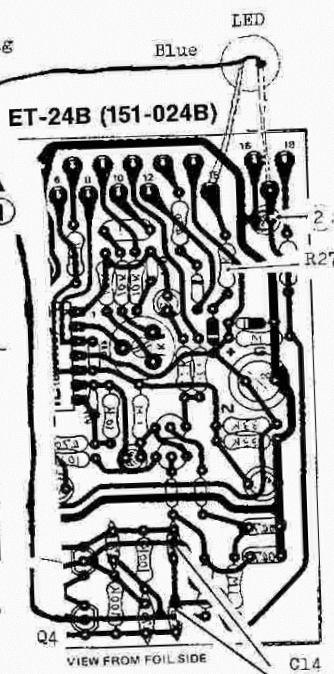
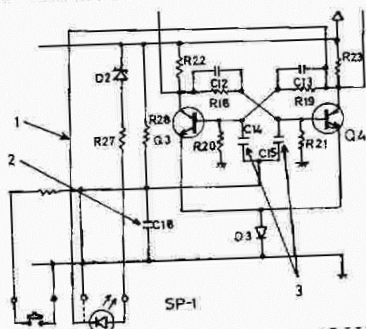


ET-24B MODIFICATION CONTINUOUS LED LIGHTING

ET-24B does not keep the LED staying on in EFFECT mode. Below describes modification steps.

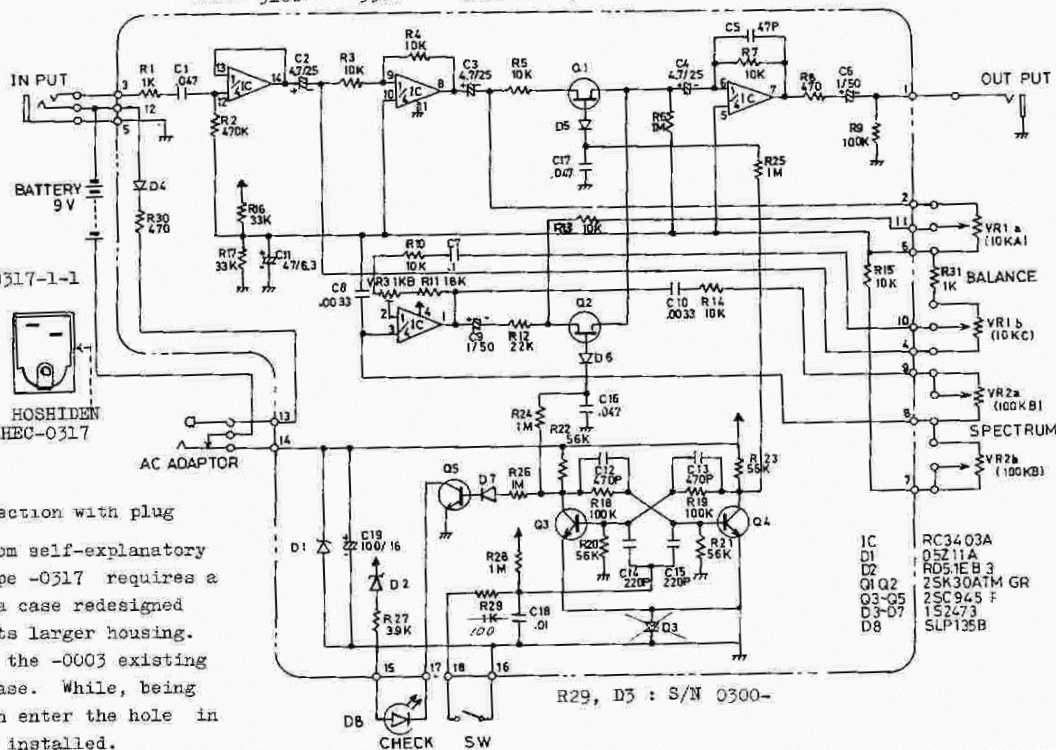
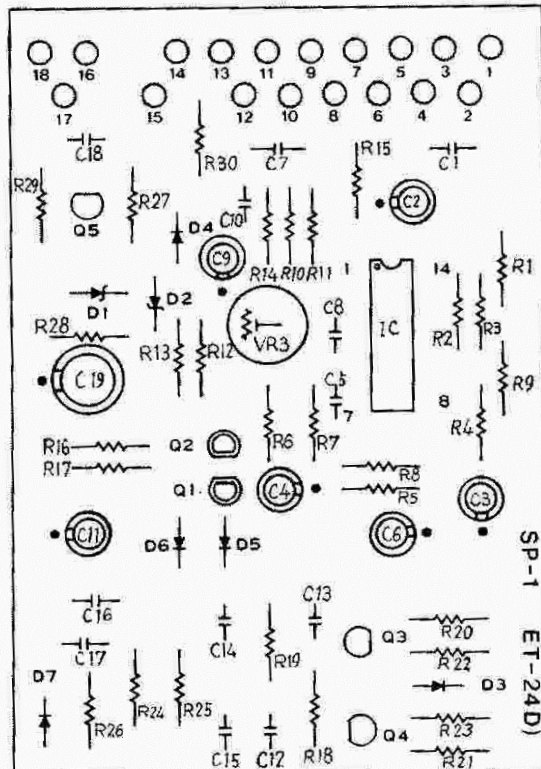
1. Reroute LED blue lead to Q4 collector.
2. Replace C18, 1/50 or 0.47/50, with 0.01mfd mylar.
3. Changing of C14 and C15 to 220pF will ensure stable flip-flop at lower supply voltages (6-7V).

For long battery life, lower-power-consumption LED SLP-135B is used with later PCBs. If the LEDs are changed, another necessary change is R27, from 1k to 3.9k.

