

# JC-120/JC-120A R&P, JC-160

## SERVICE NOTES

### APPLICABLE TO FOLLOWING SERIAL NUMBERS

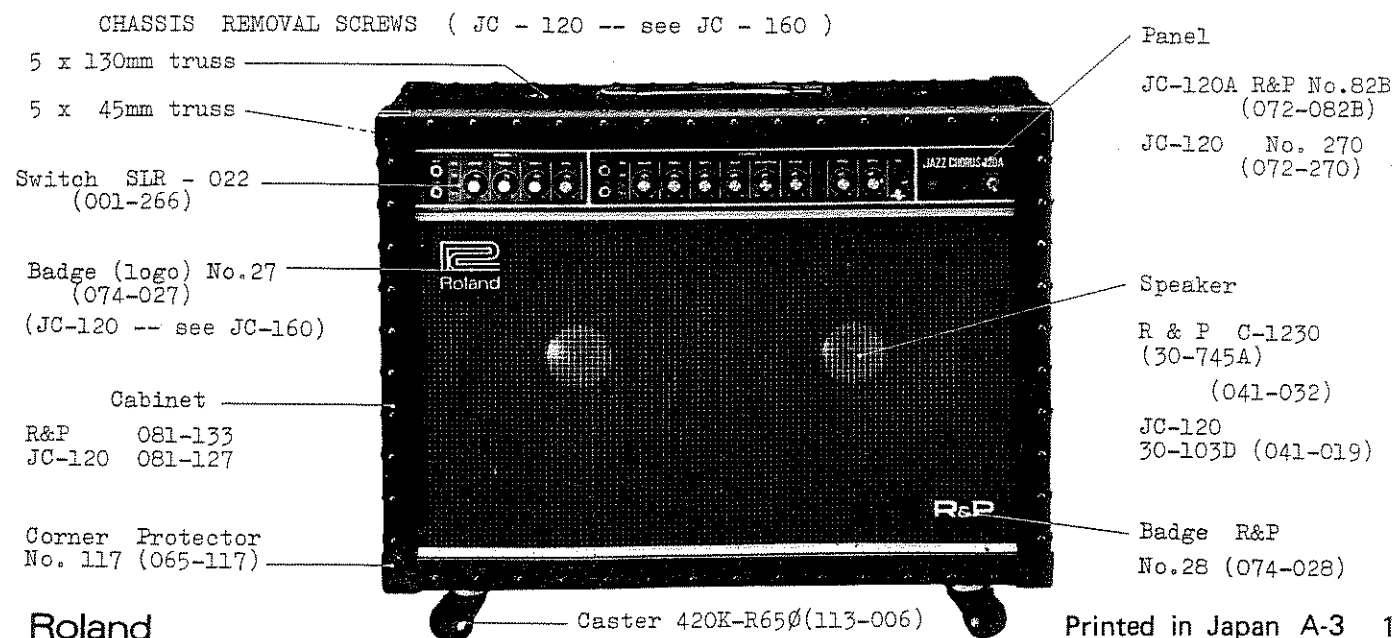
JC-120 ————— 789500 and up  
 JC-120A R&P ——— 810600 and up  
 JC-160 ————— 782921 and up

