

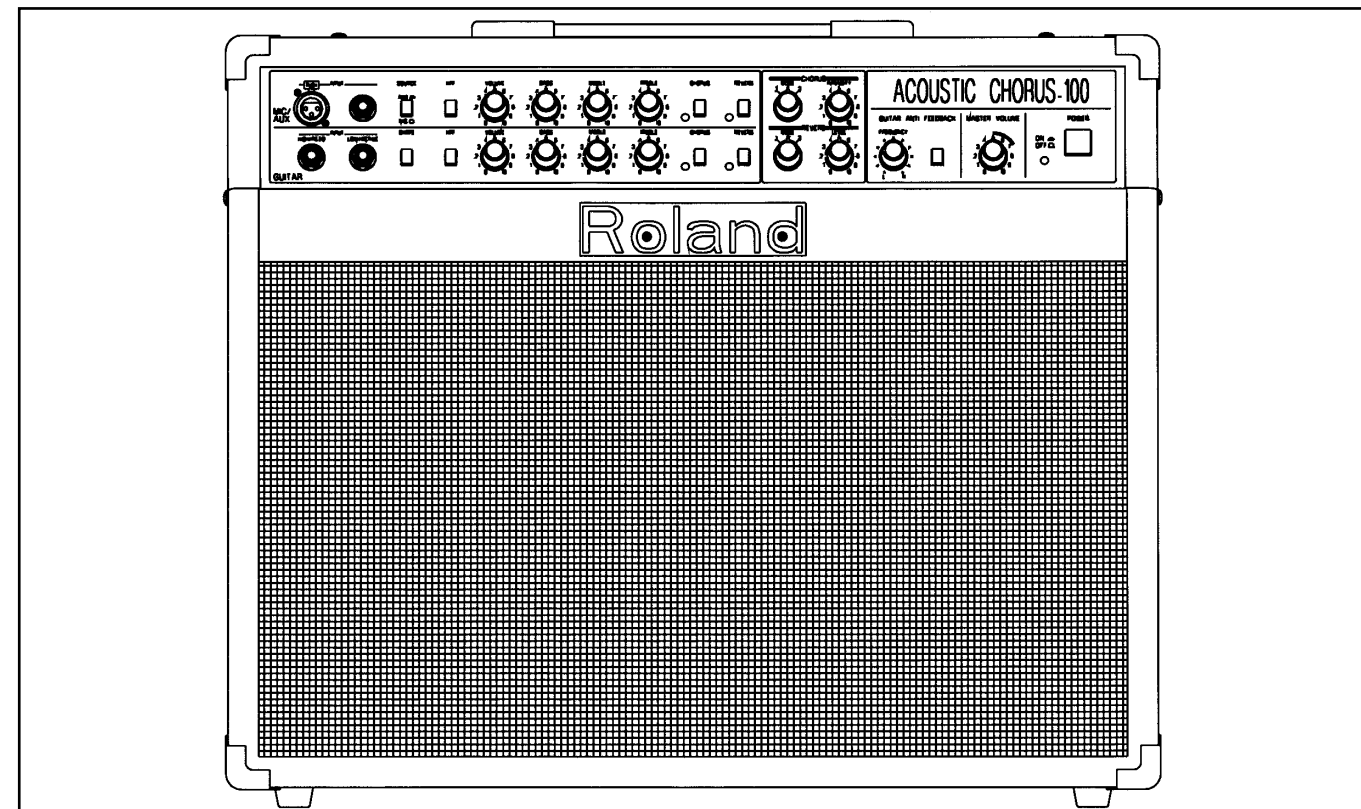
# AC-100UT SERVICE NOTES

*First Edition*

**Issued by RJA**

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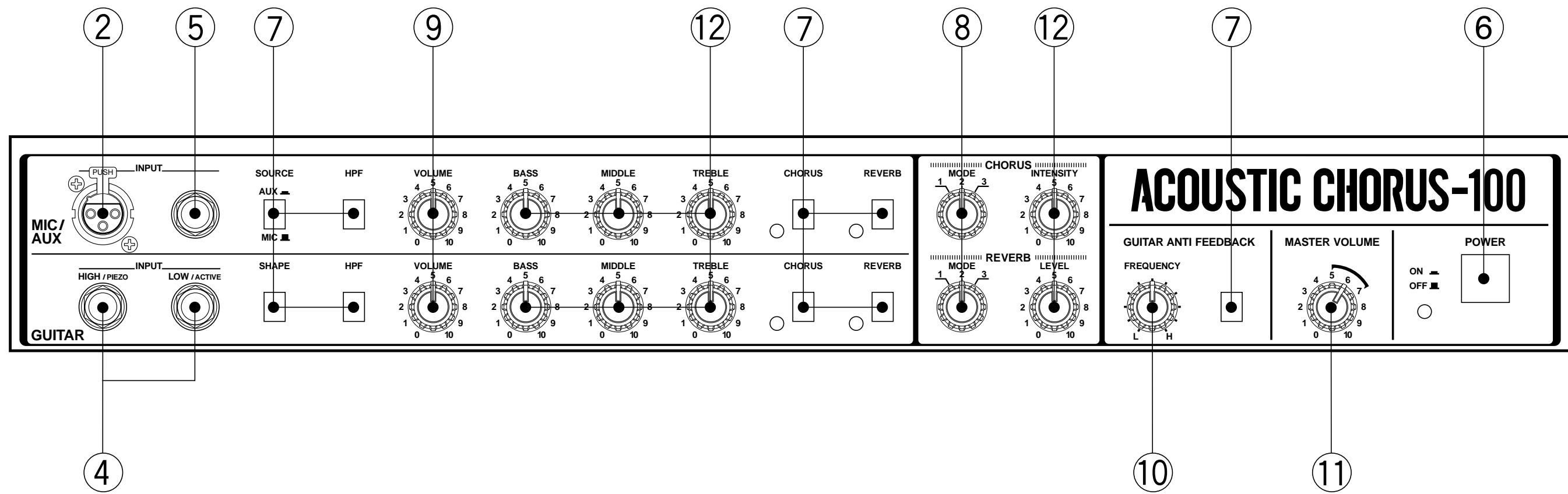
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## SPECIFICATIONS

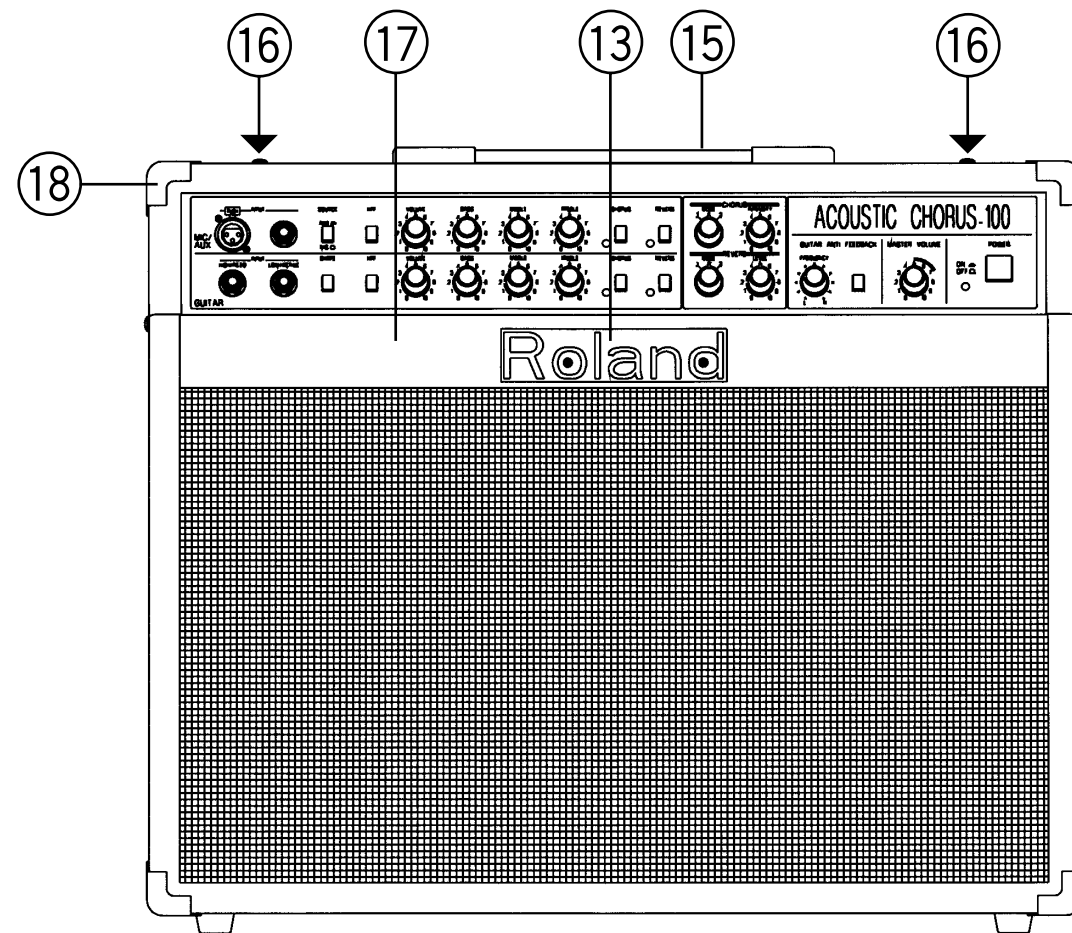
Rated Power Output .....	: 100 W ( 50 W/4Ω + 25 W/8Ω + 25 W/8Ω )	
Nominal Input Level( @ 1 kHz ) .....	INPUT MIC/AUX	MIC -50 dBm
.....		AUX -20 dBm
.....	GUITAR HIGH/PIEZO	-33 dBm
.....	LOW/ACTIVE	-27 dBm
.....	GUITAR EFFECT RETURN	-10 dBm
Nominal Output Level( @ 1 kHz ) .....	GUITAR EFFECT SEND	-10 dBm
.....	LINE OUT	+ 4 dBm
.....		0 dBm= 0.775 Vrms
Speakers .....	: 30 cm ( 12 inches) x 1 + 12 cm ( 5 inches) x 2	
Controls .....	MIC/AUX	SOURCE Switch, High Pass Filter Switch
.....		VOLUME, BASS, MIDDLE, TREBLE, CHORUS Switch, REVERB Switch
.....	GUITAR	SHAPE Switch, High Pass Filter Switch, VOLUME BASS, MIDDLE, TREBLE, CHORUS Switch, REVERB Switch, CHORUS MODE Select Switch, CHORUS INTENSITY, REVERB MODE Select Switch, REVERB LEVEL
.....		GUITAR ANTI-FEEDBACK FREQUENCY
.....		GUITAR ANTI-FEEDBACK Switch
.....	Master	MASTER VOLUME, POWER switch, LINE OUT SELECT Switch
Connectors .....	: MIC/AUX Input Jacks ( XLR type balanced, 1/4 inch phone type balanced)	
.....	GUITAR Input Jacks (HIGH/PIEZO, LOW/ACTIVE), CHORUS Foot Switch Jack	
.....	REVERB Foot Switch Jack, GUITAR EFFECT SEND Jack	
.....	GUITAR EFFECT RETURN Jack	
.....	LINE OUT Jacks (XLR type balanced, 1/4 inch phone type unbalanced)	
.....	FOOT SWITCH Jacks (DIST, REVERB, CHORUS), PHONES Jack	
Power Consumption .....	: 70W (AC 100V )	
.....	110W (AC 117V, 230V or 240V )	
Dimensions .....	: 646 (W) x 298 (D)x 533 (H) mm	
.....	25-7/16 (W) x 11-3/4 (D) x 21 (H) inches	
Weight .....	: 27 kg / 59 lbs 9 oz	
Accessories .....	: Owner's Manual English (17055094)	
.....	Owner's Manual Japanese (17055095)	

