

JC-60 JC-60A R&P

SERVICE NOTES

Applicable to following serial number:

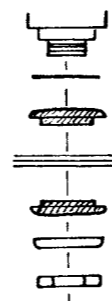
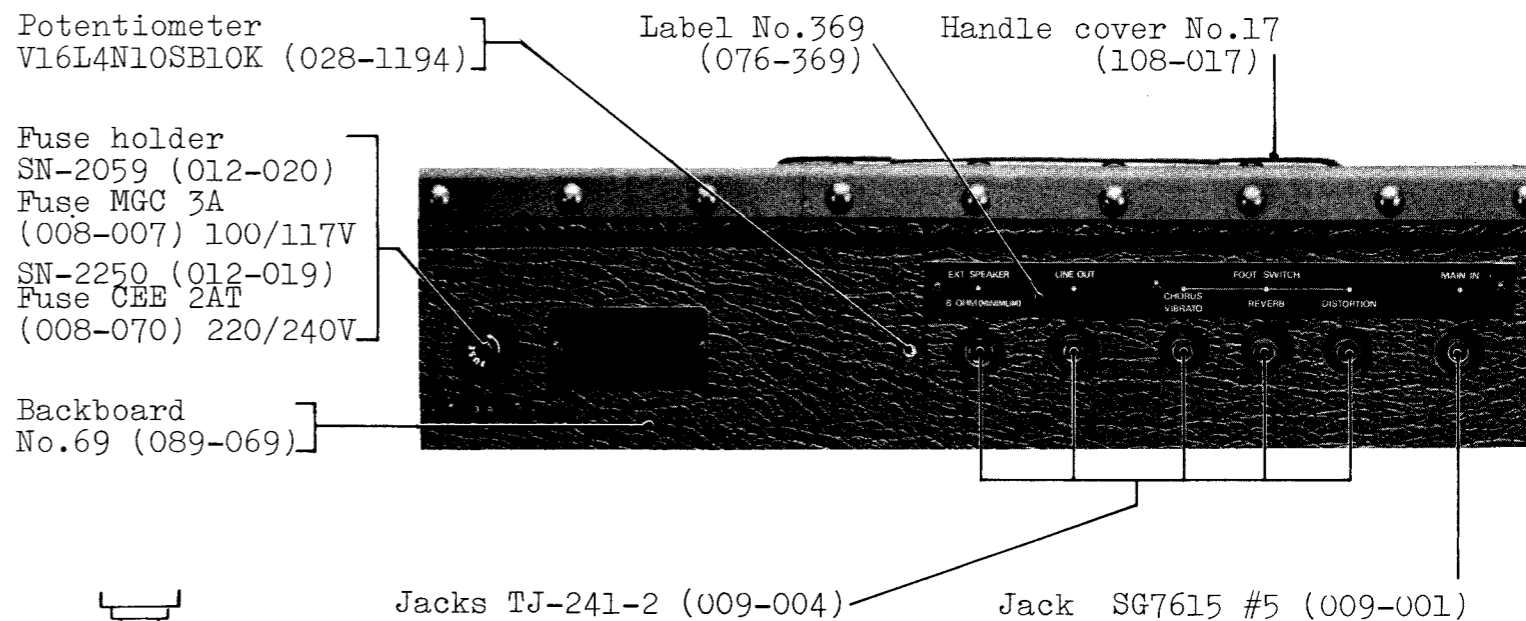
JC-60 787100 ~
JC-60A R&P 810530 ~