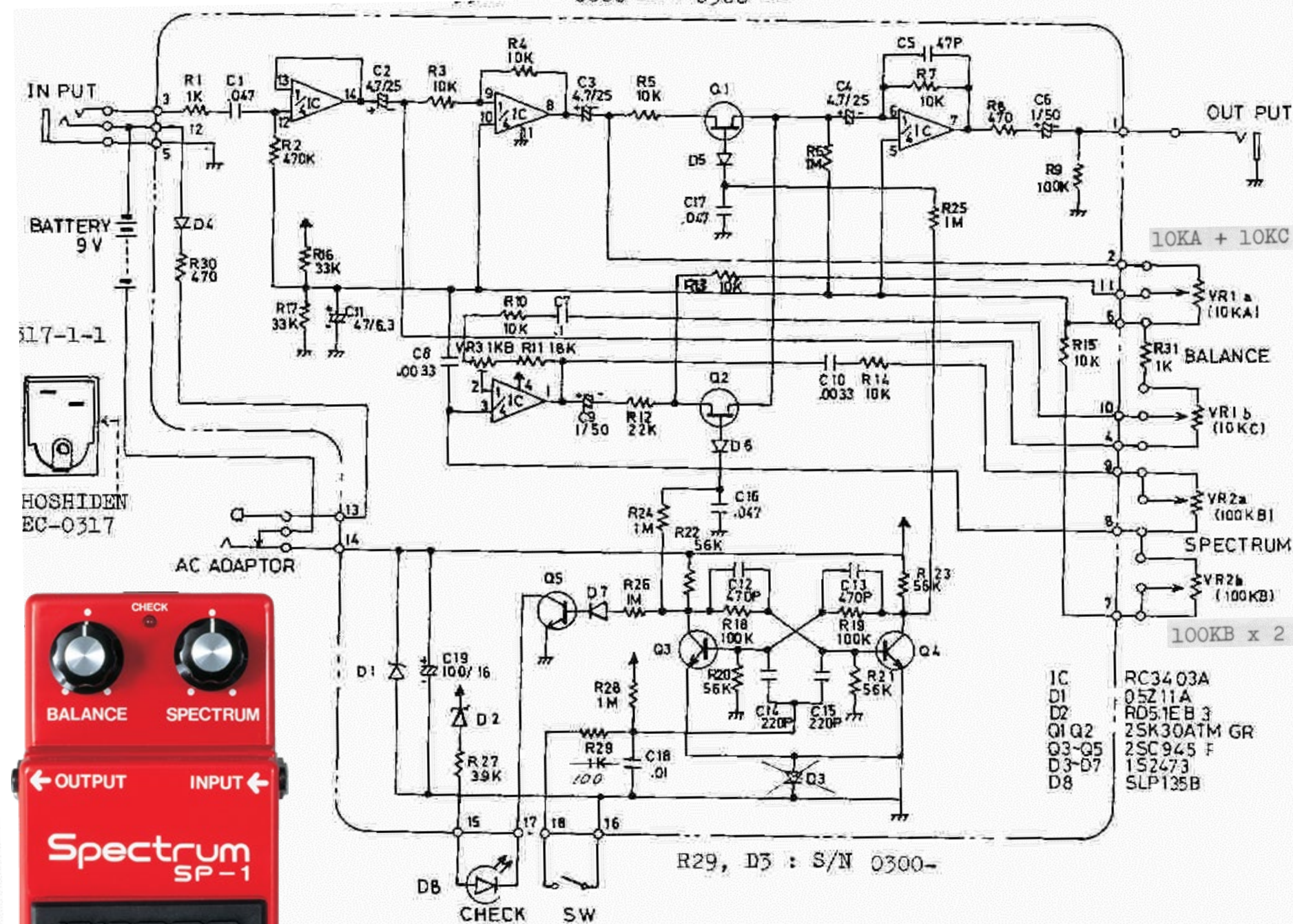
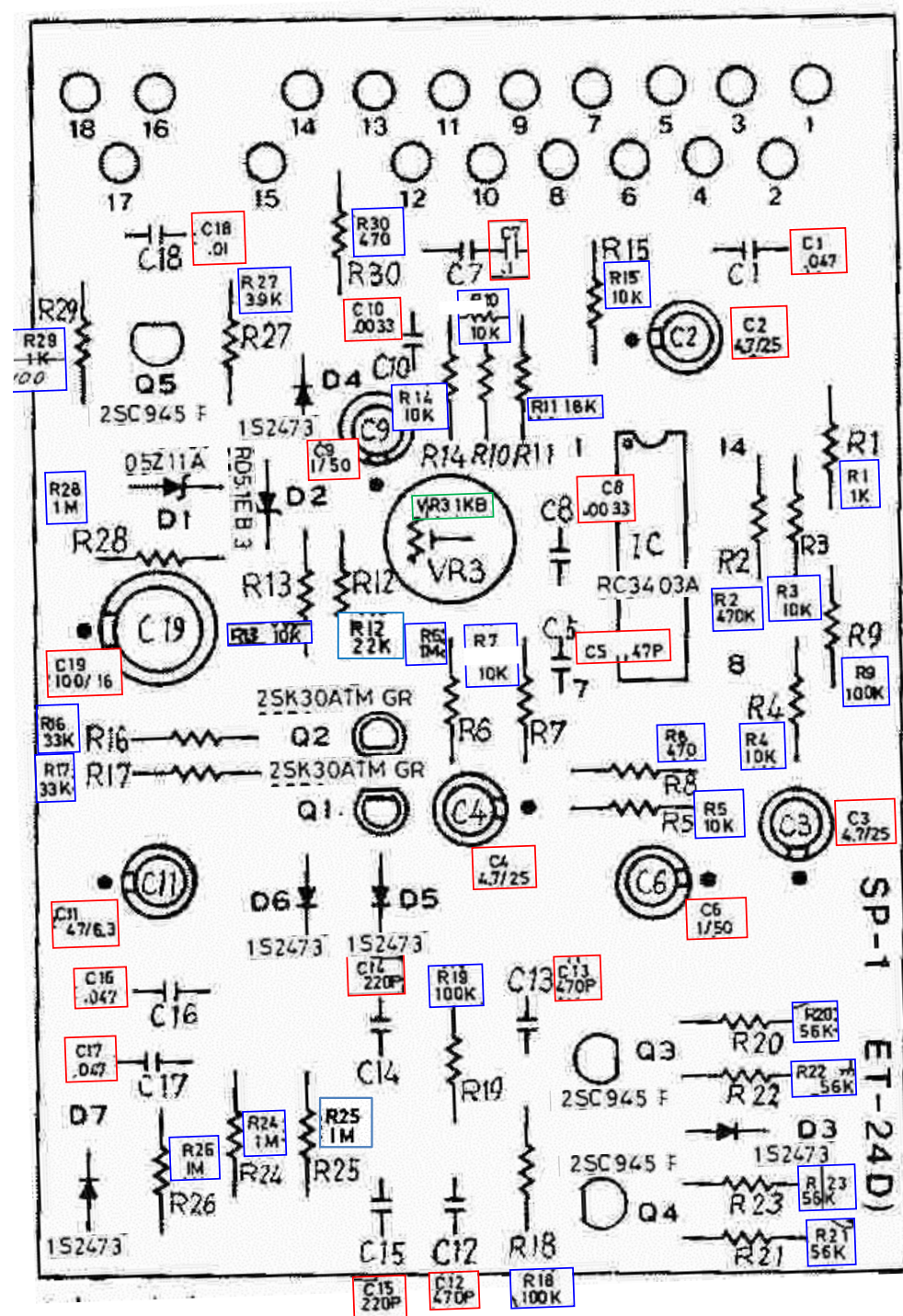


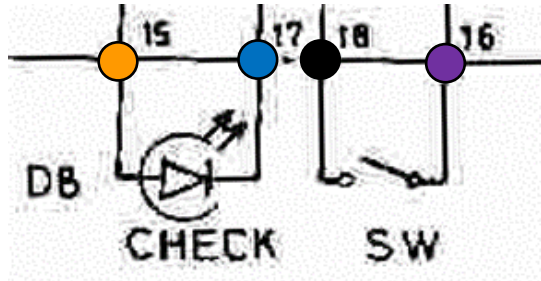
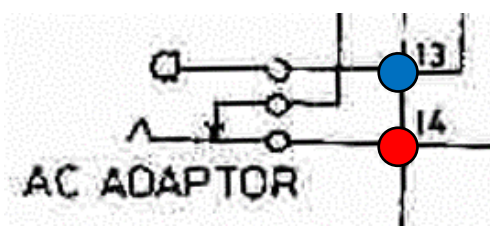
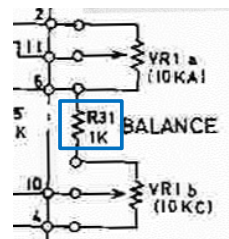
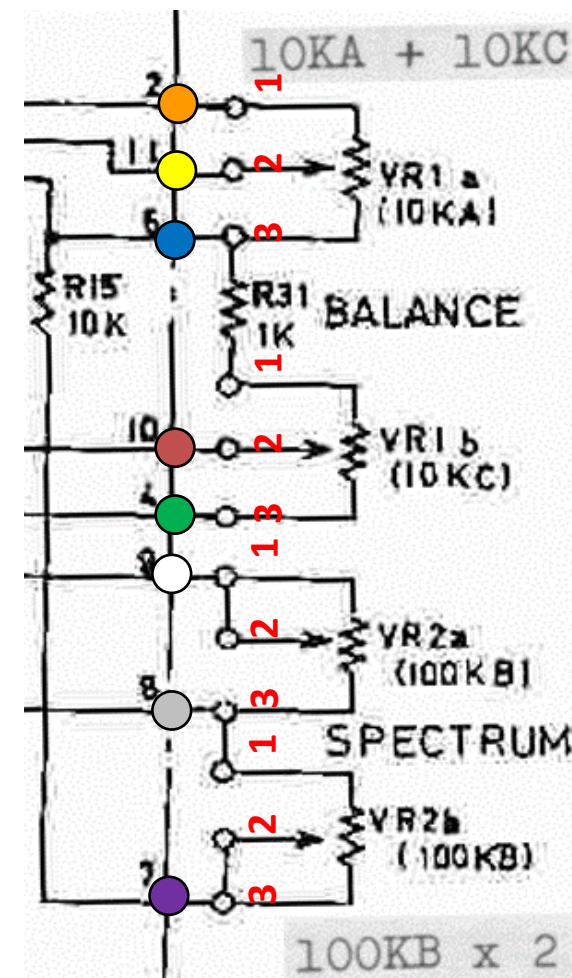
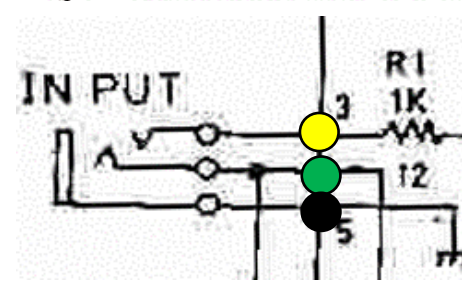
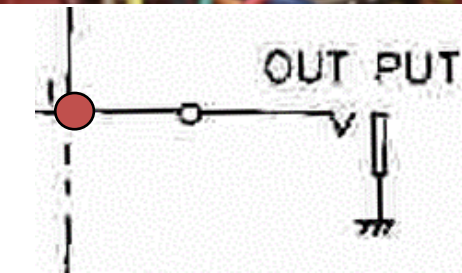
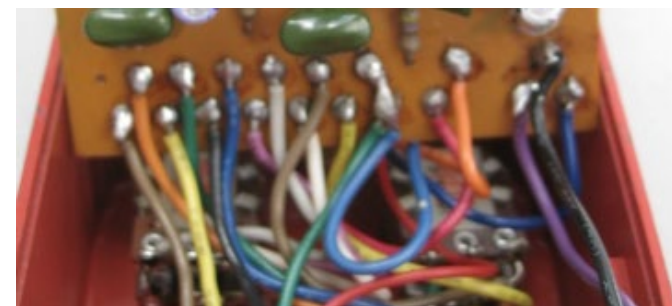
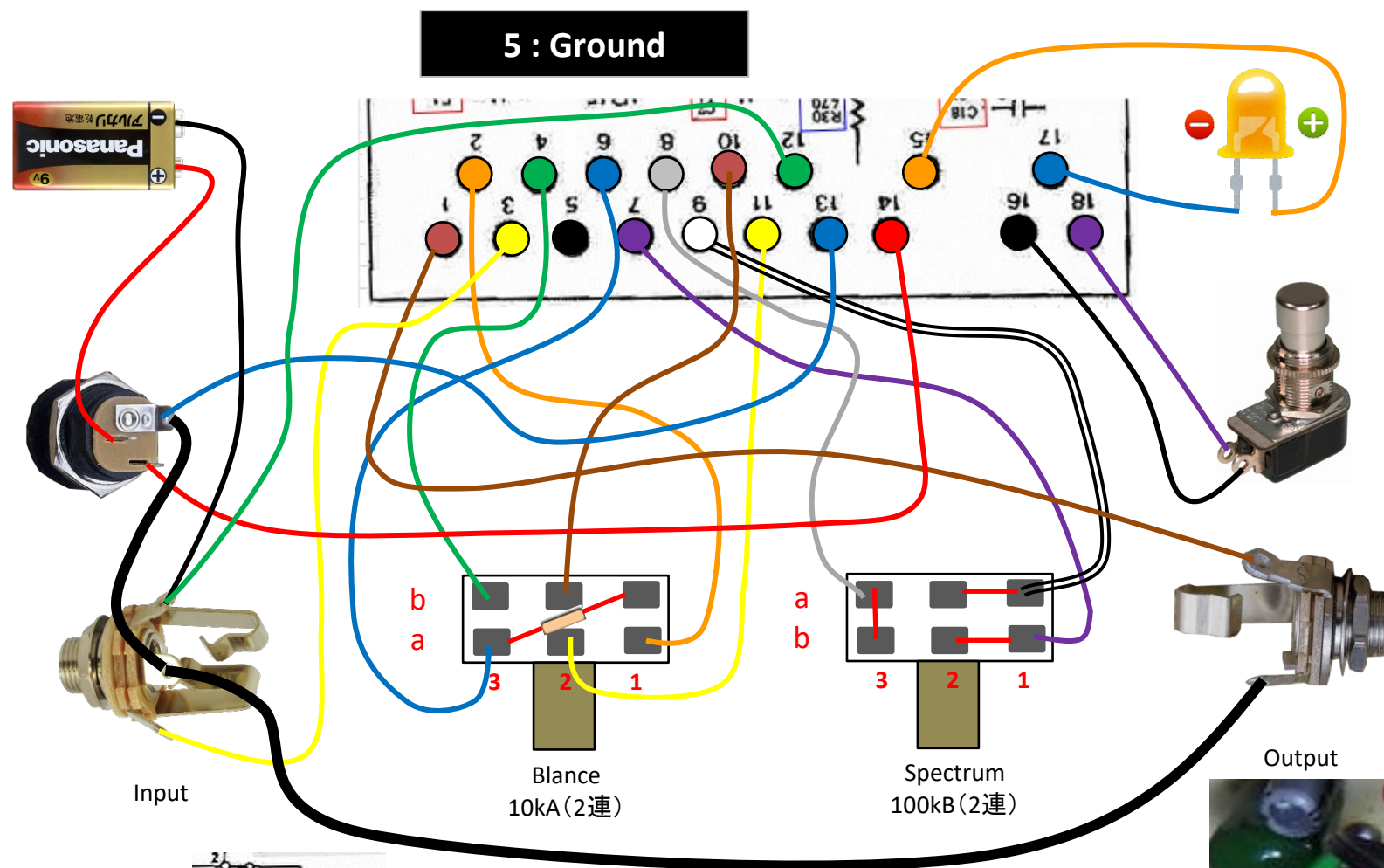
SERIAL NUMBER