*Fourth Edition*

### SPECIFICATIONS

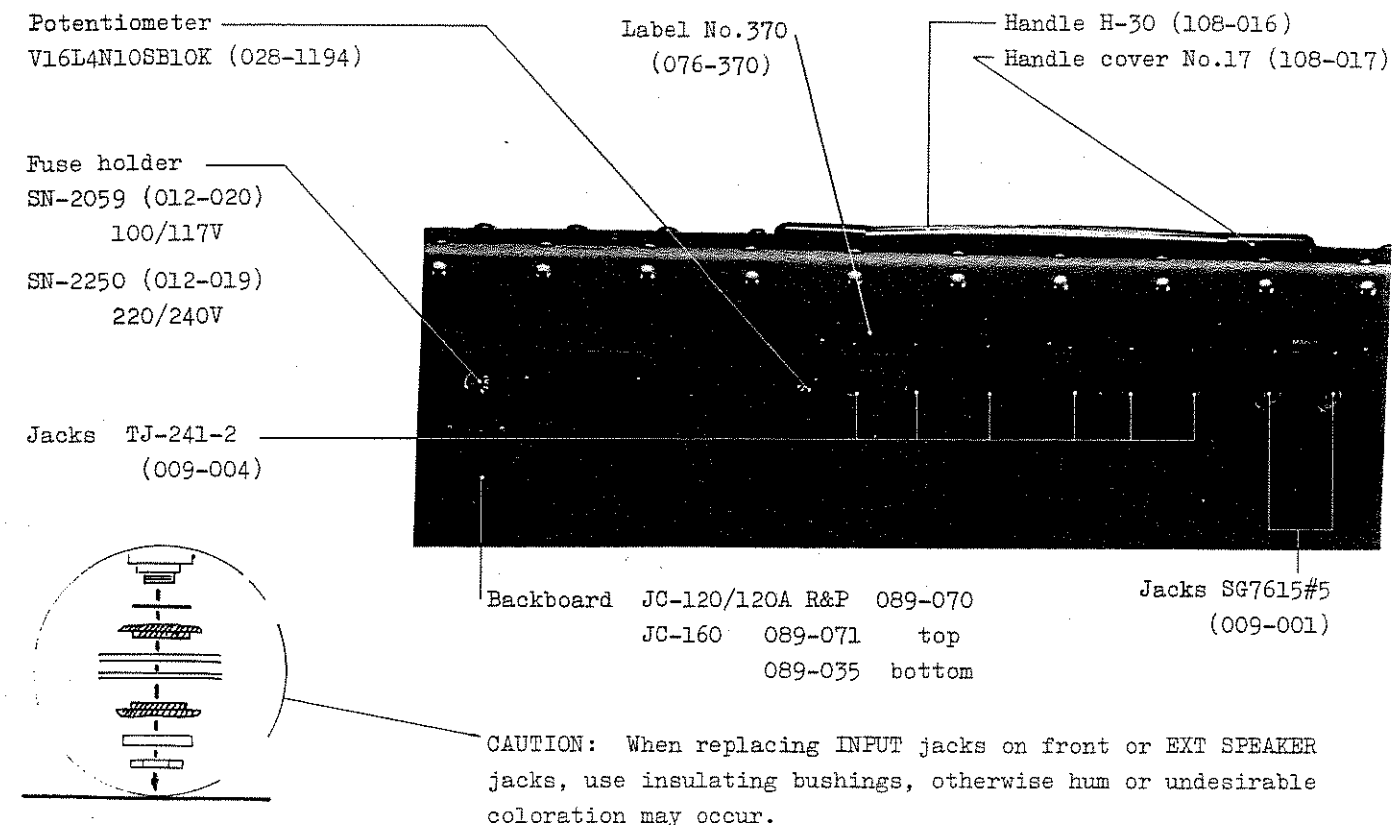
OUTPUT POWER -----	22V RMS		per channel		into 8-ohm
INPUT SENSITIVITY -----	HIGH	LOW		MAIN IN	700mV
	22mV	72mV	@ 1kHz		
	38mV		@ 100Hz		
	11mV		@ 10kHz		
INPUT IMPEDANCE -----	220k-ohm	82k-ohm	@ 1kHz	MAIN IN	68k-ohm
LINE OUTPUT -----	Level	100mV	@ 1kHz	IMPEDANCE	100-ohm
RESIDUAL NOISE -----	9---20mV				per channel (varies with controls setting)
TONE CONTROL RANGE -----	TREBLE	38dB	@ 10kHz		
	MIDDLE	2dB	@ 1kHz		
	BASS	18dB	@ 100Hz		
	BRIGHT	4dB	@ 10kHz	VOLUME at center	
POWER CONSUMPTION -----	500VA				
DIMENSIONS -----	JC-120	750W x 540H x 270Dmm	(29.6 x 21.2 x 10.6 in.)		
	JC-120A R & P	774W x 634H x 270Dmm	(30.5 x 25 x 10.6 in.)		
	JC-160	750W x 700H x 240/300Dmm	(29.5x27.6x9.4/11.8 in.)		
WEIGHT -----	JC-120	28Kg (62 lbs)	JC-120A R&P	40Kg(88 lbs)	
	JC-160	35Kg (77 lbs)			