Fourth Edition

SPECIFICATIONS

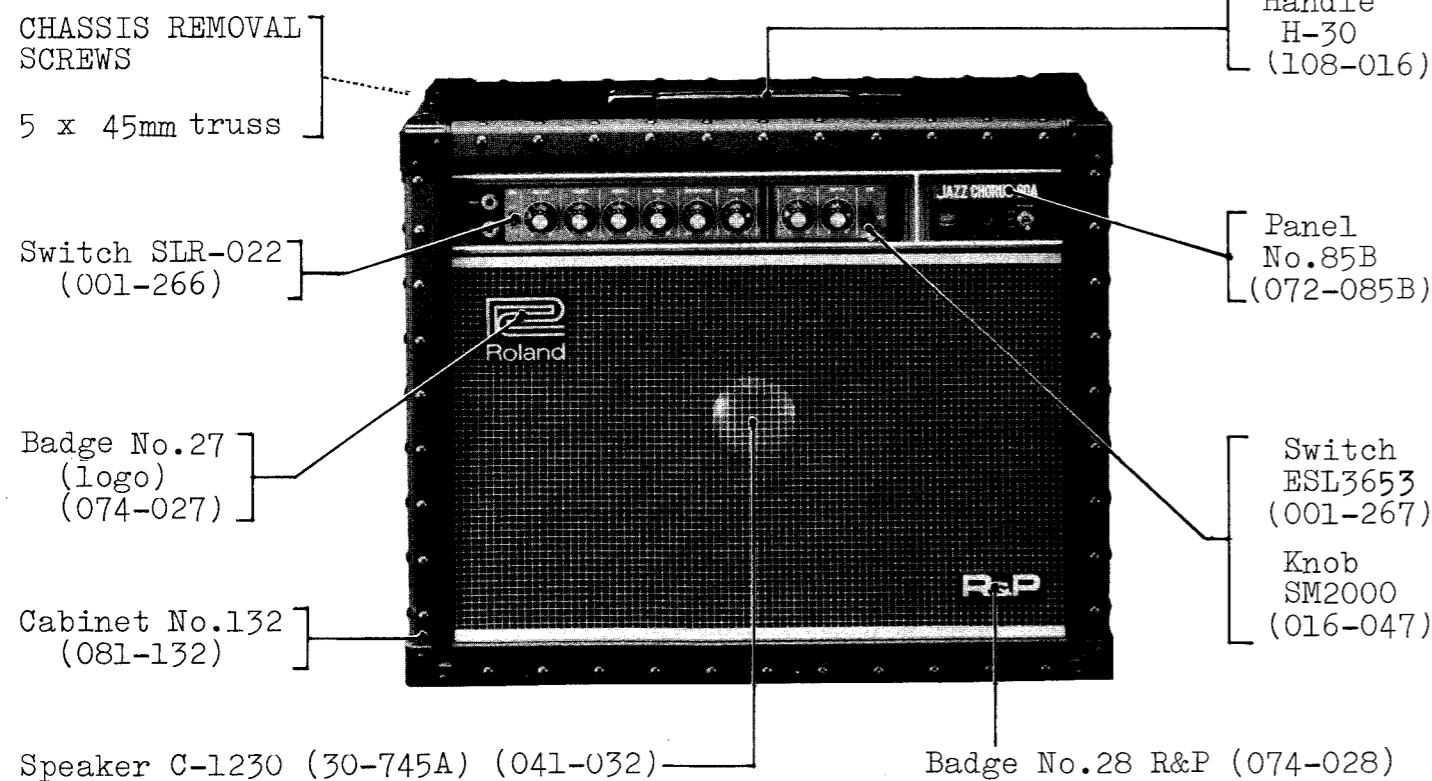
| | | | | | |
|------------------------|---------------------|--------------------------------|-----------------------|---------------|---------|
| OUTPUT POWER ----- | 22V RMS | into | 8-ohm | | |
| INPUT SENSITIVITY ---- | HIGH | LOW | MAIN IN | 700mV | @ 1kHz |
| | 15mV | 44mV | | | @ 1kHz |
| | 30mV | | | | @ 100Hz |
| | 9mV | | | | @ 10kHz |
| INPUT IMPEDANCE ----- | 220k-ohm | 82k-ohm | MAIN IN | 68k-ohm | @ 1kHz |
| LINE OUTPUT ----- | Level | 50mV | IMPEDANCE | 100-ohm | @ 1kHz |
| RESIDUAL NOISE ----- | 9 -- 20mV | (varies with controls setting) | | | |
| TONE CONTROL RANGE --- | TREBLE 37dB @ 10kHz | BASS 16dB | | @ 100Hz | |
| | MIDDLE 1.5dB @ 1kHz | BRIGHT 4dB | | @ 10kHz | |
| | | (VOL at center) | | | |
| POWER CONSUMPTION ---- | 250VA | | | | |
| DIMENSIONS ----- | JC-60 | 600Wx480Hx255Dmm | (23.6 x 18.9 x 10 in) | | |
| | JC-60A R&P | 624Wx530Hx255Dmm | (24.5 x 20.9 x 10 in) | | |
| WEIGHT ----- | JC-60 | 20kg(44 lbs) | JC-60A R&P | 26kg (57 lbs) | |

PARTS COMMON to TWO MODELS are shown only once rather than being shown in each photograph.