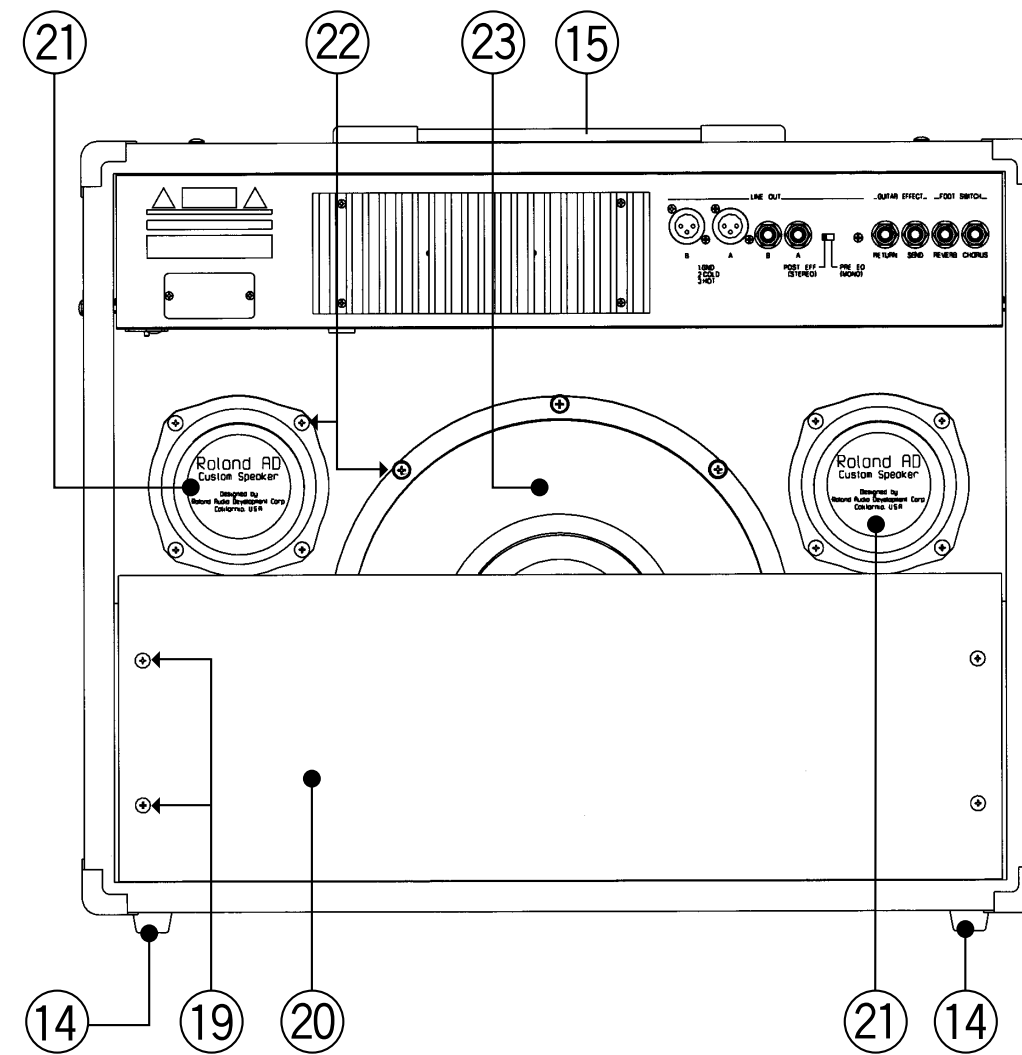
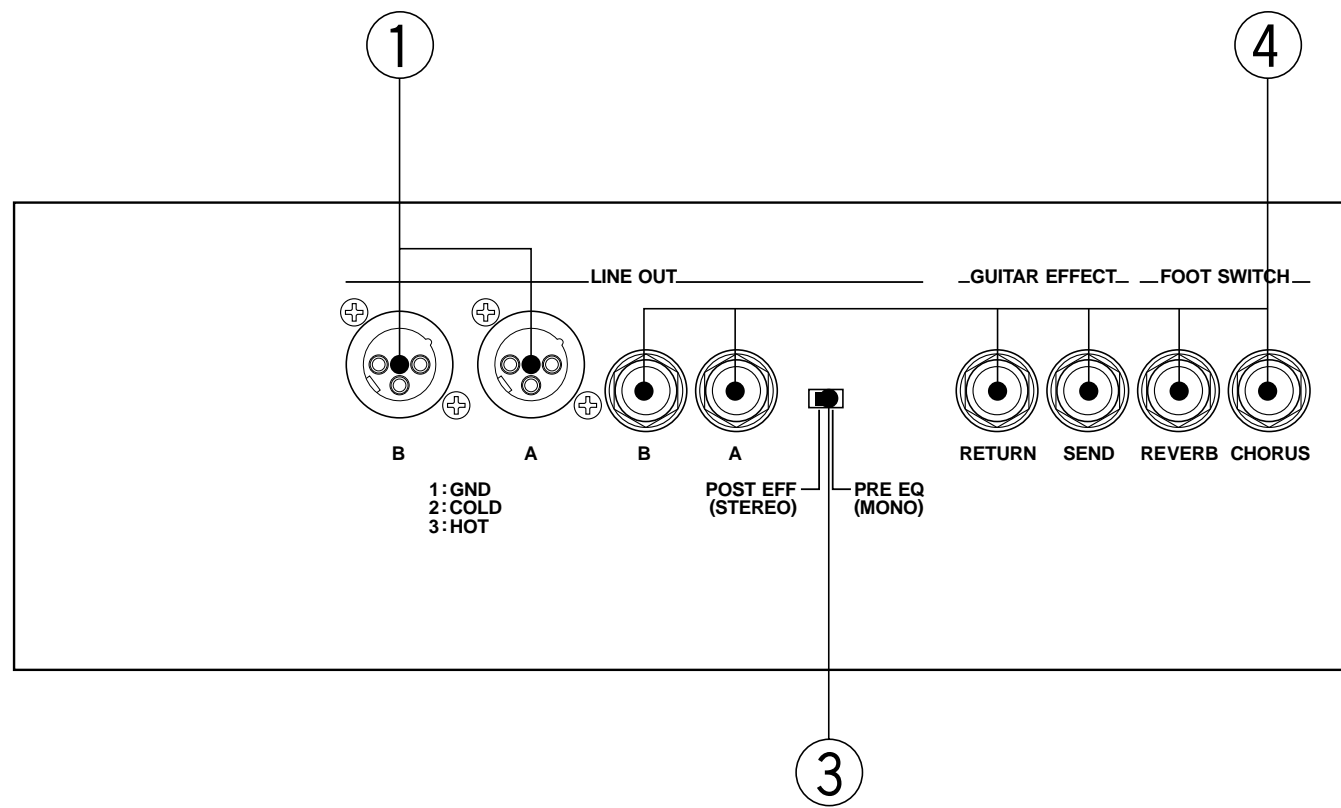
LOCATION OF CONTROLS



[PARTS]