stamped on case top
First two digits re-cycle when exhausted.
----- 9100 ----- 9900 ----- 0000 ----- 0300 -----



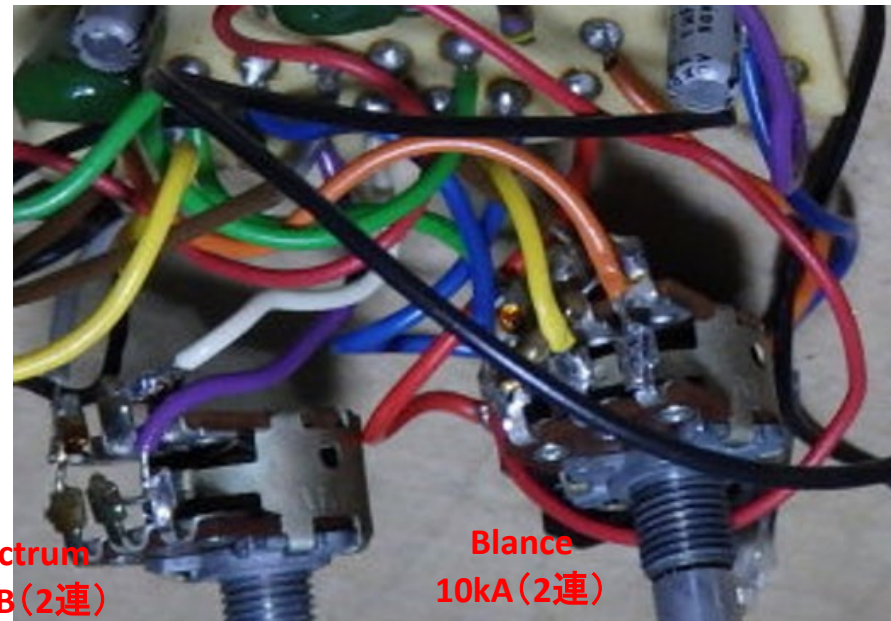
For positive connection with plug
As can be seen from self-explanatory figures above, type -0317 requires a mounting hole in a case redesigned to accommodate its larger housing. It cannot replace the -0003 existing in an exclusive case. While, being smaller, -0003 can enter the hole in a new case and be installed.