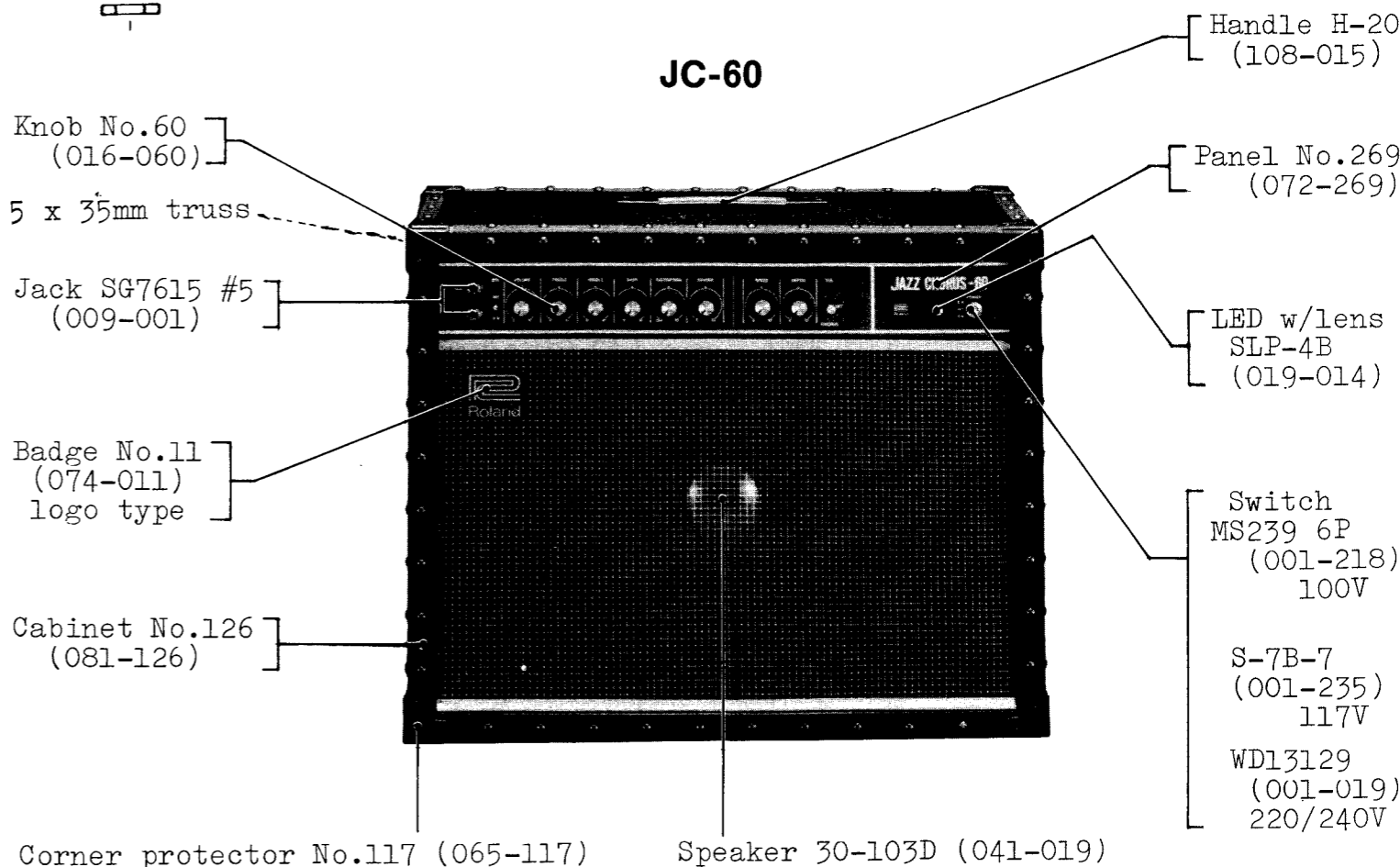


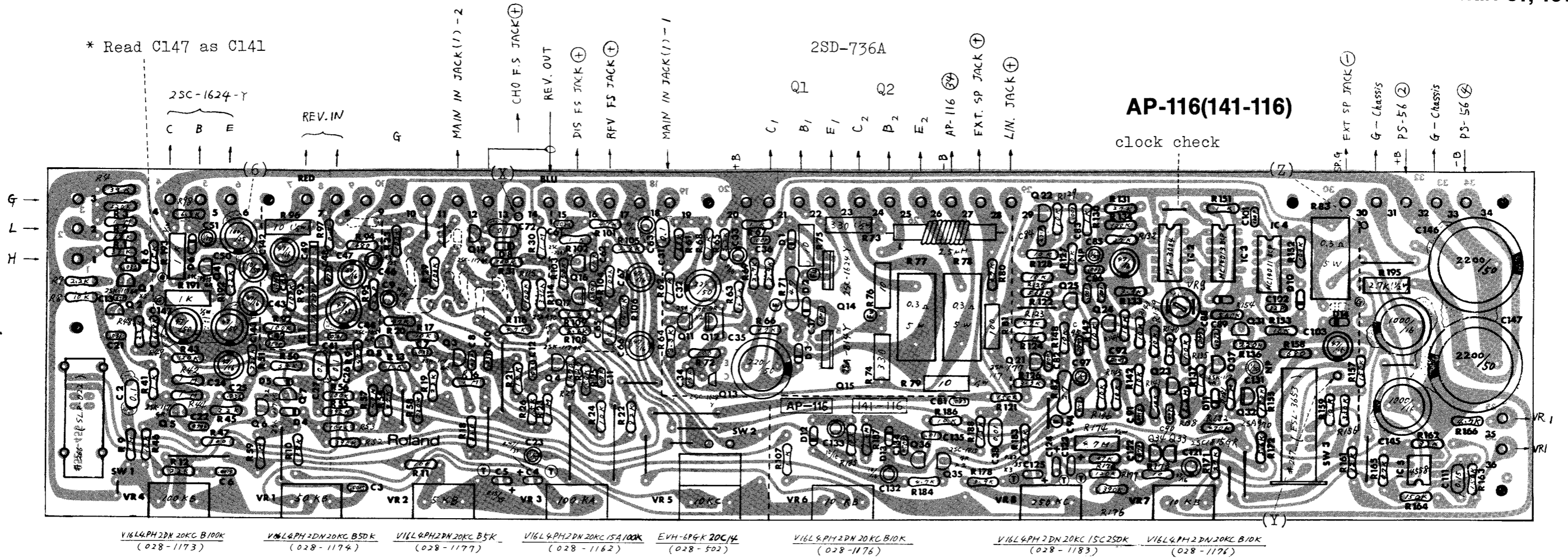
CAUTION: When replacing INPUT jacks on front or EXT SPEAKER jack, use insulating bushings, otherwise hum or undesirable tone coloration may occur.

JC-60A R&P



JC-60