No.	Part Cord	Part Name
①	00122123	XLR TYPE YKB52-5003
②	13429688	XLR TYPE AF3LR-PC-RT
③	13159178	SLIDE SWITCH SSSU12584A
④	13449149	JACK YKB21-5011
⑤	13449263	JACK YKB21-5005
⑥	22495565	F S-BUTTON MX BLK
⑦	00125612	U S-KEY MX1H DCG/WHT
⑧	00122390	ROTARY SWITCH SRBM23N-F15-16
⑨	13289217	ROTARY POT. RK09L1120 100KB
⑩	00675823	ROTARY POT. RK09L12B0 50KCx2
⑪	00782578	ROTARY POT. RK0971410 10KBx4
⑫	13289233	ROTARY POT. RK09L1120 20KB
⑬	K2238110	Roland LOGO BADGE
⑭	12359104	RUBBER FOOT MP-600
⑮	22310207	HANDLE H-40 + ESCUTCHEON
⑯	40010601	ORIGINAL TRUSS MACHINE SCREW M5x35 BZC
⑰	17055046	CABINET ASSY
⑱	17055035	PROTECTION CORNER
⑲	17055052	#8-32x11/2 PH PN BK
⑳	17055049	REAR BOARD
㉑	17055048	5" SPEAKER G0508C03
㉒	17055050	#8-32 KEP NUT
㉓	17055047	12" SPEAKER G1204E02



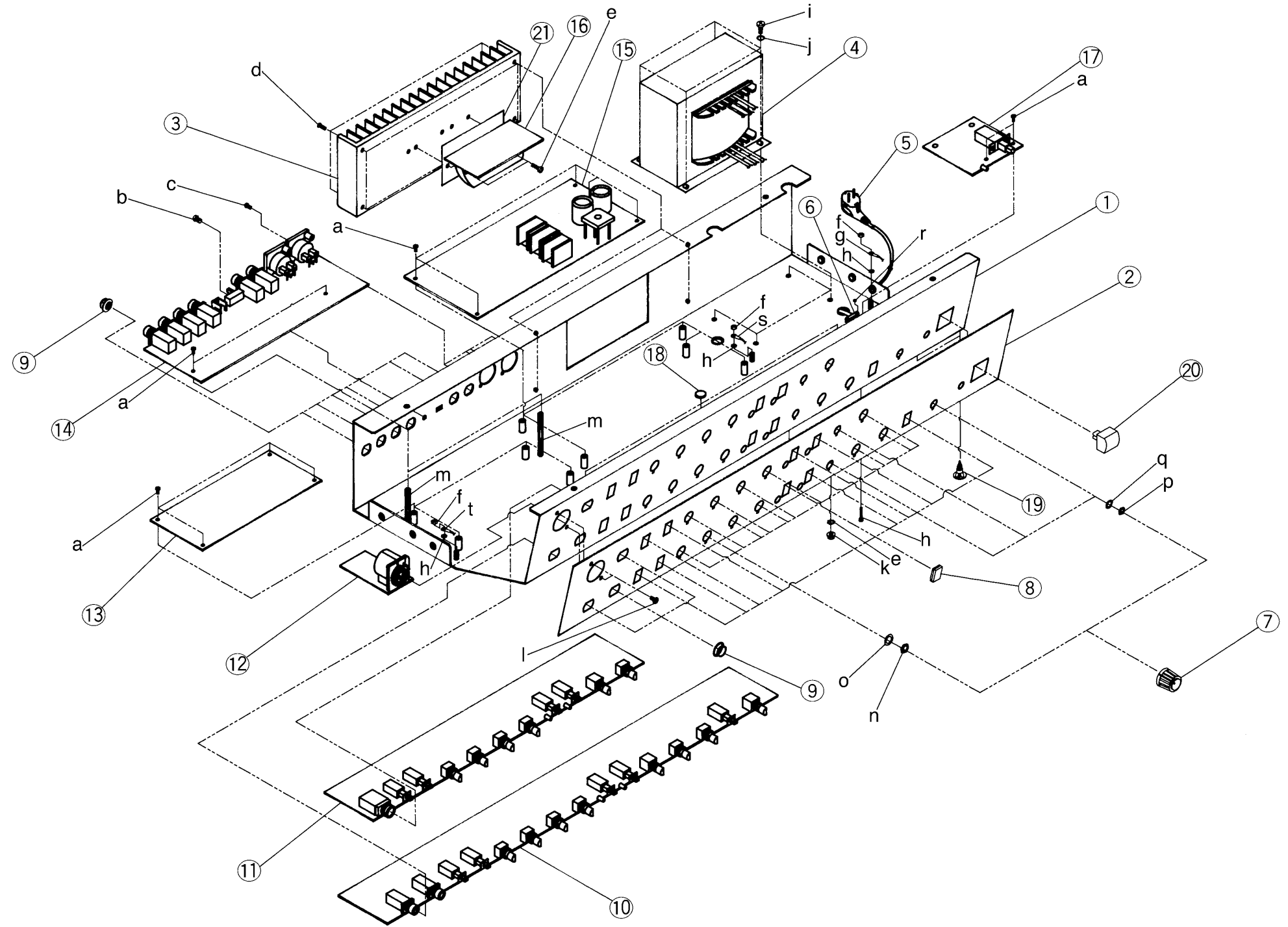


**EXPLODED VIEW**

[PARTS]

No.	Part Cord	Part Name
①	G2817114	CHASSIS
②	G2217118	FRONT PANEL
③	G2467408	HEATSINK
④	G245713301	TRANSFORMER 100V/117V
	G245713401	TRANSFORMER 230V/240V
⑤	G3497123	VCTF 100V
	G349712401	SJT 117V
	G3497125	SY010 230V
	13499111	4622-001-0886 230VE
	G3497126	FC-305 240VA
⑥	12369410RT	CORD HOLDER 1702B
⑦	2247011900	AC-KNOB
⑧	00125612	U S-KEY MX1H DCG/WHT
⑨	2215075600	JACK NUT #756
⑩	01126412	PRE BOARD ASSY 230V/240V
⑪	01126412	PRE BOARD ASSY 230V/240V
⑫	01126412	PRE BOARD ASSY 230V/240V
⑬	01126434	EFFECT BOARD ASSY
⑭	01126423	MAIN BOARD ASSY
⑮	01126423	MAIN BOARD ASSY
⑯	01126423	MAIN BOARD ASSY
⑰	01126412	PRE BOARD ASSY 230V/240V
⑱	G2357017	RUBBER FOOT
⑲	H2369410	SPACER SCT-14
⑳	22497565	F S-BUTTON MX BLK
㉑	G2257114	INSULATING SHEET

No.	Part Cord	Part Name
a	40010423	BINDING MACHINE SCREW W/INT TOOTH WASHER M3x8 BZC
b	40010323	BINDING MACHINE SCREW M4x6 BZC
c	40011312	BINDING TAPTITE P M3x8 BZC
d	40012967	PAN MACHINE SCREW W/SW+PW M3x10 BZC
e	40012989	PAN MACHINE SCREW W/SW+PW M3x20 BZC
f	40129889	NUT M4 ZC
g	AC CORD CHASSIS EARTH	
	100V	: NONE
	117V	: Use the EARTH of AC CODE
	230V/240V	: H4019113CF WIRING HARNESS W18
h	40011889	EXT TOOTH WASHER M4 ZC
i	40010345	BINDING MACHINE SCREW M4x10 BZC
j	40230023	SPRING WASHER M4 ZC
k	40011767	FLANGE NUT M4 ZC
l	40010256	BINDING MACHINE SCREW M3x8 BZC
m	G2157505	STANDOFF M3 L50
n	17048630	VR ACCESSORY NUT M9
o	17048631	VR ACCESSORY WASHER M9
p	40128923	VR ACCESSORY NUT M7
q	17048651	VR ACCESSORY WASHER M7
r	40011756	FLANGE NUT M3 ZC
s	*****	WIRING HARNESS W17 (on MAIN BOARD ASSY 01126423)
t	*****	WIRING HARNESS W16 (on PRE BOARD ASSY 230V/240V 01126412)
u	40012989	PAN MACHINE SCREW W/SW+PW M3x20 BZC



### PARTS LIST

<p><b>SAFETY PRECAUTIONS:</b>*2</p> <p>The parts marked <math>\Delta</math> have safety-related characteristics.</p> <p>Use only listed parts for replacement.</p>	<p><b>CONSIDERATIONS ON PARTS ORDERING</b></p> <p>When ordering any parts listed in the parts list, please specify the following items in the order sheet.</p> <table border="1"> <thead> <tr> <th>QTY</th> <th>PART NUMBER</th> <th>DESCRIPTION</th> <th>MODEL NUMBER</th> </tr> </thead> <tbody> <tr> <td>Ex. 10</td> <td>22575241</td> <td>Sharp Key</td> <td>C-20/50</td> </tr> <tr> <td>15</td> <td>2247017300</td> <td>Knob (orange)</td> <td>DAC-15D</td> </tr> </tbody> </table> <p>Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.</p>	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER	Ex. 10	22575241	Sharp Key	C-20/50	15	2247017300	Knob (orange)	DAC-15D
QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER										
Ex. 10	22575241	Sharp Key	C-20/50										
15	2247017300	Knob (orange)	DAC-15D										

NOTE1: The parts marked # are new. (initial parts)  
 NOTE2: The parts marked ! have safety-related characteristics.  
 Use only listed parts for replacement