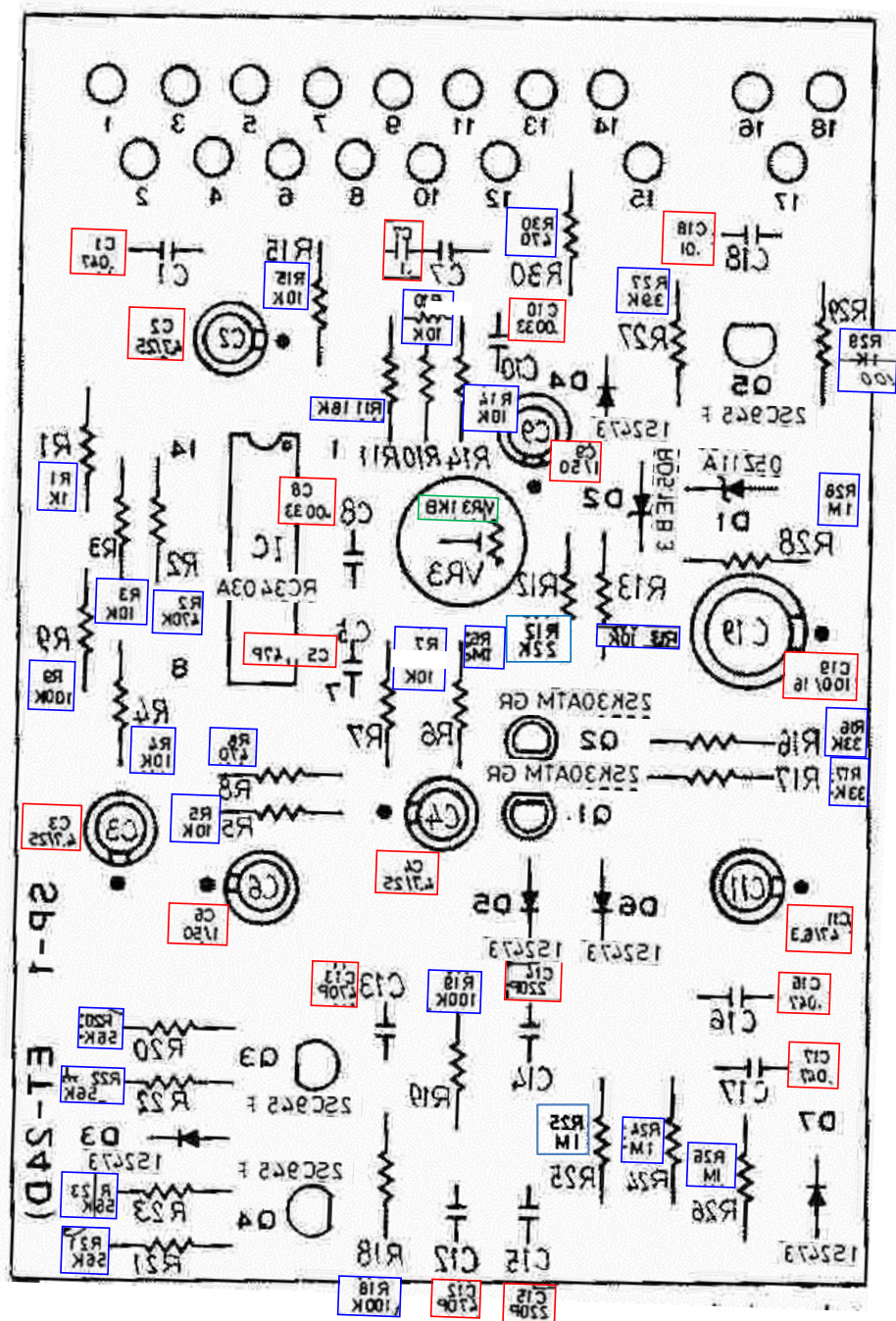




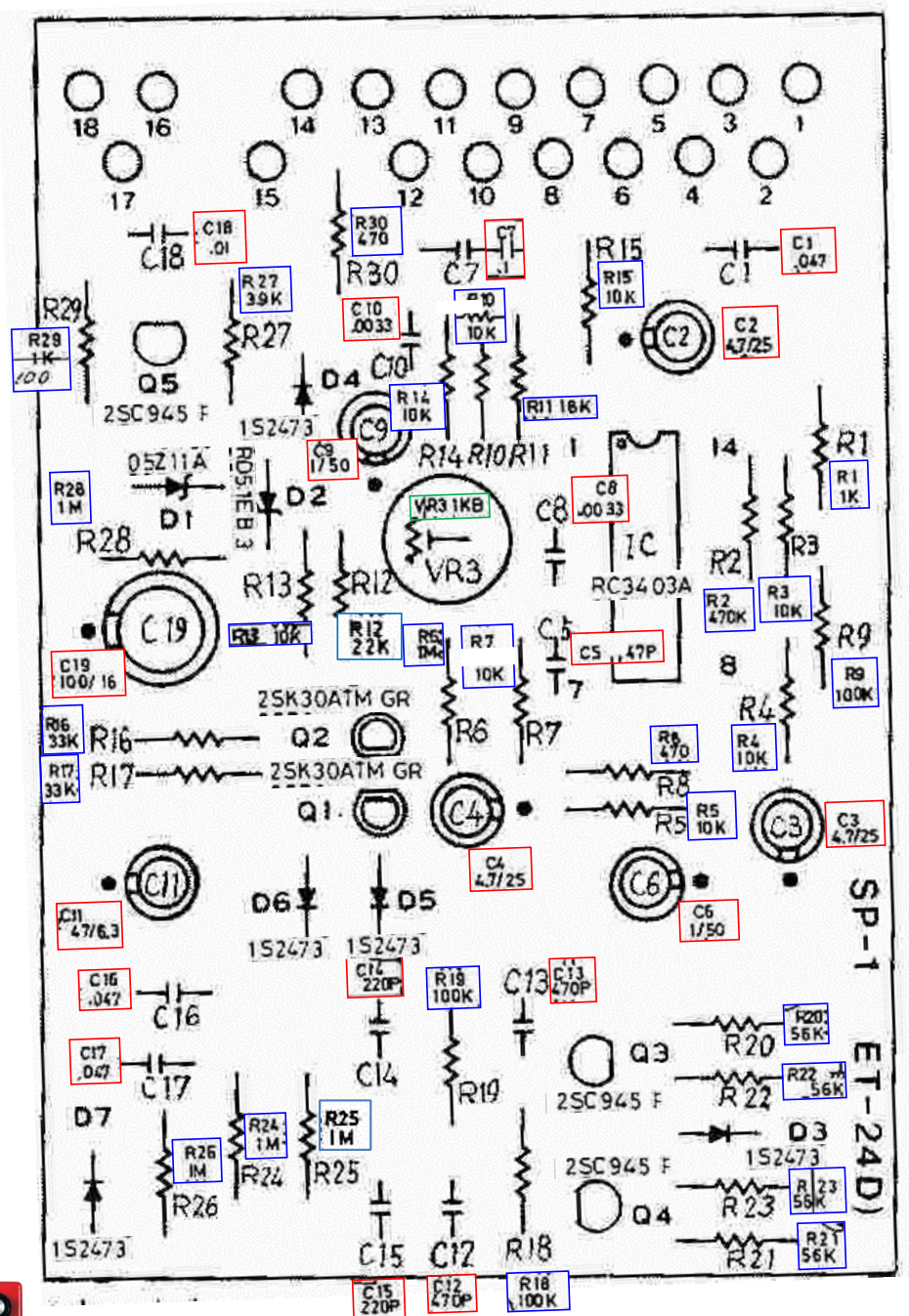
Spectrum
100kB (2連)

Balance
10kA (2連)

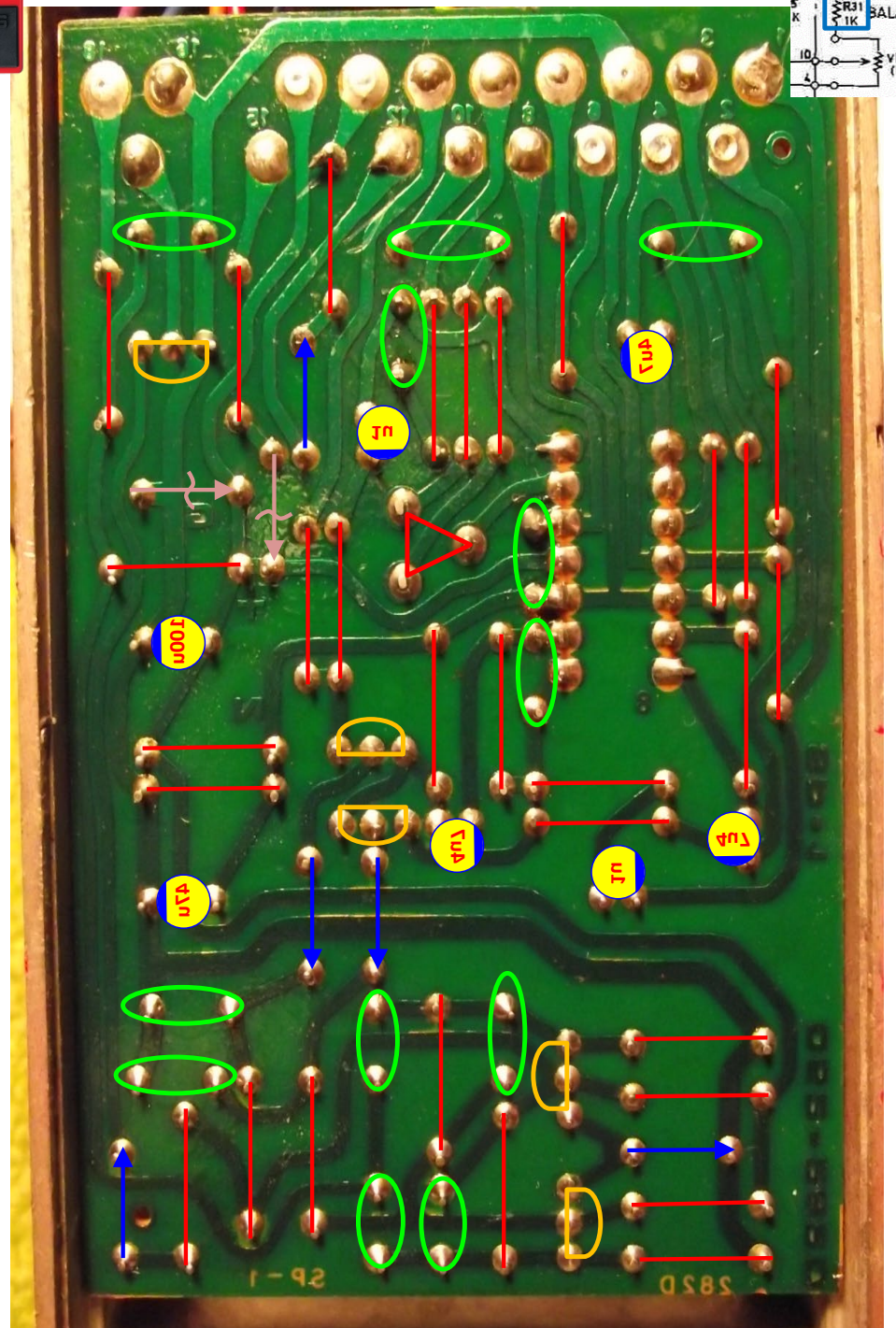
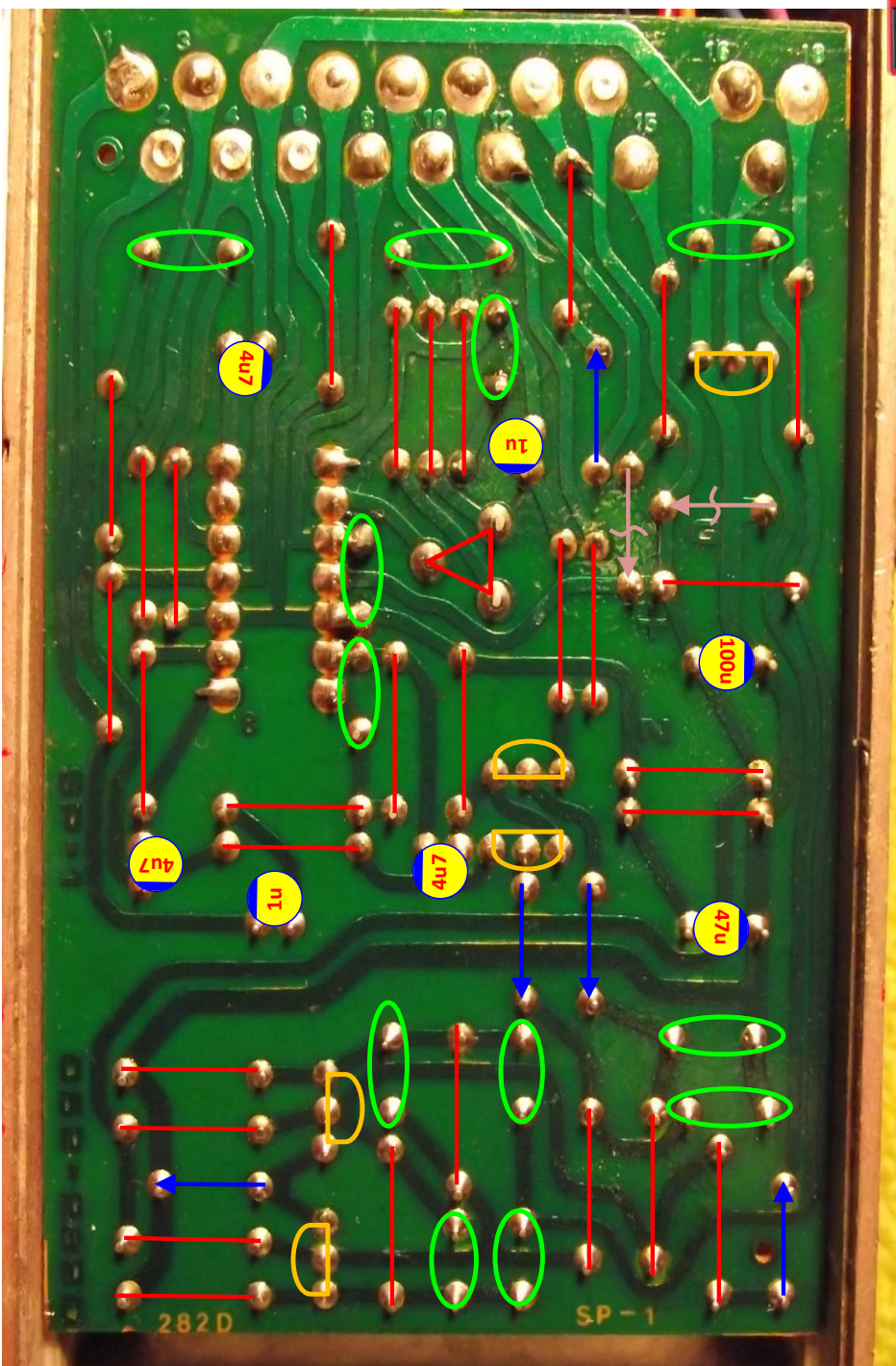
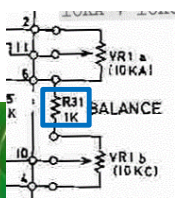