V16L4PH2DN20KC B100K (028-1173)

V16L4PH2DN20KC B5DK (028-1174)

V16L4PH2DN20KC B5K (028-1177)

V16L4PH2DN20KC 15A100K (028-1162)

EVH-6P4K 20C14 (028-502)

V16L4PH2DN20KC B10K (028-1176)

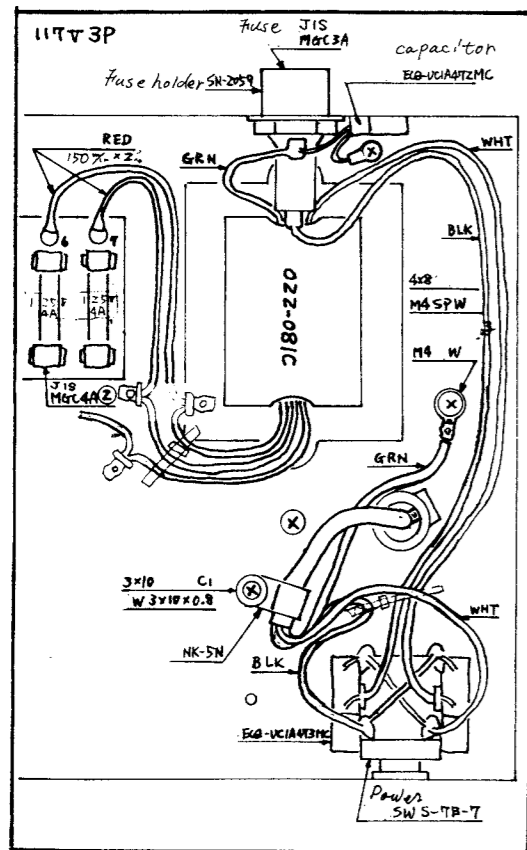
V16L4PH2DN20KC 15C25DK (028-1183)