<b>CABINET</b>			
17055046	CABINET ASSY	NOTE: Replacement CABINET ASSY includes the following parts	
22310207	HANDLE H-40 + ESCUTCHEON		
12359104	RUBBER FOOT MP-600		
17055035	PROTECTION CORNER		
K2238110	Roland LOGO BADGE		
17055045	BAFFLE BOARD ASSY		
17055049	REAR BOARD		
<b>CHASSIS</b>			
#	G2817114	CHASSIS	
#	G2217118	FRONT PANEL	
# $\Delta$	G2467408	HEATSINK	
<b>KNOB, BUTTON</b>			
	2247011900	AC-KNOB	
	00125612	U S-KEY MX1H DCG/WHT	
	22495565	F S-BUTTON MX BLK	
<b>SWITCH</b>			
$\Delta$	13129160	AC PUSH SWITCH SDDL1-B-D-2	TV-5 5A/250V
	13129405	PUSH SWITCH PSKOP-AF2KX	4A021-7000
	00122390	ROTARY SWITCH SRBM23N-F15-16	
	13159178	SLIDE SWITCH SSSU12584A	
<b>JACK, SOCKET</b>			
	13449263	JACK YKB21-5005	
	13449149	JACK YKB21-5011	
	13429688	XLR TYPE AF3LR-PC-RT	
	00122123	XLR TYPE YKB52-5003	
<b>SPEAKER</b>			
$\Delta$	17055047	12 inch SPEAKER G1204E02	
$\Delta$	17055048	5 inch SPEAKER G0508C03	
<b>PCB ASSY</b>			
#	01126412	230V/240V PRE-AMP BOARD ASSY	NOTE1: Replacement PRE-AMP BOARD ASSY includes the following PCB.
		XLR BOARD ASSY / MIC/AUX CH BOARD ASSY	
		GUITAR CH BOARD ASSY / PRI BOARD ASSY	
#	01126423	POWER-AMP BOARD ASSY	NOTE2: Replacement POWER-AMP BOARD ASSY includes the following PCB.
		MAIN BOARD ASSY	
		JACK BOARD ASSY	
		POWER IC BOARD ASSY	
#	01126434	EFFECT BOARD ASSY	NOTE3: Replacement PRE-AMP BOARD ASSY is 230V/240V version only. 230V/240V version differs from 100V/117V version only in fuse system. When using MAIN AMP BOARD ASSY for 100V/117V version, replace fuse. (refer to TABLE A)
TABLE A			
	100V/117V	FUSE 5x20 SB 4A/125V (12559444)	
	230V/240V	FUSE 5T 2.5A/250V (F2559105)	
<b>IC</b>			
	00675789	M37470M2-308SP ST-04A	CPU
	00341890	M5M44256BJ-7 SOJ	DRAM
	00346723	TC25SC080AU-104	CFM CUSTOM IC
	15189188	M5238AL OP.AMP	
	15189261	M5218AFP-600E	OP.AMP
	15189250	M5218AL SIP	OP.AMP
	F5189103	NJM2068L SIP 8P	
	00346445	NJM2100M	BIPOLAR OP
	00347189	M51951AML	
	00347156	UPD6379GR-E2	DAC
	00347145	LC8390M-TLM	ADC
$\Delta$	15199209	NJM7815FA	V.REG

$\Delta$	15199190	NJM7805FA	V.REG
$\Delta$	15199208	NJM7915FA	V.REG
	15199271	NJM78L05UA	V.REG
$\Delta$	00675801	STK400-490	POWER AMP
<b>TRANSISTOR</b>			
	15119113	2SA1015GR	Tr.
	15309110	2SA1312GR(TE85R)	Tr.
	15129114	2SC1815GR	Tr.
	15139138	2SK381E	FET
<b>RESISTOR</b>			
$\Delta$	12559718	FUSIBLE 330 OHM 0.5W	
$\Delta$	F2559803	FUSIBLE 6.8 OHM 0.5W	
$\Delta$	13839615RT	CEMENT SQM 0.33 OHM 5W	
<b>DIODE</b>			
	F5019107CH	DIODE 1N4148	
$\Delta$	F5019203	DIODE 1N4004	
	15029139	L-53HD RED	
	15029140	L-53GD GREEN	
$\Delta$	F5019205	BRIDGE DIODE CP1002 10A/200V	
<b>POTENTIOMETER</b>			
	13289233	RK09L1120 20KB	ROTARY POT
#	13289232	RK09L1120 50KC	ROTARY POT
	13289217	RK09L1120 100KB	ROTARY POT
	00675823	RK09L12B0 50KCx2	ROTARY POT
	00782578	RK0971410 10KBx4	ROTARY POT
#	01235134	EVMEAG00B52 500B	TRIMMER
<b>CAPACITOR</b>			
# $\Delta$	F3659222	ELECTROLYTIC 3300uF 35V	
$\Delta$	13639136	ELECTROLYTIC 470uF 35V	
$\Delta$	F3519501	PY17FY472MLO CERAMIC 472/250V	
# $\Delta$	13519402	E C8 472M6 CERAMIC 472/250V	
<b>FUSE, FUSE HOLDER</b>			
$\Delta$	12559444	FUSE 5x20 SB 4A/125V	(100V/117V ONLY)
$\Delta$	F2559105	FUSE 5T 2.5A/250V	(230V/240V ONLY)
$\Delta$	12199550RT	FUSE HOLDER	
$\Delta$	F2029601	FUSE COVER FH-1	
<b>WIRING, CABLE</b>			
#	G3417119	WIRING HARNESS W1	2P L180
#	G3417120	WIRING HARNESS W2,W3	3P L100
#	G3417141	WIRING HARNESS W4	3P L350
#	G3417145	WIRING HARNESS W5	4P L100
#	G3417122	WIRING HARNESS W6	4P L300
#	G3417123	WIRING HARNESS W7	5P L150
#	G3417124	WIRING HARNESS W8	5P L200
#	G3417125	WIRING HARNESS W9	6P L100
#	G3417126	WIRING HARNESS W10,W11	7P L100
#	G3417127	WIRING HARNESS W12	9P L100
#	G3417128	WIRING HARNESS W13,W14	9P L200
#	H4019113CF	WIRING HARNESS W18 L100+B6+187N	
<b>TRANSFORMER</b>			
# $\Delta$	G245713301	TRANSFORMER 100V/117V	
# $\Delta$	G245713401	TRANSFORMER 230V/240V	
<b>AC CORD</b>			
$\Delta$	G3497123	VCTF 100V	
$\Delta$	G349712401	SJT 117V	
$\Delta$	G3497125	SY010 230V	
$\Delta$	13499111	4622-001-0886 230VE	
$\Delta$	G3497126	FC-305 240VA	
<b>SCREW</b>			
	40010423	BINDING MACHINE SCREW W/INT TOOTH WASHER M3x8 BZC	
	40010323	BINDING MACHINE SCREW M4x6 BZC	
	40011312	BINDING TAPTITE P M3x8 BZC	
	40012967	PAN MACHINE SCREW W/SW+PW M3x10 BZC	
	40012989	PAN MACHINE SCREW W/SW+PW M3x20 BZC	
	40129889	NUT M4 ZC	
	40011889	EXT TOOTH WASHER M4 ZC	
	40010345	BINDING MACHINE SCREW M4x10 BZC	
	40230023	SPRING WASHER M4 ZC	
	40011767	FLANGE NUT M4 ZC	
	40010256	BINDING MACHINE SCREW M3x8 BZC	
#	G2157505	STANDOFF M3 L50	
	17048630	VR ACCESSORY NUT M9	
	17048631	VR ACCESSORY WASHER M9	
	40128923	VR ACCESSORY NUT M7	
	17048651	VR ACCESSORY WASHER M7	
	40011756	FLANGE NUT M3 ZC	
	2215075600	JACK NUT #756	
	40010601	ORIGINAL TRUSS MACHINE SCREW M5x35 BZC	
	17055052	#8-32x1 1/2 PH PN BK	
	17055050	#8-32 KEP NUT	
<b>MISCELLANEOUS</b>			
#	F3459104	GROUNDING TERMINAL JH-8(T)	
$\Delta$	12369410RT	CORD HOLDER 1702B	
# $\Delta$	G2537710	FUSE CAUTION SEAL	
# $\Delta$	G2467106	HEATSINK for V.REG	
#	H2369410	SPACER SCT-14	
#	G2257114	INSULATING SHEET	
<b>ACCESSORIES</b>			
#	17055094	OWNER'S MANUAL (ENGLISH)	
#	17055095	OWNER'S MANUAL (JAPANESE)	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