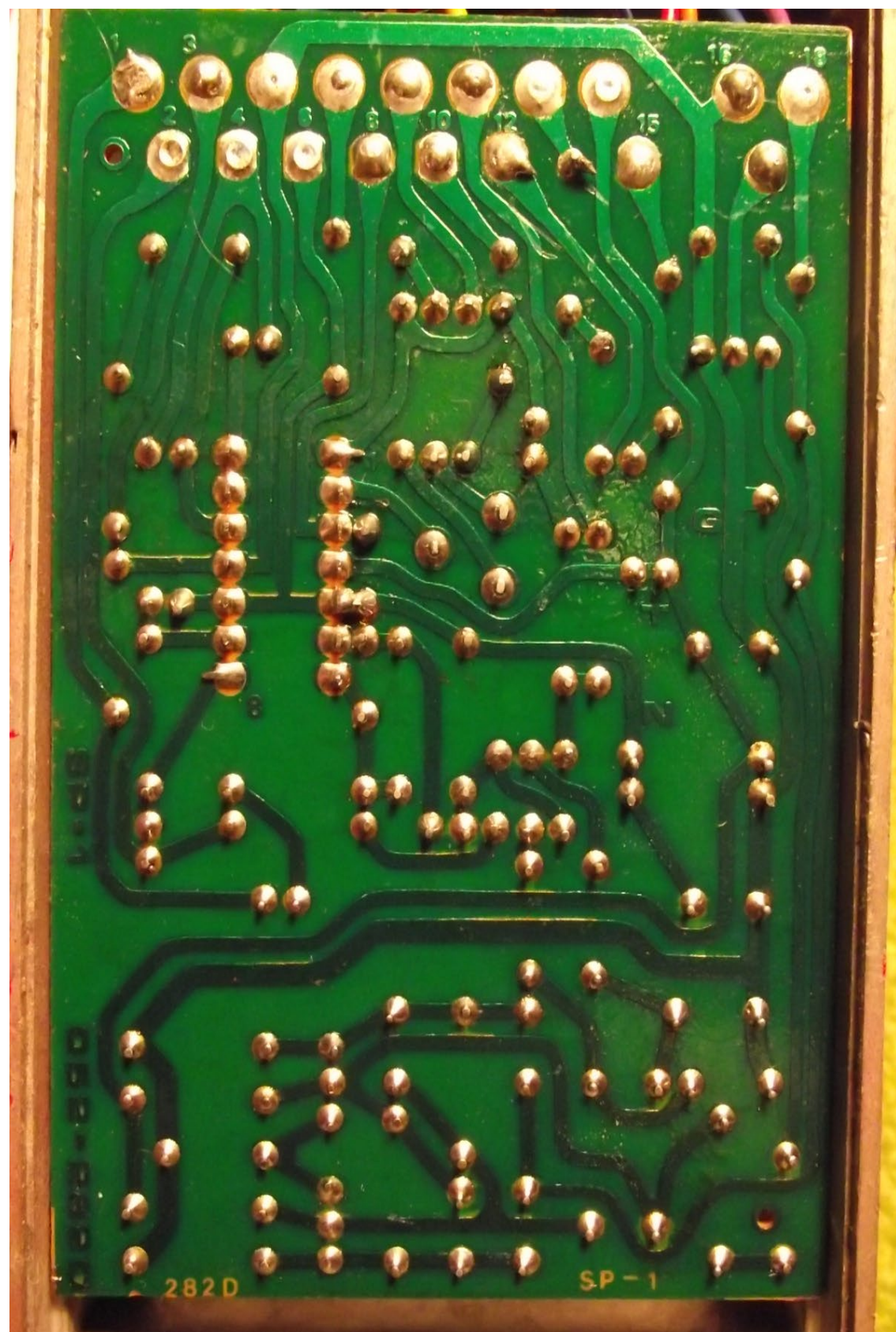


Back



Surface

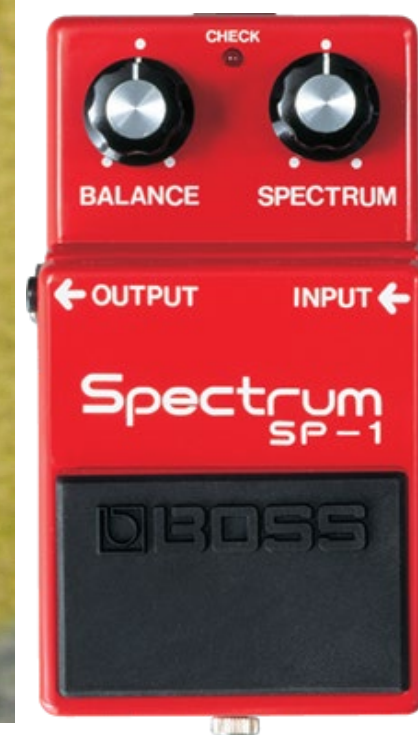


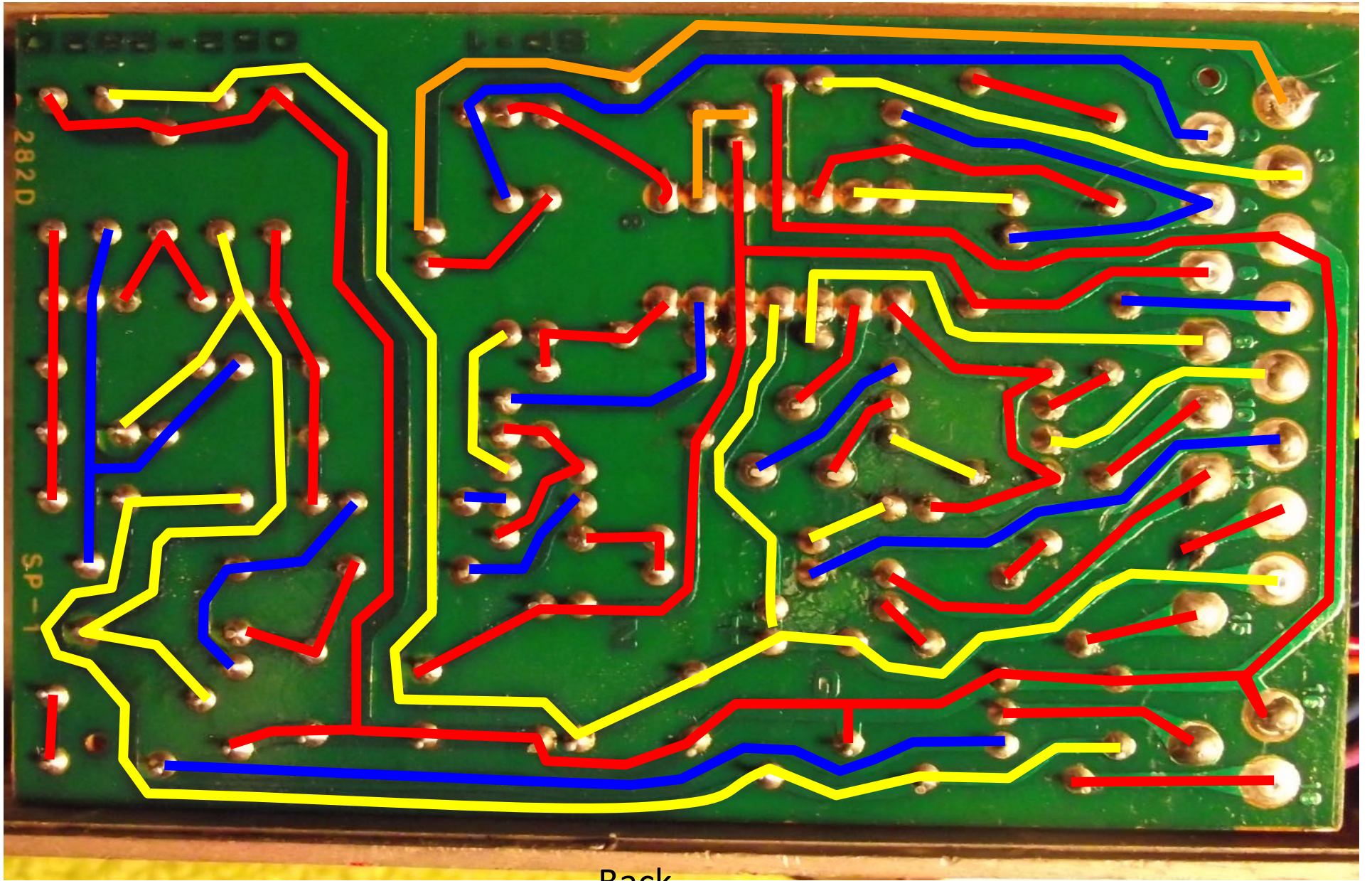


Back

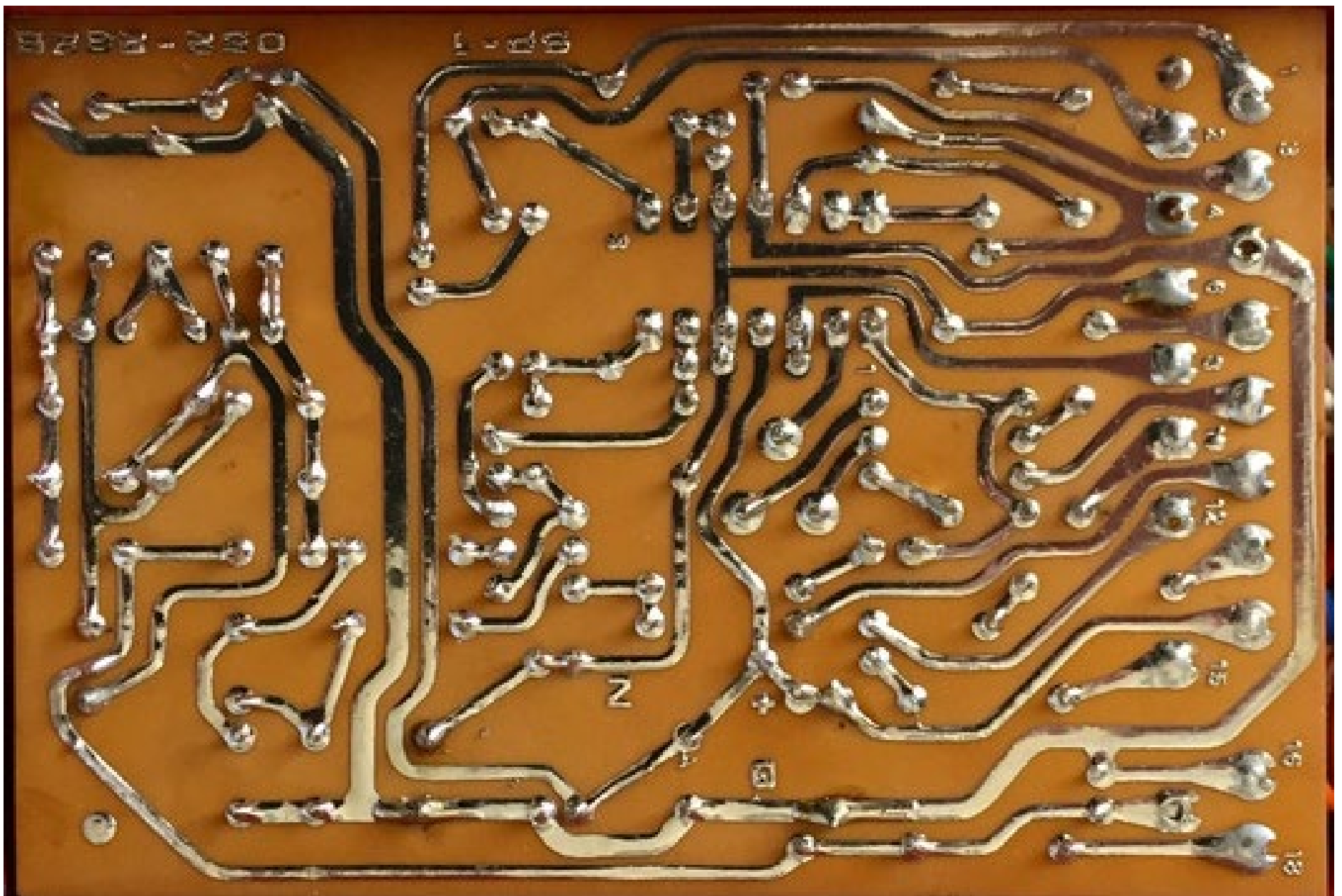


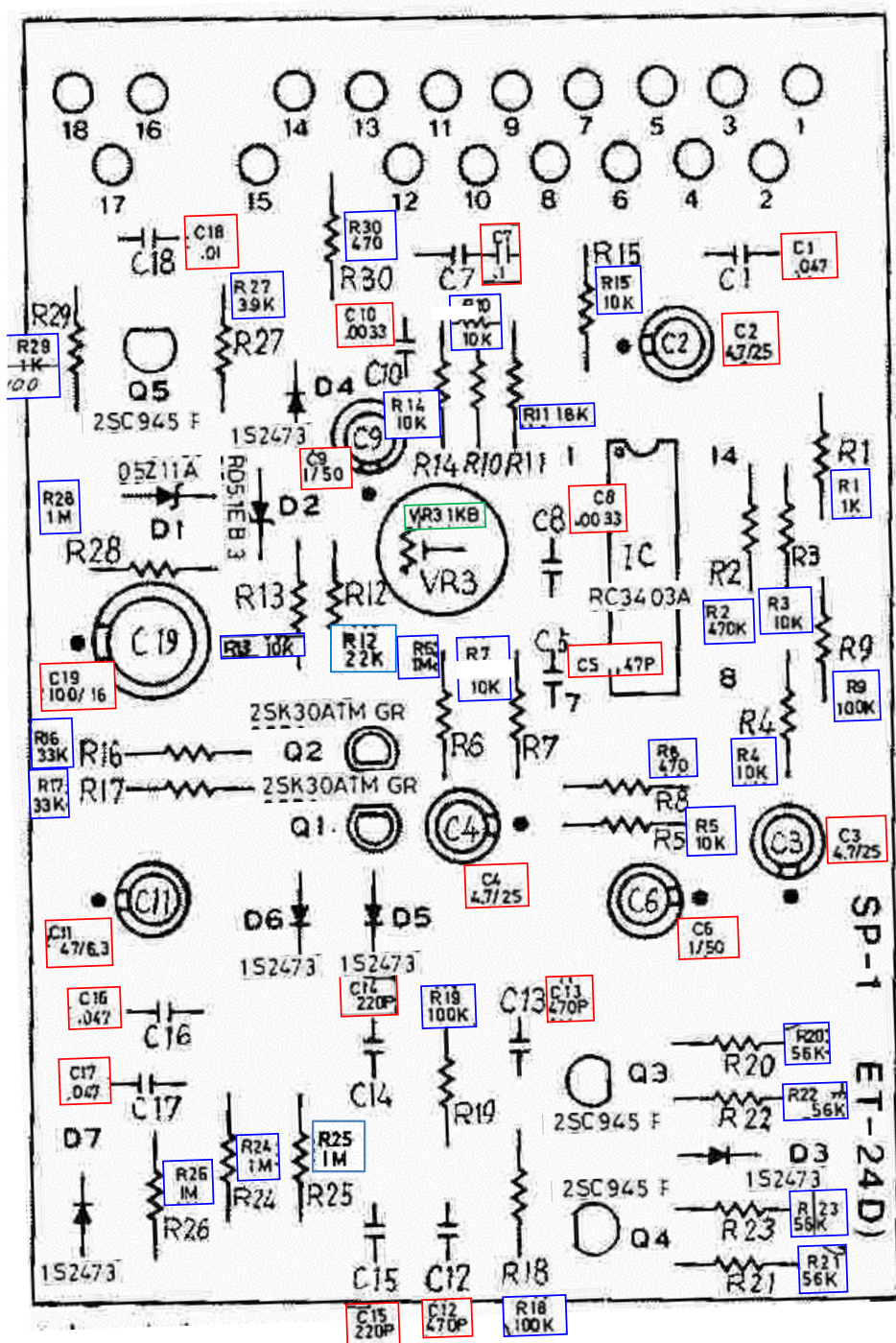
Surface





Back





100R	1
470R	2
1k	2
10k	8
18k	3
22k	1
33k	4
39k	1
56k	4
100k	3
470k	1
1M	5

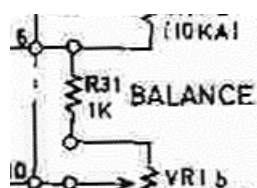
1u	2
4u7	3
47u	1
100u	1

47p	1
220p	2
470p	2
3n3	2
10n	1
47n	3
100n	1

1kBT1/7	1
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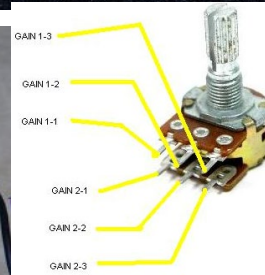
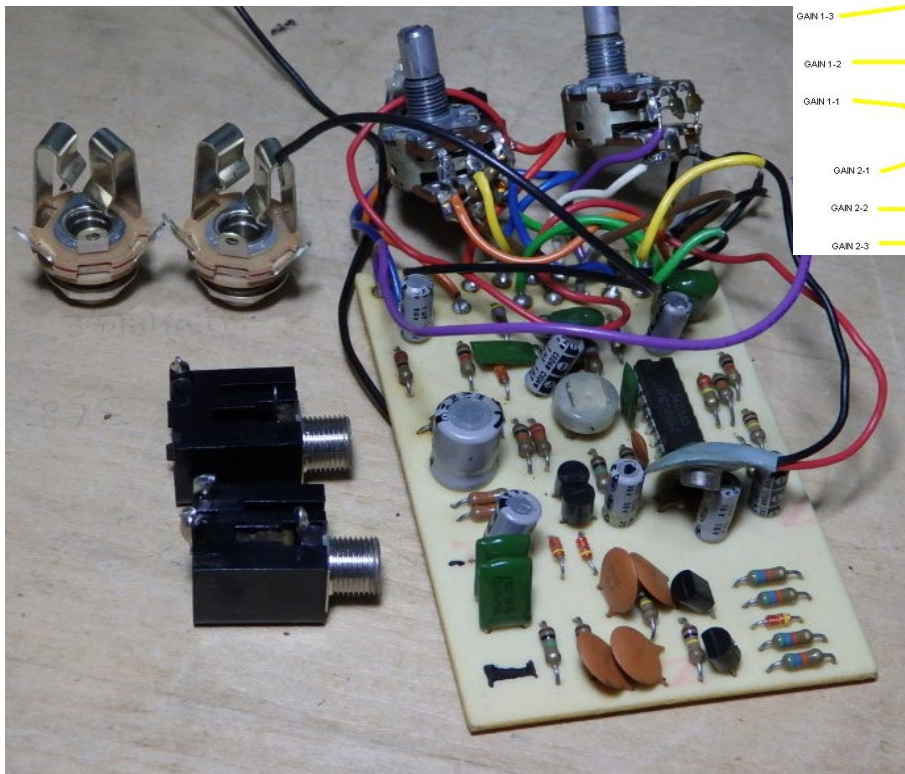
14pinquadIC	1
1N5231zn	1
1N5241zn	1
