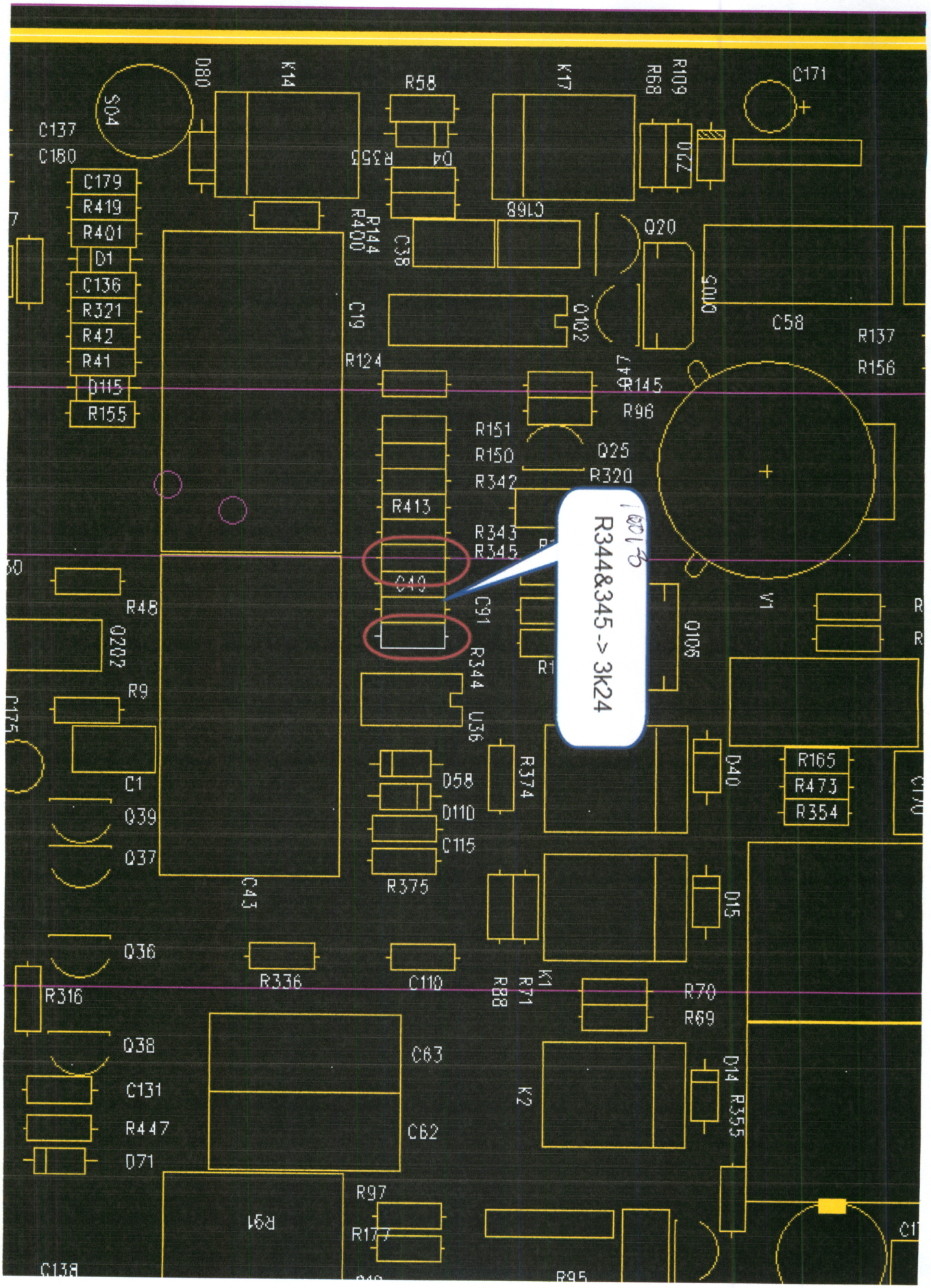

D20 to 1n4148
D25 to 1n4148
R333 to 27k4
R270 to 137k
R284 to 2k21

1081-3


R18 to 15k0
R6 to 33k.
R453 to 39k
R443
K9
R351
K10
D11
C104
C103
D19
R55
R56
D2
R73
R325
R14
R167
Q301
R165
R420
Z18
C44
R439
V3
C158
C95
C93
C90
C109
U28
C86
R372
R370
C12
R114
R327
R190
R329
R303
D34
D21
R51
C119
R128
R358
R7
TR2
R225
D509
R311
Q41
R233
C7
Q40
D32
C107
J9
GR MTR
C9
C105
R205
SW1
VR1
SW4
R235
R108
U14
R18
R309
C126
R279
R278
R396
R16
J34
D78
R487
R456
C111
D79
R457
R260
D30
D22
J36
C42
R230
Q4
C6
Q49
Q18
C23
R183
R19
D9
D77
D32
R180
R416
R182
R417
S09
TR1
SW5
SW10


1001-3
Q2 to
2n5401


D80
S04
C179
R419
R401
D1
C136
R321
R242
R241
R115
R155
C137
C180
1001-3
R402&419 to 4k99
R402
R287
U15
R125
R119
Q30
R48
Q202
R9
C1
Q39
Q37
Q36
R316
C175
Q31
D66
R366
Q206
R39
C25
R414
R36
Q205
R40
C113
C187
R451
C182
R347
V2
C157
R59
R60
Q31
C3
K7
C46
C183
R5
R3
R111
R4
R2
R229
D7


R34&345 -> 3k24
S04
K14
R58
K17
R68
R109
C171
C137
C180
C179
R419
R401
D1
C136
R321
R42
R41
D115
R155
R144
R400
C38
C19
Q102
Q20
C58
R137
R156
R124
R145
R96
R151
R150
R342
Q25
R320
R413
R343
R345
C49
C91
R344
U36
R48
Q202
R9
C1
Q39
Q37
C43
R374
D58
D110
C115
R375
R165
R473
R354
D40
Q106
V1
D15
Q36
R316
R336
C110
K1
R88
R71
R70
R69
Q38
C131
R447
D71
C63
C62
K2
D14
R355
R97
R177
R91
C138
R95