A BLOCK DIAGRAM

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

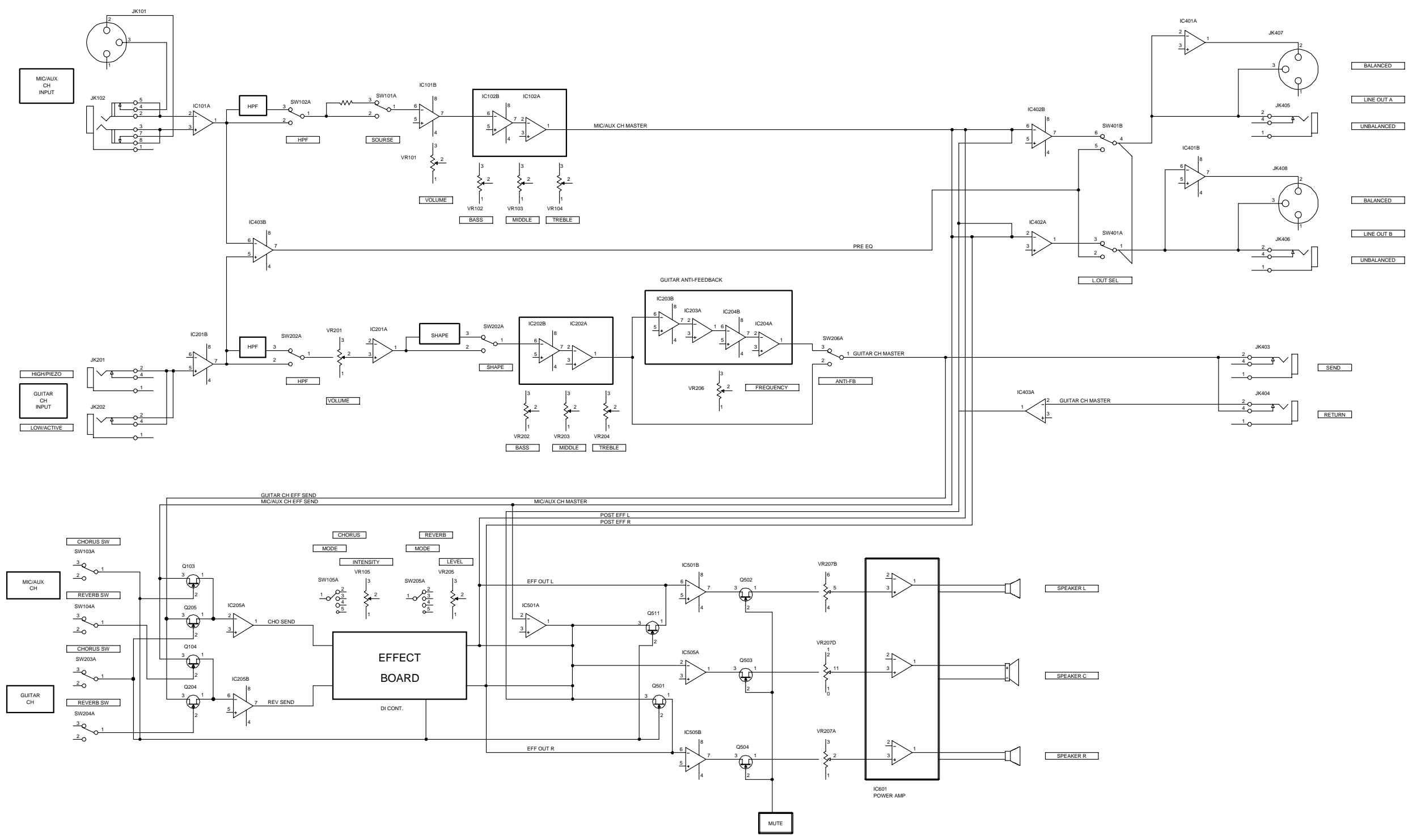
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

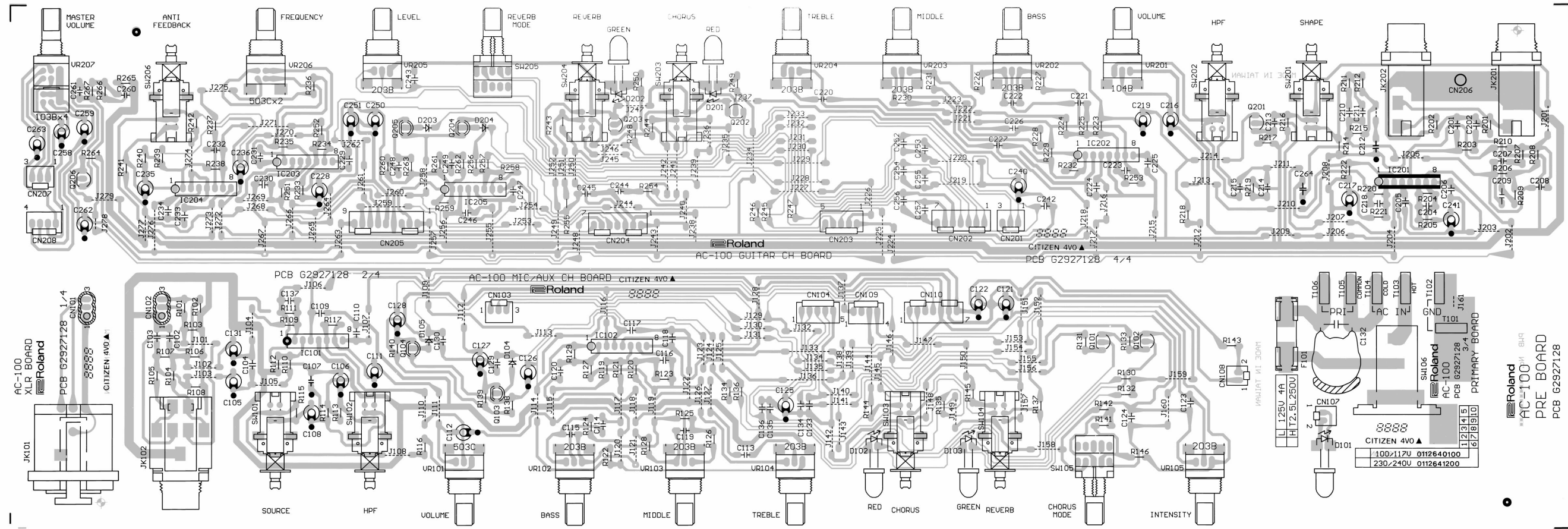
- A CIRCUIT BOARD
- B 230V/240V PRE-AMP-BOARD ASSY (01126412)
- C MIC/AUX CH BOARD
- D PRIMARY BOARD
- E GUITAR CH BOARD
- F XLR BOARD
- G
- H
- I
- J
- K
- L
- M
- N
- O
- P
- Q
- R
- S
- T
- U

NOTE: Replacement PRE-AMP BOARD ASSY is 230V/240V version only.  
 230V/240V version differs from 100V/117V version only in fuse system.  
 When using MAIN AMP BOARD ASSY for 100V/117V version, replace fuse.  
 (refer to TABLE A)

TABLE A

100V/117V	FUSE 5x20 SB 4A/125V (12559444)
230V/240V	FUSE 5ST 2.5A/250V (F2559105)