V16L4PH2DN20KC B10K (028-1176)

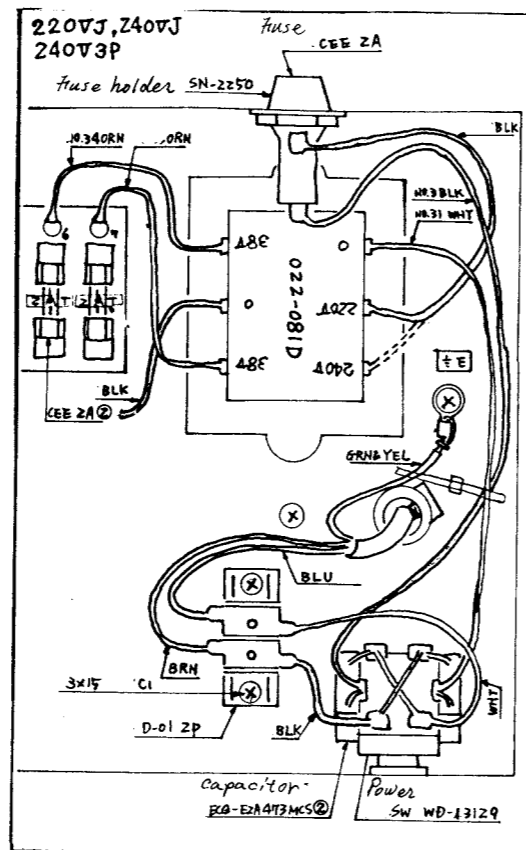
NOTE: AP-116 (X) -- (Y) jumper wired
(6) -- (Z)

CHECKING & ADJUSTMENT

117V



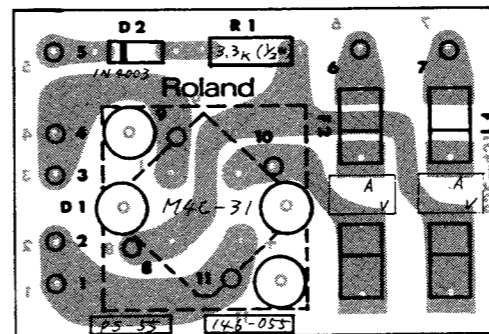
220/240V



- D1 --- D5 : 1S2473
- D7 --- D13 : 1S2473
- D6, D14 : 05Z15A
- Q22 --- Q25 : 2SC2240-GR
- Q31 : 2SC2240-GR

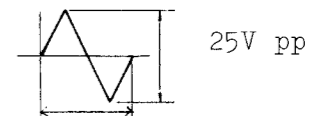
PS-55 (146-055)