### JC-120/JC-120A R&P (Photo)

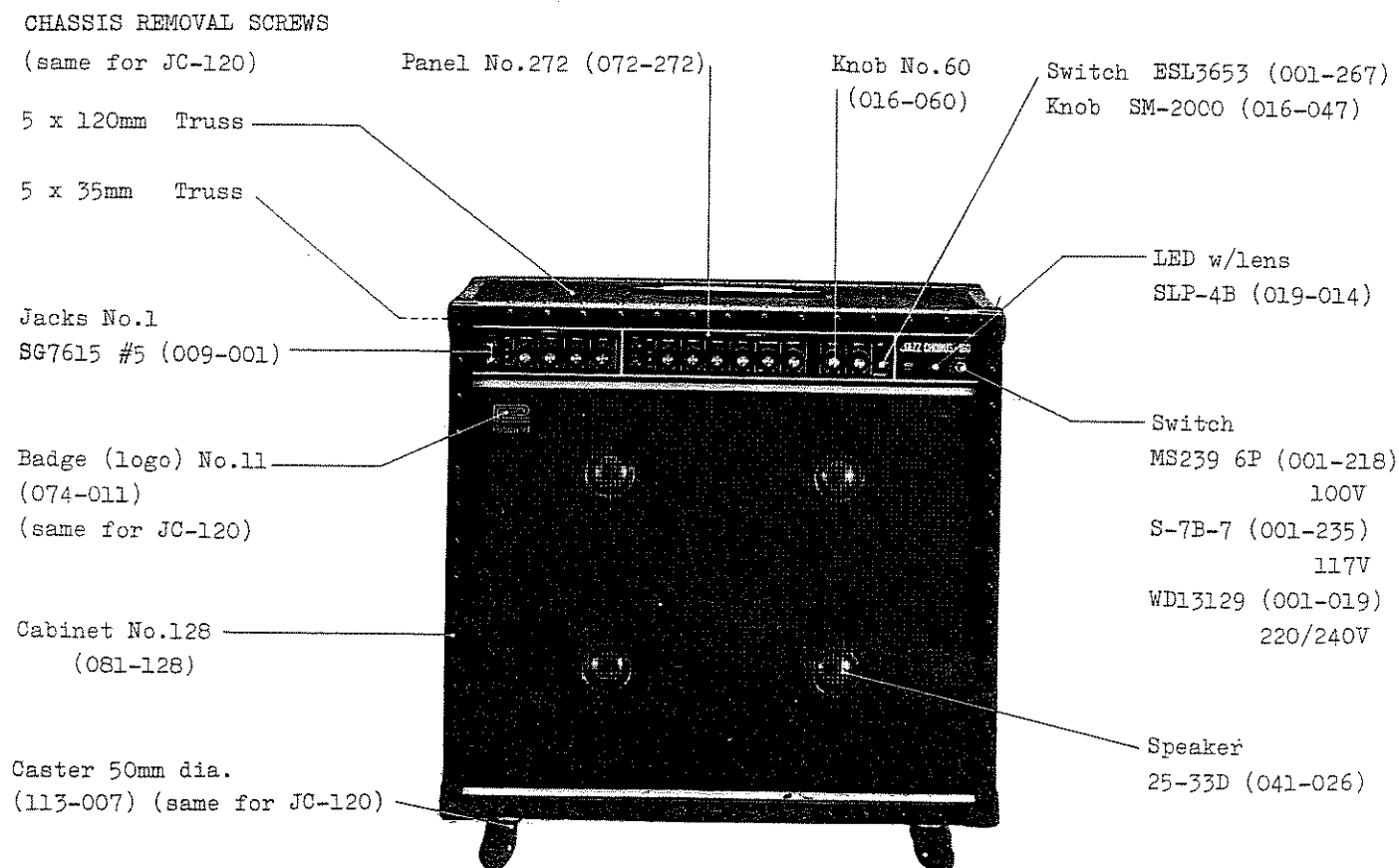


### PART COMMON TO JC-120, JC-120A R&P and JC-160

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