GUITAR CH BOARD



XLR BOARD



MIC/AUX CH BOARD

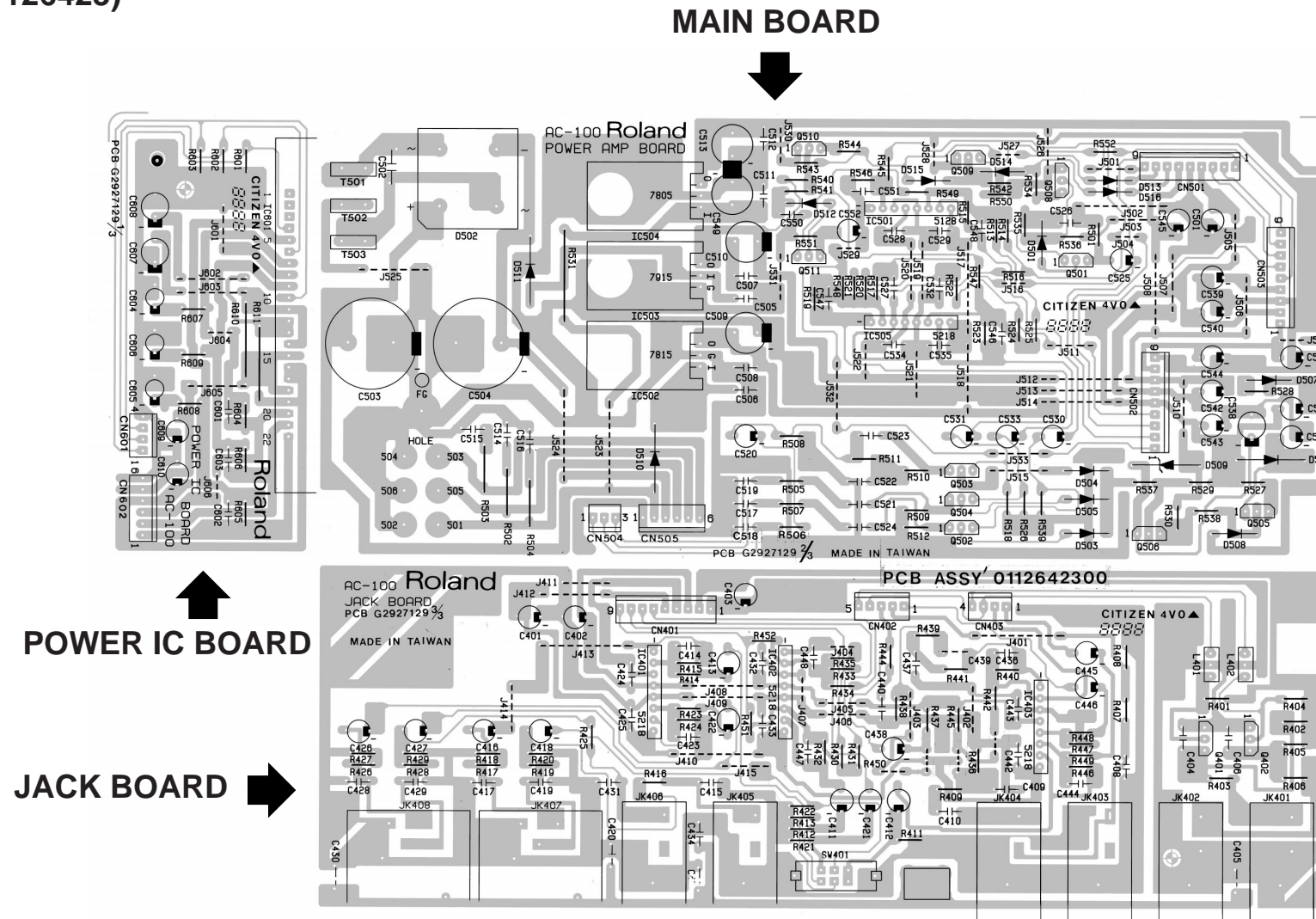


PRIMARY BOARD

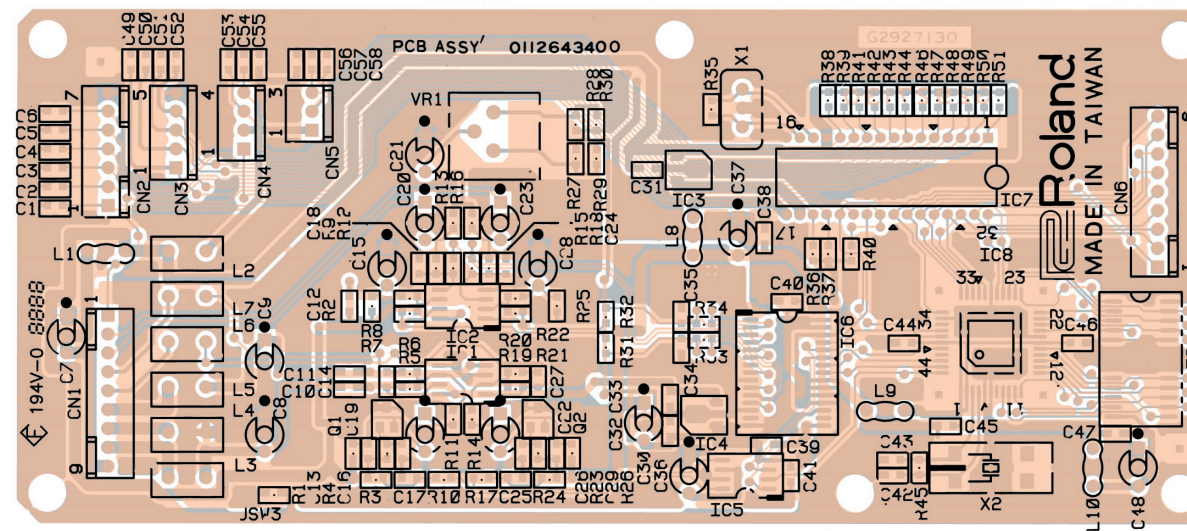


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

A **CIRCUIT BOARD**  
**POWER-AMP BOARD ASSY (01126423)**  
 B **MAIN BOARD**  
 C **JACK BOARD**  
 D **POWER IC BOARD**



**EFFECT BOARD (01126434)**

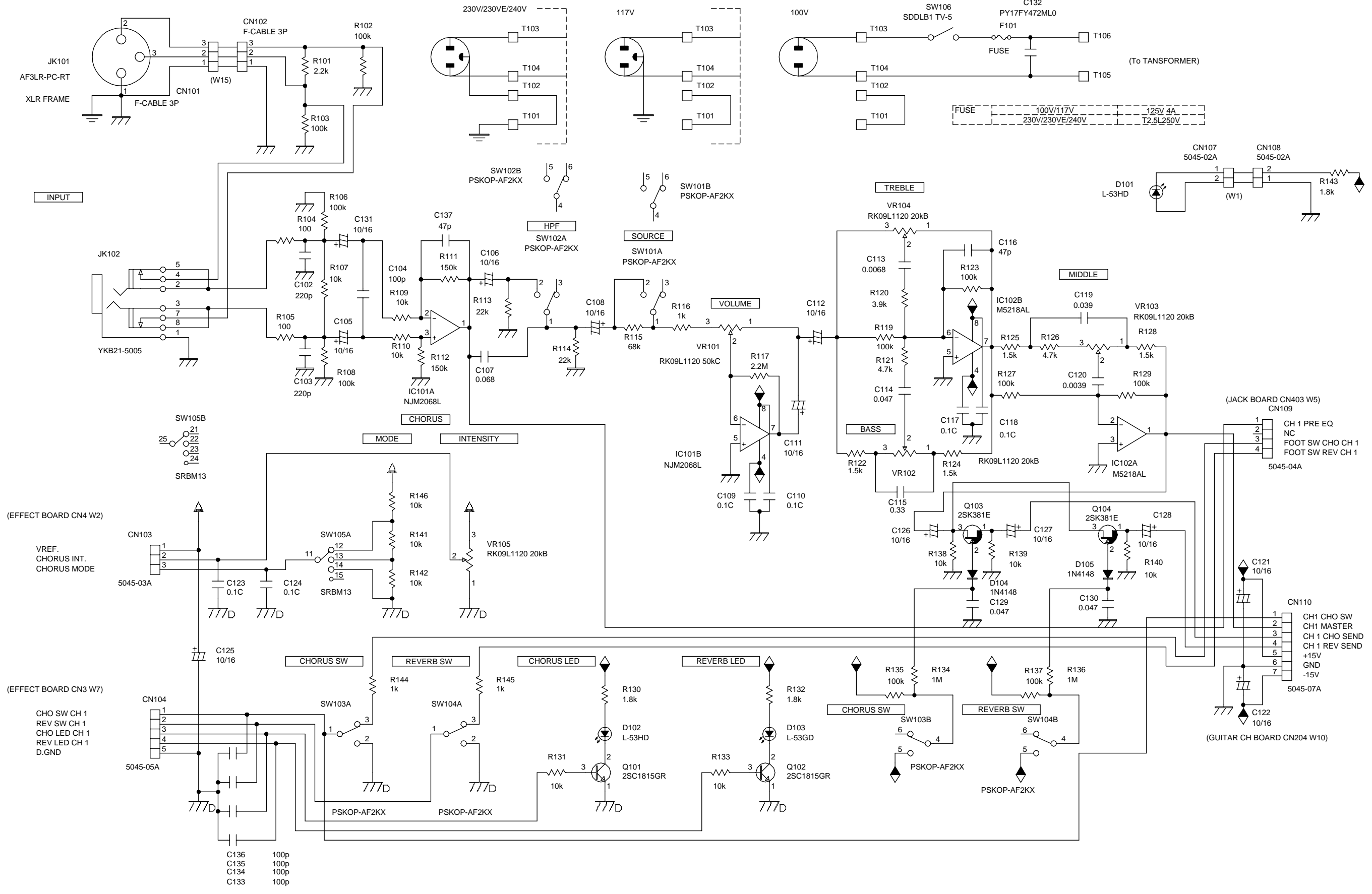


**EFFECT BOARD**



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

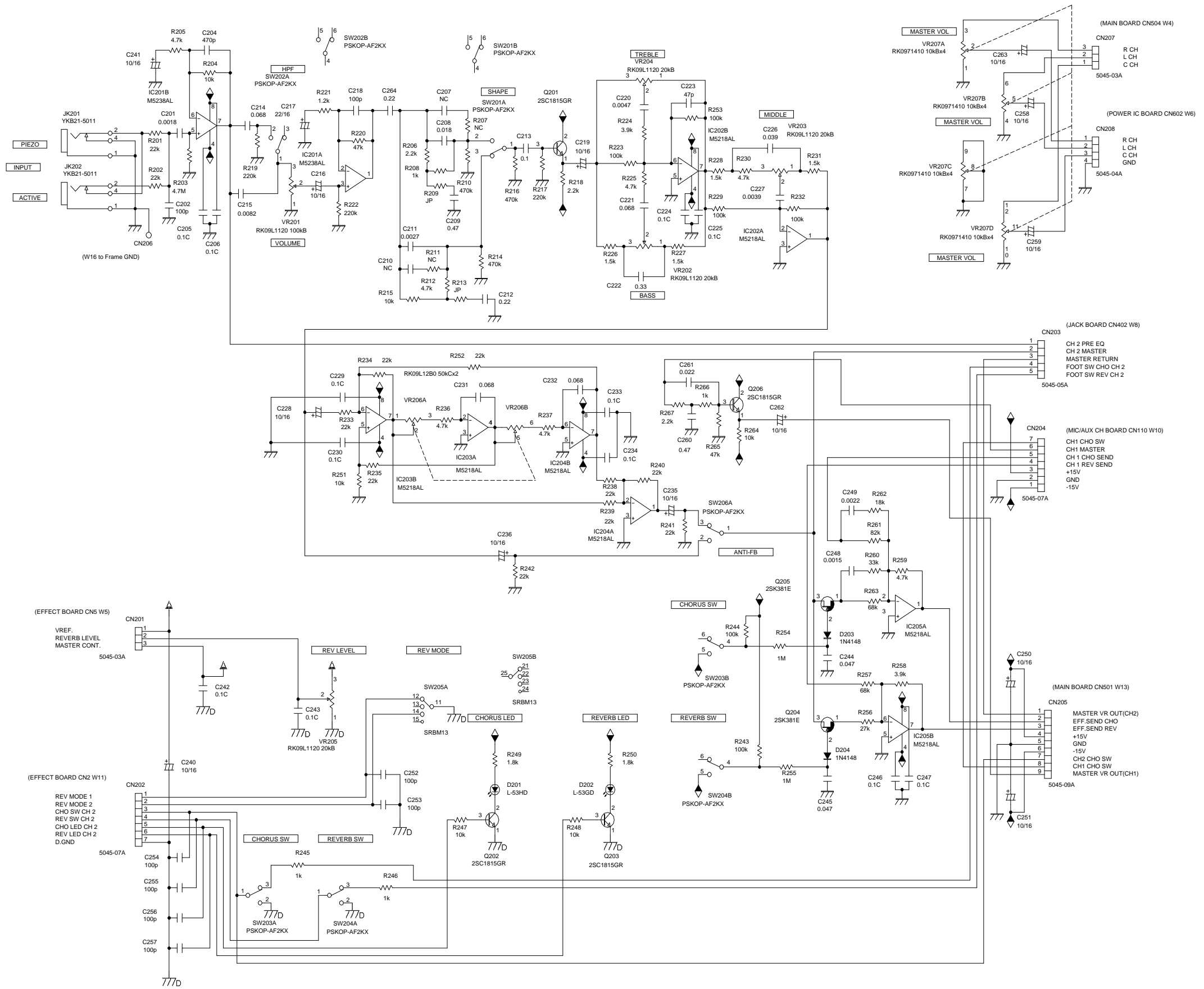
# A CIRCUIT DIAGRAM B 230V/240V PRE-AMP BOARD ASSY (MIC/AUX CH BOARD & PRIMARY BOARD)