- LED (+)
- AP-116 (3) - B
- AP-116 (3) + B



M4C 4A 100/117V Fuse clip SN-5054
CEE 2AT 220/240V

CHORUS ADJUSTMENT

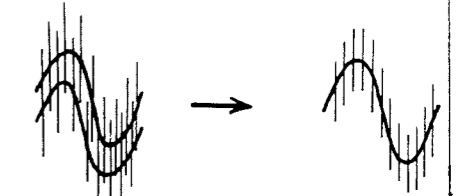


Adjust VR1 (rear panel) for 1.3 sec (0.77Hz) at R161

SENSITIVITY

Chorus starts to effect with 100mV rms output at speaker

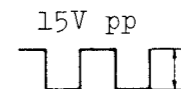
BBD OUTPUT ADJUSTMENT



Clock Composition Elimination

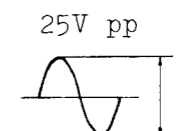
Adjust VR9 (trimpot) for fig. at R137

CLOCK OSCILLATOR Sweep Range

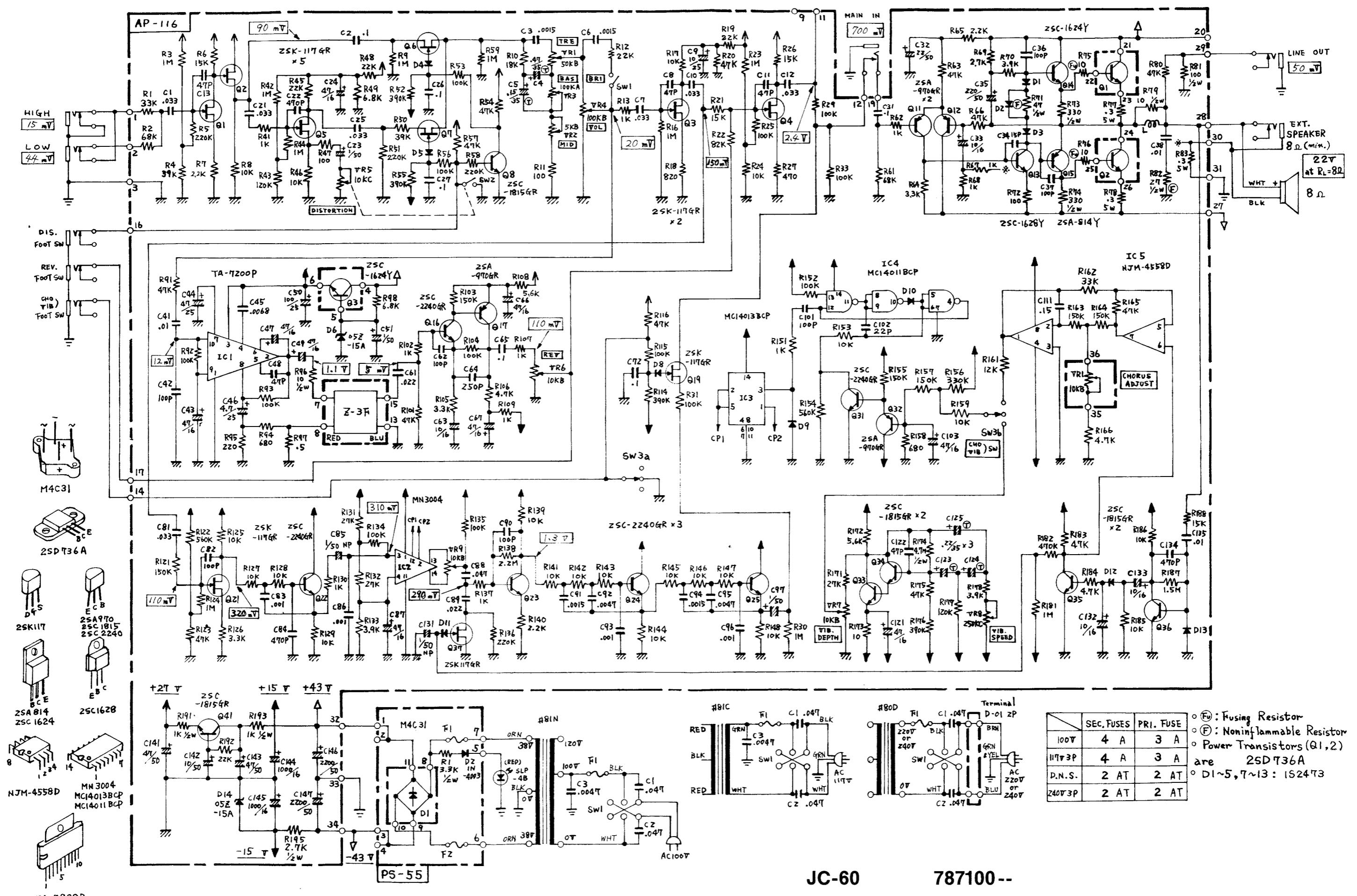


Vibrato 65k - 130kHz
Chorus 50k - 220kHz
at IC3 pin 1 (CP-2)