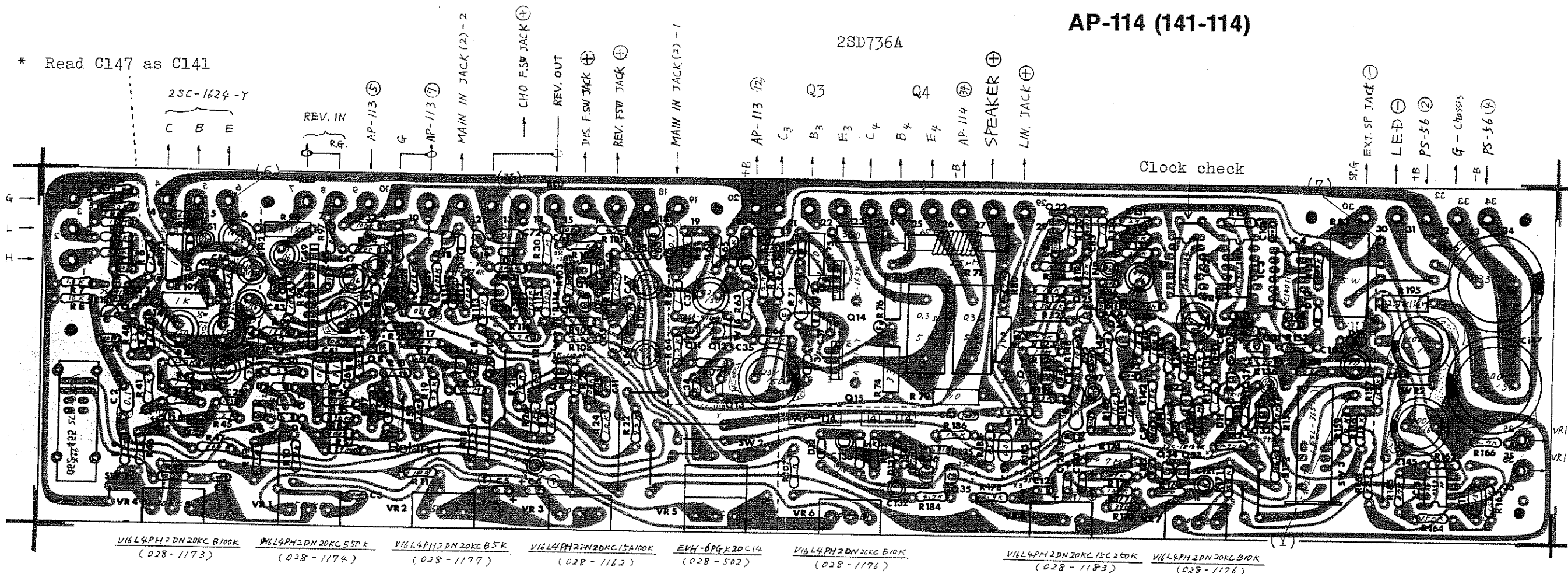


### JC-160



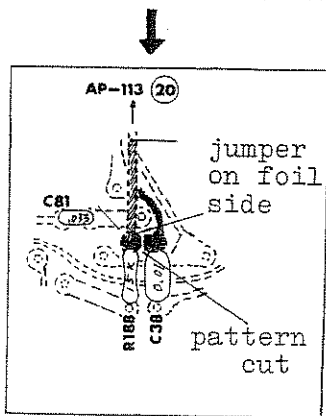
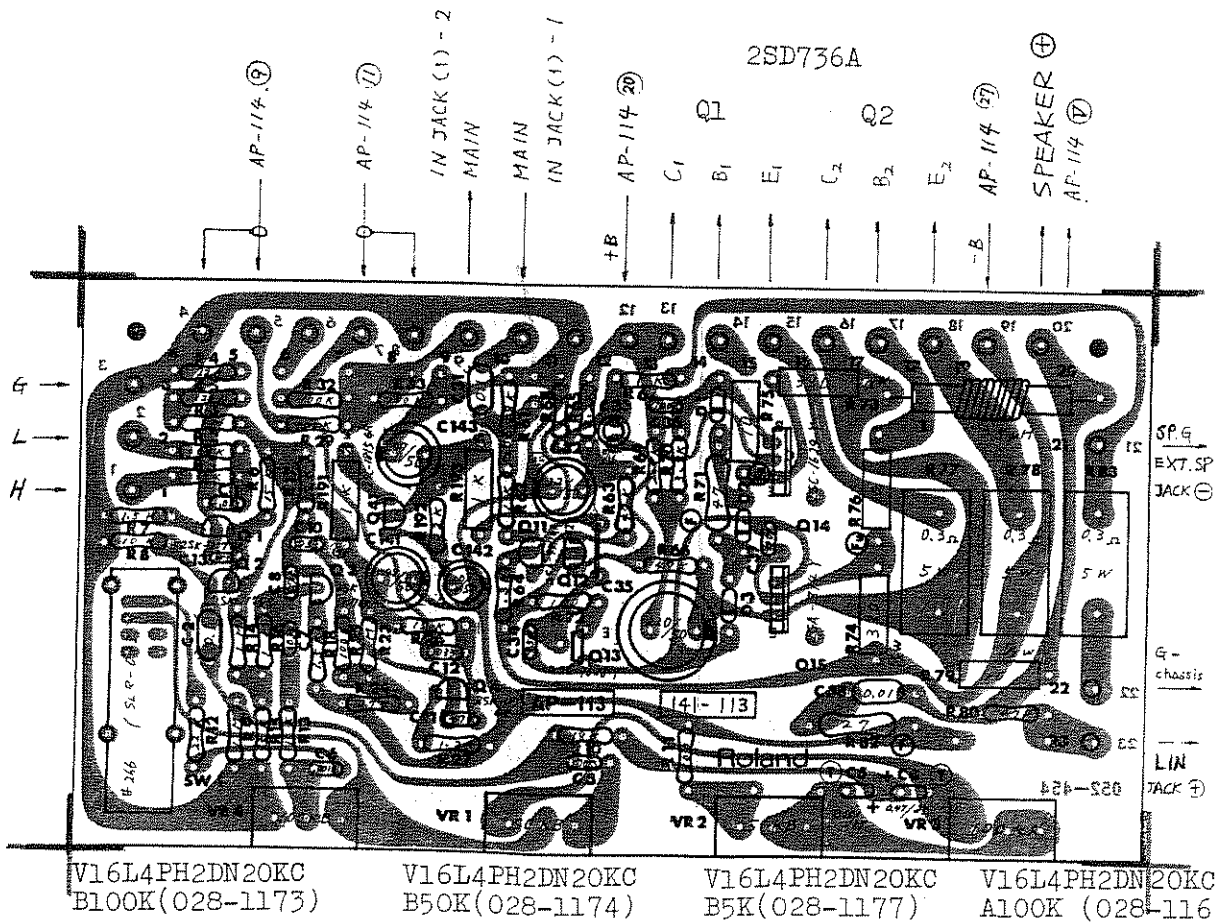
**AP-114 (141-114)**