C  
D  
E  
F  
G  
H  
I  
J  
K  
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

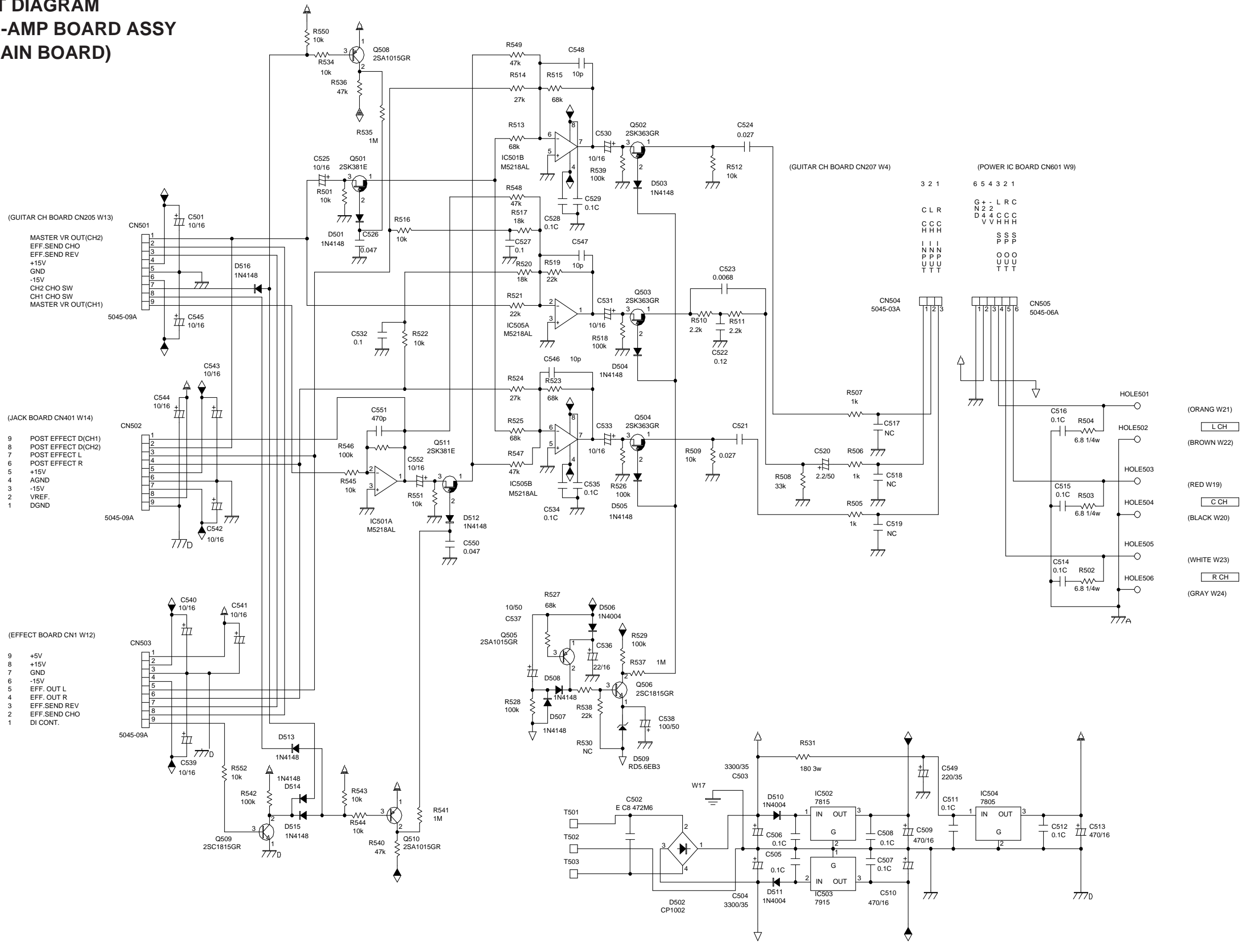
A CIRCUIT DIAGRAM  
B 230V/240V PRE-AMP BOARD ASSY (GUITAR CH BOARD)  
C  
D  
E  
F  
G  
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I  
J  
K  
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7

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

**A CIRCUIT DIAGRAM  
B POWER-AMP BOARD ASSY  
C (MAIN BOARD)**



B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U

(GUITAR CH BOARD CN205 W13)  
 1 MASTER VR OUT(CH2)  
 2 EFF.SEND CHO  
 3 EFF.SEND REV  
 4 +15V  
 5 GND  
 6 -15V  
 7 CH2 CHO SW  
 8 CH1 CHO SW  
 9 MASTER VR OUT(CH1)

(JACK BOARD CN401 W14)  
 9 POST EFFECT D(CH1)  
 8 POST EFFECT D(CH2)  
 7 POST EFFECT L  
 6 POST EFFECT R  
 5 +15V  
 4 AGND  
 3 -15V  
 2 VREF.  
 1 DGND

(EFFECT BOARD CN1 W12)  
 9 +5V  
 8 +15V  
 7 GND  
 6 -15V  
 5 EFF. OUT L  
 4 EFF. OUT R  
 3 EFF.SEND REV  
 2 EFF.SEND CHO  
 1 DI CONT.

(GUITAR CH BOARD CN207 W4)  
 3 2 1  
 C L R  
 N 2 2  
 D 4 4 C C C  
 V V H H H  
 S S S  
 P P P  
 U U U  
 T T T

(POWER IC BOARD CN601 W9)  
 6 5 4 3 2 1  
 G + - L R C  
 N 2 2  
 D 4 4 C C C  
 V V H H H  
 S S S  
 P P P  
 U U U  
 T T T

(ORANG W21)  
 L CH  
 (BROWN W22)  
 (RED W19)  
 C CH  
 (BLACK W20)  
 (WHITE W23)  
 R CH  
 (GRAY W24)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

**A CIRCUIT DIAGRAM  
B POWER-AMP BOARD ASSY  
C (JACK BOARD)**

(POWER AMP BOARD CN502 W10)

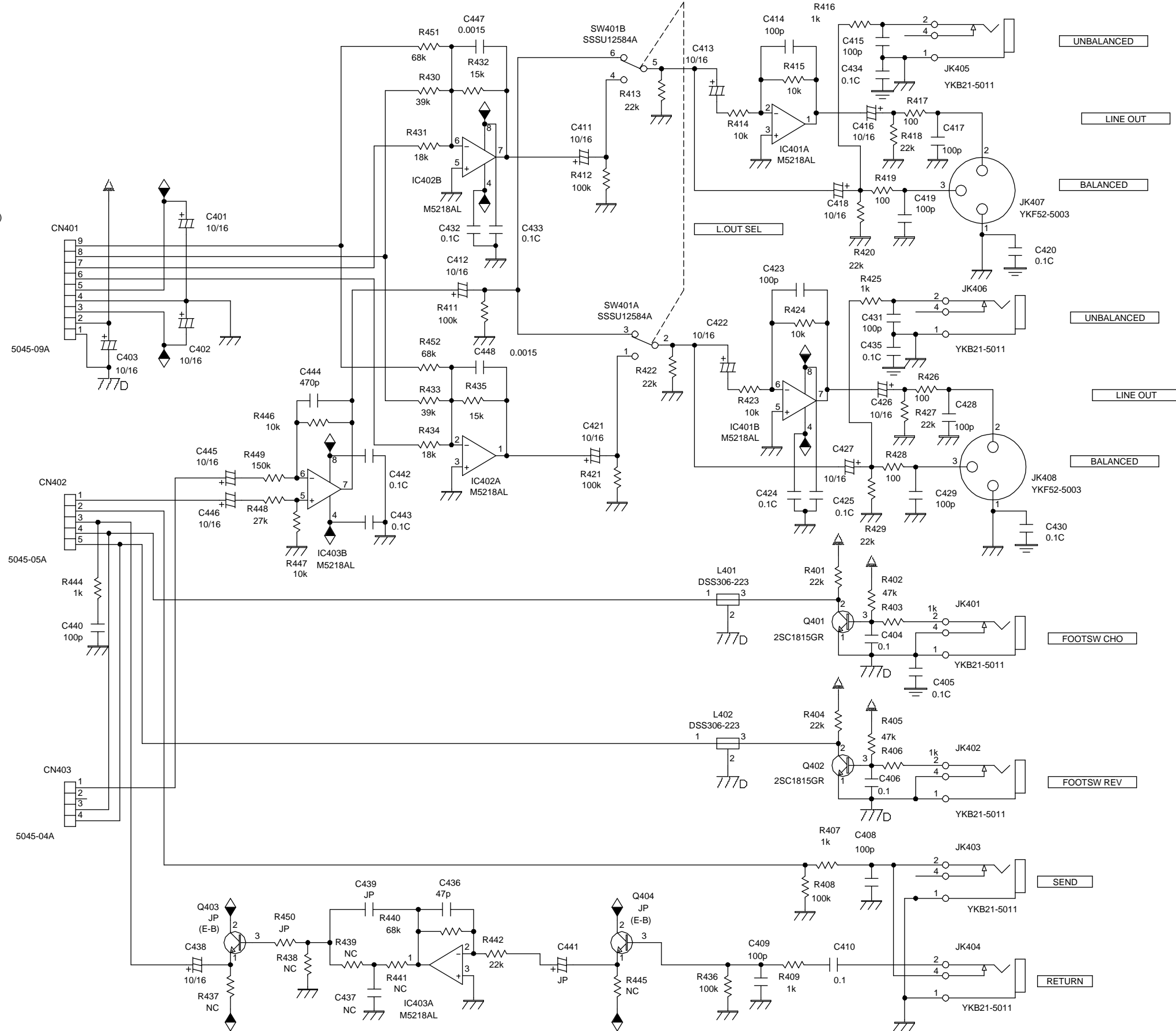
- 1 POST EFFECT D(CH1)
- 2 POST EFFECT D(CH2)
- 3 POST EFFECT L
- 4 POST EFFECT R
- 5 +15V
- 6 GND
- 7 -15V
- 8 VREF.
- 9 DGND