VIBRATO OSCILLATOR Frequency



at Q33 C 1.8 - 9Hz

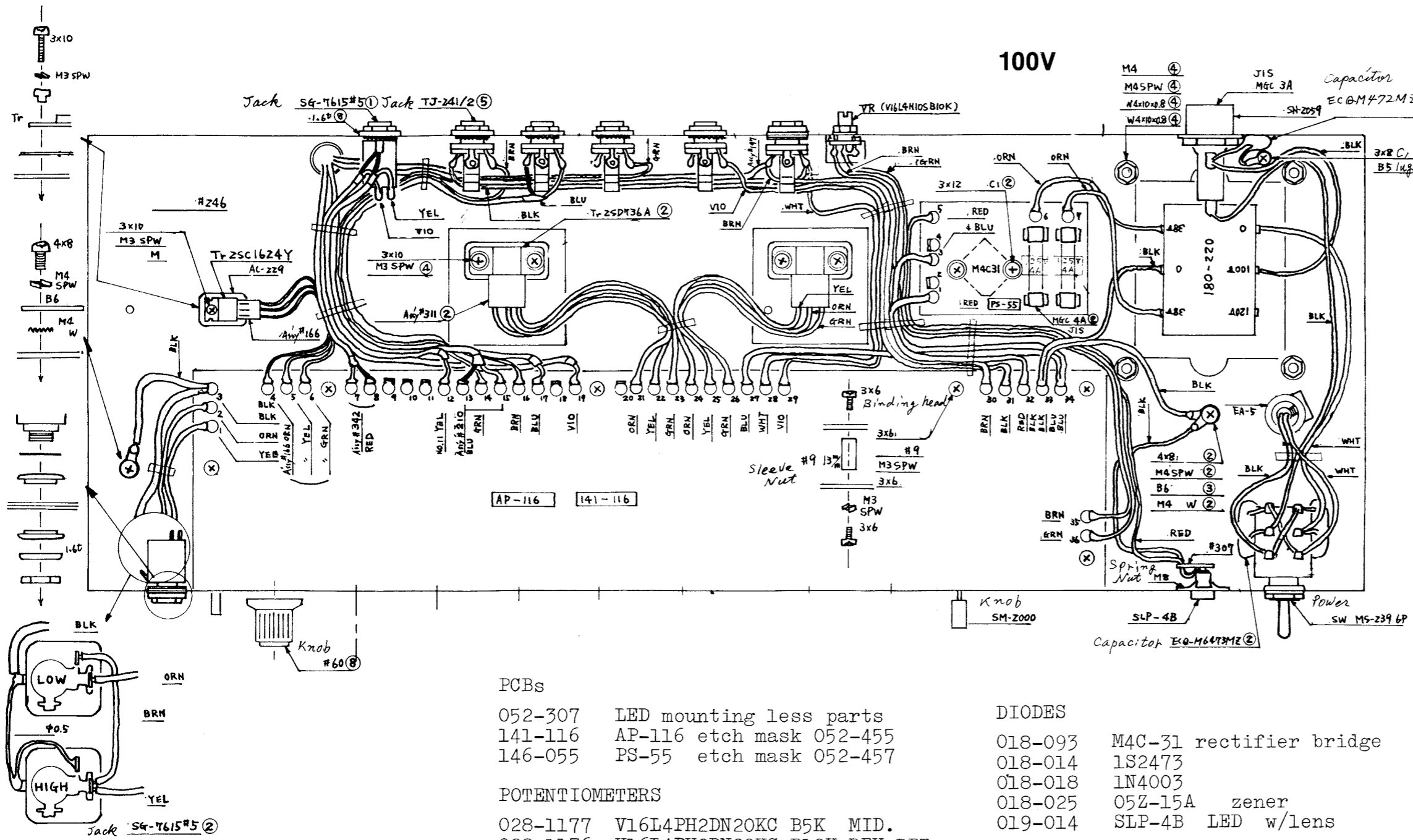


- M4C31
- 2SD1736A
- 2SK117
- 2SA970
- 2SC1815
- 2SC2240
- ZSA814
- ZSC1624
- NJM-4558D
- MN3004
- MC14013BCP
- MC14011BCP
- TA-7200P

| | SEC. FUSES | PRI. FUSE |
|--------|------------|-----------|
| 100V | 4 A | 3 A |
| 117V3P | 4 A | 3 A |
| D.N.S. | 2 AT | 2 AT |
| 240V3P | 2 AT | 2 AT |

⊕: Fusing Resistor
 ⊕: Noninflammable Resistor
 ⊕: Power Transistors (Q1,2)
 are 2SD1736A
 ⊕: D1~5,7~13: 1S2473