\* Read C147 as C141



NOTE: AP-114 (X)-(Y) / (6)-(Z) jumper wired

**AP-113 (141-113)**



**CHECKING & ADJUSTMENT**

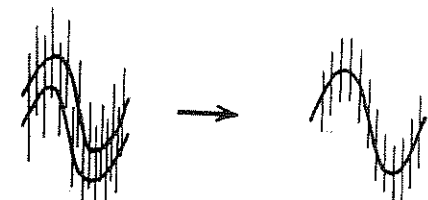
**CHORUS ADJUSTMENT**



Adjust VR1 (rear panel) for 1.3 sec (0.77Hz) at R161 (AP-114)

**SENSITIVITY**  
Chorus starts to effect with 100mV rms output at channel 1 speaker

**BBD OUTPUT ADJUSTMENT**

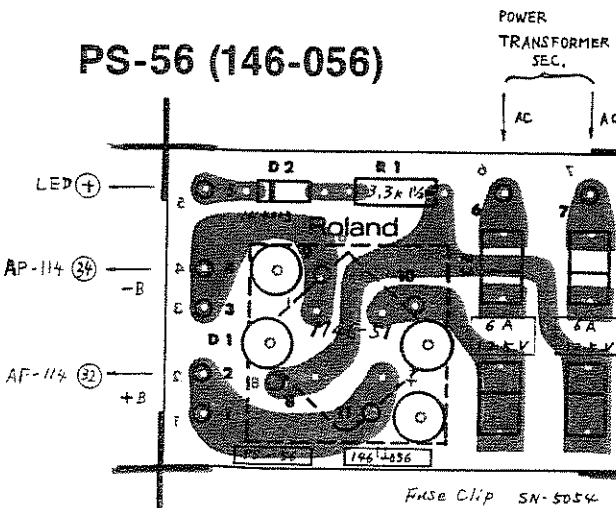


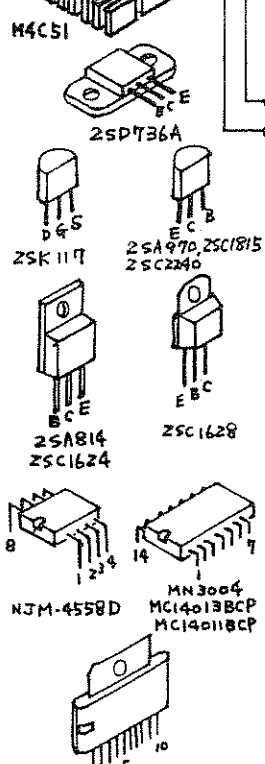
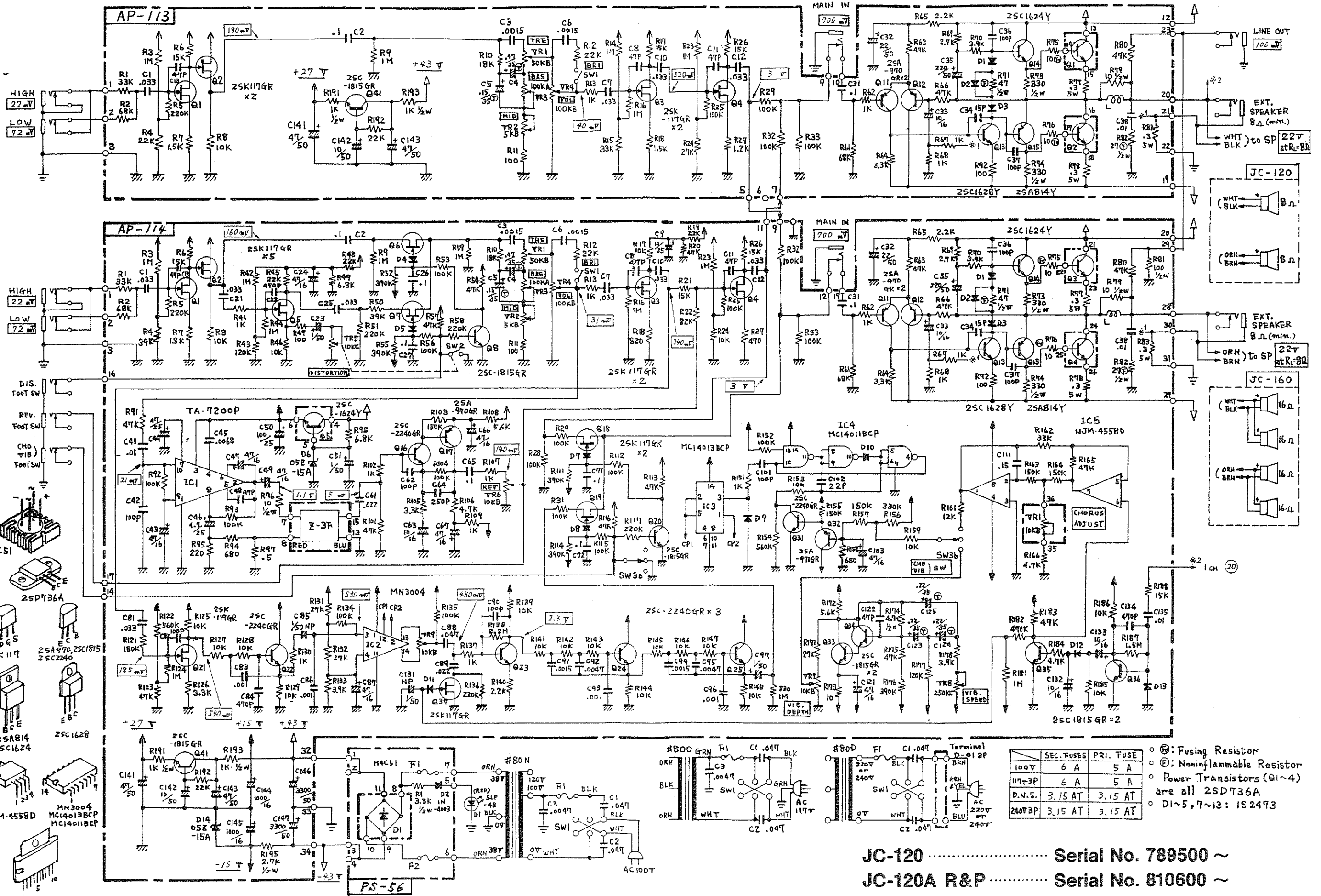
**Clock Composition Elimination**  
Adjust VR9 (trimpot) for fig. at R137(AP-114)

**CLOCK OSCILLATOR**  
Sweep Range 15V pp  
Vibrato 65k - 130kHz  
Chorus 50k - 220kHz  
at IC3 pin 1 (CP-2)

**VIBRATO OSCILLATOR**  
Frequency 25V pp  
at Q33 C 1.8 - 9Hz

**PS-56 (146-056)**





	SEC. FUSES	PRI. FUSE
100V	6 A	5 A
117V3P	6 A	5 A
D.N.S.	3.15 AT	3.15 AT
240V3P	3.15 AT	3.15 AT

⊕: Fusing Resistor  
 ⊙: Nonflammable Resistor  
 ⊗: Power Transistors (Q1~4) are all 2SD736A  
 ⊙: D1~5, 7~13: 1S2473