(GUITAR CH BOARD CN203 W8)

- 1 CH 2 PRE EQ
- 2 CH 2 MASTER
- 3 MASTER RETURN
- 4 FOOT SW CHO CH 2
- 5 FOOT SW REV CH 2

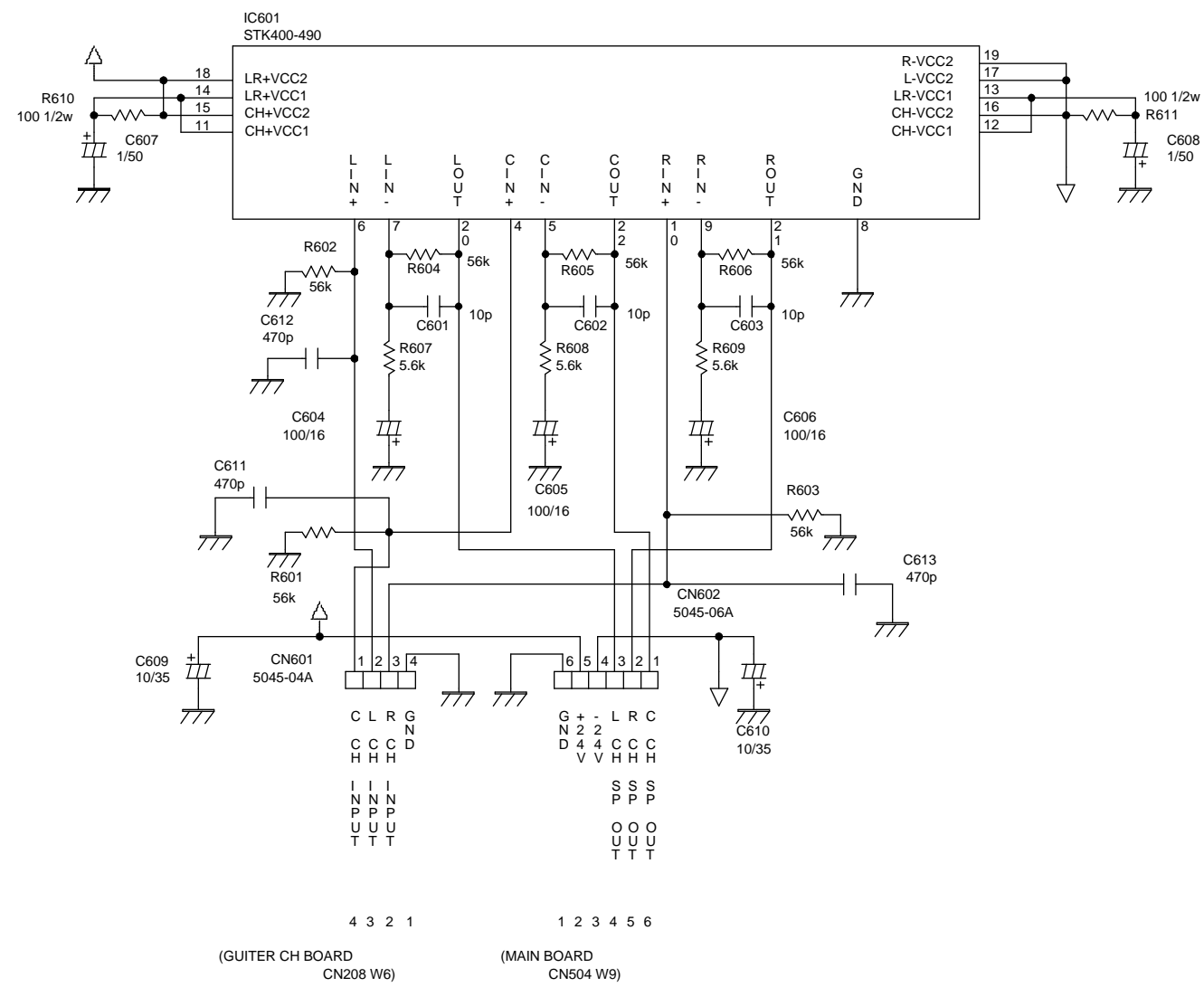
(MIC/AUX CH BOARD CN109 W5)

- 1 CH 1 PRE EQ
- 2 NC
- 3 FOOT SW CHO CH 1
- 4 FOOT SW REV CH 1



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

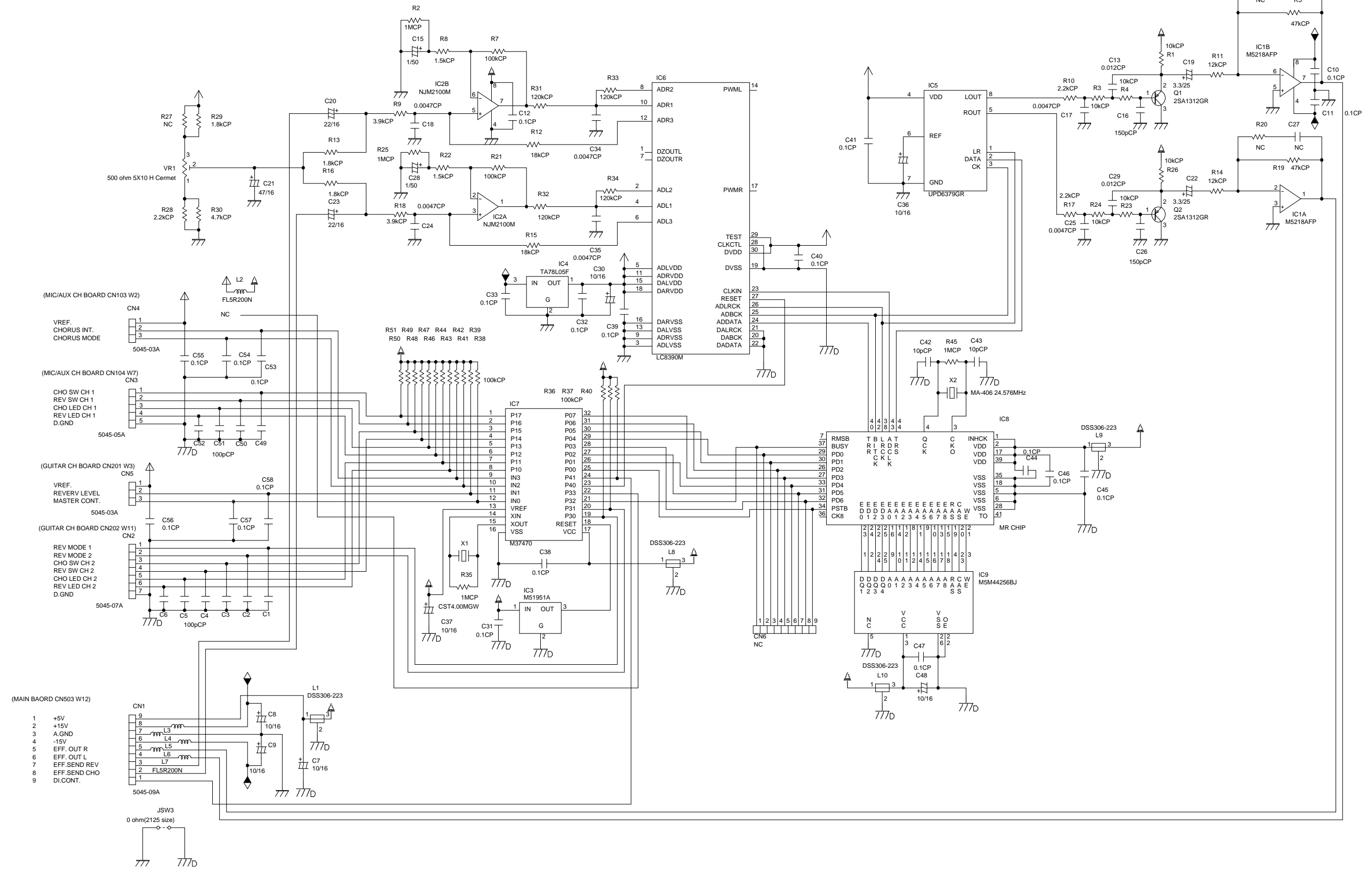
**A CIRCUIT DIAGRAM**  
**B POWER-AMP BOARD ASSY**  
**C (POWER IC BOARD)**



C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

**A CIRCUIT DIAGRAM**  
**B EFFECT BOARD ASSY**



- (MAIN BOARD CN503 W12)
- 1 +5V
  - 2 +15V
  - 3 A.GND
  - 4 -15V
  - 5 EFF. OUT R
  - 6 EFF. OUT L
  - 7 EFF.SEND REV
  - 8 EFF.SEND CHO
  - 9 DI.CONT.

NOTE:  
\*\*CP = 2125 size chip Resistor or Capacitor