2SK30A-Gr	2
KSC945CG	3
1S1588	5

100kB dual	1
10kA dual	1



KSC945CG	NPN シリコン	Fairchild Gランク (hFE:200~400)	TO-92 ケース	2SC945
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2SC945P	Si	NPN	0.25	60	50	5	0.15	150	300	2.5	200	TO92
KSC945G	Si	NPN	0.25	60	50	5	0.15	150	300	3.5	200	TO92



POTENTIOMETER

13229755 028-655 GM70A15R 100KB x 2
 13229756 028-641 GM70A15R 10KA + 10KC
 13299109 030-459 SR-19R 1KB trimmer

SEMICONDUCTOR

15189114 020-077 RC3403A quad op amp
 *15129108 017-110 2SC945-P(017-037 2SC536-F)
 15139103 017-016 2SK30ATM-GR FET
 15019103 018-014 1S2473 (1S1555) diode
 *15019523 018-075 RD5.1EB-3 (018-073 02BZ4.7A)
 15019617 018-068 05Z-11A zener
 *15029117 019-034 SLP-135B (019-008 GL-32AR)

ELECTROLYTIC CAPACITOR

13639109 032-008 ECEA6V47 47mfd 6.3V
 13639150 032-037 ECEA16V100 100mfd 16V
 13639202 032-071 ECEA50V1 1mfd 50V
 13639165 032-046 ECEA25V4R7 4.7mfd 25V

2SC945 NPN シリコン

KSC945CG NPN シリコン

2SC945P Si NPN 0.25 60 50 5 0.15 150 300 2.5 200 TO92

KSC945G Si NPN 0.25 60 50 5 0.15 150 300 3.5 200 TO92

2SK30AGR N-JFET

1S1588 シリコン DO-35 東芝 高速スイッチングダイオード 廃品種

1N5231 ツェナー DO-35 5.1V 500mW

1N5241 ツェナー DO-35 11V 500mW RD11EBの代替

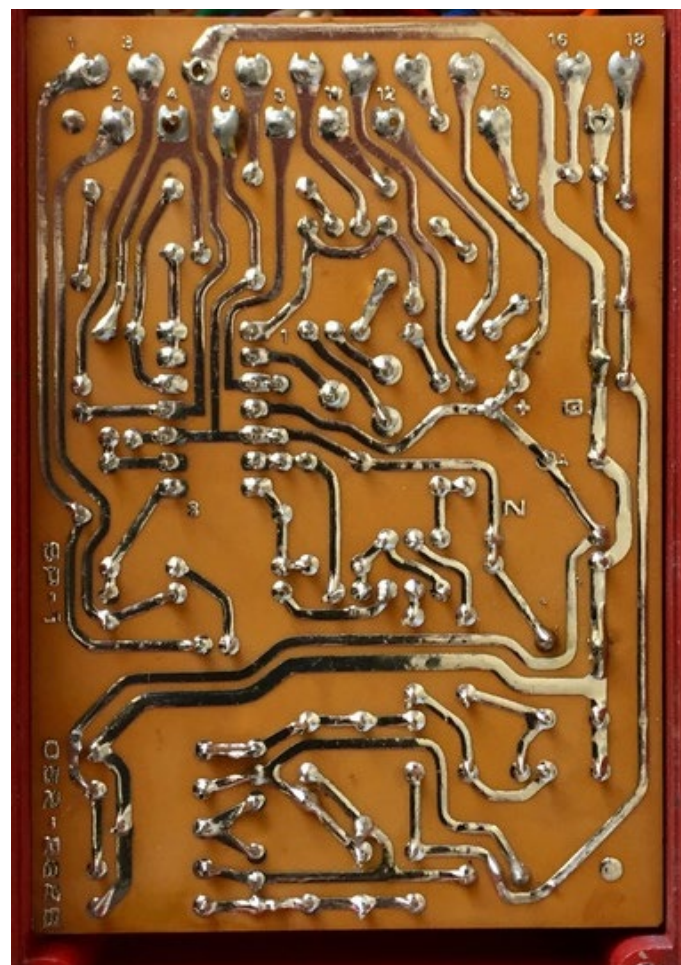
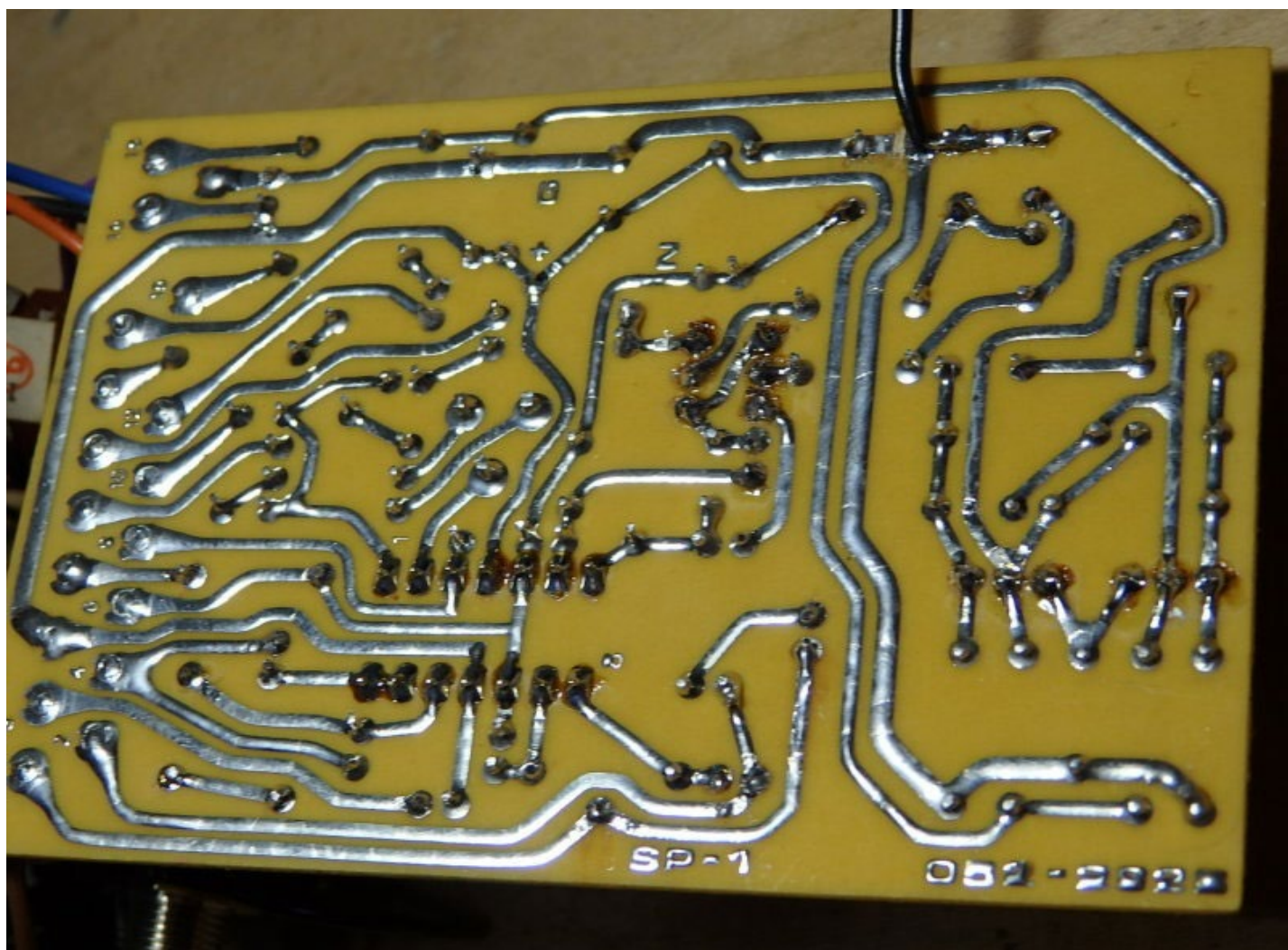
Check_LED