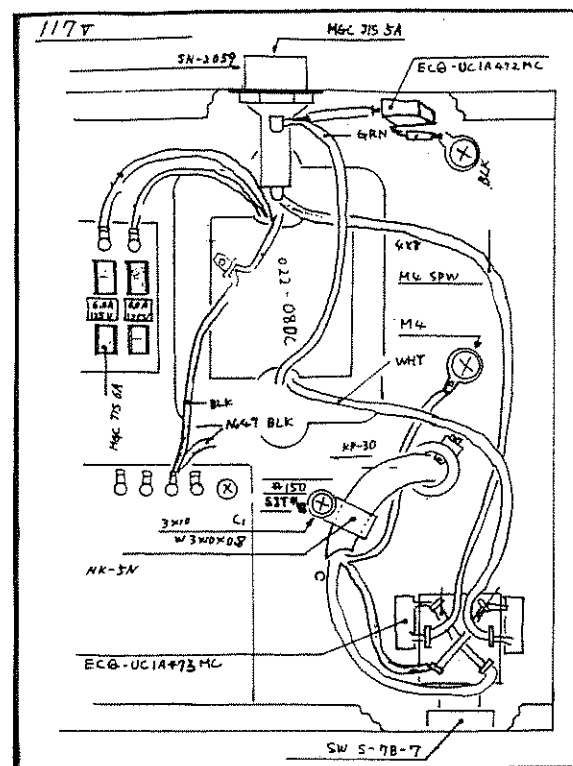
JC-120 ..... Serial No. 789500 ~  
 JC-120A R&P ..... Serial No. 810600 ~  
 10-100 ..... Serial No. 789900 ~

AC CONNECTIONS

PARTS LIST

117V

220/240V



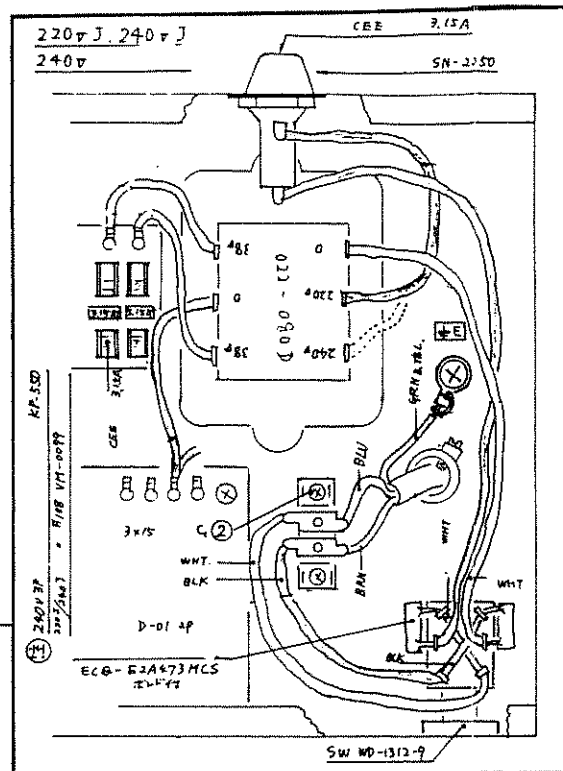
117V  
Fuse prim. MGC JIS 5A (008-009)  
sec. MGC JIS 6A (008-010)