JC-60 787100--
 JC-60A R&P 810530--



PARTS LIST

- JC-60
- 081-126 Cabinet no.126
 - 108-015 Handle H-20
 - 074-011 Badge no.11 logo
 - 072-269 Panel no.269
 - 131-067 Vinyl cover no.67
 - 041-019 Speaker 30-103D
- JC-60A R&P
- 081-132 Cabinet no.132
 - 108-106 Handle H-30
 - 074-027 Badge no.27 logo
 - 074-028 Badge no.28 R&P
 - 072-085B Panel no.85B
 - 131-097 Vinyl cover no.97
 - 041-032 Speaker C-1230(30-745A)
- 089-069 Backboard no.69
 - 108-017 Handle cover no.17
 - 061-246 Chassis no.246
 - 048-073 Heat sink no.73 2SD736A
 - 053-311 Connector assy no.311 2SD736A
 - 053-166 Connector assy no.166 Reverb 2SC1624
 - 040-001 Reverb unit Z-3F
 - 120-009 Sleeve nut no.9 3x13mm
 - 121-017 Spring nut M8 P LED
 - 047-025 Line cord strain relief EA-5
 - 009-001 Jack SG7615 #5
 - 009-004 Jack TJ-241-2
 - 016-060 Knob no.60 rotary
 - 016-047 Knob SM2000 lever
- POWER TRANSFORMER
- 022-081 PT no.81 100V
 - 022-081C PT no.81C 117V
 - 022-081D PT no.81D 220/240V
- SWITCHES
- 001-218 MS239 6P power 100V
 - 001-235 S-7B-7 power 117V
 - 001-019 WD13129 power 220/240V
 - 001-266 SLR-022 lever BRI.
 - 001-267 ESL-3653 lever VIB/CHO
- FUSES, FUSE HOLDERS
- 008-007 MGC 3A prim. 100/117V
 - 008-008 MGC 4A sec. 100/117V
 - 008-070 CEE 2AT 220/240V
 - 012-020 Holder SN2059 100/117V
 - 012-019 Holder SN2250 220/240V
 - 012-029 Clip SN5054 sec.

PCBs

- 052-307 LED mounting less parts
- 141-116 AP-116 etch mask 052-455
- 146-055 PS-55 etch mask 052-457

POTENTIOMETERS

- 028-1177 V16L4PH2DN20KC B5K MID.
- 028-1176 V16L4PH2DN20KC B10K REV.DPT.
- 028-1174 V16L4PH2DN20KC B50K TRE.
- 028-1173 V16L4PH2DN20KC B100K VOL.
- 028-1162 V16L4PH2DN20KC15A100K BASS
- 028-1183 V16L4PH2DN20KC15C250K SPEED
- 028-1194 V16L4N10SB10K CHORUS-Adj.
- 028-502 EVH6PGK20C14 10KC w/sw DIS.
- 028-004 EVTR4AA00B14(SR19R) trim.

CAPACITORS

- 032-092 0.15 mfd. tantalum
- 032-093 0.22 mfd. tantalum
- 032-095 0.47 mfd. tantalum
- 032-195 CEO4D1H01ONBPE 1mfd. 50V Bi-polar
- 032-261 ECET50R222SW 2200 mfd. 50V
- 035-103 ECQM2103KZ 0.01 mfd. 200V polyester

DIODES

- 018-093 M4C-31 rectifier bridge
- 018-014 1S2473
- 018-018 1N4003
- 018-025 05Z-15A zener
- 019-014 SLP-4B LED w/lens

ICs

- 020-028 TA7200P
- 020-170 MC-14011BCP
- 020-179 MC-14013BCP
- 020-063 MN-3004 BBD
- 020-064 NJM-4558DP or μ PC4558C

TRANSISTORS

- 017-119 2SA970-GR or 2SA841-GR (except Q32)
- 017-030 2SA814-Y
- 017-123 2SC2240-GR or 2SC1681-GR (except Q31)
- 017-106 2SC1815-GR or 2SC373
- 017-028 2SC1628-Y
- 017-029 2SC1624-Y
- 017-134 2SD736A- (B) or (C)
- 017-103 2SK117-GR FET

RESISTORS

- 044-253A MO-4P 0.3-ohm 5W wire wound
- 044-398 ERD-12FJ 27-ohm $\frac{1}{2}$ W nonflam.
- 044-401 ERD-12FJ 47-ohm $\frac{1}{2}$ W nonflam.
- 008-118 FRNB 10-ohm $\frac{1}{4}$ W fusing

* Resistor of $\frac{1}{4}$ w, mylar and ordinary electrolytic capacitor are omitted.