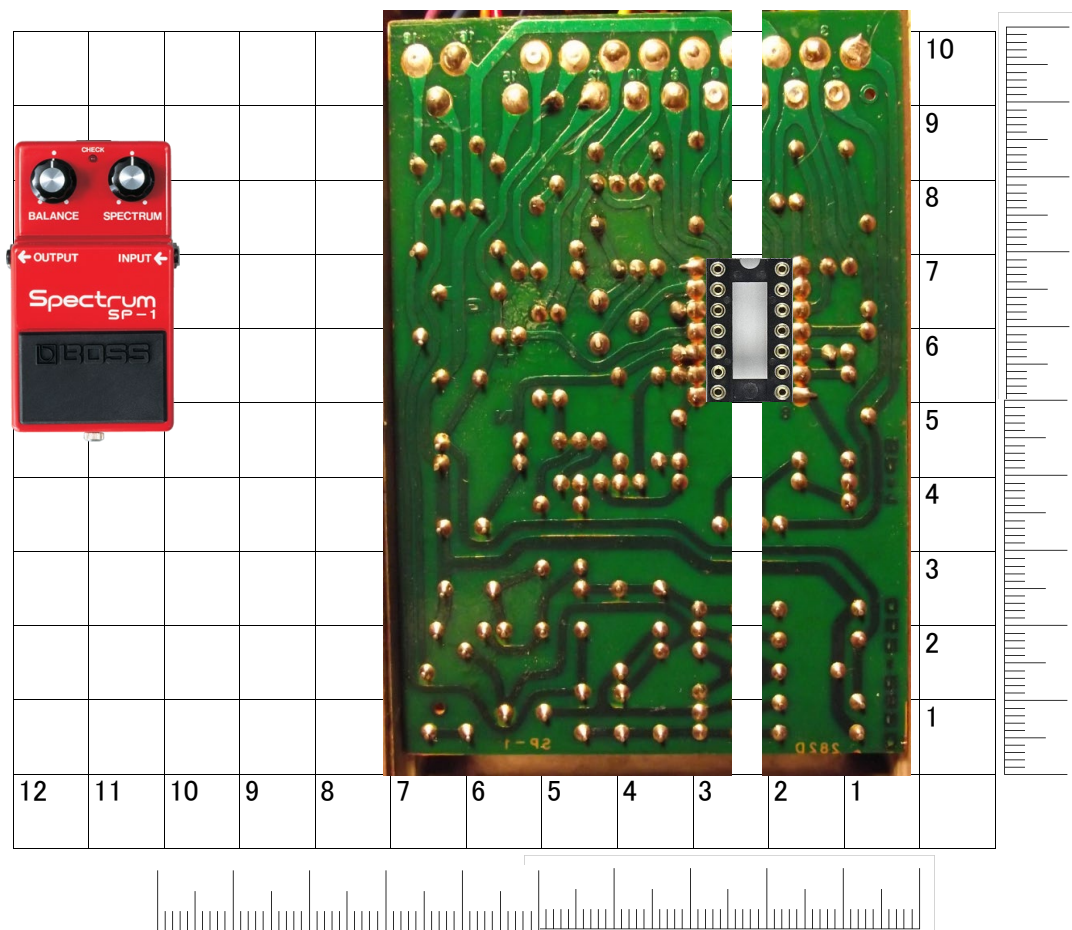
	TS-808	'81 GE-601 115370	1s2076	1s2076A	'82 1s1588	1s1587	1s1555	1s2075K
V	I uA	I uA	I uA	I uA	I uA	I uA	I uA	I uA
0	0	0	0	0	0	0	0	0
0.1	0	0	0	0	0	0	0	0
0.2	0.1	0.1	0.4	0.3	0.4	0	0.2	0.3
0.3	1.6	1.2	2.3	3.1	2.4	3	1.6	3.1
0.4	10.6	9.2	11.4	14.3	13.7	13.3	13.1	17.1
0.5	42.1	38.3	48.9	49.2	53.3	49.1	49.6	59
0.6	101	96.1	100.5	110.1	98.5	113	113.9	115
0.7	165	165.4	178.5	177.6	201	177	177	186
0.8	257	256.4	256	263	285	266	265	262
0.9	339	338.8	349	368	349	349	361	367
1	420	421	458	439	468	436	452	435
1.1	521	517	571	543	575	567	536	547
1.2	614	614						
1.3		711						

日立1S2076A





Surface



Actual size(実寸大)

BOSS SP-1 SERVICE NOTES

SPECIFICATION

Power Battery 9V (1)
 AC Adaptor
 Current draw 3.5mA
 S/N ratio Over 80dB
 Input impedance 470K Ω
 Output load impedance Over 10K Ω
 Dimensions 70(W) x 55(H) x 125(D)mm
 2.8(W) x 2.2(H) x 4.9(D)in
 Weight 400g, 0.88lb

Second Edition

COVER NO. 130(065-130)
 BASE NO. 32(111-032) RUBBER
 BOTTOM NOT SHOWN

N-116 (2202011600)
 N-305 (2235030500)

SCREW 3 x 10mm

9V
BATTERY

N-109
(2217010900)

COIL SPRING
NO.59 (070-059)

PEDAL GUIDE
BUSH NO.26
(068-026)

N-702
(2215070201)

CASE NO.18
(066-018)

N-106(2201010600)

*HEC-0317 (13449704) JACK
 detail on back page HEC-003
 (009-022)

GM70A15R- 10KA+1 OKC (028-641)
 (13229756)

GL-32AR
(019-008)

*SLP-135B
(15029117)

POT. GM70A15R
100KB x 2 (028-655) (13229755)
 KNOB TK-1122 (016-025)(2247010500)

SG-7622
(009-012)
(13449106)

COVER
NO.145
(065-145)

Pedal N-502E
(2218050205)

SG-7713
(009-036) (13449104)

BASE NO.31 (111-031) N-304
 RUBBER (2235030400)

PARTS LIST

DESIGNATION Both New(8-10 digits) and Old (6 digits)
 for cross-reference
 SYMBOL "*" Indicates latest one of the changed parts
 COMPATIBILITY No comment on compatible ones
 N for No. Always followed by abbreviated NEW number

NEW	OLD	DESCRIPTION
2201010600	066-018	Case N-106 main
2218050205	065-145	Pedal N-502E top
2235030400	111-031	Base N-304 pedal matt
2202011600	065-130	Cover N-116 bottom
2235030500	111-032	Base N-305 bottom,rubber
2247010500	016-025	Knob TK-1122 w/screw
2215070201	068-026	Guide bushing N-702A
2217010900	070-059	Coil spring N-109
13449106	009-012	Jack SG-7622 output
13449104	009-036	Jack SG-7713 input
13449702	009-022	Jack HEC-0003 AC adaptor (w/SCO mark)
*13449704	or	HEC-0317-1-1 (HOSHIDEN)
downward compatibility: verte(see even page)		

. . . 001-091 Switch JMO400#1 white
 or
 *13129710 001-295 JM-0404 black
 incompatible different in size

. . . 151-024B PCB assy ET-24B (pcb 052-282B)
 or
 *7520251000 . . . ET-5202-510A
 (pcb 2291032204 or 052-282D)

POTENTIOMETER
 13229755 028-655 GM70A15R 100KB x 2
 13229756 028-641 GM70A15R 10KA + 10KC
 13299109 030-459 SR-19R 1KB trimmer

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ELECTROLYTIC CAPACITOR
 13639109 032-008 ECEA6V47 47mfd 6.3V
 13639150 032-037 ECEA16V100 100mfd 16V
 13639202 032-071 ECEA50V1 1mfd 50V
 13639165 032-046 ECEA25V4R7 4.7mfd 25V