Power transformer 022-080C

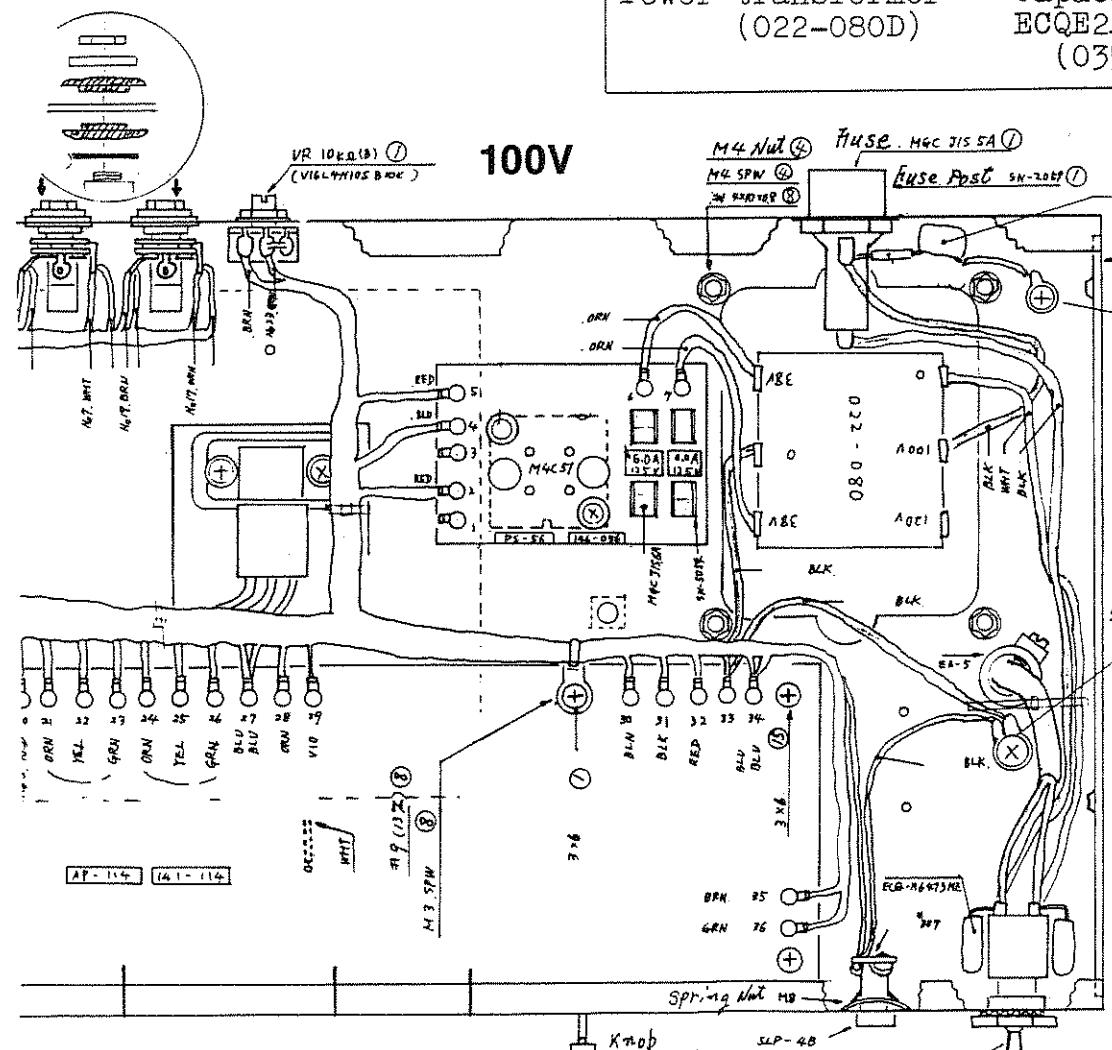
Capacitors ECQUC1A472MC (035-107)  
ECQUC1A473MC (035-108)

220/240V  
Fuse CEE 3.15AT (008-072)

Power transformer (022-080D)



Capacitor ECQE2A473MCS (035-310)



100V  
Fuses prim. MGC JIS 5A (008-009)  
sec. MGC JIS 6A (008-010)

Power transformer 022-080

Capacitors ECQM6472M2 (035-101)  
ECQM6473M2 (035-102)

JC-120  
081-127 Cabinet no.127  
089-070 Backboard no.70  
072-270 Panel no.270  
131-068 Vinyl cover no.68  
041-019 Speaker 30-103D

JC-120A R&P  
081-133 Cabinet no.133  
089-070 Backboard no.70  
072-082B Panel no.82B  
131-098 Vinyl cover no.98  
041-032 Speaker C1230(30745A)

JC-160  
081-128 Cabinet no.128  
089-071 Backboard no.71 top  
089-035 Backboard no.35 bottom  
072-272 Panel no.272  
131-073 Vinyl cover no.73  
041-026 Speaker 25-33D

061-247 Chassis no.247  
048-073 Heatsink 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 TRANSFORMERS  
022-080 PT no.80 100V  
022-080C PT no.80C 117V  
022-080D PT no.80D 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  
008-009 MGC 5A prim. 100/117V  
008-010 MGC 6A sec. 100/117V  
008-072 CEE 3.15AT 220/240V  
012-020 Holder SN2059 100/117V  
012-019 Holder SN2250 220/240V  
012-029 Clip SN5054 sec.

\* For the parts on the cabinets, see page 1.  
\* Resistor of 1/2w. mvlar and

PCBs  
052-307 LED mounting less parts  
141-113 AP-113 etch mask 052-454  
141-114 AP-114 etch mask 052-455  
146-056 PS-56 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.

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

CAPACITORS  
032-092 0.15 mfd. tantalum  
032-093 0.22 mfd. tantalum  
032-095 0.47 mfd. tantalum  
032-195 CE04D1H010NBPE 1 mfd. 50V  
032-262 ECET50R332SW 3300 mfd 50V electrolytic larg can  
035-103 ECQM2103KZ 0.01 mfd 200V polyester

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

DIODES  
018-095 M4C-51 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